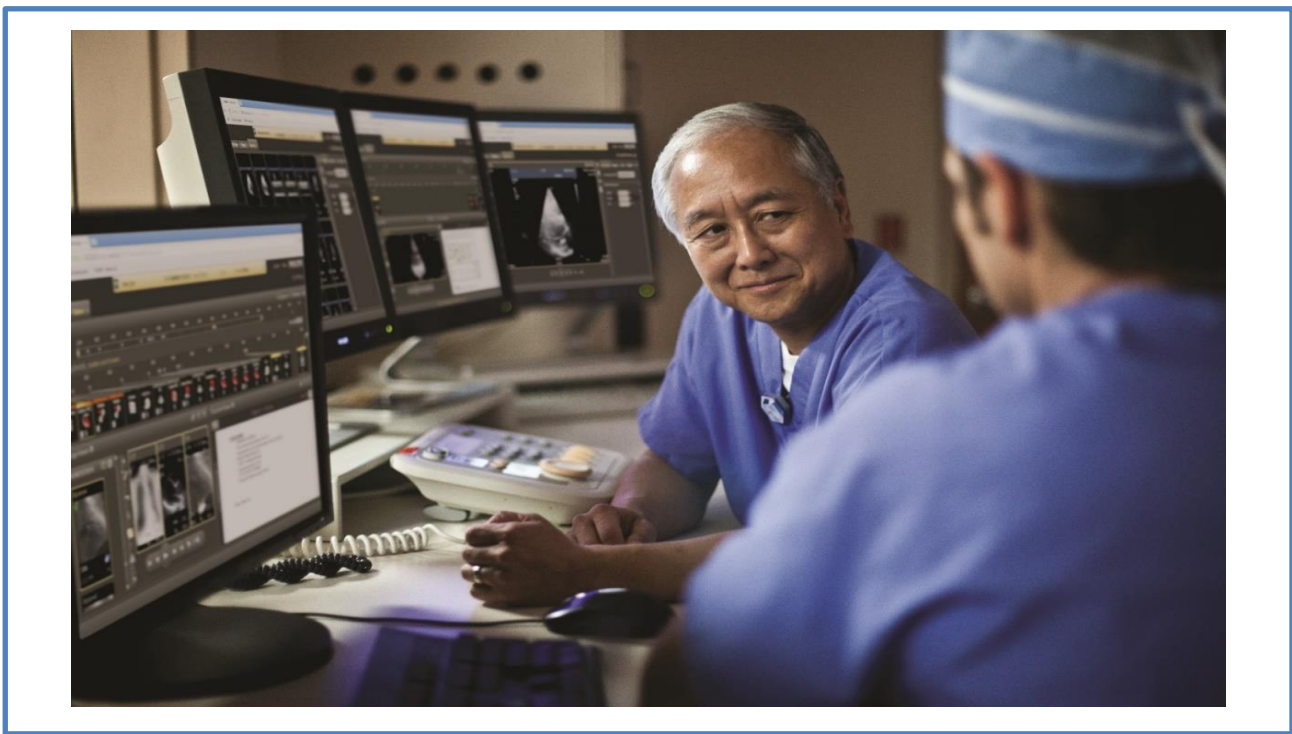


# DICOM Conformance Statement

## IntelliSpace Cardiovascular 8.0



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## 1. DICOM Conformance Statement Overview

IntelliSpace Cardiovascular is the Philips Cardiology multi-modality image and information management solution that allows images, information and reports to be reviewed, stored and distributed throughout the cardiology department and beyond.

IntelliSpace Cardiovascular is intended to:

- Review the high-quality medical study data provided by modalities.
- Serve as a permanent archive for such data.

As such, the IntelliSpace Cardiovascular system consists of a central image and database server and several connected viewer workspots capable of running various viewer applications (also called review station).

The IntelliSpace Cardiovascular is designed with the concerns for the system as: data integrity, performance, image quality, serviceability, and large number of users. Added with ease of use, privacy/confidentiality, flexibility, and expandability.

Data is imported from the image acquisition system through a vendor provided DICOM port. This port is provided as a safe and reliable way to access clinical data.

In addition to DICOM, IntelliSpace Cardiovascular also maintains compatibility with the installed base of Philips Sonos US image acquisition system in supporting the proprietary DSR-TIFF format.

The system also offers DICOM ports such that external systems (viewers, other PACS systems and etc) can access the data.

Data can also be imported from and exported to CD or DVD.

The primary point of user contact with the system is the viewer workspot, consisting of several clinical tools, e.g. for Cath, Echo, CT and MR, including tools like QLAB. These programs use the common Windows GUI metaphors for selecting items or entering information in the common patient and study search window.

A network based on standard technology, connects the IntelliSpace Cardiovascular server, the viewer workspots and external DICOM nodes, such as Cath labs, Ultrasound labs, EP labs and other acquisition systems, DICOM archives, DICOM viewers etc.

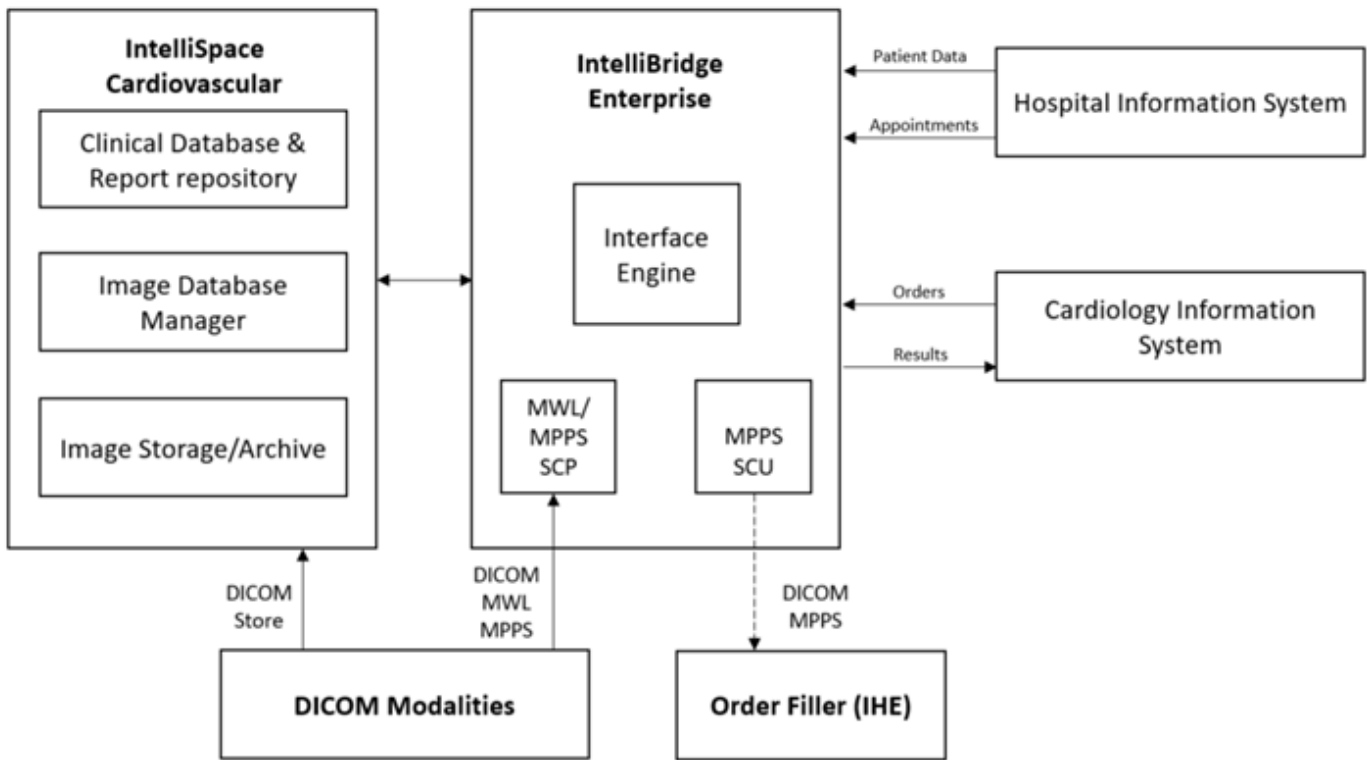
MWL SCP and MPPS SCU & SCP is a highly programmable interface engine to connect the IntelliSpace Cardiovascular Image Management System (IMS) and DICOM competent (imaging) modalities to the Hospital Information Systems (HIS) and/or the Cardiology Information System (CIS).

Prime objective of the interface engine is to match the HL7 domain of the hospital information management systems (HIS, CIS, EMR) to the DICOM domain of Imaging modalities, IntelliSpace Cardiovascular Image Management system and its connected (diagnostic) viewing workstations.

MWL SCP and MPPS SCU & SCP support DICOM Modality Worklist Management (MWLM) as a Service Class provider (SCP) and Service Class User (SCU) and DICOM Modality Performed Procedure Step (MPPS) both as a Service Class Provider (SCP) and Service Class User (SCU).

The SCU role of MPPS is required to support the IHE requirements on Cardiology workflow. IntelliBridge Enterprise, on behalf of IntelliSpace Cardiovascular IMS, may propagate the MPPS data from the DICOM modalities to an IHE compliant Order Filler system. MPPS SCU/SCP and MWL SCP are realized by IBE on behalf of ISCV.

IAN SCU Service is implemented to inform the Hospital Information Systems (HIS), Cardiology Information System (SIC) or any DICOM peer who is interested in availability of study instances stored on IntelliSpace Cardiovascular PACS. IntelliSpace Cardiovascular will send Instance Available Notifications whenever new instances for a study are being imported.



**Figure 1: IntelliSpace Cardiovascular Data flow in Network**

## 1.1. Display limitations on Content and Transfer

The following display limitations are applicable for the supported transfer content:

- Overlays are not displayed in the UI by ISCV, however export/import of the overlay is supported.
- Presentation state objects are not displayed in the UI by ISCV, however export/import of the presentation state objects is supported.
- (0008,1080) Admitting Diagnoses Description (e.g. Reason for Study) is not displayed in UI by ISCV when imported via DICOM. When a user in ISCV has supplied a Reason for study in its database, and this value is longer than 60 characters (on UI 255 characters are supported) ISCV stores it in multiple values of 63 characters along with three dots ("...") after 60 characters. The remainder part of the value will not have three dots ("...").

**Table 1: Network Services**

| SOP Class   |                               | User of Service (SCU) | Provider of Service (SCP) |
|---|-------------------------------|-----------------------|---------------------------|
| Name  | UID                           |                       |                           |
| <b>Other</b>  |                               |                       |                           |
| Verification SOP Class*                                     | 1.2.840.10008.1.1             | Yes                   | Yes                       |
| <b>Print Management</b>                                     |                               |                       |                           |
| Print Job SOP Class   | 1.2.840.10008.5.1.1.14        | Yes                   | No                        |
| Basic Annotation Box SOP Class                              | 1.2.840.10008.5.1.1.15        | Yes                   | No                        |
| Stored Print Storage SOP Class (Retired)                    | 1.2.840.10008.5.1.1.27        | Yes                   | No                        |
| Basic Grayscale Print Management Meta SOP Class             | 1.2.840.10008.5.1.1.9         | Yes                   | No                        |
| >Basic Film Session SOP Class                               | 1.2.840.10008.5.1.1.1         | Yes                   | No                        |
| >Basic Film Box SOP Class                                   | 1.2.840.10008.5.1.1.2         | Yes                   | No                        |
| >Basic Grayscale Image Box SOP Class                        | 1.2.840.10008.5.1.1.4         | Yes                   | No                        |
| >Printer SOP Class  | 1.2.840.10008.5.1.1.16        | Yes                   | No                        |
| <b>Query/Retrieve</b>                                       |                               |                       |                           |
| Patient Root QR Information Model - FIND SOP Class          | 1.2.840.10008.5.1.4.1.2.1.1   | No                    | Yes                       |
| Patient Root QR Information Model - MOVE SOP Class          | 1.2.840.10008.5.1.4.1.2.1.2   | No                    | Yes                       |
| Study Root QR Information Model - FIND SOP Class            | 1.2.840.10008.5.1.4.1.2.2.1   | Yes                   | Yes                       |
| Study Root QR Information Model - MOVE SOP Class            | 1.2.840.10008.5.1.4.1.2.2.2   | Yes                   | Yes                       |
| PatientStudy Only QR Info. Model - FIND SOP Class (Retired) | 1.2.840.10008.5.1.4.1.2.3.1   | No                    | Yes                       |
| PatientStudy Only QR Info. Model - MOVE SOP Class (Retired) | 1.2.840.10008.5.1.4.1.2.3.2   | No                    | Yes                       |
| <b>Transfer</b>   |                               |                       |                           |
| Hardcopy Grayscale Image Storage (Retired)                  | 1.2.840.10008.5.1.1.29        | Yes                   | Yes                       |
| Hardcopy Color Image Storage (Retired)                      | 1.2.840.10008.5.1.1.30        | Yes                   | Yes                       |
| Computed Radiography Image Storage SOP Class                | 1.2.840.10008.5.1.4.1.1.1     | Yes                   | Yes                       |
| Digital X-Ray Image Storage - For Pres. SOP                 | 1.2.840.10008.5.1.4.1.1.1.1   | Yes                   | Yes                       |
| Digital X-Ray Image Storage - For Proc. SOP                 | 1.2.840.10008.5.1.4.1.1.1.1.1 | Yes                   | Yes                       |
| Digital Mammography X-Ray Image Storage - Pres. SOP         | 1.2.840.10008.5.1.4.1.1.1.2   | Yes                   | Yes                       |
| Digital Mammography X-Ray Image Storage - Proc. SOP         | 1.2.840.10008.5.1.4.1.1.1.2.1 | Yes                   | Yes                       |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP          | 1.2.840.10008.5.1.4.1.1.1.3   | Yes                   | Yes                       |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP          | 1.2.840.10008.5.1.4.1.1.1.3.1 | Yes                   | Yes                       |
| CT Image Storage SOP Class                                  | 1.2.840.10008.5.1.4.1.1.2     | Yes                   | Yes                       |
| Enhanced CT Image Storage [Note 1]                          | 1.2.840.10008.5.1.4.1.1.2.1   | Yes                   | Yes                       |
| Ultrasound Multi-frame Image Storage (Retired)              | 1.2.840.10008.5.1.4.1.1.3     | Yes                   | Yes                       |
| Ultrasound Multi-frame Image Storage SOP Class              | 1.2.840.10008.5.1.4.1.1.3.1   | Yes                   | Yes                       |

| SOP Class   |                                | User of Service (SCU) | Provider of Service (SCP) |
|---|--------------------------------|-----------------------|---------------------------|
| Name  | UID                            |                       |                           |
| MR Image Storage SOP Class  | 1.2.840.10008.5.1.4.1.1.4      | Yes                   | Yes                       |
| Enhanced MR Image Storage [Note 1]                                  | 1.2.840.10008.5.1.4.1.1.4.1    | Yes                   | Yes                       |
| MR Spectroscopy Storage [Note 1]                                    | 1.2.840.10008.5.1.4.1.1.4.2    | Yes                   | Yes                       |
| Nuclear Medicine Image Storage (Retired) [Note 1]                   | 1.2.840.10008.5.1.4.1.1.5      | Yes                   | Yes                       |
| Ultrasound Image Storage (Retired)                                  | 1.2.840.10008.5.1.4.1.1.6      | Yes                   | Yes                       |
| Ultrasound Image Storage SOP Class                                  | 1.2.840.10008.5.1.4.1.1.6.1    | Yes                   | Yes                       |
| Secondary Capture Image Storage SOP Class                           | 1.2.840.10008.5.1.4.1.1.7      | Yes                   | Yes                       |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class    | 1.2.840.10008.5.1.4.1.1.7.1    | Yes                   | Yes                       |
| Multi-frame Grayscale Byte SC Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.7.2    | Yes                   | Yes                       |
| Multi-frame Grayscale Word SC Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.7.3    | Yes                   | Yes                       |
| Multi-frame True Color Secondary Capture Image Storage              | 1.2.840.10008.5.1.4.1.1.7.4    | Yes                   | Yes                       |
| Standalone Overlay Storage SOP Class (Retired)                      | 1.2.840.10008.5.1.4.1.1.8      | Yes                   | Yes                       |
| Standalone Curve Storage SOP Class (Retired)                        | 1.2.840.10008.5.1.4.1.1.9      | Yes                   | Yes                       |
| 12-lead ECG Waveform Storage  | 1.2.840.10008.5.1.4.1.1.9.1.1  | Yes                   | Yes                       |
| General ECG Waveform Storage SOP Class                              | 1.2.840.10008.5.1.4.1.1.9.1.2  | Yes                   | Yes                       |
| Ambulatory ECG Waveform Storage [Note 1]                            | 1.2.840.10008.5.1.4.1.1.9.1.3  | Yes                   | Yes                       |
| Standard Hemodynamic Waveform Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.9.2.1  | Yes                   | Yes                       |
| Cardiac Electrophysiology Waveform Storage [Note 1]                 | 1.2.840.10008.5.1.4.1.1.9.3.1  | Yes                   | Yes                       |
| Basic Voice Audio Waveform Storage [Note 1]                         | 1.2.840.10008.5.1.4.1.1.9.4.1  | Yes                   | Yes                       |
| Standalone Modality LUT Storage (Retired)                           | 1.2.840.10008.5.1.4.1.1.10     | Yes                   | Yes                       |
| Standalone VOI LUT Storage SOP Class (Retired)                      | 1.2.840.10008.5.1.4.1.1.11     | Yes                   | Yes                       |
| Grayscale Softcopy Presentation State Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.11.1   | Yes                   | Yes                       |
| Color Softcopy Presentation State Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.11.2   | Yes                   | Yes                       |
| Pseudo-Color Softcopy Presentation State Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.11.3   | Yes                   | Yes                       |
| Blending Softcopy Presentation State Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.11.4   | Yes                   | Yes                       |
| X-Ray Angiographic Image Storage SOP Class                          | 1.2.840.10008.5.1.4.1.1.12.1   | Yes                   | Yes                       |
| Enhanced XA Image Storage [Note 1]                                  | 1.2.840.10008.5.1.4.1.1.12.1.1 | Yes                   | Yes                       |
| X-Ray Radiofluoroscopic Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.12.2   | Yes                   | Yes                       |
| Enhanced XRF Image Storage [Note 1]                                 | 1.2.840.10008.5.1.4.1.1.12.2.1 | Yes                   | Yes                       |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired)       | 1.2.840.10008.5.1.4.1.1.12.3   | Yes                   | Yes                       |
| Nuclear Medicine Image Storage SOP Class                            | 1.2.840.10008.5.1.4.1.1.20     | Yes                   | Yes                       |

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| SOP Class   |                                  | User of Service (SCU) | Provider of Service (SCP) |
|---|----------------------------------|-----------------------|---------------------------|
| Name  | UID                              |                       |                           |
| Raw Data Storage SOP Class                              | 1.2.840.10008.5.1.4.1.1.66       | Yes                   | Yes                       |
| Spatial Registration Storage [Note 1]                   | 1.2.840.10008.5.1.4.1.1.66.1     | Yes                   | Yes                       |
| Spatial Fiducials Storage [Note 1]                      | 1.2.840.10008.5.1.4.1.1.66.2     | Yes                   | Yes                       |
| Real World Value Mapping Storage [Note 1]               | 1.2.840.10008.5.1.4.1.1.67       | Yes                   | Yes                       |
| VL Endoscopic Image Storage [Note 1]                    | 1.2.840.10008.5.1.4.1.1.77.1.1   | Yes                   | Yes                       |
| Video Endoscopic Image Storage [Note 1]                 | 1.2.840.10008.5.1.4.1.1.77.1.1.1 | Yes                   | Yes                       |
| VL Microscopic Image Storage [Note 1]                   | 1.2.840.10008.5.1.4.1.1.77.1.2   | Yes                   | Yes                       |
| Video Microscopic Image Storage [Note 1]                | 1.2.840.10008.5.1.4.1.1.77.1.2.1 | Yes                   | Yes                       |
| VL Slide-Coordinates Microscopic Image Storage [Note 1] | 1.2.840.10008.5.1.4.1.1.77.1.3   | Yes                   | Yes                       |
| VL Photographic Image Storage [Note 1]                  | 1.2.840.10008.5.1.4.1.1.77.1.4   | Yes                   | Yes                       |
| Video Photographic Image Storage [Note 1]               | 1.2.840.10008.5.1.4.1.1.77.1.4.1 | Yes                   | Yes                       |
| Ophthalmic Photography 8 Bit Image Storage [Note 1]     | 1.2.840.10008.5.1.4.1.1.77.1.5.1 | Yes                   | Yes                       |
| Ophthalmic Photography 16 Bit Image Storage [Note 1]    | 1.2.840.10008.5.1.4.1.1.77.1.5.2 | Yes                   | Yes                       |
| Stereometric Relationship Storage [Note 1]              | 1.2.840.10008.5.1.4.1.1.77.1.5.3 | Yes                   | Yes                       |
| Detail SR Storage - Trial (Retired)                     | 1.2.840.10008.5.1.4.1.1.88.3     | Yes                   | Yes                       |
| Basic Text SR SOP Class                                 | 1.2.840.10008.5.1.4.1.1.88.11    | Yes                   | Yes                       |
| Enhanced SR SOP Class                                   | 1.2.840.10008.5.1.4.1.1.88.22    | Yes                   | Yes                       |
| Comprehensive SR SOP Class                              | 1.2.840.10008.5.1.4.1.1.88.33    | Yes                   | Yes                       |
| Procedure Log Storage SOP Class                         | 1.2.840.10008.5.1.4.1.1.88.40    | Yes                   | Yes                       |
| Mammography CAD SR [Note 1]                             | 1.2.840.10008.5.1.4.1.1.88.50    | Yes                   | Yes                       |
| Key Object Selection Document Storage SOP Class         | 1.2.840.10008.5.1.4.1.1.88.59    | Yes                   | Yes                       |
| Chest CAD SR [Note 1]                                   | 1.2.840.10008.5.1.4.1.1.88.65    | Yes                   | Yes                       |
| X-Ray Radiation Dose SR SOP Class                       | 1.2.840.10008.5.1.4.1.1.88.67    | Yes                   | Yes                       |
| Encapsulated PDF Storage                                | 1.2.840.10008.5.1.4.1.1.104.1    | Yes                   | Yes                       |
| Positron Emission Tomography Image Storage SOP Class    | 1.2.840.10008.5.1.4.1.1.128      | Yes                   | Yes                       |
| Standalone PET Curve Storage SOP Class (Retired)        | 1.2.840.10008.5.1.4.1.1.129      | Yes                   | Yes                       |
| RT Image Storage SOP Class                              | 1.2.840.10008.5.1.4.1.1.481.1    | Yes                   | Yes                       |
| RT Dose Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.481.2    | Yes                   | Yes                       |
| RT Structure Set Storage SOP Class                      | 1.2.840.10008.5.1.4.1.1.481.3    | Yes                   | Yes                       |
| RT Beams Treatment Record Storage [Note 1]              | 1.2.840.10008.5.1.4.1.1.481.4    | Yes                   | Yes                       |
| RT Plan Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.481.5    | Yes                   | Yes                       |
| RT Brachy Treatment Record Storage [Note 1]             | 1.2.840.10008.5.1.4.1.1.481.6    | Yes                   | Yes                       |
| RT Treatment Summary Record Storage [Note 1]            | 1.2.840.10008.5.1.4.1.1.481.7    | Yes                   | Yes                       |

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| SOP Class  |                               | User of Service (SCU) | Provider of Service (SCP) |
|--|-------------------------------|-----------------------|---------------------------|
| Name   | UID                           |                       |                           |
| RT Ion Plan Storage [Note 1]                                   | 1.2.840.10008.5.1.4.1.1.481.8 | Yes                   | Yes                       |
| RT Ion Beams Treatment Record Storage [Note 1]                 | 1.2.840.10008.5.1.4.1.1.481.9 | Yes                   | Yes                       |
| Philips Private X-Ray Image Storage                            | 1.3.46.670589.2.3.1.1         | Yes                   | Yes                       |
| Philips Private Reconstructed X-ray Storage                    | 1.3.46.670589.2.4.1.1         | Yes                   | Yes                       |
| Philips Private IE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1         | Yes                   | Yes                       |
| Philips Private Xcelera Info Object Storage                    | 1.3.46.670589.2.6.1.1         | Yes                   | Yes                       |
| Philips Private ViewForum 3D Volume New Storage                | 1.3.46.670589.5.0.1.1         | Yes                   | Yes                       |
| Philips Private ViewForum 3D Volume Object New Storage         | 1.3.46.670589.5.0.2.1         | Yes                   | Yes                       |
| Philips Private ViewForum Surface New Storage                  | 1.3.46.670589.5.0.3.1         | Yes                   | Yes                       |
| Philips Private ViewForum MR Cardio New Storage                | 1.3.46.670589.5.0.8.1         | Yes                   | Yes                       |
| Philips Private ViewForum CT Synthetic Image Storage           | 1.3.46.670589.5.0.9           | Yes                   | Yes                       |
| Philips Private ViewForum MR Synthetic Image Storage           | 1.3.46.670589.5.0.10          | Yes                   | Yes                       |
| Philips Private ViewForum MR Cardio Analysis New Storage       | 1.3.46.670589.5.0.11.1        | Yes                   | Yes                       |
| Philips Private ViewForum CX Synthetic Image Storage           | 1.3.46.670589.5.0.12          | Yes                   | Yes                       |
| Philips Private ViewForum Perfusion Storage                    | 1.3.46.670589.5.0.13          | Yes                   | Yes                       |
| Philips Private ViewForum Perfusion Analysis Storage           | 1.3.46.670589.5.0.14          | Yes                   | Yes                       |
| Workflow Management  |                               |                       |                           |
| Storage Commitment Push Model SOP Class                        | 1.2.840.10008.1.20.1          | Yes                   | Yes                       |
| Modality Performed Procedure Step SOP Class                    | 1.2.840.10008.3.1.2.3.3       | Yes                   | Yes                       |
| Modality Worklist Information Model - FIND SOP Class           | 1.2.840.10008.5.1.4.31        | No                    | Yes                       |
| Instance Availability Notification SOP Class                   | 1.2.840.10008.5.1.4.33        | Yes                   | No                        |

Note 1: Not available in default configuration. Please consult customer service representative to enable this.

Note 2: ISCV claim viewing of mammo images, but not diagnostic viewing (diagnostic viewing is claimed only for US). ISCV should be able to store and export these images, which is mostly what is required.



Table below shows the Supported Media Storage Application Profiles (with roles).

**Table 2: Media Services**

| Media Storage Application Profile                | File-set Creator (FSC) | File-set Updater (FSU) | File-set Reader (FSR) |
|--|------------------------|------------------------|-----------------------|
| <b>Compact Disk-Recordable</b>                   |                        |                        |                       |
| 1024 X-Ray Angiographic Studies on CD-R          | Yes                    | No                     | Yes                   |
| Basic Cardiac X-RAY Angiographic Studies on CD-R | Yes                    | No                     | Yes                   |
| CT/MR Studies on CD-R                            | Yes                    | No                     | Yes                   |
| General Purpose CD-R Interchange                 | Yes                    | No                     | Yes                   |
| Image Display (Ultrasound {SF MF})               | Yes                    | No                     | Yes                   |
| <b>DVD</b>                                       |                        |                        |                       |
| CT/MR Studies on DVD Media                       | Yes                    | No                     | Yes                   |
| General Purpose DVD Interchange with JPEG        | Yes                    | No                     | Yes                   |

**Table 3: DICOMweb Transactions**

| Resource                                       | User Agent | Origin Server |
|--|------------|---------------|
| <b>Retrieve Transaction DICOM resources</b>    |            |               |
| Retrieve Study                                 | No         | Yes           |
| Retrieve Series                                | No         | Yes           |
| Retrieve Instance                              | No         | Yes           |
| Retrieve Frame                                 | No         | Yes           |
| Retrieve Bulkdata                              | No         | Yes           |
| <b>Retrieve Transaction Metadata resources</b> |            |               |
| Retrieve Study Metadata                        | No         | Yes           |
| Retrieve Series Metadata                       | No         | Yes           |
| Retrieve Instance Metadata                     | No         | Yes           |
| <b>Search Transaction resources</b>            |            |               |
| All Studies                                    | No         | Yes           |
| Study's Series                                 | No         | Yes           |
| Study's Instances                              | No         | Yes           |
| All Series                                     | No         | Yes           |
| Study's Series' Instance                       | No         | Yes           |
| All Instances                                  | No         | Yes           |
| Series' Instances                              | No         | Yes           |
| <b>Store Transaction resources</b>             |            |               |
| Store Transaction (STOW-RS)                    | No         | Yes           |

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### 3. Introduction

The introduction specifies product and relevant disclaimers as well as any general information that the vendor feels is appropriate.

#### 3.1. Revision History

The revision history provides dates and differences of the different releases.

**Table 4: Revision History**

| Document Version | Date of Issue | Description of change                             |
|------------------|---------------|---|
| 01               | 28-Feb-2024   | First release for IntelliSpace Cardiovascular 8.0 |

#### 3.2. Audience

This Conformance Statement is intended for:

- (Potential) customers
- System integrators of medical equipment
- Marketing staff interested in system functionality.
- Software designers implementing DICOM interfaces.

It is assumed that the reader is familiar with the DICOM standard.

#### 3.3. Remarks

The DICOM Conformance Statement is contained in chapter 4 through 8 and follows the contents and structuring requirements of DICOM PS 3.2.

This DICOM Conformance Statement by itself does not guarantee successful interoperability of Philips equipment with non-Philips equipment. The user (or user’s agent) should be aware of the following issues:

##### ➤ Interoperability

Interoperability refers to the ability of application functions, distributed over two or more systems, to work successfully together. The integration of medical devices into an IT environment may require application functions that are not specified within the scope of DICOM. Consequently, using only the information provided by this Conformance Statement does not guarantee interoperability of Philips equipment with non-Philips equipment. It is the user's responsibility to analyze thoroughly the application requirements and to specify a solution that integrates Philips equipment with non-Philips equipment.

##### ➤ Validation

Philips equipment has been carefully tested to ensure that the actual implementation of the DICOM interface corresponds with this Conformance Statement. Where Philips equipment is linked to non-Philips equipment, the first step is to compare the relevant Conformance Statements. If the Conformance Statements indicate that successful information exchange should be possible, additional validation tests will be necessary to ensure the functionality, performance, accuracy and stability of image and image related data. It is the responsibility of the user (or user’s agent) to specify the appropriate test suite and to carry out the additional validation tests.

➤ **New versions of the DICOM Standard**

The DICOM Standard will evolve in future to meet the user’s growing requirements and to incorporate new features and technologies. Philips is actively involved in this evolution and plans to adapt its equipment to future versions of the DICOM Standard. In order to do so, Philips reserves the right to make changes to its products or to discontinue its delivery. The user should ensure that any non-Philips provider linking to Philips equipment also adapts to future versions of the DICOM Standard. If not, the incorporation of DICOM enhancements into Philips equipment may lead to loss of connectivity (in case of networking) and incompatibility (in case of media).

### 3.4. Definitions, Terms and Abbreviations

**Table 5: Definitions, Terms and Abbreviations**

| Abbreviation/Term | Explanation                                    |
|-------------------|--|
| AE                | Application Entity                             |
| ANSI              | American National Standard Institute           |
| AP                | Application Profile                            |
| BOT               | Basic Offset Table                             |
| CD                | Compact Disc                                   |
| CD-R              | CD-Recordable                                  |
| CD-M              | CD-Medical                                     |
| CR                | Computed Radiography                           |
| CT                | Computed Tomography                            |
| DCR               | Dynamic Cardio Review                          |
| DICOM             | Digital Imaging and Communications in Medicine |
| DIMSE             | DICOM Message Service Element                  |
| DIMSE-C           | DIMSE-Composite                                |
| DIMSE-N           | DIMSE-Normalized                               |
| DX                | Digital X-Ray                                  |
| EBE               | DICOM Explicit VR Big Endian                   |
| ELE               | DICOM Explicit VR Little Endian                |
| FSC               | File-set Creator                               |
| FSR               | File-set Reader                                |
| FSU               | File-set Updater                               |
| GUI               | Graphic User Interface                         |
| HIS               | Hospital Information System                    |
| HL7               | Health Level Seven                             |
| ILE               | DICOM Implicit VR Little Endian                |

| Abbreviation/Term | Explanation                                     |
|-------------------|---|
| IOD               | Information Object Definition                   |
| ISIS              | Information System – Imaging System             |
| ISCV              | IntelliSpace Cardiovascular                     |
| MOD               | Magneto-Optical Disk                            |
| MPPS              | Modality Performed Procedure Step               |
| MR                | Magnetic Resonance                              |
| NEMA              | National Electrical Manufacturers Association   |
| NM                | Nuclear Medicine                                |
| N/A               | Not Applicable means product doesn't support it |
| PDU               | Protocol Data Unit                              |
| RF                | X-Ray Radiofluoroscopic                         |
| RIS               | Radiology Information System                    |
| RT                | Radiotherapy                                    |
| RWA               | Real-World Activity                             |
| SC                | Secondary Capture                               |
| SCM               | Study Component Management                      |
| SCP               | Service Class Provider                          |
| SCU               | Service Class User                              |
| SOP               | Service Object Pair                             |
| TCP/IP            | Transmission Control Protocol/Internet Protocol |
| UID               | Unique Identifier                               |
| US                | Ultrasound                                      |
| USMF              | Ultrasound Multi-frame                          |
| WLM               | Worklist Management                             |
| XA                | X-Ray Angiographic                              |

### 3.5. References

[DICOM] Digital Imaging and Communications in Medicine, Parts 1 - 22 (NEMA PS 3.1- PS 3.22),  
 National Electrical Manufacturers Association  
 1300 North 17th Street  
 Suite 900  
 Arlington, Virginia 22209  
 Internet: <https://www.dicomstandard.org/current>

## 4. Networking

This section contains the networking related services (vs. the media related ones).

### 4.1. Implementation model

The implementation model consists of three sections:

- The application data flow diagram, specifying the relationship between the Application Entities and the "external world" or Real-World Activities,
- A functional description of each Application Entity, and
- The sequencing constraints among them.

#### 4.1.1. Application Data Flow

As part of the implementation model, an application data flow diagram is included. This diagram represents all of the Application Entities present in an implementation, and graphically depicts the relationship of the AE's use of DICOM to Real-World Activities as well as any applicable user interaction.

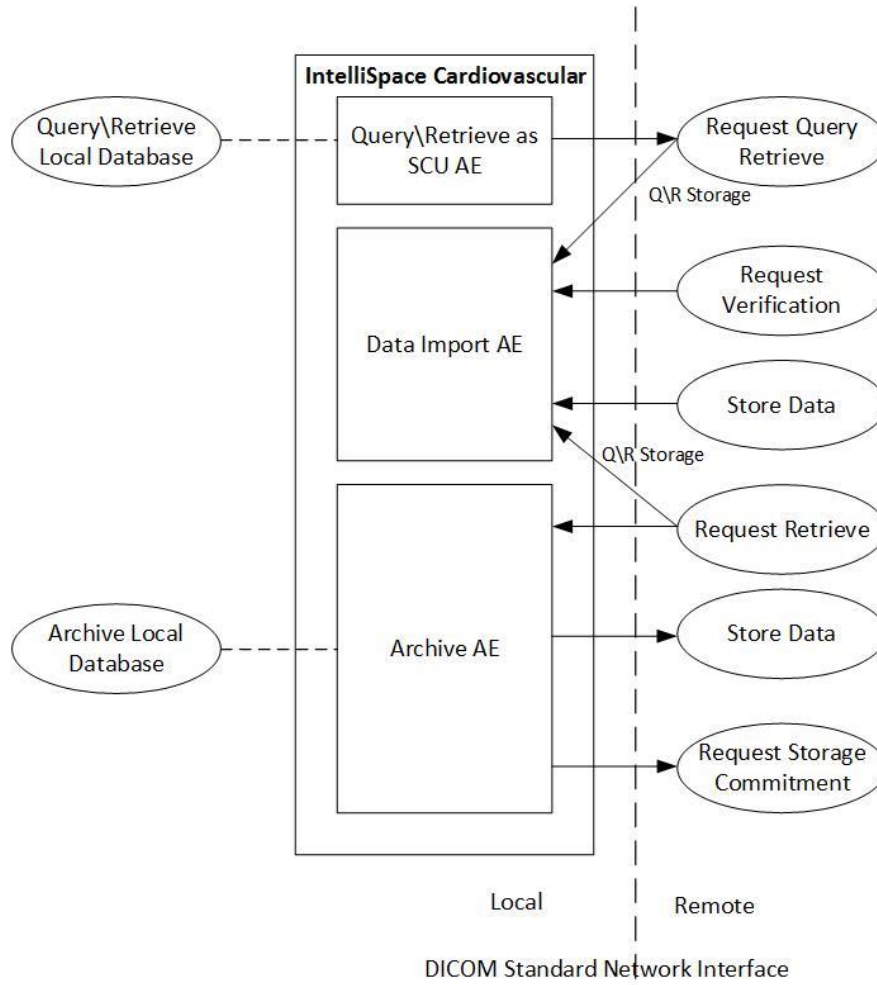
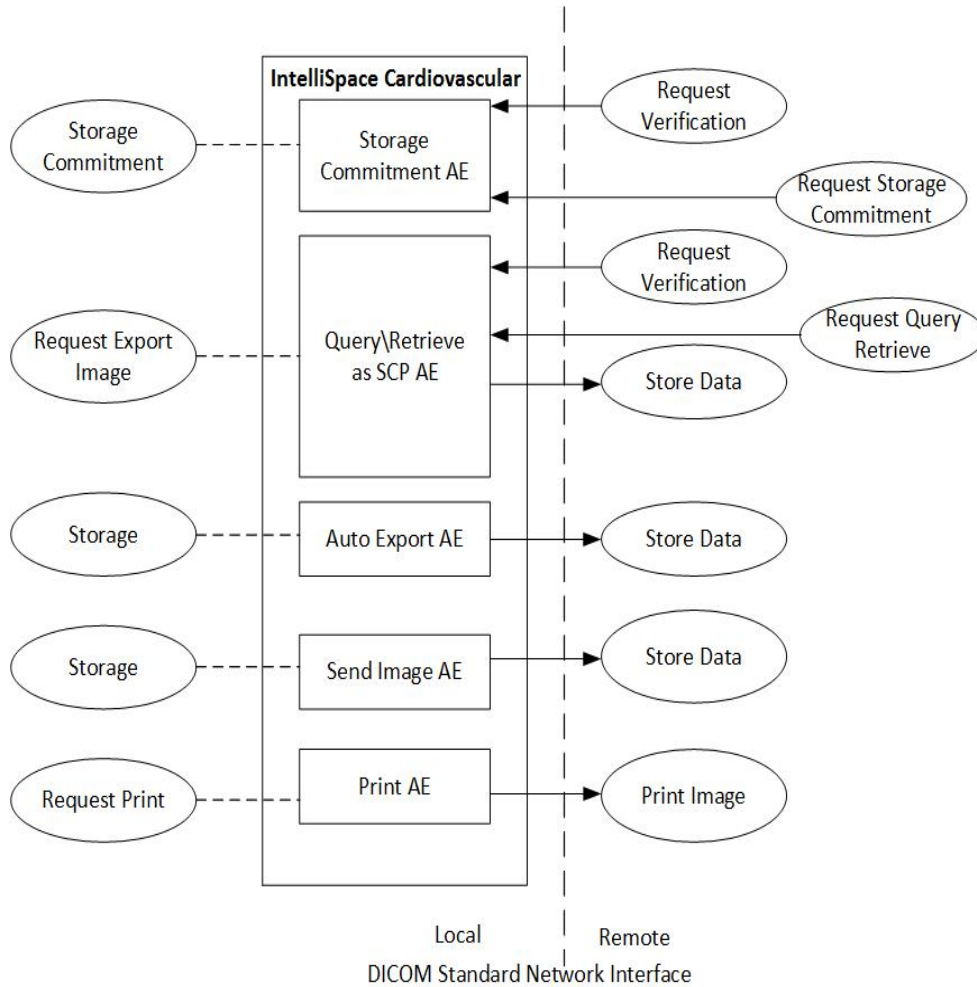


Figure 2: Application Data Flow Diagram (1)

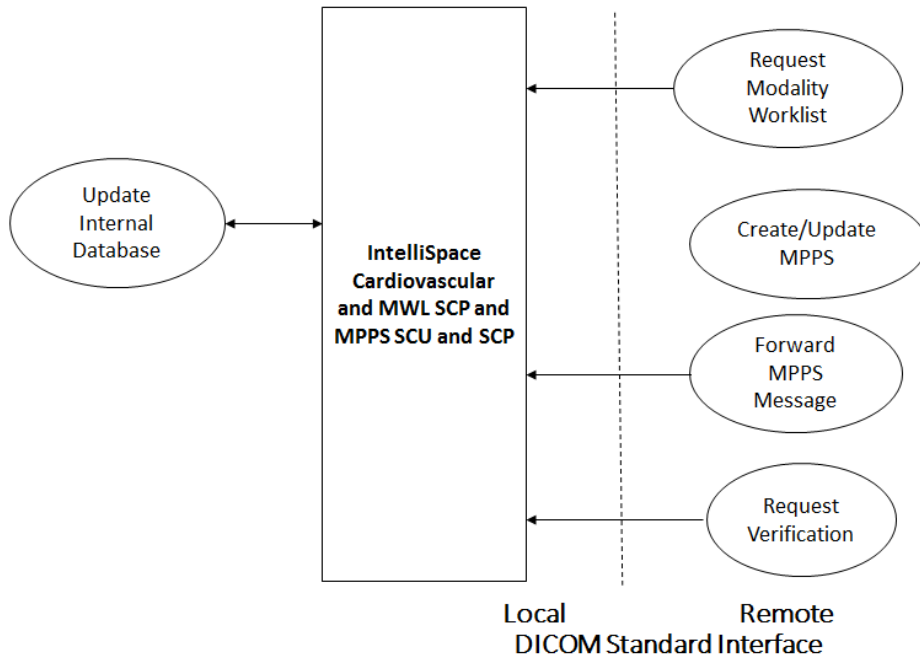


**Figure 3: Application Data Flow Diagram (2)**

#### 4.1.2. Application Data Flow MWL SCP and MPPS SCU & SCP

As part of the implementation model, an application data flow diagram is included. This diagram represents all of the Application Entities present in an implementation and graphically depicts the relationship of the AE's use of DICOM to Real-World Activities (RWA) as well as any applicable user interaction.

The related Implementation Model (for a single AE) is shown in Figure below.



**Figure 4: (Real World) Activity – Application Data flow Diagram**

MWL SCP, MPPS SCU & SCP can accept associations in order to receive worklist requests from modalities for an up-to-date Worklist. The Worklist management application of MWL SCP and MPPS SCU & SCP will interpret the modalities requests, retrieve the requested modality worklist data from its internal database and send the detailed worklist contents to the modalities.

MWL SCP and MPPS SCU & SCP will also accept associations related to start and completion of (performed) procedures (i.e. examinations). The MPPS message will be interpreted by the relevant application in MWL SCP and MPPS SCU & SCP and stored in its internal database.

If required, MWL SCP and MPPS SCU & SCP can receive/queue the MPPS messages from the modalities and forward these to an external, MPPS Manager, acting as a DICOM SCU.

MWL SCP and MPPS SCU & SCP also support DICOM Verification requests from the remote modalities.

### 4.1.3. Functional Definition of AE's

This section contains a functional definition for each individual local Application Entity.

#### 4.1.3.1. Functional Definition of Archive AE

The Archive AE handles the communication between IntelliSpace Cardiovascular and the DICOM Archive. For storing instances to an archive, an automatic function, Storage with Storage Commitment will be used. To pull the instance



from an archive, a C-MOVE with Study Instance UID handles this action. The study/instance will be retrieved via the Import AE.

#### **4.1.3.2. Functional Definition of Auto Export AE**

IntelliSpace Cardiovascular (SCU) automatically initiates an association with a remote DICOM AE (SCP) to send a storage request and the applicable instance data. (DICOM Storage Service Class)

This Auto export behavior of IntelliSpace Cardiovascular, when configured, happens for all imported studies. It is also possible to auto export only studies from an import AE-Title.

#### **4.1.3.3. Functional Definition of Image Import AE**

IntelliSpace Cardiovascular (SCP) accepts an association with a remote DICOM AE (SCU) to receive a storage request and the applicable instance data. (DICOM Storage Service Class)

#### **4.1.3.4. Functional Definition of Print AE**

The Print AE in IntelliSpace Cardiovascular supports the functionality for basic grayscale print management, basic annotation box, and print job. On demand, IntelliSpace Cardiovascular (SCU) initiates an association with a printer (SCP) and sends a create requests to the printer (DICOM Print Management SOP class).

#### **4.1.3.5. Functional Definition of Query Retrieve as SCP AE**

IntelliSpace Cardiovascular Query/Retrieve as SCP AE consists of two functions. IntelliSpace Cardiovascular (SCP) accepts an association from a remote DICOM AE (SCU) to receive a Query/Retrieve request. (DICOM Query/Retrieve Service Class). - When a retrieve of an instance is requested, IntelliSpace Cardiovascular sends that requested instance through Store SCU AE (DICOM Storage Service Class).

#### **4.1.3.6. Functional Definition of Query Retrieve as SCU AE**

IntelliSpace Cardiovascular (SCU) initiates an association on event, initiated by the user, with a remote DICOM AE (SCP) to send a Query/Retrieve request (DICOM Storage Service Class).

#### **4.1.3.7. Functional Definition of Send AE**

When the Send function in IntelliSpace Cardiovascular is addressed, IntelliSpace Cardiovascular (SCU) initiates an association on event, initiated by the user, with a remote DICOM AE (SCP) to send a storage request and the applicable instance data. (DICOM Storage Service Class).

#### 4.1.3.8. Functional Definition of Storage Commitment AE

IntelliSpace Cardiovascular (SCP) accepts an association from a remote DICOM AE (SCU) to receive a storage commitment request. After handling the requested storage commitment, IntelliSpace Cardiovascular initiates an association with the SCU to report the status of the storage commitment (DICOM Storage Commitment Service Class).

#### 4.1.3.9. Functional Definition of MWL AE and MPPS AE

MWL SCP and MPPS SCU & SCP implements a DICOM Service Class Provider (SCP) for the Verification, Basic Worklist Management and for the Modality Performed Procedure Step SOP Class. These SCP's entire are contained within a single Application Entity. The same Application Entity can also act as DICOM Service Class Users (SCU) for the Modality Performed Procedure Step SOP Class (MPPS Forwarding).

#### 4.1.3.10. Functional Definition of IAN AE

IntelliSpace Cardiovascular (SCU) initiates an association on event, DICOM Study import, with a remote DICOM AE (SCP) to send a create request and the applicable instance data (DICOM Instance Availability Notification SOP Class).

#### 4.1.4. Sequencing of Real-World Activities

All Real-World Activities as specified in the Functional Definition of Application Entities may occur independently from each other.

MWL SCP and MPPS SCU & SCP do not require any specific sequence of activities.

Modalities are setup in such a way that the requests for MWLM updates are issued at regular intervals. Moreover, the user may press a button on the modality console to refresh the modality worklist instantaneously.

Regarding the MPPS service, the modality has to comply with the normal sequence as defined in the DICOM standard. An MPPS-Created message should be followed by an MPPS-In Progress and/or a MPPS-Completed/Discontinued message type.

#### 4.2. AE Specifications

This section in the DICOM Conformance Statement is a set of Application Entity specifications. There are as many of these subsections as there are different AE's in the implementation.

##### 4.2.1. Archive AE

Details of this specific Application Entity is specified in this section.

##### 4.2.1.1. SOP Classes

Archive AE is used for archiving the patient studies either in IntelliSpace Cardiovascular Server (IntelliSpace Cardiovascular DICOM Archive) or in external DICOM Archive.

Archive AE is intended to do the functioning of storing the patient studies in the DICOM Archive, Sending the Storage Commitment to the DICOM Archive and Retrieving studies from the DICOM Archive whenever they are needed. These

functions are undertaken automatically.

Archive AE, for its functioning, makes use of following DICOM functions:

- Verification as SCU, which uses C-ECHO service element.
- Image Storage as SCU, which uses C-STORE as service element.
- Storage Commitment as SCU, which uses N-ACTION, N-EVENT-REPORT service elements.
- Retrieve as SCU, which uses C-MOVE as service element.
- Patient/study attributes will be updated with the latest information before instances are exported to the DICOM Archive (Refer to the tables in section [4.2.1.3.3.3 SOP Specific Conformance for Storage SOP Classes](#) for the list of updated patient and study attributes.)

Separate Application Entities need to be configured for Storage, Storage Commitment and Fetch (Retrieve) functionalities.

These DICOM functionalities are described here.

This Application Entity provides Standard Conformance to the following SOP Classes.

**Table 6: SOP Classes for Archive AE**

| SOP Class Name                                      | SOP Class UID                 | SCU | SCP |
|---|-------------------------------|-----|-----|
| Verification SOP Class                              | 1.2.840.10008.1.1             | Yes | No  |
| Storage Commitment Push Model SOP Class             | 1.2.840.10008.1.20.1          | Yes | No  |
| Hardcopy Grayscale Image Storage (Retired)          | 1.2.840.10008.5.1.1.29        | Yes | Yes |
| Hardcopy Color Image Storage (Retired)              | 1.2.840.10008.5.1.1.30        | Yes | Yes |
| Computed Radiography Image Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.1     | Yes | Yes |
| Digital X-Ray Image Storage - For Pres. SOP         | 1.2.840.10008.5.1.4.1.1.1.1   | Yes | Yes |
| Digital X-Ray Image Storage - For Proc. SOP         | 1.2.840.10008.5.1.4.1.1.1.1.1 | Yes | Yes |
| Digital Mammography X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.2   | Yes | Yes |
| Digital Mammography X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.2.1 | Yes | Yes |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP  | 1.2.840.10008.5.1.4.1.1.1.3   | Yes | Yes |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP  | 1.2.840.10008.5.1.4.1.1.1.3.1 | Yes | Yes |
| CT Image Storage SOP Class                          | 1.2.840.10008.5.1.4.1.1.2     | Yes | Yes |
| Ultrasound Multi-frame Image Storage (Retired)      | 1.2.840.10008.5.1.4.1.1.3     | Yes | Yes |
| Ultrasound Multi-frame Image Storage SOP Class      | 1.2.840.10008.5.1.4.1.1.3.1   | Yes | Yes |
| MR Image Storage SOP Class                          | 1.2.840.10008.5.1.4.1.1.4     | Yes | Yes |
| Ultrasound Image Storage (Retired)                  | 1.2.840.10008.5.1.4.1.1.6     | Yes | Yes |

| SOP Class Name   | SOP Class UID                 | SCU | SCP |
|--|-------------------------------|-----|-----|
| Ultrasound Image Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.6.1   | Yes | Yes |
| Secondary Capture Image Storage SOP Class                        | 1.2.840.10008.5.1.4.1.1.7     | Yes | Yes |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1   | Yes | Yes |
| Multi-frame Grayscale Byte SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.2   | Yes | Yes |
| Multi-frame Grayscale Word SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.3   | Yes | Yes |
| Multi-frame True Color Secondary Capture Image Storage           | 1.2.840.10008.5.1.4.1.1.7.4   | Yes | Yes |
| Standalone Overlay Storage SOP Class (Retired)                   | 1.2.840.10008.5.1.4.1.1.8     | Yes | Yes |
| Standalone Curve Storage SOP Class (Retired)                     | 1.2.840.10008.5.1.4.1.1.9     | Yes | Yes |
| General ECG Waveform Storage SOP Class                           | 1.2.840.10008.5.1.4.1.1.9.1.2 | Yes | Yes |
| Standard Hemodynamic Waveform Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.9.2.1 | Yes | Yes |
| Standalone Modality LUT Storage (Retired)                        | 1.2.840.10008.5.1.4.1.1.10    | Yes | Yes |
| Standalone VOI LUT Storage SOP Class (Retired)                   | 1.2.840.10008.5.1.4.1.1.11    | Yes | Yes |
| Grayscale Softcopy Presentation State Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.11.1  | Yes | Yes |
| X-Ray Angiographic Image Storage SOP Class                       | 1.2.840.10008.5.1.4.1.1.12.1  | Yes | Yes |
| X-Ray Radiofluoroscopic Image Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.12.2  | Yes | Yes |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired)    | 1.2.840.10008.5.1.4.1.1.12.3  | Yes | Yes |
| Nuclear Medicine Image Storage SOP Class                         | 1.2.840.10008.5.1.4.1.1.20    | Yes | Yes |
| Raw Data Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.66    | Yes | Yes |
| Encapsulated PDF Storage   | 1.2.840.10008.5.1.4.1.1.104.1 | Yes | Yes |
| Positron Emission Tomography Image Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.128   | Yes | Yes |
| Standalone PET Curve Storage SOP Class (Retired)                 | 1.2.840.10008.5.1.4.1.1.129   | Yes | Yes |
| RT Image Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.481.1 | Yes | Yes |
| RT Dose Storage SOP Class  | 1.2.840.10008.5.1.4.1.1.481.2 | Yes | Yes |
| RT Structure Set Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.481.3 | Yes | Yes |
| RT Plan Storage SOP Class  | 1.2.840.10008.5.1.4.1.1.481.5 | Yes | Yes |
| Detail SR Storage - Trial (Retired)                              | 1.2.840.10008.5.1.4.1.1.88.3  | Yes | Yes |
| Basic Text SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.11 | Yes | Yes |
| Enhanced SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.22 | Yes | Yes |
| Comprehensive SR SOP Class                                       | 1.2.840.10008.5.1.4.1.1.88.33 | Yes | Yes |
| Procedure Log Storage SOP Class                                  | 1.2.840.10008.5.1.4.1.1.88.40 | Yes | Yes |
| Key Object Selection Document Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.88.59 | Yes | Yes |
| X-Ray Radiation Dose SR SOP Class                                | 1.2.840.10008.5.1.4.1.1.88.67 | Yes | Yes |
| Study Root QR Information Model - MOVE SOP Class                 | 1.2.840.10008.5.1.4.1.2.2.2   | Yes | No  |
| Philips Private X-Ray Image Storage                              | 1.3.46.670589.2.3.1.1         | Yes | Yes |
| Philips Private Reconstructed X-ray Storage                      | 1.3.46.670589.2.4.1.1         | Yes | Yes |

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Document Template ID : SNIP-IOCC-T-3.6.1.02

Document Template version : 1.0

| SOP Class Name   | SOP Class UID          | SCU | SCP |
|--|------------------------|-----|-----|
| Philips Private iE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1  | Yes | Yes |
| Philips Private Xcelera Info Object Storage                    | 1.3.46.670589.2.6.1.1  | Yes | Yes |
| Philips Private ViewForum 3D Volume New Storage                | 1.3.46.670589.5.0.1.1  | Yes | Yes |
| Philips Private ViewForum MR Synthetic Image Storage           | 1.3.46.670589.5.0.10   | Yes | Yes |
| Philips Private ViewForum MR Cardio Analysis New Storage       | 1.3.46.670589.5.0.11.1 | Yes | Yes |
| Philips Private ViewForum CX Synthetic Image Storage           | 1.3.46.670589.5.0.12   | Yes | Yes |
| Philips Private ViewForum Perfusion Storage                    | 1.3.46.670589.5.0.13   | Yes | Yes |
| Philips Private ViewForum Perfusion Analysis Storage           | 1.3.46.670589.5.0.14   | Yes | Yes |
| Philips Private ViewForum 3D Volume Object New Storage         | 1.3.46.670589.5.0.2.1  | Yes | Yes |
| Philips Private ViewForum Surface New Storage                  | 1.3.46.670589.5.0.3.1  | Yes | Yes |
| Philips Private ViewForum MR Cardio New Storage                | 1.3.46.670589.5.0.8.1  | Yes | Yes |
| Philips Private ViewForum CT Synthetic Image Storage           | 1.3.46.670589.5.0.9    | Yes | Yes |

Note: Any SOP class specific behavior is documented later in this conformance statement in the applicable SOP class specific conformance section.

#### 4.2.1.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

##### 4.2.1.2.1. General

The DICOM standard application context is specified below.

**Table 7: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

##### 4.2.1.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

**Table 8: Number of associations as an Association Initiator for this AE**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 1     |

### 4.2.1.2.3. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 9: DICOM Implementation Class and Version for Archive AE**

| Property                    | Value                |
|-----------------------------|----------------------|
| Implementation Class UID    | 1.3.46.670589.58.8.0 |
| Implementation Version Name | ISCV 8.0             |

### 4.2.1.2.4. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 10: Communication Failure Behavior**

| Exception     | Behavior   |
|---------------|--|
| ARTIM Timeout | The association is closed, and the reason is logged. |

### 4.2.1.3. Association Initiation Policy

The Application Entity will respond on a received reject Association attempt as shown in next table.

**Table 11: Association Rejection response**

| Result                 | Source  | Reason/Diagnosis                           | Explanation   |
|------------------------|---|--|---|
| 1 - rejected-permanent | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - application-context-name-not supported | The user is informed. Details are logged in central log file. |
|                        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|                        |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|                        | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|                        | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |

| Result                 | Source  | Reason/Diagnosis                           | Explanation   |
|------------------------|---|--|---|
| 2 - rejected-transient | 1 - DICOM UL service-user                                     | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
|                        |   | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|                        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|                        | 2 - DICOM UL service-provider (ACSE related function)         | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|                        |   | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        | 3 - DICOM UL service-provider (Presentation related function) | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|                        |   | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|                        |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
|                        |   |  |   |

The behavior of the AE on receiving an association abort is summarized in the next table.

**Table 12: Association Abort Handling**

| Source  | Reason/Diagnosis                | Behavior   |
|---|---------------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU            | When received, terminates the connection and logs the event. |
|   | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|   | 4 - unrecognized-PDU-parameter  | When received, terminates the connection and logs the event. |
|   | 5 - unexpected-PDU-parameter    | When received, terminates the connection and logs the event. |
|   | 6 - invalid-PDU-parameter-value | When received, terminates the connection and logs the event. |

## 4.2.1.3.1. (Real-World) Activity – Verification as SCU

### 4.2.1.3.1.1. Description and Sequencing of Activities

The Archive AE sends associations to systems to verify application level communication using the C-ECHO command.

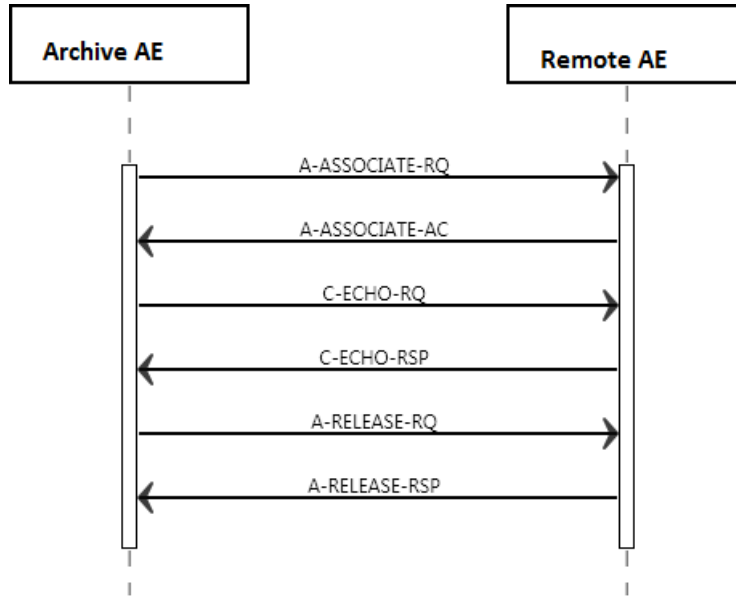


Figure 5: (Real World) Activity - Verification as SCU

### 4.2.1.3.1.2. Proposed Presentation Contexts

The Archive AE proposes the following presentation contexts to the remote AE during the association request before sending the C-ECHO.

Table 13: Proposed Presentation Contexts for (Real-World) Activity – Verification as SCU

| Presentation Context Table |                   |                           |                     |      |                      |
|----------------------------|-------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax            |                   | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                       | UID               | Name List                 | UID List            |      |                      |
| Verification SOP Class     | 1.2.840.10008.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|                            |                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                            |                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

### 4.2.1.3.1.3. SOP Specific Conformance for Verification SOP Class

The Archive AE provides standard conformance to Verification SOP Class.



### 4.2.1.3.1.3.1.

### Dataset Specific Conformance for Verification C-ECHO SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

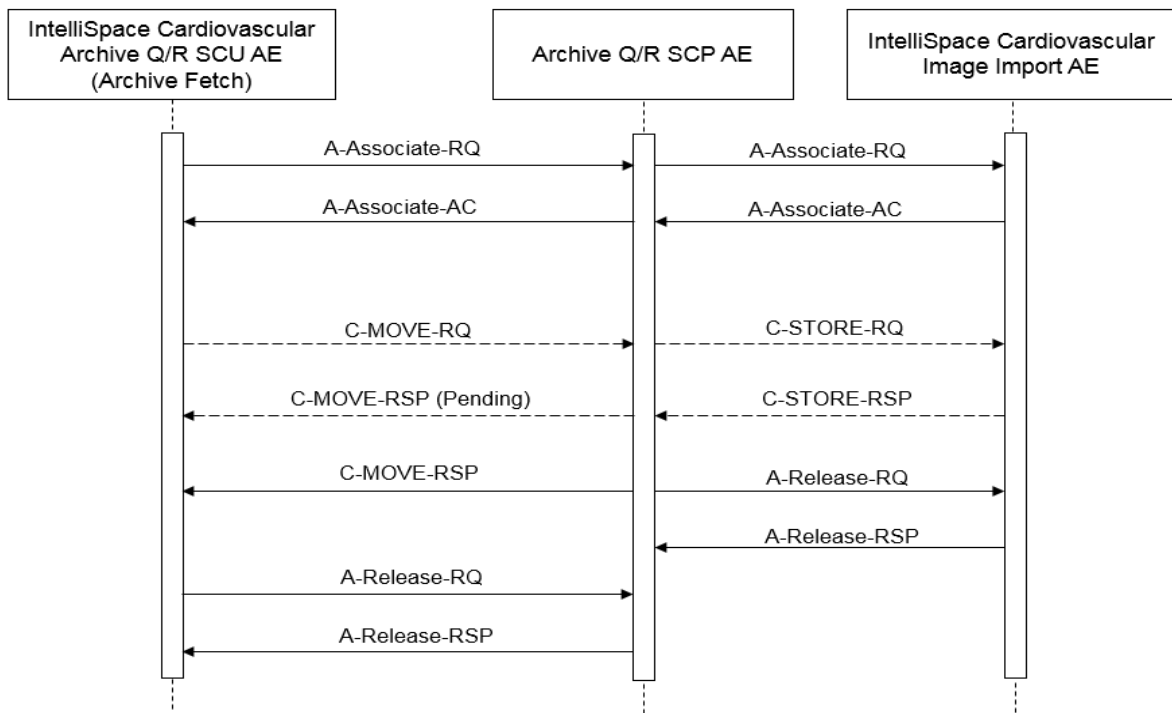
This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 14: Status Response**

| Service Status     | Error Code | Further Meaning                     | Behavior                             |
|--------------------|------------|-------------------------------------|--------------------------------------|
| Success            | 0000       | Confirmation                        | the SCU has successfully send C-ECHO |
| Other than success | xxxx       | Problems with sending the C-ECHO-RQ | Archive AE sends C-ECHO-RQ           |

### 4.2.1.3.2. (Real-World) Activity – MOVE as SCU

#### 4.2.1.3.2.1. Description and Sequencing of Activities



**Figure 6: (Real World) Activity - MOVE As SCU (Archive Fetch)**

Steps in fetch from DICOM Archive:

1. Send a DICOM C-MOVE (using Study UID from the database as identifier) request to the DICOM archive for

each study to be fetched.

2. In response to the C-MOVE, DICOM Archive performs a C-STORE to IntelliSpace Cardiovascular data Import AE.

#### 4.2.1.3.2.2. Proposed Presentation Contexts

The presentation contexts proposed by Archive QR SCU AE for (Real-World) Activity – C-MOVE are defined in next table.

**Table 15: Proposed Presentation Contexts for (Real-World) Activity – MOVE As SCU**

| Presentation Context Table                       |                             |                           |                     |      |                      |
|--|-----------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                                  |                             | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name   | UID                         | Name List                 | UID List            |      |                      |
| Study Root QR Information Model - MOVE SOP Class | 1.2.840.10008.5.1.4.1.2.2.2 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                             | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                             | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

#### 4.2.1.3.2.3. SOP Specific Conformance for Study Root QR Information Model - MOVE SOP Class

Only Study level queries are supported.

The Archive QR SCU AE supports queries based on the combination of the following (Study level) attributes and attribute matching types (as defined in [DICOM] PS 3.4).

**Exceptions:**

1. If after setting up the connection and sending the move request, if no data is received from the external DICOM node before a (user configurable) time out has passed; the QR SCU AE aborts the connection.
2. If an error occurs on the external DICOM node while setting up the connection, the QR SCU AE will abort all actions related to the connection and report errors.
3. If no agreement between the two parties can be reached concerning communication parameters the connection will be closed and no query communications will take place.
4. If an error occurs on the DICOM Archive server during query communications, the DICOM Archive server will abort the connection.

## 4.2.1.3.2.3.1.

## Dataset Specific Conformance for Study Root QR Information Model - MOVE

### SOP Class C-MOVE-SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 16: Identifiers for MOVE Study Root Information Model as SCU**

| Study Root Information Model |           |    |                     |
|------------------------------|-----------|----|---------------------|
| Attribute Name               | Tag       | VR | Comment             |
| Query/Retrieve Level         | 0008,0052 | CS | STUDY               |
| Q/R Study level              |           |    |                     |
| Study Instance UID           | 0020,000D | UI | Universal Matching. |

C-MOVE-SCU acts on the possible Status Responses with are shown in the next Table.

**Table 17: DICOM Command response status handling behavior**

| Service Status | Error Code           | Further Meaning  | Behavior   |
|----------------|----------------------|--|--|
| Success        | 0000                 | Sub-operations complete – No failures                    | The Retrieve job is marked as Completed at the queue manager. The association is released.                       |
| Failed         | A900                 | Identifier does not match SOP class                      | The Retrieve job is marked as Failed at the queue manager. The association is released. The reason is logged.    |
|                | Cxxx                 | Unable to process  | The Retrieve job is marked as Failed at the queue manager. The association is released. The reason is logged.    |
| Refused        | A701                 | Out of resources – Unable to calculate number of matches | The Retrieve job is marked as Failed at the queue manager. The association is released. The reason is logged.    |
|                | A702                 | Out of resources – Unable to perform sub-operations      | The Retrieve job is marked as Failed at the queue manager. The association is released. The reason is logged.    |
|                | A801                 | Destination unknown                                      | The Retrieve job is marked as Failed at the queue manager. The association is released. The reason is logged.    |
| Pending        | FF00                 | Sub-operations are continuing                            | The Retrieve job continues.  |
| Warning        | B000                 | Sub-operations complete – One or more failures           | The Retrieve job is marked as Completed at the queue manager. The association is released. The reason is logged. |
| Cancel         | FE00                 | Sub-operations terminated due to Cancel indication       | The Retrieve job is marked as Failed at the queue manager. The association is released. The reason is logged.    |
|                | When no status match |  | The Retrieve job is marked as Failed at the queue manager. The association is released. The reason is logged.    |

The possible Communication Failures are listed here.

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**Table 18: DICOM Command Communication Failure Behavior**

| Exception                | Behavior   |
|--------------------------|--|
| Reply Time-out           | The job fails and the association is aborted. The reason is logged and reported to the user. |
| Association Time-out SCU | N/A  |
| Association Aborted      | The job fails. The reason is logged and reported to the user.                                |

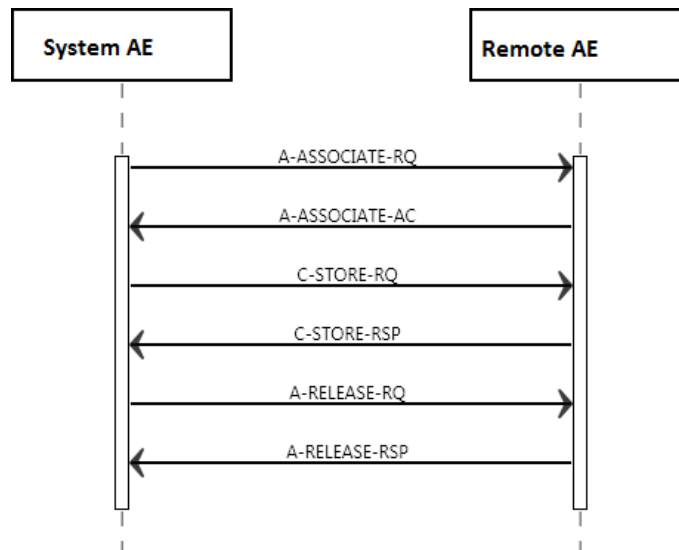
### 4.2.1.3.3. (Real-World) Activity – Image Export

#### 4.2.1.3.3.1. Description and Sequencing of Activities

In this chapter the Export of Instance (Archive Storage SCU) behavior of the IntelliSpace Cardiovascular will be described.

#### Normal flow of events for Image Export (Archive Storage SCU):

1. when the condition for Archiving of study/studies is met (based on the Archive Configuration settings); IntelliSpace Cardiovascular sets up a store connection and negotiates communication parameters with this Archive DICOM node. Connection setup is executed according to DICOM Store protocols, with IntelliSpace Cardiovascular acting as DICOM Store SCU.
2. After this connection is setup, IntelliSpace Cardiovascular send study/studies to the external DICOM node. Upon completion of this, the connection is closed. Start and end of the connection and data transfer are logged.



**Figure 7: (Real World) Activity – Export of Instances (Archive Storage SCU)**

#### 4.2.1.3.3.2. Proposed Presentation Contexts

The presentation contexts for the Export Instances are defined in the next table.

**Table 19: Proposed Presentation Contexts for (Real-World) Activity – Image Export**

| Presentation Context Table                   |                               |   |                                 |      |                      |
|--|-------------------------------|---|---------------------------------|------|----------------------|
| Abstract Syntax                              |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
| Name   | UID                           | Name List                                   | UID List                        |      |                      |
| Hardcopy Grayscale Image Storage (Retired)   | 1.2.840.10008.5.1.1.29        | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Hardcopy Color Image Storage (Retired)       | 1.2.840.10008.5.1.1.30        | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Computed Radiography Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.1     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Pres. SOP  | 1.2.840.10008.5.1.4.1.1.1.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Proc. SOP  | 1.2.840.10008.5.1.4.1.1.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |

**Presentation Context Table**

| Abstract Syntax                                     |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
| Digital Mammography X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Mammography X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP  | 1.2.840.10008.5.1.4.1.1.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP  | 1.2.840.10008.5.1.4.1.1.1.3.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone Modality LUT Storage (Retired)           | 1.2.840.10008.5.1.4.1.1.1.0   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax   |                                | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|---|--------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                            | Name List   | UID List                        |      |                      |
|   |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Encapsulated PDF Storage                                | 1.2.840.10008.5.1.4.1.1.1.04.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Standalone VOI LUT Storage SOP Class (Retired)          | 1.2.840.10008.5.1.4.1.1.1.1    | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Grayscale Softcopy Presentation State Storage SOP Class | 1.2.840.10008.5.1.4.1.1.1.1.1  | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| X-Ray Angiographic Image Storage SOP Class              | 1.2.840.10008.5.1.4.1.1.1.2.1  | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          | SCU  | None                 |
|   |                                | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|   |                                | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|   |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|   |                                | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
| X-Ray Radiofluoroscopic Image Storage SOP Class         | 1.2.840.10008.5.1.4.1.1.1.2.2  | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |

## Presentation Context Table

| Abstract Syntax   |                                  | Transfer Syntax                                   |                                 | Role                   | Extended Negotiation |
|---|----------------------------------|---|---------------------------------|------------------------|----------------------|
| Name  | UID                              | Name List   | UID List                        |                        |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |                        |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |                        |                      |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.1<br>2.3 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU                    | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |                        |                      |
|   |                                  | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |                        |                      |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |                        |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |                        |                      |
|   |                                  | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |                        |                      |
|   |                                  |   |                                 |                        |                      |
| Positron Emission Tomography Image Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.1<br>28  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |                        |                      |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |                        |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |                        |                      |
|   |                                  |   |                                 | Explicit VR Big Endian | 1.2.840.10008.1.2.2  |
| Standalone PET Curve Storage SOP Class (Retired)              | 1.2.840.10008.5.1.4.1.1.1<br>29  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |                        |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |                        |                      |
|   |                                  |   |                                 | Explicit VR Big Endian | 1.2.840.10008.1.2.2  |
| CT Image Storage SOP Class                                    | 1.2.840.10008.5.1.4.1.1.2        | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |                        |                      |

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**Presentation Context Table**

| Abstract Syntax                                |                             | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|-----------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                         | Name List   | UID List                        |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Nuclear Medicine Image Storage SOP Class       | 1.2.840.10008.5.1.4.1.1.2.0 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Ultrasound Multi-frame Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.3   | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|  |                             | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Ultrasound Multi-frame Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.3.1 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                             | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax                    |                                | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|------------------------------------|--------------------------------|---|---------------------------------|------|----------------------|
| Name                               | UID                            | Name List   | UID List                        |      |                      |
|                                    |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|                                    |                                | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| MR Image Storage SOP Class         | 1.2.840.10008.5.1.4.1.1.4      | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|                                    |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|                                    |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| RT Image Storage SOP Class         | 1.2.840.10008.5.1.4.1.1.4 81.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|                                    |                                | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|                                    |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| RT Dose Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.4 81.2 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|                                    |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| RT Structure Set Storage SOP Class | 1.2.840.10008.5.1.4.1.1.4 81.3 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|                                    |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Ultrasound Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.6      | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|                                    |                                | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|                                    |                                | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |

**Presentation Context Table**

| Abstract Syntax                           |                             | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|---|-----------------------------|---|---------------------------------|------|----------------------|
| Name                                      | UID                         | Name List   | UID List                        |      |                      |
|   |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|   |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Ultrasound Image Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.6.1 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|   |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|   |                             | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|   |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|   |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|   |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Raw Data Storage SOP Class                | 1.2.840.10008.5.1.4.1.1.6.6 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7   | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|   |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|   |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                             | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|-----------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                         | Name List   | UID List                        |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Multi-frame Grayscale Byte SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.2 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                             | Transfer Syntax                                   |                                    | Role | Extended Negotiation |
|--|-----------------------------|---|------------------------------------|------|----------------------|
| Name   | UID                         | Name List   | UID List                           |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2                  |      |                      |
| Multi-frame Grayscale Word SC Image Storage SOP Class  | 1.2.840.10008.5.1.4.1.1.7.3 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50             | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57<br>[Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1]    |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70             |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2                  |      |                      |
| Multi-frame True Color Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.4 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50             | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57<br>[Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1]    |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70             |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2                  |      |                      |

## Presentation Context Table

| Abstract Syntax                                |                                   | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                               | Name List                 | UID List            |      |                      |
| Standalone Overlay Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.8         | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Basic Text SR SOP Class                        | 1.2.840.10008.5.1.4.1.1.8<br>8.11 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Enhanced SR SOP Class                          | 1.2.840.10008.5.1.4.1.1.8<br>8.22 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Detail SR Storage - Trial (Retired)            | 1.2.840.10008.5.1.4.1.1.8<br>8.3  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Comprehensive SR SOP Class                     | 1.2.840.10008.5.1.4.1.1.8<br>8.33 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| X-Ray Radiation Dose SR SOP Class              | 1.2.840.10008.5.1.4.1.1.8<br>8.67 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Standalone Curve Storage SOP Class (Retired)   | 1.2.840.10008.5.1.4.1.1.9         | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

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**Presentation Context Table**

| Abstract Syntax                                 |                                   | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-----------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                               | Name List                                   | UID List                        |      |                      |
| General ECG Waveform Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.9<br>.1.2 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standard Hemodynamic Waveform Storage SOP Class | 1.2.840.10008.5.1.4.1.1.9<br>.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Procedure Log Storage SOP Class                 | 1.2.840.10008.5.1.4.1.1.8<br>8.40 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Key Object Selection Document Storage SOP Class | 1.2.840.10008.5.1.4.1.1.8<br>8.59 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced CT Image Storage SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.2<br>.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                   | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced MR Image Storage SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.4<br>.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                   | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax   |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| MR Spectroscopy Storage SOP Class [Note 1]                          | 1.2.840.10008.5.1.4.1.1.4.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Nuclear Medicine Image Storage (Retired)SOP Class [Note 1]          | 1.2.840.10008.5.1.4.1.1.5     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ambulatory ECG Waveform Storage SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.9.1.3 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Cardiac Electrophysiology Waveform Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.9.3.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Color Softcopy Presentation State Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Pseudo-Color Softcopy Presentation State Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |



**Presentation Context Table**

| Abstract Syntax   |                                    | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|------------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                                | Name List                                   | UID List                        |      |                      |
| Basic Voice Audio Waveform Storage SOP Class [Note 1]           | 1.2.840.10008.5.1.4.1.1.9<br>.4.1  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Blending Softcopy Presentation State Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.1<br>1.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced XA Image Storage SOP Class [Note 1]                    | 1.2.840.10008.5.1.4.1.1.1<br>2.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced XRF Image Storage SOP Class [Note 1]                   | 1.2.840.10008.5.1.4.1.1.1<br>2.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Registration Storage SOP Class [Note 1]                 | 1.2.840.10008.5.1.4.1.1.6<br>6.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Fiducials Storage SOP Class [Note 1]                    | 1.2.840.10008.5.1.4.1.1.6<br>6.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax                                     |                                  | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|----------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                              | Name List                                   | UID List                        |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Real World Value Mapping Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.67       | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Endoscopic Image Storage SOP Class [Note 1]      | 1.2.840.10008.5.1.4.1.1.77.1.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Endoscopic Image Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.77.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Microscopic Image Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.77.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Microscopic Image Storage SOP Class [Note 1]  | 1.2.840.10008.5.1.4.1.1.77.1.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax   |                                      | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|--------------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                                  | Name List                                   | UID List                        |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Slide-Coordinates Microscopic Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.7<br>7.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Photographic Image Storage SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.7<br>7.1.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Photographic Image Storage SOP Class                        | 1.2.840.10008.5.1.4.1.1.7<br>7.1.4.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ophthalmic Photography 8 Bit Image Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                      | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|--------------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                                  | Name List                                   | UID List                        |      |                      |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ophthalmic Photography 16 Bit Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.2 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Stereometric Relationship Storage SOP Class [Note 1]           | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.3 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Mammography CAD SR SOP Class [Note 1]                          | 1.2.840.10008.5.1.4.1.1.8<br>8.50    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Chest CAD SR SOP Class [Note 1]                                | 1.2.840.10008.5.1.4.1.1.8<br>8.65    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Beams Treatment Record Storage SOP Class [Note 1]           | 1.2.840.10008.5.1.4.1.1.4<br>81.4    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                   | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                               | Name List                 | UID List            |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Brachy Treatment Record Storage SOP Class [Note 1]          | 1.2.840.10008.5.1.4.1.1.4<br>81.6 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Treatment Summary Record Storage SOP Class [Note 1]         | 1.2.840.10008.5.1.4.1.1.4<br>81.7 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Plan Storage SOP Class [Note 1]                         | 1.2.840.10008.5.1.4.1.1.4<br>81.8 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Beams Treatment Record Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.4<br>81.9 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private X-Ray Image Storage                            | 1.3.46.670589.2.3.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Reconstructed X-ray Storage                    | 1.3.46.670589.2.4.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private iE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                    | Name List                 | UID List            |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Xcelera Info Object Storage              | 1.3.46.670589.2.6.1.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume New Storage          | 1.3.46.670589.5.0.1.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Synthetic Image Storage     | 1.3.46.670589.5.0.10   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio Analysis New Storage | 1.3.46.670589.5.0.11.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CX Synthetic Image Storage     | 1.3.46.670589.5.0.12   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Storage              | 1.3.46.670589.5.0.13   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Analysis Storage     | 1.3.46.670589.5.0.14   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

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**Presentation Context Table**

| Abstract Syntax  |                       | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                   | Name List                 | UID List            |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume Object New Storage | 1.3.46.670589.5.0.2.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Surface New Storage          | 1.3.46.670589.5.0.3.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio New Storage        | 1.3.46.670589.5.0.8.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CT Synthetic Image Storage   | 1.3.46.670589.5.0.9   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

Note 1: Not available in default configuration. Please consult customer service representative to enable this.

#### 4.2.1.3.3.3. SOP Specific Conformance for Storage SOP Classes

During DICOM based auto-forward, transfer negotiations may indicate that the original format of the data is not accepted by the target node. In such cases, the DICOM ARCHIVE server will try to apply one of the transfer syntax conversions indicated by '+', in order to get to transfer syntax that is supported by the external system. The Transfer syntax conversion is supported from SCU to SCP.

| Source Syntax                               | Destination Syntax |     |     |
|---|--------------------|-----|-----|
|   | ILE                | ELE | EBE |
| ILE   | -                  | +   | +   |
| ELE   | +                  | -   | +   |
| EBE   | +                  | +   | -   |
| JPEG Baseline                               | -                  | -   | -   |
| JPEG Lossless Non-hierarchical /Proc 14     | -                  | -   | -   |
| JPEG Lossless FOP Non-Hierarchical 14       | +                  | +   | +   |
| JPEG 2000 Image Compression (Lossless Only) | -                  | -   | -   |
| RLE   | +                  | -   | +   |

**Figure 8: Transfer Syntax Conversion from Source to Destination.**

The list of updated patient and study attributes are explained in the section [4.2.1.1](#) (before export to DICOM archive, all instances are updated with the latest study/patient information)

**Table 20: List of updated Patient Attributes**

| Attribute                        | DICOM Tag           |
|----------------------------------|---------------------|
| Last Name                        | Part of (0010,0010) |
| First name                       | Part of (0010,0010) |
| Middle name                      | Part of (0010,0010) |
| Date of birth                    | (0010,0030)         |
| Sex                              | (0010,0040)         |
| Issuer of Patient ID             | (0010,0021)         |
| MRN                              | (0010,0020)         |
| Alternate ID#                    | (0010,1000)         |
| Title                            | Part of (0010,0010) |
| Honorific                        | Part of (0010,0010) |
| Address 1                        | Part of (0010,1040) |
| Address 2 (if Address1 is empty) | Part of (0010,1040) |
| City                             | Part of (0010,1040) |
| State/Province                   | (0010,2152)         |
| Postal code                      | Part of (0010,1040) |
| Country                          | (0010,2150)         |
| Race                             | (0010,2160)         |
| Home phone                       | Part of (0010,2154) |



| Attribute      | DICOM Tag           |
|----------------|---------------------|
| Business phone | Part of (0010,2154) |
| Mobile phone   | Part of (0010,2154) |

**Table 21: List of updated Study Attributes**

| Attribute                       | DICOM Tag   |
|---------------------------------|-------------|
| Study Description               | (0008,1030) |
| Accession Number                | (0008,0050) |
| Body Part                       | (0018,0015) |
| Admitting Diagnoses Description | (0008,1080) |
| Performed By                    | (0008,1050) |
| Reading Physician               | (0008,1060) |
| Ordering Physician              | (0032,1032) |
| Reviewer                        | (300E,0008) |
| Referring Physician             | (0008,0090) |
| Institution Department Name     | (0008,1040) |
| Station Name                    | (0008,1010) |
| Study Comments                  | (0032,4000) |

**4.2.1.3.3.3.1.**

**Dataset Specific Conformance for C-STORE-RQ**

Details regarding the Dataset Specific response behavior will be reported in this section.

This includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

STORE-SCU acts on the Status Responses which are shown in the next table:

**Table 22: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning                           | Behavior                                  |
|----------------|------------|---|---|
| Success        | 0000       | Successful stored                         | Status will be logged.                    |
| Refused        | A700       | Data set does not match SOP class         | Status will be logged.                    |
|                | 0122       | SOP Class Not Supported                   | Status will be logged.                    |
| Warning        | B000       | Coercion of data elements                 | Status will be logged. Job will Continue. |
|                | B006       | Elements discarded                        | Status will be logged. Job will Continue. |
|                | B007       | Data set does not match SOP class         | Status will be logged Job will continue.  |
| Error          | 0110       | Error – Processing failure                | Status will be logged.                    |
|                | A900       | Error – Data set does not match SOP class | Status will be logged.                    |
|                | C000       | Error – Cannot understand                 | Status will be logged.                    |

| Service Status | Error Code | Further Meaning                                 | Behavior                     |
|----------------|------------|---|------------------------------|
|                | A701       | Error - Out of resources. Store operation fails | Association will be release. |

**Exceptions:**

1. If, after setting up the connection, no data can be sent to the external DICOM node for 2 minutes, IntelliSpace Cardiovascular will retry for 15 times with an interval of 2^n and then it will abort the connection.
2. If an error occurs on IntelliSpace Cardiovascular while setting up the connection, IntelliSpace Cardiovascular aborts and reports error.
3. If an error occurs on the external DICOM node while setting up the connection, IntelliSpace Cardiovascular will abort all actions related to that connection and report errors.
4. If no agreement between the two parties can be reached concerning communication parameters the connection will be closed and no data transfer will take place.
5. When a network error occurs during connection set up or during data transfer, IntelliSpace Cardiovascular will abort all actions related to the connection.
6. If an error occurs on IntelliSpace Cardiovascular during the data transfer, IntelliSpace Cardiovascular will notify the external DICOM node of this problem. After retrying notifying the external DICOM node of this problem for 15 times, with an interval of 2^n, the connection will be closed.

**Table 23: DICOM Command Communication Failure Behavior**

| Exception           | Behavior  |
|---------------------|---|
| Timeout             | The association is closed and the reason logged |
| Association aborted | The association is closed and the reason logged |

**4.2.1.3.4. (Real-World) Activity – Storage Commitment Push Model AS SCU**

**4.2.1.3.4.1. Description and Sequencing of Activities**

**Normal Flow of events:**

1. after the configured time, IntelliSpace Cardiovascular will initiate a Storage Commit request for the study that it stored into the DICOM Archive.
2. When a successful response from the DICOM archive is received, for this study, IntelliSpace Cardiovascular mark this study as correctly archived.

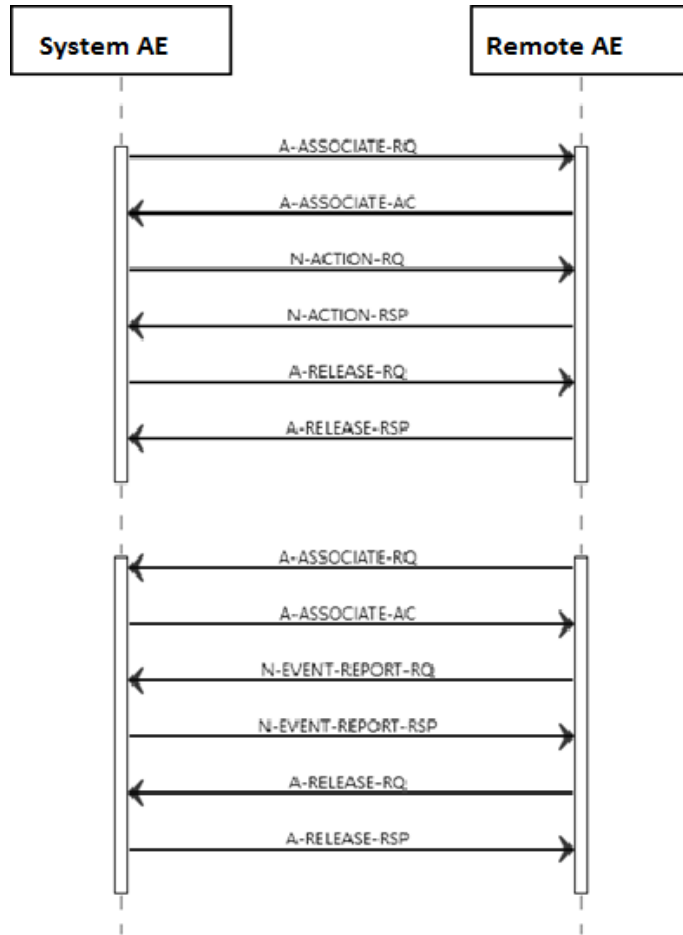


Figure 9: (Real World) Activity - Storage Commitment Push Model AS SCU

#### 4.2.1.3.4.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 24: Proposed Presentation Contexts for (Real-World) Activity – Storage Commitment Push Model AS SCU

| Presentation Context Table              |                      |                           |                     |      |                      |
|---|----------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                         |                      | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                                    | UID                  | Name List                 | UID List            |      |                      |
| Storage Commitment Push Model SOP Class | 1.2.840.10008.1.20.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|   |                      | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                      | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

### 4.2.1.3.4.3. SOP Specific Conformance for Storage Commitment Push Model SOP Class

The Archive AE (Storage Commitment) provides standard conformance to the Storage Commitment Push Model SOP Class.

#### 4.2.1.3.4.3.1. Dataset Specific Conformance for Storage Commitment Push Model SOP Class N-EVENT-REPORT-SCP

Details regarding the Dataset Specific response behavior will be reported in this section.

The N-EVENT-REPORT-SCP can send the next status responses as listed in the table below:

**Table 25: Status Response**

| Service Status | Error Code | Further Meaning   | Behavior  |
|----------------|------------|---|---|
| Success        | 0000       | Confirmation  | The association will be released. The reason is logged. |
| Failure        | 0119       | Class/Instance conflict; the SOP Class of an instance in the Referenced SOP Instance Sequence did not correspond to the SOP class of the SOP Instance stored at the SCP | The reason is logged.                                   |
|                | 0213       | Resource limitation The SCP does not currently have enough resources to store the requested SOP Instance(s).  | The reason is logged.                                   |
|                | 0110       | Processing failure A general failure in processing the operation was encountered  | The reason is logged.                                   |
|                | 0112       | No such object instance One or more of the elements in the Referenced SOP Instance Sequence was not available.  | The reason is logged.                                   |
|                | 0122       | Referenced SOP Class not supported Storage Commitment has been requested for a SOP Instance with a SOP Class that is not supported by the SCP.                          | The reason is logged.                                   |
|                | 0131       | Duplicate transaction UID The Transaction UID of the Storage Commitment Request is already in use.  | The reason is logged.                                   |

**Table 26: DICOM Command Communication Failure Behavior**

| Exception                | Behavior                     |
|--------------------------|------------------------------|
| Reply Time-out           | The association is released. |
| Association Time-out SCU | The association is released. |
| Association Aborted      | The association is released. |

## 4.2.1.3.4.3.2.

## Dataset Specific Conformance for Storage Commitment Push Model SOP

### Class N-ACTION-SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 27: Storage Commitment Attribute for N-ACTION-RQ**

| Attribute Name                   | Tag       | Comment |
|----------------------------------|-----------|---------|
| <b>Storage Commitment Module</b> |           |         |
| Transaction UID                  | 0008,1195 | -       |
| Referenced SOP Sequence          | 0008,1199 | -       |
| >Referenced SOP Class UID        | 0008,1150 | -       |
| >Referenced SOP Instance UID     | 0008,1155 | -       |

The N-ACTION-SCU will act the status responses as listed in the table below:

**Table 28: DICOM command response status handling behavior**

| Service Status     | Error Code | Further Meaning                            | Behavior  |
|--------------------|------------|--|---|
| Success            | 0000       | Confirmation                               | The association will not release. The reason is logged. |
| Other than Success | xxxx       | Problems with sending the N-ACTION Request | The reason is logged.                                   |

During the N-ACTION-SCU communication the next failures can occur:

**Table 29: DICOM Command Communication Failure Behavior**

| Exception                | Behavior                     |
|--------------------------|------------------------------|
| Reply Time-out           | The association is released. |
| Association Time-out SCU | The association is released. |
| Association Aborted      | The association is released. |

### Exceptions:

1. After setting up the connection, if no data can be sent to the external node for 60 seconds, IntelliSpace Cardiovascular aborts the connection and reports an error.
2. An error occurs on the target node while setting up the connection. If the retries are unsuccessful, the system will mark the data for later archiving.
3. If an error or warning concerning data transfer is received from the target node during data transfer. If it is related to the data being send IntelliSpace Cardiovascular tries to correct the cause of the error

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4. When IntelliSpace Cardiovascular cannot setup connection with the DICOM Archive, IntelliSpace Cardiovascular will retry for 3 times (configurable). If within these retries, if it is still not possible to setup the connection, the study will be re-archived, conforms its own retry mechanism and a warning will be reported.
5. When IntelliSpace Cardiovascular does not receive a storage commit report within 72 hours, the study will be re-archived, conforms its own retry mechanism and a warning will be reported.
6. When the IntelliSpace Cardiovascular receives a storage commit response other than successful, the study will be re-archived, conforms to its own retry mechanism and a warning will be reported.

#### 4.2.1.4. Association Acceptance Policy

The Application Entity may reject Association attempts as shown in the table below.

**Table 30: Association Reject Reasons**

| Result                 | Source  | Reason/Diagnosis                           | Behavior  |
|------------------------|---|--|---|
| 1 - rejected permanent | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|                        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|                        |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|                        | 2 - DICOM UL service provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|                        | 3 - DICOM UL service provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|                        |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
| 2 - rejected-transient | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|                        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|                        |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |

| Result | Source  | Reason/Diagnosis                   | Behavior   |
|--------|---|------------------------------------|--|
|        | 2 - DICOM UL service provider (ACSE related function)         | 1 - no-reason-given                | The user is informed. Details are logged in central log file.  |
|        |   | 2 - protocol-version-not-supported | The user is informed. Details are logged in central log file.d |
|        | 3 - DICOM UL service provider (Presentation related function) | 1 - temporary-congestion           | The user is informed. Details are logged in central log file.  |
|        |   | 2 - local-limit-exceeded           | The user is informed. Details are logged in central log file.  |

The behavior of the AE for sending an association abort is summarized in the next table.

**Table 31: Association Abort Policies**

| Source  | Reason/Diagnosis                | Behavior  |
|---|---------------------------------|---|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | Notifies Remote AE, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | Notifies Remote AE, terminates the connection and logs the event  |
|   | 1 - unrecognized-PDU            | Notifies Remote AE, terminates the connection and logs the event  |
|   | 2 - unexpected-PDU              | Notifies Remote AE, terminates the connection and logs the event  |
|   | 4 - unrecognized-PDU parameter  | Notifies Remote AE, terminates the connection and logs the event  |
|   | 5 - unexpected-PDU parameter    | Notifies Remote AE, terminates the connection and logs the event  |
|   | 6 - invalid-PDU-parameter value | Notifies Remote AE, terminates the connection and logs the event  |

#### 4.2.1.4.1. (Real-World) Activity – Image Import as SCP

##### 4.2.1.4.1.1. Description and Sequencing of Activities

As defined by the IntelliSpace Cardiovascular System RWA Import instances, the Import image AE acts as a Storage SCP for any DICOM Archive that is configured on the IntelliSpace Cardiovascular System, using an accepted presentation context.

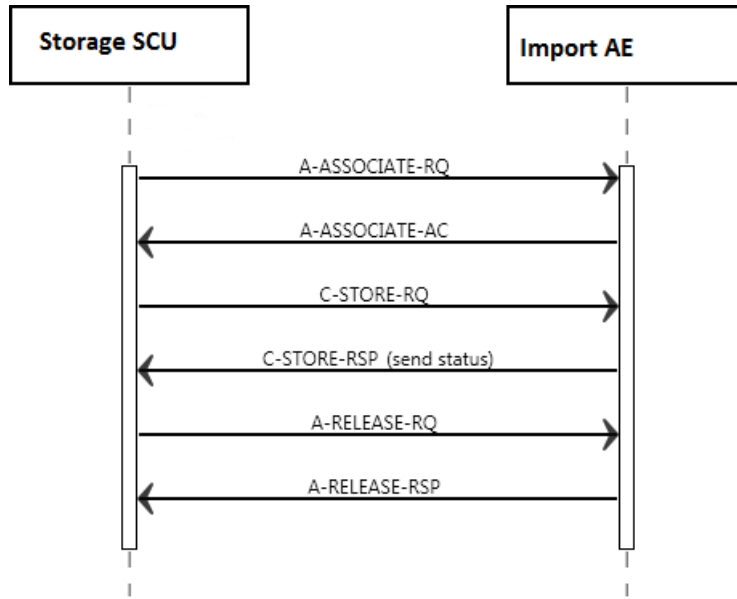


Figure 10: Real World Activity- Storage as SCP

The Import Image AE accepts associations from other systems that wish to store instances in the IntelliSpace Cardiovascular System database, using the C-STORE command.

#### 4.2.1.4.1.2. Accepted Presentation Contexts

The accepted presentation contexts for Image Import are listed in the next table.

Table 32: Acceptable Presentation Contexts for (Real-World) Activity – Image Import

| Presentation Context Table                 |                        |                           |                     |      |                      |
|--|------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                            |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                                       | UID                    | Name List                 | UID List            |      |                      |
| Hardcopy Grayscale Image Storage (Retired) | 1.2.840.10008.5.1.1.29 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Hardcopy Color Image Storage (Retired)     | 1.2.840.10008.5.1.1.30 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |



## Presentation Context Table

| Abstract Syntax                                     |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
| Computed Radiography Image Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.1     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Pres. SOP         | 1.2.840.10008.5.1.4.1.1.1.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Proc. SOP         | 1.2.840.10008.5.1.4.1.1.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Mammography X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   |                               | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |

**Presentation Context Table**

| Abstract Syntax                                     |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
| Digital Mammography X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.2.1 | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP  | 1.2.840.10008.5.1.4.1.1.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP  | 1.2.840.10008.5.1.4.1.1.1.3.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone Modality LUT Storage (Retired)           | 1.2.840.10008.5.1.4.1.1.10    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Encapsulated PDF Storage                            | 1.2.840.10008.5.1.4.1.1.104.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   | 1.2.840.10008.5.1.4.1.1.11    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |

**Presentation Context Table**

| Abstract Syntax   |                              | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                          | Name List                                   | UID List                        |      |                      |
| Standalone VOI LUT Storage SOP Class (Retired)                |                              | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                              | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Grayscale Softcopy Presentation State Storage SOP Class       | 1.2.840.10008.5.1.4.1.1.11.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                              | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                              | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| X-Ray Angiographic Image Storage SOP Class                    | 1.2.840.10008.5.1.4.1.1.12.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                              | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                              | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                              | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| X-Ray Radiofluoroscopic Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.12.2 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                              | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                              | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                              | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.12.3 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                              | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                              | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                              | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   |                              | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |

**Presentation Context Table**

| Abstract Syntax                                      |                             | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|-----------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                         | Name List                                   | UID List                        |      |                      |
| Positron Emission Tomography Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.128 | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone PET Curve Storage SOP Class (Retired)     | 1.2.840.10008.5.1.4.1.1.129 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                             | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| CT Image Storage SOP Class                           | 1.2.840.10008.5.1.4.1.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                             | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Nuclear Medicine Image Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.20  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                             | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ultrasound Multi-frame Image Storage (Retired)       | 1.2.840.10008.5.1.4.1.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                             | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|  | 1.2.840.10008.5.1.4.1.1.3.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |

**Presentation Context Table**

| Abstract Syntax                                |                                   | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|-----------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                               | Name List                                   | UID List                        |      |                      |
| Ultrasound Multi-frame Image Storage SOP Class |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                   | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| MR Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.4         | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                   | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.48<br>1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                   | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Dose Storage SOP Class                      | 1.2.840.10008.5.1.4.1.1.48<br>1.2 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Structure Set Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.48<br>1.3 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|  | 1.2.840.10008.5.1.4.1.1.6         | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |

**Presentation Context Table**

| Abstract Syntax  |                             | Transfer Syntax                             |                                  | Role | Extended Negotiation |
|--|-----------------------------|---|----------------------------------|------|----------------------|
| Name   | UID                         | Name List                                   | UID List                         |      |                      |
| Ultrasound Image Storage (Retired)                               |                             | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1              |      |                      |
|  |                             | Implicit VR Little Endian                   | 1.2.840.10008.1.2                |      |                      |
| Ultrasound Image Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.6.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2              | SCP  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.5 7[Note 1]  |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.9 0 [Note 1] |      |                      |
|  |                             | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1              |      |                      |
|  |                             | Implicit VR Little Endian                   | 1.2.840.10008.1.2                |      |                      |
| Raw Data Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.66  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2              | SCP  | None                 |
|  |                             | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1              |      |                      |
|  |                             | Implicit VR Little Endian                   | 1.2.840.10008.1.2                |      |                      |
| Secondary Capture Image Storage SOP Class                        | 1.2.840.10008.5.1.4.1.1.7   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2              | SCP  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.5 7 [Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.9 0 [Note 1] |      |                      |
|  |                             | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1              |      |                      |
|  |                             | Implicit VR Little Endian                   | 1.2.840.10008.1.2                |      |                      |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2              | SCP  | None                 |
|  |                             | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1              |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.9 0 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|-------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                           | Name List                                   | UID List                        |      |                      |
|  |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Multi-frame Grayscale Byte SC Image Storage SOP Class  | 1.2.840.10008.5.1.4.1.1.7.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Multi-frame Grayscale Word SC Image Storage SOP Class  | 1.2.840.10008.5.1.4.1.1.7.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Multi-frame True Color Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone Overlay Storage SOP Class (Retired)         | 1.2.840.10008.5.1.4.1.1.8     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Basic Text SR SOP Class                                | 1.2.840.10008.5.1.4.1.1.88.11 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax                                 |                               | Transfer Syntax           |                     | Role | Extended Negotiation |
|---|-------------------------------|---------------------------|---------------------|------|----------------------|
| Name  | UID                           | Name List                 | UID List            |      |                      |
|   |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Enhanced SR SOP Class                           | 1.2.840.10008.5.1.4.1.1.88.22 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Detail SR Storage - Trial (Retired)             | 1.2.840.10008.5.1.4.1.1.88.3  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Comprehensive SR SOP Class                      | 1.2.840.10008.5.1.4.1.1.88.33 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| X-Ray Radiation Dose SR SOP Class               | 1.2.840.10008.5.1.4.1.1.88.67 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Standalone Curve Storage SOP Class (Retired)    | 1.2.840.10008.5.1.4.1.1.9     | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| General ECG Waveform Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.9.1.2 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Standard Hemodynamic Waveform Storage SOP Class | 1.2.840.10008.5.1.4.1.1.9.2.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |



**Presentation Context Table**

| Abstract Syntax                                 |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Procedure Log Storage SOP Class                 | 1.2.840.10008.5.1.4.1.1.88.40 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Key Object Selection Document Storage SOP Class | 1.2.840.10008.5.1.4.1.1.88.59 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced CT Image Storage SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.2.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced MR Image Storage SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.4.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| MR Spectroscopy Storage SOP Class [Note 1]      | 1.2.840.10008.5.1.4.1.1.4.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   | 1.2.840.10008.5.1.4.1.1.5     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |

**Presentation Context Table**

| Abstract Syntax   |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
| Nuclear Medicine Image Storage (Retired)SOP Class [Note 1]          |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ambulatory ECG Waveform Storage SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.9.1.3 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Cardiac Electrophysiology Waveform Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.9.3.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Color Softcopy Presentation State Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.11.2  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Pseudo-Color Softcopy Presentation State Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.11.3  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Basic Voice Audio Waveform Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.9.4.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Blending Softcopy Presentation State Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.11.4  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax                                     |                                | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|--------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                            | Name List                                   | UID List                        |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced XA Image Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.12.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced XRF Image Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.12.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Registration Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.66.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Fiducials Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.66.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Real World Value Mapping Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.67     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   |                                | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |

**Presentation Context Table**

| Abstract Syntax   |                                  | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|----------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                              | Name List                                   | UID List                        |      |                      |
| VL Endoscopic Image Storage SOP Class [Note 1]                    | 1.2.840.10008.5.1.4.1.1.77.1.1   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Endoscopic Image Storage SOP Class [Note 1]                 | 1.2.840.10008.5.1.4.1.1.77.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Microscopic Image Storage SOP Class [Note 1]                   | 1.2.840.10008.5.1.4.1.1.77.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Microscopic Image Storage SOP Class [Note 1]                | 1.2.840.10008.5.1.4.1.1.77.1.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Slide-Coordinates Microscopic Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.77.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                  | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|----------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                              | Name List                                   | UID List                        |      |                      |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Photographic Image Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.77.1.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Photographic Image Storage SOP Class [Note 1]            | 1.2.840.10008.5.1.4.1.1.77.1.4.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ophthalmic Photography 8 Bit Image Storage SOP Class [Note 1]  | 1.2.840.10008.5.1.4.1.1.77.1.5.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                  | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|  |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ophthalmic Photography 16 Bit Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.77.1.5.2 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                  | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                  | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|----------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                              | Name List                                   | UID List                        |      |                      |
|  |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Stereometric Relationship Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.77.1.5.3 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Mammography CAD SR SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.88.50    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Chest CAD SR SOP Class [Note 1]                        | 1.2.840.10008.5.1.4.1.1.88.65    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Beams Treatment Record Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.48.1.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Brachy Treatment Record Storage SOP Class [Note 1]  | 1.2.840.10008.5.1.4.1.1.48.1.6   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Treatment Summary Record Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.48.1.7   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

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**Presentation Context Table**

| Abstract Syntax  |                                   | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                               | Name List                 | UID List            |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Plan Storage SOP Class [Note 1]                         | 1.2.840.10008.5.1.4.1.1.48<br>1.8 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Beams Treatment Record Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.48<br>1.9 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private X-Ray Image Storage                            | 1.3.46.670589.2.3.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Reconstructed X-ray Storage                    | 1.3.46.670589.2.4.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private iE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Xcelera Info Object Storage                    | 1.3.46.670589.2.6.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume New Storage                | 1.3.46.670589.5.0.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                    | Name List                 | UID List            |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Synthetic Image Storage     | 1.3.46.670589.5.0.10   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio Analysis New Storage | 1.3.46.670589.5.0.11.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CX Synthetic Image Storage     | 1.3.46.670589.5.0.12   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Storage              | 1.3.46.670589.5.0.13   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Analysis Storage     | 1.3.46.670589.5.0.14   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume Object New Storage   | 1.3.46.670589.5.0.2.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Surface New Storage            | 1.3.46.670589.5.0.3.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |



**Presentation Context Table**

| Abstract Syntax                                      |                       | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                   | Name List                 | UID List            |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio New Storage      | 1.3.46.670589.5.0.8.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CT Synthetic Image Storage | 1.3.46.670589.5.0.9   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

Note 1: Not available in default configuration. Please consult customer service representative to enable this. The IntelliSpace Cardiovascular System does not support extended negotiations for Image Import.

The order of the proposed transfer syntaxes is configurable. Default the ELE transfer syntax is preferred.

**4.2.1.4.1.3. SOP Specific Conformance for Storage SOP Classes**

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The possible Communication Failures and the possible Status Responses during a C-STORE-RQ are listed in the next tables below.

**4.2.1.4.1.3.1. Dataset Specific Conformance for C-STORE-RSP**

Possible status responses during the C-STORE responses are shown in the next table:

**Table 33: Status Response**

| Service Status | Error Code | Further Meaning                          | Behavior         |
|----------------|------------|--|------------------|
| Success        | 0000       | Successful stored                        | Reason is logged |
| Failure        | A7xx       | Refused: Out of Resources                | Reason is logged |
|                | A9xx       | Error: Data Set does not match SOP Class | Reason is logged |
|                | Cxxx       | Error: cannot understand                 | Reason is logged |
| Warning        | B000       | Coercion of Data Elements                | Reason is logged |

| Service Status | Error Code | Further Meaning                   | Behavior         |
|----------------|------------|-----------------------------------|------------------|
|                | B007       | Data Set does not match SOP Class | Reason is logged |
|                | B006       | Elements Discarded                | Reason is logged |

The possible network communication failures are shown in the following table:

**Table 34: Communication Failure Behavior for C-STORE-RSP.**

| Exception                | Behavior  |
|--------------------------|---|
| ARTIM Time-out           | The store job fails in case of association setup. The reason is logged. |
| Reply Time-out           | The store job fails and association is aborted. The reason is logged.   |
| Association Time-out SCU | The association is released.  |
| Association aborted      | The store job fails. The reason is logged.                              |

## 4.2.2. Auto Export AE

Details of this specific Application Entity is specified in this section.

### 4.2.2.1. SOP Classes

The Image Export AE is used for exporting DICOM Instances (images, objects) from IntelliSpace Cardiovascular Server to remote system. The Image Export AE makes use of the following DICOM functions:

- Verification as SCU, which uses C-ECHO service element.
- Storage as SCU, which uses C-STORE as service element.
- Patient / Study are always updated with the latest information for the exported studies.

These DICOM functions will be described in the following subsections.

The Auto Export Application Entity provides Standard Conformance to the following SOP Classes:

**Table 35: SOP Classes for Auto Export AE**

| SOP Class Name                                      | SOP Class UID                 | SCU | SCP |
|---|-------------------------------|-----|-----|
| Verification SOP Class                              | 1.2.840.10008.1.1             | Yes | No  |
| Hardcopy Grayscale Image Storage (Retired)          | 1.2.840.10008.5.1.1.29        | Yes | No  |
| Hardcopy Color Image Storage (Retired)              | 1.2.840.10008.5.1.1.30        | Yes | No  |
| Computed Radiography Image Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.1     | Yes | No  |
| Digital X-Ray Image Storage - For Pres. SOP         | 1.2.840.10008.5.1.4.1.1.1.1   | Yes | No  |
| Digital X-Ray Image Storage - For Proc. SOP         | 1.2.840.10008.5.1.4.1.1.1.1.1 | Yes | No  |
| Digital Mammography X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.2   | Yes | No  |

| SOP Class Name   | SOP Class UID                 | SCU | SCP |
|--|-------------------------------|-----|-----|
| Digital Mammography X-Ray Image Storage - Proc. SOP              | 1.2.840.10008.5.1.4.1.1.1.2.1 | Yes | No  |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP               | 1.2.840.10008.5.1.4.1.1.1.3   | Yes | No  |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP               | 1.2.840.10008.5.1.4.1.1.1.3.1 | Yes | No  |
| CT Image Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.2     | Yes | No  |
| Ultrasound Multi-frame Image Storage (Retired)                   | 1.2.840.10008.5.1.4.1.1.3     | Yes | No  |
| Ultrasound Multi-frame Image Storage SOP Class                   | 1.2.840.10008.5.1.4.1.1.3.1   | Yes | No  |
| MR Image Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.4     | Yes | No  |
| Ultrasound Image Storage (Retired)                               | 1.2.840.10008.5.1.4.1.1.6     | Yes | No  |
| Ultrasound Image Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.6.1   | Yes | No  |
| Secondary Capture Image Storage SOP Class                        | 1.2.840.10008.5.1.4.1.1.7     | Yes | No  |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1   | Yes | No  |
| Multi-frame Grayscale Byte SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.2   | Yes | No  |
| Multi-frame Grayscale Word SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.3   | Yes | No  |
| Multi-frame True Color Secondary Capture Image Storage           | 1.2.840.10008.5.1.4.1.1.7.4   | Yes | No  |
| Standalone Overlay Storage SOP Class (Retired)                   | 1.2.840.10008.5.1.4.1.1.8     | Yes | No  |
| Standalone Curve Storage SOP Class (Retired)                     | 1.2.840.10008.5.1.4.1.1.9     | Yes | No  |
| General ECG Waveform Storage SOP Class                           | 1.2.840.10008.5.1.4.1.1.9.1.2 | Yes | No  |
| Standard Hemodynamic Waveform Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.9.2.1 | Yes | No  |
| Standalone Modality LUT Storage (Retired)                        | 1.2.840.10008.5.1.4.1.1.10    | Yes | No  |
| Standalone VOI LUT Storage SOP Class (Retired)                   | 1.2.840.10008.5.1.4.1.1.11    | Yes | No  |
| Grayscale Softcopy Presentation State Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.11.1  | Yes | No  |
| X-Ray Angiographic Image Storage SOP Class                       | 1.2.840.10008.5.1.4.1.1.12.1  | Yes | No  |
| X-Ray Radiofluoroscopic Image Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.12.2  | Yes | No  |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired)    | 1.2.840.10008.5.1.4.1.1.12.3  | Yes | No  |
| Nuclear Medicine Image Storage SOP Class                         | 1.2.840.10008.5.1.4.1.1.20    | Yes | No  |
| Raw Data Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.66    | Yes | No  |
| Detail SR Storage - Trial (Retired)                              | 1.2.840.10008.5.1.4.1.1.88.3  | Yes | No  |
| Basic Text SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.11 | Yes | No  |
| Enhanced SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.22 | Yes | No  |
| Comprehensive SR SOP Class                                       | 1.2.840.10008.5.1.4.1.1.88.33 | Yes | No  |
| Procedure Log Storage SOP Class                                  | 1.2.840.10008.5.1.4.1.1.88.40 | Yes | No  |
| Key Object Selection Document Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.88.59 | Yes | No  |
| X-Ray Radiation Dose SR SOP Class                                | 1.2.840.10008.5.1.4.1.1.88.67 | Yes | No  |
| Encapsulated PDF Storage   | 1.2.840.10008.5.1.4.1.1.104.1 | Yes | No  |
| Positron Emission Tomography Image Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.128   | Yes | No  |

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| SOP Class Name   | SOP Class UID                 | SCU | SCP |
|--|-------------------------------|-----|-----|
| Standalone PET Curve Storage SOP Class (Retired)               | 1.2.840.10008.5.1.4.1.1.129   | Yes | No  |
| RT Image Storage SOP Class                                     | 1.2.840.10008.5.1.4.1.1.481.1 | Yes | No  |
| RT Dose Storage SOP Class                                      | 1.2.840.10008.5.1.4.1.1.481.2 | Yes | No  |
| RT Structure Set Storage SOP Class                             | 1.2.840.10008.5.1.4.1.1.481.3 | Yes | No  |
| RT Plan Storage SOP Class                                      | 1.2.840.10008.5.1.4.1.1.481.5 | Yes | No  |
| Philips Private X-Ray Image Storage                            | 1.3.46.670589.2.3.1.1         | Yes | No  |
| Philips Private Reconstructed X-ray Storage                    | 1.3.46.670589.2.4.1.1         | Yes | No  |
| Philips Private iE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1         | Yes | No  |
| Philips Private Xcelera Info Object Storage                    | 1.3.46.670589.2.65.1.1        | Yes | No  |
| Philips Private ViewForum 3D Volume New Storage                | 1.3.46.670589.5.0.1.1         | Yes | No  |
| Philips Private ViewForum 3D Volume Object New Storage         | 1.3.46.670589.5.0.2.1         | Yes | No  |
| Philips Private ViewForum Surface New Storage                  | 1.3.46.670589.5.0.3.1         | Yes | No  |
| Philips Private ViewForum MR Cardio New Storage                | 1.3.46.670589.5.0.8.1         | Yes | No  |
| Philips Private ViewForum CT Synthetic Image Storage           | 1.3.46.670589.5.0.9           | Yes | No  |
| Philips Private ViewForum MR Synthetic Image Storage           | 1.3.46.670589.5.0.10          | Yes | No  |
| Philips Private ViewForum MR Cardio Analysis New Storage       | 1.3.46.670589.5.0.11.1        | Yes | No  |
| Philips Private ViewForum CX Synthetic Image Storage           | 1.3.46.670589.5.0.12          | Yes | No  |
| Philips Private ViewForum Perfusion Storage                    | 1.3.46.670589.5.0.13          | Yes | No  |
| Philips Private ViewForum Perfusion Analysis Storage           | 1.3.46.670589.5.0.14          | Yes | No  |

Note that any SOP specific behavior is documented later in this conformance statement into the applicable SOP specific conformance section.

#### 4.2.2.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

##### 4.2.2.2.1. General

The DICOM standard application context is specified below.

**Table 36: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

#### 4.2.2.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

**Table 37: Number of associations as an Association Initiator for this AE**

| Description                                 | Value                       |
|---|-----------------------------|
| Maximum number of simultaneous associations | Limited by system resource. |

#### 4.2.2.2.3. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 38: DICOM Implementation Class and Version for Auto Export AE**

| Property                    | Value                |
|-----------------------------|----------------------|
| Implementation Class UID    | 1.3.46.670589.58.8.0 |
| Implementation Version Name | ISCV 8.0             |

#### 4.2.2.2.4. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 39: Communication Failure Behavior**

| Exception     | Behavior   |
|---------------|--|
| ARTIM Timeout | The association closed and the reason is logged. |

#### 4.2.2.3. Association Initiation Policy

The Application Entity will respond on a received reject Association attempt as shown in next table.

**Table 40: Association Rejection response**

| Result                 | Source                    | Reason/Diagnosis                           | Explanation   |
|------------------------|---------------------------|--|---|
| 1 - rejected-permanent | 1 - DICOM UL service-user | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |                           | 2 - application-context-name-not supported | The user is informed. Details are logged in central log file. |

| Result                 | Source  | Reason/Diagnosis                           | Explanation   |
|------------------------|---|--|---|
|                        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|                        |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|                        | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|                        | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|                        |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
| 2 - rejected-transient | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|                        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|                        |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|                        | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|                        | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|                        |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |

The behavior of the AE on receiving an association abort is summarized in the next table.

**Table 41: Association Abort Handling**

| Source  | Reason/Diagnosis         | Behavior   |
|---|--------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified | When received, terminates the connection and logs the event. |

| Source | Reason/Diagnosis                | Behavior   |
|--------|---------------------------------|--|
|        | 1 - unrecognized-PDU            | When received, terminates the connection and logs the event. |
|        | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|        | 4 - unrecognized-PDU-parameter  | When received, terminates the connection and logs the event. |
|        | 5 - unexpected-PDU-parameter    | When received, terminates the connection and logs the event. |
|        | 6 - invalid-PDU-parameter-value | When received, terminates the connection and logs the event. |

### 4.2.2.3.1. (Real-World) Activity – Verification as SCU

#### 4.2.2.3.1.1. Description and Sequencing of Activities

Auto Export AE initiates an association with the remote AE.

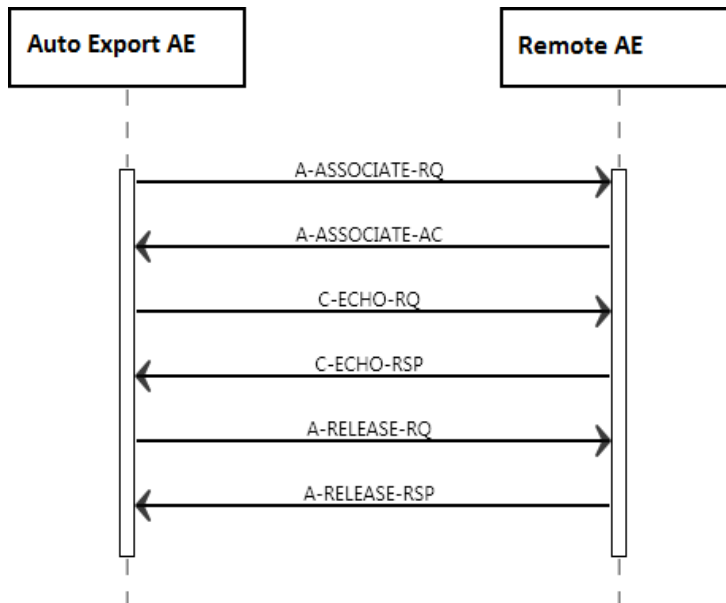


Figure 11: (Real World) Activity - Verification as SCU.

#### 4.2.2.3.1.2. Proposed Presentation Contexts

Each time an association is initiated, the association initiator proposes a number of presentation contexts to be used on that association. The association will be closed immediately upon receiving the response.

The presentation contexts proposed by DICOM Manager for (Real-World) Activity - Verification as SCU are defined in the following table.

**Table 42: Proposed Presentation Contexts for (Real-World) Activity – Verification as SCU**

| Presentation Context Table |                   |                           |                     |      |                      |
|----------------------------|-------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax            |                   | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                       | UID               | Name List                 | UID List            |      |                      |
| Verification SOP Class     | 1.2.840.10008.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|                            |                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                            |                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

#### 4.2.2.3.1.3. SOP Specific Conformance for Verification SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

##### 4.2.2.3.1.3.1. Dataset Specific Conformance for Verification C-ECHO SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 43: Status Response**

| Service Status     | Error Code | Further Meaning                  | Behavior  |
|--------------------|------------|----------------------------------|---|
| Success            | 0000       | Success, Matching is complete    | The SCU has successfully send C-ECHO.                       |
| Other than success | xxxx       | Problems with sending the C-ECHO | The SCU failed to send the C-ECHO; user is notified. Logged |

#### 4.2.2.3.2. (Real-World) Activity – Image Export

##### 4.2.2.3.2.1. Description and Sequencing of Activities

The (Real World) Activity - Image Export (Data Export) is explained here for a Normal flow of events:

1. IntelliSpace Cardiovascular sets up a connection with the target DICOM node and negotiates communications



parameters. If the two parties cannot agree on transfer using the data format stored on the server, IntelliSpace Cardiovascular will negotiate an alternative DICOM transfer syntax and create a converted copy of the study data to be transferred.

2. Then IntelliSpace Cardiovascular transfers data (complete study or SC only) to the target DICOM node depending on configuration setting, IntelliSpace Cardiovascular auto forwards studies completely, or only new deltas such as photo files or new instances coming from an acquisition system.

3. Upon completion of this transfer, the connection is closed. Connection set up and connection release, and data transfer takes place according to the DICOM Store protocol defined as part of the DICOM 3.0 standard.

The next figure shows the image (instance) export functionality.

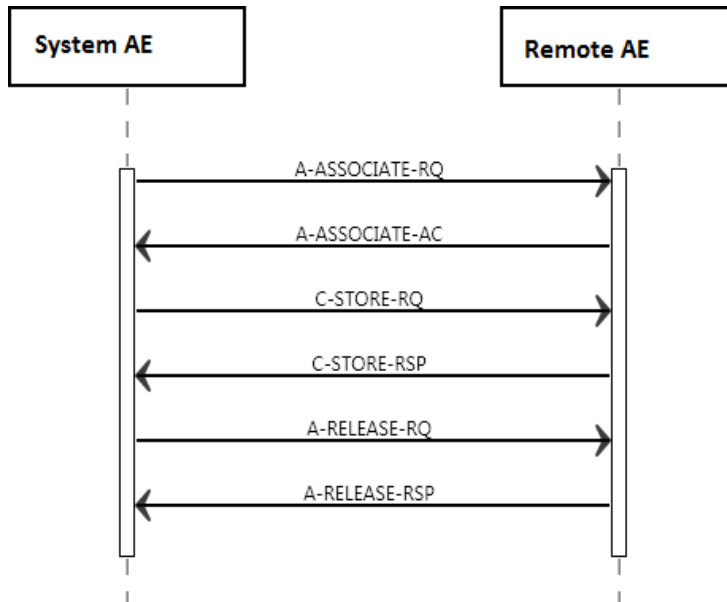


Figure 12: (Real World) Activity - Image Export (Data Export)

#### 4.2.2.3.2.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 44: Proposed Presentation Contexts for (Real-World) Activity – Image Export

| Presentation Context Table                 |                        |                           |                     |      |                      |
|--|------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                            |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                                       | UID                    | Name List                 | UID List            |      |                      |
| Hardcopy Grayscale Image Storage (Retired) | 1.2.840.10008.5.1.1.29 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

**Presentation Context Table**

| Abstract Syntax                                     |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Hardcopy Color Image Storage (Retired)              | 1.2.840.10008.5.1.1.30        | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Computed Radiography Image Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.1     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Pres. SOP         | 1.2.840.10008.5.1.4.1.1.1.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Proc. SOP         | 1.2.840.10008.5.1.4.1.1.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Mammography X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   |                               | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |

## Presentation Context Table

| Abstract Syntax                                     |                                | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|--------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                            | Name List                                   | UID List                        |      |                      |
| Digital Mammography X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.2.1  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP  | 1.2.840.10008.5.1.4.1.1.1.3    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP  | 1.2.840.10008.5.1.4.1.1.1.3.1  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone Modality LUT Storage (Retired)           | 1.2.840.10008.5.1.4.1.1.1.0    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Encapsulated PDF Storage                            | 1.2.840.10008.5.1.4.1.1.1.04.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone VOI LUT Storage SOP Class (Retired)      | 1.2.840.10008.5.1.4.1.1.1.1    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   | 1.2.840.10008.5.1.4.1.1.1.1.1  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

## Presentation Context Table

| Abstract Syntax   |                                  | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|---|----------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                              | Name List   | UID List                        |      |                      |
| Grayscale Softcopy Presentation State Storage SOP Class       |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| X-Ray Angiographic Image Storage SOP Class                    | 1.2.840.10008.5.1.4.1.1.1<br>2.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|   |                                  | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|   |                                  | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
| X-Ray Radiofluoroscopic Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.1<br>2.2 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.1<br>2.3 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|   |                                  | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |

**Presentation Context Table**

| Abstract Syntax                                      |                              | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                          | Name List   | UID List                        |      |                      |
|  |                              | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Positron Emission Tomography Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.1.28 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                              | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Standalone PET Curve Storage SOP Class (Retired)     | 1.2.840.10008.5.1.4.1.1.1.29 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Nuclear Medicine Image Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.2.0  | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Ultrasound Multi-frame Image Storage (Retired)       | 1.2.840.10008.5.1.4.1.1.3    | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                              | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|  |                              | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|  |                              | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Ultrasound Multi-frame Image Storage SOP Class       | 1.2.840.10008.5.1.4.1.1.3.1  | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                              | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |

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| Abstract Syntax                    |                                   | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|------------------------------------|-----------------------------------|---|---------------------------------|------|----------------------|
| Name                               | UID                               | Name List   | UID List                        |      |                      |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|                                    |                                   | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|                                    |                                   | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|                                    |                                   | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|                                    |                                   | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| MR Image Storage SOP Class         | 1.2.840.10008.5.1.4.1.1.4         | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                   | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| RT Image Storage SOP Class         | 1.2.840.10008.5.1.4.1.1.4<br>81.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                   | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| RT Dose Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.4<br>81.2 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| RT Structure Set Storage SOP Class | 1.2.840.10008.5.1.4.1.1.4<br>81.3 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|                                    | 1.2.840.10008.5.1.4.1.1.6         | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |

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| Abstract Syntax                           |                             | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|---|-----------------------------|---|---------------------------------|------|----------------------|
| Name                                      | UID                         | Name List   | UID List                        |      |                      |
| Ultrasound Image Storage (Retired)        |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|   |                             | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|   |                             | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|   |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Ultrasound Image Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.6.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|   |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|   |                             | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|   |                             | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|   |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Raw Data Storage SOP Class                | 1.2.840.10008.5.1.4.1.1.6.6 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|   |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |

## Presentation Context Table

| Abstract Syntax  |                             | Transfer Syntax                                   |                                    | Role | Extended Negotiation |
|--|-----------------------------|---|------------------------------------|------|----------------------|
| Name   | UID                         | Name List   | UID List                           |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2                  |      |                      |
|  |                             | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50             |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70             |      |                      |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50             | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57<br>[Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1]    |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70             |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2                  |      |                      |
| Multi-frame Grayscale Byte SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.2 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50             | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57<br>[Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1]    |      |                      |

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| Abstract Syntax  |                             | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|-----------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                         | Name List   | UID List                        |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Multi-frame Grayscale Word SC Image Storage SOP Class  | 1.2.840.10008.5.1.4.1.1.7.3 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Multi-frame True Color Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.4 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |

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| Presentation Context Table                     |                                   |                           |                     |      |                      |
|--|-----------------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                                |                                   | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name   | UID                               | Name List                 | UID List            |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Standalone Overlay Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.8         | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Basic Text SR SOP Class                        | 1.2.840.10008.5.1.4.1.1.8<br>8.11 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Enhanced SR SOP Class                          | 1.2.840.10008.5.1.4.1.1.8<br>8.22 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Detail SR Storage - Trial (Retired)            | 1.2.840.10008.5.1.4.1.1.8<br>8.3  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Comprehensive SR SOP Class                     | 1.2.840.10008.5.1.4.1.1.8<br>8.33 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| X-Ray Radiation Dose SR SOP Class              | 1.2.840.10008.5.1.4.1.1.8<br>8.67 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | SCU                  |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Standalone Curve Storage SOP Class (Retired)   | 1.2.840.10008.5.1.4.1.1.9         | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| General ECG Waveform Storage SOP Class         | 1.2.840.10008.5.1.4.1.1.9.<br>1.2 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|--------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                            | Name List                                   | UID List                        |      |                      |
| Standard Hemodynamic Waveform Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.9.2.1  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Procedure Log Storage SOP Class                            | 1.2.840.10008.5.1.4.1.1.8.8.40 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Key Object Selection Document Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.8.8.59 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced CT Image Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.2.1    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced MR Image Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.4.1    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| MR Spectroscopy Storage SOP Class [Note 1]                 | 1.2.840.10008.5.1.4.1.1.4.2    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Nuclear Medicine Image Storage (Retired)SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.5      | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

## Presentation Context Table

| Abstract Syntax   |                                 | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|---------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                             | Name List                                   | UID List                        |      |                      |
|   |                                 | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ambulatory ECG Waveform Storage SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.9.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                 | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                 | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Cardiac Electrophysiology Waveform Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.9.3.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                 | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                 | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Color Softcopy Presentation State Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.1.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                 | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                 | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Pseudo-Color Softcopy Presentation State Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.1.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                 | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                 | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Basic Voice Audio Waveform Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.9.4.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                 | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                 | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Blending Softcopy Presentation State Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.1.1.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                 | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                 | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced XA Image Storage SOP Class [Note 1]                        | 1.2.840.10008.5.1.4.1.1.1.2.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                 | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                 | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                 | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   |                                 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |

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**Presentation Context Table**

| Abstract Syntax                                     |                                      | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|--------------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                                  | Name List                                   | UID List                        |      |                      |
| Enhanced XRF Image Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.1<br>2.2.1   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Registration Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.6<br>6.1     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Fiducials Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.6<br>6.2     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Real World Value Mapping Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.6<br>7       | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Endoscopic Image Storage SOP Class [Note 1]      | 1.2.840.10008.5.1.4.1.1.7<br>7.1.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Endoscopic Image Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.7<br>7.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Microscopic Image Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.7<br>7.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax   |                                      | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|--------------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                                  | Name List                                   | UID List                        |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Microscopic Image Storage SOP Class [Note 1]                | 1.2.840.10008.5.1.4.1.1.7<br>7.1.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Slide-Coordinates Microscopic Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.7<br>7.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Photographic Image Storage SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.7<br>7.1.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Photographic Image Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.7<br>7.1.4.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |

## Presentation Context Table

| Abstract Syntax  |                                      | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|--------------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                                  | Name List                                   | UID List                        |      |                      |
| Ophthalmic Photography 8 Bit Image Storage SOP Class [Note 1]  | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ophthalmic Photography 16 Bit Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.2 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Stereometric Relationship Storage SOP Class [Note 1]           | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.3 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Mammography CAD SR SOP Class [Note 1]                          | 1.2.840.10008.5.1.4.1.1.8<br>8.50    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Chest CAD SR SOP Class [Note 1]                                | 1.2.840.10008.5.1.4.1.1.8<br>8.65    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Beams Treatment Record Storage SOP Class [Note 1]           | 1.2.840.10008.5.1.4.1.1.4<br>81.4    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|  |                                      | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |

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**Presentation Context Table**

| Abstract Syntax  |                                   | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                               | Name List                 | UID List            |      |                      |
| RT Brachy Treatment Record Storage SOP Class [Note 1]          | 1.2.840.10008.5.1.4.1.1.4         | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  | 81.6                              | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Treatment Summary Record Storage SOP Class [Note 1]         | 1.2.840.10008.5.1.4.1.1.4<br>81.7 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Plan Storage SOP Class [Note 1]                         | 1.2.840.10008.5.1.4.1.1.4<br>81.8 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Beams Treatment Record Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.4<br>81.9 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private X-Ray Image Storage                            | 1.3.46.670589.2.3.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Reconstructed X-ray Storage                    | 1.3.46.670589.2.4.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private iE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Xcelera Info Object Storage                    | 1.3.46.670589.2.5.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume New Storage                | 1.3.46.670589.5.0.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |



**Presentation Context Table**

| Abstract Syntax  |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                    | Name List                 | UID List            |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Synthetic Image Storage     | 1.3.46.670589.5.0.10   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio Analysis New Storage | 1.3.46.670589.5.0.11.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CX Synthetic Image Storage     | 1.3.46.670589.5.0.12   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Storage              | 1.3.46.670589.5.0.13   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Analysis Storage     | 1.3.46.670589.5.0.14   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume Object New Storage   | 1.3.46.670589.5.0.2.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Surface New Storage            | 1.3.46.670589.5.0.3.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio New Storage          | 1.3.46.670589.5.0.8.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

| Presentation Context Table                              |                     |                           |                     |      |                      |
|---|---------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax   |                     | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name  | UID                 | Name List                 | UID List            |      |                      |
| Philips Private ViewForum<br>CT Synthetic Image Storage | 1.3.46.670589.5.0.9 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|   |                     | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                     | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

Note 1: Not available in default configuration. Please consult customer service representative to enable this.

#### 4.2.2.3.2.3. SOP Specific Conformance for Storage SOP Classes

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

#### 4.2.2.3.2.3.1. Dataset Specific Conformance for C-STORE-RQ

Details regarding the Dataset Specific response behavior will be reported in this section.

This includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 45: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning                           | Behavior   |
|----------------|------------|---|--|
| Success        | 0000       | Successful stored                         | Log; Continue.   |
| Refused        | A700       | Refused – Out of resources                | Log; Release association; Release application; Retry to send the images. |
| Failure        | 0110       | Error – Processing failure                | Log; Release association; Release application; Retry to send the images  |
|                | A900       | Error – Data set does not match SOP class | Log; Release association; Release application; Retry to send the images  |
|                | C000       | Error – Cannot understand                 | Log; Release association; Release application; Retry to send the images  |
| Warning        | B000       | Coercion of Data Elements                 | Log; Continue  |
|                | B007       | Data Set does not match SOP Class         | Log; Continue  |
|                | B006       | Elements Discarded                        | Log; Continue  |

#### Exceptions:

IntelliSpace Cardiovascular always retry in case of errors for 15 times, with an interval of 2^n, before aborting the connection in the following cases:

1. If, after setting up the connection, no data can be sent to the external node for 60 seconds, IntelliSpace Cardiovascular aborts the connection.
2. If an error occurs on IntelliSpace Cardiovascular while setting up the connection, IntelliSpace Cardiovascular aborts

the connection.

3. If an error occurs on the target node while setting up the connection. If the retries are unsuccessful, the system will mark the data for later.
4. If an error occurs on IntelliSpace Cardiovascular during the instance conversion or the instance transfer, IntelliSpace Cardiovascular will abort the auto forward process. A final error will be reported.
5. If an error occurs on the target node during data transfer, results the connection to be aborted IntelliSpace Cardiovascular will report this error.
6. An error or warning concerning data transfer is received from the target node during data transfer. If it is related to the data being send, IntelliSpace Cardiovascular tries to correct the cause of the error (e.g. by redoing the conversion). All information available on the error or warning will be reported.
7. Only the DICOM instances of the services where both parties agreed upon are forwarded, this will be reported. During the DICOM based auto-forward, the transfer negotiations may indicate that the original format of the data is not accepted by the target node. In such cases, the DICOM ARCHIVE server will try to apply one of the transfer syntax conversions indicated by '+', in order to get to transfer syntax that is supported by the external system. Next table gives an overview of the supported Transfer Syntax conversions from SCU to SCP.

| Source Syntax                               | Destination Syntax |     |     |
|---|--------------------|-----|-----|
|   | ILE                | ELE | EBE |
| ILE   | -                  | +   | +   |
| ELE   | +                  | -   | +   |
| EBE   | +                  | +   | -   |
| JPEG Baseline                               | -                  | -   | -   |
| JPEG Lossless Non-hierarchical /Proc 14     | -                  | -   | -   |
| JPEG Lossless FOP Non-Hierarchical 14       | +                  | +   | +   |
| JPEG 2000 Image Compression (Lossless Only) | -                  | -   | -   |
| RLE   | +                  | -   | +   |

**Figure 13: Transfer Syntax Conversion from SCU to SCP.**

The list of updated patient and study attributes are mentioned in the tables in section [4.2.1.3.3.3 SOP Specific Conformance for Storage SOP Classes](#).

The possible Communication Failures are given in the following table:

**Table 46: DICOM Command Communication Failure Behavior**

| Exception           | Behavior  |
|---------------------|---|
| Timeout             | The association is closed and the reason is logged. |
| Association aborted | The association is closed and the reason is logged. |

#### 4.2.2.4. Association Acceptance Policy

Not applicable, Auto Export AE does not accept any associations.

#### 4.2.3. Image Import AE

Details of this specific Application Entity is specified in this section.

##### 4.2.3.1. SOP Classes

The Image Import AE is used for importing DICOM Instances (images, objects) from remote system into IntelliSpace Cardiovascular Server. The Image Import AE makes use of the following DICOM functions:

- Verification as SCP, which uses C-ECHO service element.
- Storage as SCP, which uses C-STORE as service element.
- Storage Commitment as SCP, which uses N-ACTION and N-EVENT-REPORT service elements.

The separate AE's need to be configured for Storage and Storage Commitment functionalities.

This Application Entity provides Standard Conformance to the following SOP Classes.

**Table 47: SOP Classes for Image Import AE**

| SOP Class Name                                      | SOP Class UID                 | SCU | SCP |
|---|-------------------------------|-----|-----|
| Verification SOP Class                              | 1.2.840.10008.1.1             | No  | Yes |
| Storage Commitment Push Model SOP Class             | 1.2.840.10008.1.20.1          | No  | Yes |
| Hardcopy Grayscale Image Storage (Retired)          | 1.2.840.10008.5.1.1.29        | No  | Yes |
| Hardcopy Color Image Storage (Retired)              | 1.2.840.10008.5.1.1.30        | No  | Yes |
| Computed Radiography Image Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.1     | No  | Yes |
| Digital X-Ray Image Storage - For Pres. SOP         | 1.2.840.10008.5.1.4.1.1.1.1   | No  | Yes |
| Digital X-Ray Image Storage - For Proc. SOP         | 1.2.840.10008.5.1.4.1.1.1.1.1 | No  | Yes |
| Digital Mammography X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.2   | No  | Yes |
| Digital Mammography X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.2.1 | No  | Yes |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP  | 1.2.840.10008.5.1.4.1.1.1.3   | No  | Yes |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP  | 1.2.840.10008.5.1.4.1.1.1.3.1 | No  | Yes |
| CT Image Storage SOP Class                          | 1.2.840.10008.5.1.4.1.1.2     | No  | Yes |
| Ultrasound Multi-frame Image Storage (Retired)      | 1.2.840.10008.5.1.4.1.1.3     | No  | Yes |
| Ultrasound Multi-frame Image Storage SOP Class      | 1.2.840.10008.5.1.4.1.1.3.1   | No  | Yes |
| MR Image Storage SOP Class                          | 1.2.840.10008.5.1.4.1.1.4     | No  | Yes |
| Ultrasound Image Storage (Retired)                  | 1.2.840.10008.5.1.4.1.1.6     | No  | Yes |

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| SOP Class Name   | SOP Class UID                 | SCU | SCP |
|--|-------------------------------|-----|-----|
| Ultrasound Image Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.6.1   | No  | Yes |
| Secondary Capture Image Storage SOP Class                        | 1.2.840.10008.5.1.4.1.1.7     | No  | Yes |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1   | No  | Yes |
| Multi-frame Grayscale Byte SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.2   | No  | Yes |
| Multi-frame Grayscale Word SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.3   | No  | Yes |
| Multi-frame True Color Secondary Capture Image Storage           | 1.2.840.10008.5.1.4.1.1.7.4   | No  | Yes |
| Standalone Overlay Storage SOP Class (Retired)                   | 1.2.840.10008.5.1.4.1.1.8     | No  | Yes |
| Standalone Curve Storage SOP Class (Retired)                     | 1.2.840.10008.5.1.4.1.1.9     | No  | Yes |
| General ECG Waveform Storage SOP Class                           | 1.2.840.10008.5.1.4.1.1.9.1.2 | No  | Yes |
| Standard Hemodynamic Waveform Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.9.2.1 | No  | Yes |
| Standalone Modality LUT Storage (Retired)                        | 1.2.840.10008.5.1.4.1.1.10    | No  | Yes |
| Standalone VOI LUT Storage SOP Class (Retired)                   | 1.2.840.10008.5.1.4.1.1.11    | No  | Yes |
| Grayscale Softcopy Presentation State Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.11.1  | No  | Yes |
| X-Ray Angiographic Image Storage SOP Class                       | 1.2.840.10008.5.1.4.1.1.12.1  | No  | Yes |
| X-Ray Radiofluoroscopic Image Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.12.2  | No  | Yes |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired)    | 1.2.840.10008.5.1.4.1.1.12.3  | No  | Yes |
| Nuclear Medicine Image Storage SOP Class                         | 1.2.840.10008.5.1.4.1.1.20    | No  | Yes |
| Raw Data Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.66    | No  | Yes |
| Detail SR Storage - Trial (Retired)                              | 1.2.840.10008.5.1.4.1.1.88.3  | No  | Yes |
| Basic Text SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.11 | No  | Yes |
| Enhanced SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.22 | No  | Yes |
| Comprehensive SR SOP Class                                       | 1.2.840.10008.5.1.4.1.1.88.33 | No  | Yes |
| Procedure Log Storage SOP Class                                  | 1.2.840.10008.5.1.4.1.1.88.40 | No  | Yes |
| Key Object Selection Document Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.88.59 | No  | Yes |
| X-Ray Radiation Dose SR SOP Class                                | 1.2.840.10008.5.1.4.1.1.88.67 | No  | Yes |
| Encapsulated PDF Storage   | 1.2.840.10008.5.1.4.1.1.104.1 | No  | Yes |
| Positron Emission Tomography Image Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.128   | No  | Yes |
| Standalone PET Curve Storage SOP Class (Retired)                 | 1.2.840.10008.5.1.4.1.1.129   | No  | Yes |
| RT Image Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.481.1 | No  | Yes |
| RT Dose Storage SOP Class  | 1.2.840.10008.5.1.4.1.1.481.2 | No  | Yes |
| RT Structure Set Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.481.3 | No  | Yes |
| RT Plan Storage SOP Class  | 1.2.840.10008.5.1.4.1.1.481.5 | No  | Yes |
| Philips Private X-Ray Image Storage                              | 1.3.46.670589.2.3.1.1         | No  | Yes |
| Philips Private Reconstructed X-ray Storage                      | 1.3.46.670589.2.4.1.1         | No  | Yes |
| Philips Private iE33 3D NEO Presentation State Subpage Storage   | 1.3.46.670589.2.5.1.1         | No  | Yes |

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| SOP Class Name   | SOP Class UID          | SCU | SCP |
|--|------------------------|-----|-----|
| Philips Private Xcelera Info Object Storage              | 1.3.46.670589.2.6.1.1  | No  | Yes |
| Philips Private ViewForum 3D Volume New Storage          | 1.3.46.670589.5.0.1.1  | No  | Yes |
| Philips Private ViewForum 3D Volume Object New Storage   | 1.3.46.670589.5.0.2.1  | No  | Yes |
| Philips Private ViewForum Surface New Storage            | 1.3.46.670589.5.0.3.1  | No  | Yes |
| Philips Private ViewForum MR Cardio New Storage          | 1.3.46.670589.5.0.8.1  | No  | Yes |
| Philips Private ViewForum CT Synthetic Image Storage     | 1.3.46.670589.5.0.9    | No  | Yes |
| Philips Private ViewForum MR Synthetic Image Storage     | 1.3.46.670589.5.0.10   | No  | Yes |
| Philips Private ViewForum MR Cardio Analysis New Storage | 1.3.46.670589.5.0.11.1 | No  | Yes |
| Philips Private ViewForum CX Synthetic Image Storage     | 1.3.46.670589.5.0.12   | No  | Yes |
| Philips Private ViewForum Perfusion Storage              | 1.3.46.670589.5.0.13   | No  | Yes |
| Philips Private ViewForum Perfusion Analysis Storage     | 1.3.46.670589.5.0.14   | No  | Yes |

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.

#### 4.2.3.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

##### 4.2.3.2.1. General

The DICOM standard application context is specified below.

**Table 48: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

##### 4.2.3.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

**Table 49: Number of associations as an Association Acceptor for this AE**

| Description                                 | Value                      |
|---|----------------------------|
| Maximum number of simultaneous associations | Limit of system resources. |

### 4.2.3.2.3. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 50: DICOM Implementation Class and Version for Image Import AE**

| Property                    | Value                |
|-----------------------------|----------------------|
| Implementation Class UID    | 1.3.46.670589.58.8.0 |
| Implementation Version Name | ISCV 8.0             |

### 4.2.3.2.4. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 51: Communication Failure Behavior**

| Exception              | Behavior  |
|------------------------|---|
| ARTIM Timeout          | The association is released and the reason is logged. |
| ABORT by remote system | The abort will be logged.                             |

### 4.2.3.3. Association Initiation Policy

Not applicable, Image Import AE does not initiate any associations.

### 4.2.3.4. Association Acceptance Policy

The Application Entity may reject Association attempts as shown in the table below.

**Table 52: Association Reject Reasons**

| Result                 | Source  | Reason/Diagnosis                           | Behavior  |
|------------------------|---|--|---|
| 1 - rejected permanent | 1 - DICOM UL service-user                             | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|                        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|                        |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|                        | 2 - DICOM UL service provider (ACSE related function) | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |

| Result                 | Source  | Reason/Diagnosis                           | Behavior   |
|------------------------|---|--|--|
|                        | 3 - DICOM UL service provider (Presentation related function) | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file.  |
|                        |   | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file.  |
|                        |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file.  |
| 2 - rejected-transient | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file.  |
|                        |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file.  |
|                        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file.  |
|                        |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file.  |
|                        | 2 - DICOM UL service provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file.  |
|                        |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file.d |
|                        | 3 - DICOM UL service provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file.  |
|                        |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file.  |

The behavior of the AE for sending an association abort is summarized in next table.

**Table 53: Association Abort Policies**

| Source  | Reason/Diagnosis               | Behavior  |
|---|--------------------------------|---|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified       | Notifies Remote AE, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified       | Notifies Remote AE, terminates the connection and logs the event  |
|   | 1 - unrecognized-PDU           | Notifies Remote AE, terminates the connection and logs the event  |
|   | 2 - unexpected-PDU             | Notifies Remote AE, terminates the connection and logs the event  |
|   | 4 - unrecognized-PDU parameter | Notifies Remote AE, terminates the connection and logs the event  |



| Source | Reason/Diagnosis                | Behavior   |
|--------|---------------------------------|--|
|        | 5 - unexpected-PDU parameter    | Notifies Remote AE, terminates the connection and logs the event |
|        | 6 - invalid-PDU-parameter value | Notifies Remote AE, terminates the connection and logs the event |

### 4.2.3.4.1. (Real-World) Activity – Verification as SCP

#### 4.2.3.4.1.1. Description and Sequencing of Activities

The Import Image AE accepts associations from systems that wish to verify application level communication using the C-ECHO command.

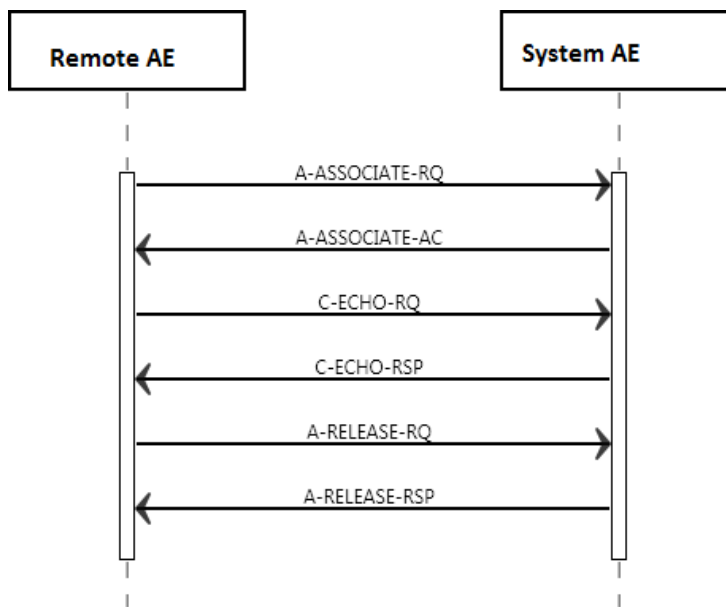


Figure 14: (Real World) Activity - Verification as SCP

#### 4.2.3.4.1.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 54: Acceptable Presentation Contexts for (Real-World) Activity – Verification as SCP

| Presentation Context Table |                   |                        |                     |      |                      |
|----------------------------|-------------------|------------------------|---------------------|------|----------------------|
| Abstract Syntax            |                   | Transfer Syntax        |                     | Role | Extended Negotiation |
| Name                       | UID               | Name List              | UID List            |      |                      |
| Verification SOP Class     | 1.2.840.10008.1.1 | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP  | None                 |

**Presentation Context Table**

| Abstract Syntax |     | Transfer Syntax           |                     | Role | Extended Negotiation |
|-----------------|-----|---------------------------|---------------------|------|----------------------|
| Name            | UID | Name List                 | UID List            |      |                      |
|                 |     | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                 |     | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

The Import Image AE accepts all contexts in the intersection of the proposed and acceptable Presentation Context. This means that the Import Image AE will accept multiple proposed Presentation Contexts with the same SOP Class but different Transfer Syntaxes, so there will be no checks for duplicate Presentation Contexts.

**4.2.3.4.1.3. SOP Specific Conformance for Verification SOP Class**

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

**4.2.3.4.1.3.1. Dataset Specific Conformance for Verification C-ECHO SCP**

The DICOM command communication behavior is shown in the following table. The standard as well as the specific status codes and their corresponding behavior are also specified.

**Table 55: Status Response**

| Service Status | Error Code | Further Meaning | Behavior             |
|----------------|------------|-----------------|----------------------|
| Success        | 0000       | Confirmation    | Message in log file. |

**4.2.3.4.2. (Real-World) Activity – Image Import as SCP**

**4.2.3.4.2.1. Description and Sequencing of Activities**

A remote system can sets up an association with IntelliSpace Cardiovascular. If IntelliSpace Cardiovascular has not reached already the maximum number of associations, IntelliSpace Cardiovascular will communicate with each remote system.

If suitable, IntelliSpace Cardiovascular will accept the association with a preferred presentation context. Then the remote system may transfer its instance data to IntelliSpace Cardiovascular. When the complete instance has been received, IntelliSpace Cardiovascular will send a C-STORE response to notify the remote system that the transfer is completed successfully and the remote system may release the association.

Next figure shows the Image Import functionality.

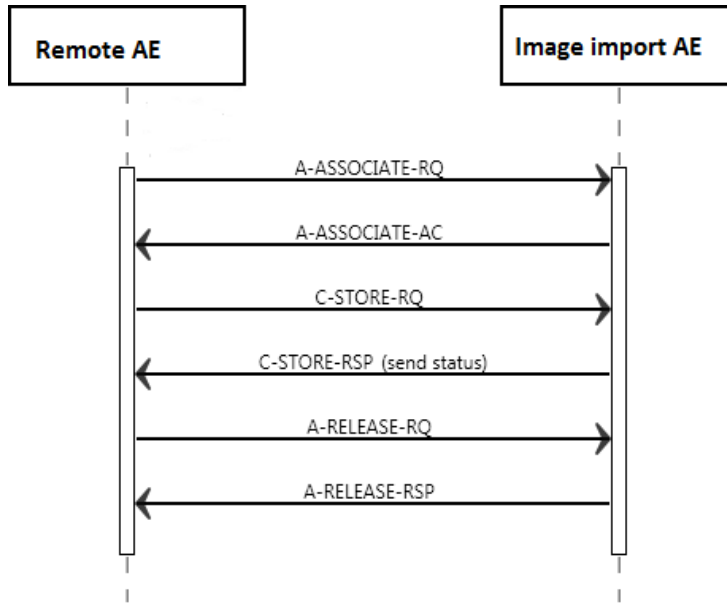


Figure 15: (Real World) Activity - Image Import

Note that only for configured systems some additional information can be configured, like institution-, department- and station - name, and whether the study must be archived or not.

#### 4.2.3.4.2.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 56: Acceptable Presentation Contexts for (Real-World) Activity – Image Import

| Presentation Context Table                 |                           |                           |                     |      |                      |
|--|---------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                            |                           | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                                       | UID                       | Name List                 | UID List            |      |                      |
| Hardcopy Grayscale Image Storage (Retired) | 1.2.840.10008.5.1.1.29    | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                           | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                           | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Hardcopy Color Image Storage (Retired)     | 1.2.840.10008.5.1.1.30    | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                           | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                           | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
|  | 1.2.840.10008.5.1.4.1.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |

## Presentation Context Table

| Abstract Syntax                                     |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
| Computed Radiography Image Storage SOP Class        |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Pres. SOP         | 1.2.840.10008.5.1.4.1.1.1.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Proc. SOP         | 1.2.840.10008.5.1.4.1.1.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Mammography X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Mammography X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax                                    |                                | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|--------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                            | Name List                                   | UID List                        |      |                      |
|  |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.3    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.3.1  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone Modality LUT Storage (Retired)          | 1.2.840.10008.5.1.4.1.1.1.0    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Encapsulated PDF Storage                           | 1.2.840.10008.5.1.4.1.1.1.04.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone VOI LUT Storage SOP Class (Retired)     | 1.2.840.10008.5.1.4.1.1.1.1    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax   |                                  | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|---|----------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                              | Name List   | UID List                        |      |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Grayscale Softcopy Presentation State Storage SOP Class       | 1.2.840.10008.5.1.4.1.1.1<br>1.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| X-Ray Angiographic Image Storage SOP Class                    | 1.2.840.10008.5.1.4.1.1.1<br>2.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|   |                                  | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|   |                                  | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
| X-Ray Radiofluoroscopic Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.1<br>2.2 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.1<br>2.3 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax                                      |                              | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                          | Name List   | UID List                        |      |                      |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                              | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|  |                              | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Positron Emission Tomography Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.1.28 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Standalone PET Curve Storage SOP Class (Retired)     | 1.2.840.10008.5.1.4.1.1.1.29 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| CT Image Storage SOP Class                           | 1.2.840.10008.5.1.4.1.1.1.2  | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                              | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Nuclear Medicine Image Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.1.20 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |

## Presentation Context Table

| Abstract Syntax                                |                             | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|-----------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                         | Name List   | UID List                        |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Ultrasound Multi-frame Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.3   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                             | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|  |                             | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Ultrasound Multi-frame Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.3.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                             | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|  |                             | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| MR Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.4   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |



**Presentation Context Table**

| Abstract Syntax                    |                                | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|------------------------------------|--------------------------------|---|---------------------------------|------|----------------------|
| Name                               | UID                            | Name List   | UID List                        |      |                      |
|                                    |                                | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|                                    |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| RT Image Storage SOP Class         | 1.2.840.10008.5.1.4.1.1.4 81.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|                                    |                                | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|                                    |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| RT Dose Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.4 81.2 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|                                    |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| RT Structure Set Storage SOP Class | 1.2.840.10008.5.1.4.1.1.4 81.3 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|                                    |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Ultrasound Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.6      | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|                                    |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|                                    |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|                                    |                                | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|                                    |                                | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|                                    |                                | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|                                    |                                | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |

**Presentation Context Table**

| Abstract Syntax                           |                                 | Transfer Syntax                                   |                                    | Role | Extended Negotiation |
|---|---------------------------------|---|------------------------------------|------|----------------------|
| Name                                      | UID                             | Name List   | UID List                           |      |                      |
| Ultrasound Image Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.6<br>.1 | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57<br>[Note 1] |      |                      |
|   |                                 | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                |      |                      |
|   |                                 | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90<br>[Note 1] |      |                      |
|   |                                 | Implicit VR Little Endian                         | 1.2.840.10008.1.2                  |      |                      |
|   |                                 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50             |      |                      |
|   |                                 | RLE Lossless                                      | 1.2.840.10008.1.2.5                |      |                      |
|   |                                 | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70             |      |                      |
|   |                                 | Raw Data Storage SOP Class                        | 1.2.840.10008.5.1.4.1.1.6<br>6     |      |                      |
| Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7       | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                |      |                      |
|   |                                 | Implicit VR Little Endian                         | 1.2.840.10008.1.2                  |      |                      |
|   |                                 | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90<br>[Note 1] |      |                      |
|   |                                 | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57<br>[Note 1] |      |                      |
|   |                                 | Implicit VR Little Endian                         | 1.2.840.10008.1.2                  |      |                      |
|   |                                 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50             |      |                      |
|   |                                 | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70             |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                             | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|-----------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                         | Name List   | UID List                        |      |                      |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCP  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Multi-frame Grayscale Byte SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.2 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCP  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Multi-frame Grayscale Word SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.3 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCP  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                              | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                          | Name List   | UID List                        |      |                      |
|  |                              | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                              | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                              | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Multi-frame True Color Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.4  | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCP  | None                 |
|  |                              | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                              | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                              | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                              | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Standalone Overlay Storage SOP Class (Retired)         | 1.2.840.10008.5.1.4.1.1.8    | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Basic Text SR SOP Class                                | 1.2.840.10008.5.1.4.1.1.8.11 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax                                 |                                   | Transfer Syntax           |                     | Role | Extended Negotiation |
|---|-----------------------------------|---------------------------|---------------------|------|----------------------|
| Name  | UID                               | Name List                 | UID List            |      |                      |
|   |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Enhanced SR SOP Class                           | 1.2.840.10008.5.1.4.1.1.8<br>8.22 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Detail SR Storage - Trial (Retired)             | 1.2.840.10008.5.1.4.1.1.8<br>8.3  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Comprehensive SR SOP Class                      | 1.2.840.10008.5.1.4.1.1.8<br>8.33 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| X-Ray Radiation Dose SR SOP Class               | 1.2.840.10008.5.1.4.1.1.8<br>8.67 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Standalone Curve Storage SOP Class (Retired)    | 1.2.840.10008.5.1.4.1.1.9         | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| General ECG Waveform Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.9<br>.1.2 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Standard Hemodynamic Waveform Storage SOP Class | 1.2.840.10008.5.1.4.1.1.9<br>.2.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

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**Presentation Context Table**

| Abstract Syntax                                 |                                   | Transfer Syntax                             |                                    | Role | Extended Negotiation |
|---|-----------------------------------|---|------------------------------------|------|----------------------|
| Name  | UID                               | Name List                                   | UID List                           |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2                  |      |                      |
| Procedure Log Storage SOP Class                 | 1.2.840.10008.5.1.4.1.1.8<br>8.40 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2                | SCP  | None                 |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1                |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2                  |      |                      |
| Key Object Selection Document Storage SOP Class | 1.2.840.10008.5.1.4.1.1.8<br>8.59 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2                | SCP  | None                 |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1                |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2                  |      |                      |
| Enhanced CT Image Storage SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.2<br>.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2                | SCP  | None                 |
|   |                                   | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90<br>[Note 1] |      |                      |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1                |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2                  |      |                      |
| Enhanced MR Image Storage SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.4<br>.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2                | SCP  | None                 |
|   |                                   | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90<br>[Note 1] |      |                      |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1                |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2                  |      |                      |
| MR Spectroscopy Storage SOP Class [Note 1]      | 1.2.840.10008.5.1.4.1.1.4<br>.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2                | SCP  | None                 |
|   |                                   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1                |      |                      |
|   |                                   | Implicit VR Little Endian                   | 1.2.840.10008.1.2                  |      |                      |
|   | 1.2.840.10008.5.1.4.1.1.5         | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2                | SCP  | None                 |

**Presentation Context Table**

| Abstract Syntax   |                                | Transfer Syntax                            |                                 | Role | Extended Negotiation |
|---|--------------------------------|--|---------------------------------|------|----------------------|
| Name  | UID                            | Name List                                  | UID List                        |      |                      |
| Nuclear Medicine Image Storage (Retired) SOP Class [Note 1]         |                                | JPEG 2000 Image Compression (Lossless Only | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Ambulatory ECG Waveform Storage SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.9 .1.3 | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Cardiac Electrophysiology Waveform Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.9 .3.1 | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Color Softcopy Presentation State Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.1 1.2  | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Pseudo-Color Softcopy Presentation State Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.1 1.3  | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Basic Voice Audio Waveform Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.9 .4.1 | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Blending Softcopy Presentation State Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.1 1.4  | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax                                     |                                    | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|------------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                                | Name List                                   | UID List                        |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced XA Image Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.1<br>2.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced XRF Image Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.1<br>2.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                    | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Registration Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.6<br>6.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Fiducials Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.6<br>6.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Real World Value Mapping Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.6<br>7     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   |                                    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |



**Presentation Context Table**

| Abstract Syntax   |                                      | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|--------------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                                  | Name List                                   | UID List                        |      |                      |
| VL Endoscopic Image Storage SOP Class [Note 1]                    | 1.2.840.10008.5.1.4.1.1.7<br>7.1.1   | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Endoscopic Image Storage SOP Class [Note 1]                 | 1.2.840.10008.5.1.4.1.1.7<br>7.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Microscopic Image Storage SOP Class [Note 1]                   | 1.2.840.10008.5.1.4.1.1.7<br>7.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Microscopic Image Storage SOP Class [Note 1]                | 1.2.840.10008.5.1.4.1.1.7<br>7.1.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Slide-Coordinates Microscopic Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.7<br>7.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                      | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|--------------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                                  | Name List                                   | UID List                        |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Photographic Image Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.7<br>7.1.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Photographic Image Storage SOP Class [Note 1]            | 1.2.840.10008.5.1.4.1.1.7<br>7.1.4.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ophthalmic Photography 8 Bit Image Storage SOP Class [Note 1]  | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ophthalmic Photography 16 Bit Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.2 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57[Note 1]  |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                      | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|--------------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                                  | Name List                                   | UID List                        |      |                      |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Stereometric Relationship Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.3 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Mammography CAD SR SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.8<br>8.50    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Chest CAD SR SOP Class [Note 1]                        | 1.2.840.10008.5.1.4.1.1.8<br>8.65    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Beams Treatment Record Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.4<br>81.4    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Brachy Treatment Record Storage SOP Class [Note 1]  | 1.2.840.10008.5.1.4.1.1.4<br>81.6    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Treatment Summary Record Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.4<br>81.7    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCP  | None                 |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

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**Presentation Context Table**

| Abstract Syntax  |                                   | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                               | Name List                 | UID List            |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Plan Storage SOP Class [Note 1]                         | 1.2.840.10008.5.1.4.1.1.4<br>81.8 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Beams Treatment Record Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.4<br>81.9 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private X-Ray Image Storage                            | 1.3.46.670589.2.3.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Reconstructed X-ray Storage                    | 1.3.46.670589.2.4.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private iE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Xcelera Info Object Storage                    | 1.3.46.670589.2.6.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume New Storage                | 1.3.46.670589.5.0.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                    | Name List                 | UID List            |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Synthetic Image Storage     | 1.3.46.670589.5.0.10   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio Analysis New Storage | 1.3.46.670589.5.0.11.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CX Synthetic Image Storage     | 1.3.46.670589.5.0.12   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Storage              | 1.3.46.670589.5.0.13   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Analysis Storage     | 1.3.46.670589.5.0.14   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume Object New Storage   | 1.3.46.670589.5.0.2.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Surface New Storage            | 1.3.46.670589.5.0.3.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

**Presentation Context Table**

| Abstract Syntax                                      |                       | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                   | Name List                 | UID List            |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio New Storage      | 1.3.46.670589.5.0.8.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CT Synthetic Image Storage | 1.3.46.670589.5.0.9   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

Note 1: Not available in default configuration. Please consult customer service representative to enable this. The Import Image AE accepts all Presentation contexts listed in the above table. This means that the Import Image AE will accept multiple proposed Presentation Contexts with the same SOP Class but different Transfer Syntaxes, so there will be no checks for duplicate Presentation Contexts.

**4.2.3.4.2.3. SOP Specific Conformance for Storage SOP Classes**

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

IntelliSpace Cardiovascular conforms to the SOP classes of the Storage Service Class. IntelliSpace Cardiovascular discards no data elements.

The instances received by IntelliSpace Cardiovascular are merged on Study UID and Series UID. For ultrasound images only the Image Information Entity level is supported.

The following are the restrictions and exceptions for the normal behavior of the Image Import AE:

1. IntelliSpace Cardiovascular try to notify the external DICOM node about the reason for not accepting the connection and will be reported.
2. If no agreement between the two parties can be reached concerning (DICOM) communication parameters the connection will be closed and no data transfer will take place and this will be reported.
3. IntelliSpace Cardiovascular will close the connection if no data is received within 2 minutes after the setup and will be reported.

4. If a network error occurs during set up of a connection or during data transfer, this is reported. IntelliSpace Cardiovascular will abort the connection and data transfer will not be completed.
5. By errors during data transfer IntelliSpace Cardiovascular will notify the external DICOM node and closed the connection and will be reported.
6. DICOM Type 1 Attributes checked during storing of study objects:

**Table 57: DICOM Type 1 Attributes Checked During Storing of Study Objects**

| DICOM Attributes    | Presence | Non Empty Value |
|---------------------|----------|-----------------|
| Study Instance UID  | Yes      | Yes             |
| Series Instance UID | Yes      | Yes             |
| SOP Class UID       | Yes      | Yes             |
| SOP Instance UID    | Yes      | Yes             |

The following attributes are checked as well for image objects:

**Table 58: DICOM Type 1 Attributes Checked During Storing of Image Objects**

| DICOM Attributes           | Presence | Non Empty Value |
|----------------------------|----------|-----------------|
| Samples per pixel          | Yes      | Yes             |
| Rows                       | Yes      | Yes             |
| Columns                    | Yes      | Yes             |
| Bits Allocated             | Yes      | Yes             |
| Bits Stored                | Yes      | Yes             |
| High Bit                   | Yes      | Yes             |
| Photometric Interpretation | Yes      | Yes             |
| Pixel Data                 | Yes      | Yes             |

If DICOM composite-object attributes are missing or empty then the system will:

- a. Discard all data received for the associated objects.
- b. Return an appropriate DICOM error message to the DICOM image system making the store request.

7. If an object received has the same DICOM SOP Instance UID as an object already stored on IntelliSpace Cardiovascular, IntelliSpace Cardiovascular will do either of the following:

- If the already stored object has the same UID's on instance, study and series level as the new one, IntelliSpace Cardiovascular will replace the stored object with the new object. This will not be communicated to the DICOM instance system, which will thus perceive this as a normal store.

OR

- Depending on the configuration setting "Send Study after Finalized State or Time our Expired" on the Archive page of the service tool, the following will be done. When the study has the status "finalize" and has the same requirements as the previous bullet point, the study will be discarded and will be communicated to the external DICOM node with the status

"C-STORE\_WARNING\_ELEMENTS\_DISCARDED"

- If the already stored object has a different study or series UID as the new one; IntelliSpace Cardiovascular will discard the object and send an error to the DICOM image system. The connection will remain open in order to allow the DICOM image system to recover from this error.

**Importing of DICOM Structure Reports.**

IntelliSpace Cardiovascular Image Import AE supports the DICOM Structured Reports from any DICOM nodes. IntelliSpace Cardiovascular uses the DICOM Structured Reports objects for displaying and reporting of the measurement values of the Adult Echocardiography Reports.

IntelliSpace Cardiovascular is multi-vendor compliant for Structured Reports.

**4.2.3.4.2.3.1.**

**Dataset Specific Conformance for C-STORE-RSP**

Details regarding the Dataset Specific response behavior will be reported in this section.

This includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 59: C-STORE-RSP Status Response**

| Service Status | Error Code | Further Meaning                            | Behavior                                   |
|----------------|------------|--|--|
| Success        | 0000       | Success                                    | Log: Continue                              |
| Refused        | A700       | Remote is not Licensed                     | Log; Abort association.                    |
| Warning        | B006       | Elements Discarded (Duplicate instances)   | SOP instance will be skipped.              |
| Error          | 0110       | Internal error IntelliSpace Cardiovascular | Send notification; Log; Abort association. |
|                | A900       | Invalid dataset                            | Send notification; Log.                    |

**Table 60: DICOM Command Communication Failure Behavior**

| Exception | Behavior  |
|-----------|---|
| Timeout   | Time-out for reception is set fixed to 2 minutes. |



### 4.2.3.4.3. (Real-World) Activity – Storage Commitment Push Model AS SCP

#### 4.2.3.4.3.1. Description and Sequencing of Activities

**Normal Flow of events:**

1. Storage Commitment AE will initiate a request to the Storage Commitment SCP.
2. When a successful response from the Storage Commitment SCP is received, Storage Commitment AE marks this as correctly working Storage Commitment SCP.

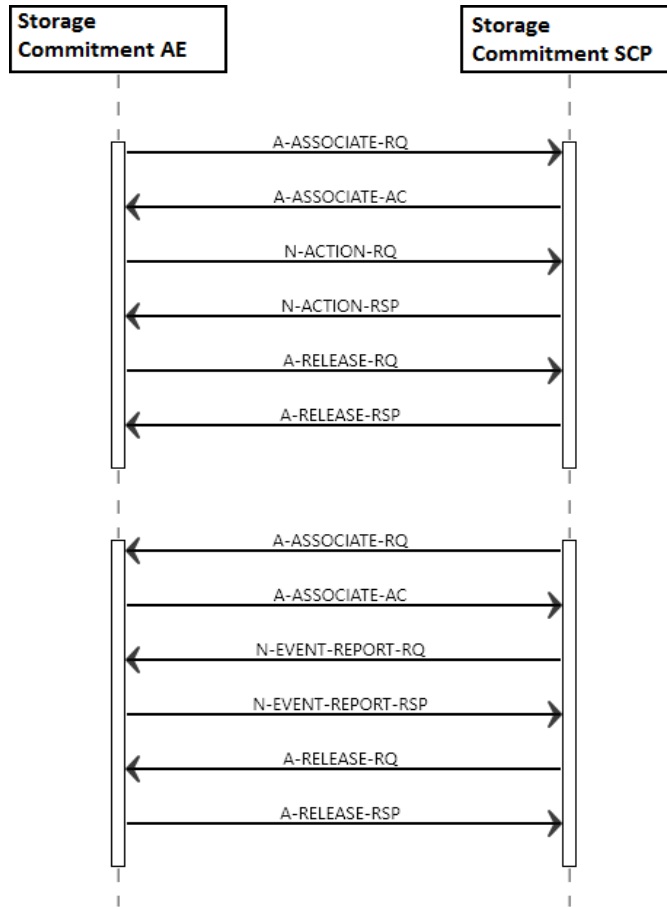


Figure 16: Real World Activity-Storage Commitment SCP

#### 4.2.3.4.3.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

**Table 61: Acceptable Presentation Contexts for (Real-World) Activity – Storage Commitment Push Model AS SCP**

| Presentation Context Table              |                      |                           |                     |      |                      |
|---|----------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                         |                      | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                                    | UID                  | Name List                 | UID List            |      |                      |
| Storage Commitment Push Model SOP Class | 1.2.840.10008.1.20.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                      | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                      | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

#### 4.2.3.4.3.3. SOP Specific Conformance for Storage Commitment Push Model SOP Class

The Remote AE (Storage Commitment) provides standard conformance to the Storage Commitment Push Model SOP Class.

#### 4.2.3.4.3.3.1. Dataset Specific Conformance for Storage Commitment Push Model SOP Class N-EVENT-REPORT-SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 62: Storage Commitment attribute for N-EVENT-REPORT**

| Event Type Name                                | EVENT Type ID | Attribute Name               | Tag       | Commit |
|--|---------------|------------------------------|-----------|--------|
| StorageCommitmentRequestSuccessful             | 1             | Transaction UID              | 0008,1195 |        |
|  |               | Referenced SOP Sequence      | 0008,1199 |        |
|  |               | >Referenced SOP Class UID    | 0008,1150 |        |
|  |               | >Referenced SOP Instance UID | 0008,1155 |        |
| StorageCommitmentRequestCompleteFailures Exist | 1             | Transaction UID              | 0008,1195 |        |
|  |               | Referenced SOP Sequence      | 0008,1199 |        |
|  |               | >Referenced SOP Class UID    | 0008,1150 |        |
|  |               | >Referenced SOP Instance UID | 0008,1155 |        |
|  | 2             | Transaction UID              | 0008,1195 |        |
|  |               | Failed SOP Sequence          | 0008,1198 |        |

| Event Type Name | EVENT Type ID | Attribute Name               | Tag       | Commit |
|-----------------|---------------|------------------------------|-----------|--------|
|                 |               | >Referenced SOP Class UID    | 0008,1150 |        |
|                 |               | >Referenced SOP Instance UID | 0008,1155 |        |
|                 |               | >Failure Reason              | 0008,1197 |        |

On receiving a storage commitment result with Event Type ID 1 (Storage Commitment Request Successful) the Application Entity will mark these images as committed.

On receiving a storage commitment result with Event Type ID 2 (Storage Commitment Request Complete - Failures Exist) the Application Entity will behave as described in next table.

**Table 63: Storage Commitment N-EVENT-REPORT Failure Handling Behavior**

| Service Status | Error Code | Further Meaning | Description   |
|----------------|------------|-----------------|---|
| Success        | 0000       | conformation    | Association will be released. The reason is logged. |
| Failure        | xxxx       | (any reason)    | The reason is logged.                               |

**Table 64: Status Response**

| Service Status | Error Code | Further Meaning          | Behavior             |
|----------------|------------|--------------------------|----------------------|
| Success        | 0000       | Verification is complete | Successful received. |

**4.2.3.4.3.3.2.**

**Dataset Specific Conformance for Storage Commitment Push Model SOP**

**Class N-ACTION-SCP**

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 65: Storage Commitment Attribute for N-ACTION-RSP**

| Attribute Name                   | Tag       | Comment |
|----------------------------------|-----------|---------|
| <b>Storage Commitment Module</b> |           |         |
| Transaction UID                  | 0008,1195 |         |
| Referenced SOP Sequence          | 0008,1199 |         |

Below the possible status Responses for Storage commitment are listed:

**Table 66: Status Response**

| Service Status | Error Code | Further Meaning | Behavior  |
|----------------|------------|-----------------|---|
| Success        | 0000       | conformation    | The association will be released. Reason is logged. |

| Service Status | Error Code | Further Meaning | Behavior              |
|----------------|------------|-----------------|-----------------------|
| Failure        | xxxx       | (any failure)   | The reason is logged. |

**Exceptions:**

1. After setting up the connection, if no data can be sent to IntelliSpace Cardiovascular before timeout, Remote AE aborts the connection and reports an error.
2. If an error or warning concerning data transfer is received from the target node during data transfer. If it is related to the data being send Remote AE tries to correct the cause of the error
3. When Remote AE cannot setup connection with the IntelliSpace Cardiovascular. Remote AE will retry to make connection. If it is still not possible to setup the connection, conforms its own retry mechanism, and warning will be reported.
4. When the Remote AE receives a storage commit response other than successful, the study will be re-archived, conforms to its own retry mechanism and a warning will be reported.

**4.2.4. Print AE**

Details of this specific Application Entity is specified in this section.

**4.2.4.1. SOP Classes**

After the print job is selected, IntelliSpace Cardiovascular will initiate DICOM associations for the DICOM Basic Grayscale Printing Service and the DICOM Verification Service with the DICOM printer (SCP).

The print job with or without annotation is send to the printer. IntelliSpace Cardiovascular supports a maximum PDU size of 64KBytes.

The printer prints the print job and sends a successful response back to IntelliSpace Cardiovascular. IntelliSpace Cardiovascular shows this response on the system screen.

This Application Entity provides Standard Conformance to the following SOP Classes.

**Table 67: SOP Classes for Print AE**

| SOP Class Name                                  | SOP Class UID          | SCU | SCP |
|---|------------------------|-----|-----|
| Print Job SOP Class                             | 1.2.840.10008.5.1.1.14 | Yes | No  |
| Basic Annotation Box SOP Class                  | 1.2.840.10008.5.1.1.15 | Yes | No  |
| Basic Grayscale Print Management Meta SOP Class | 1.2.840.10008.5.1.1.9  | Yes | No  |
| >Basic Film Session SOP Class                   | 1.2.840.10008.5.1.1.1  | Yes | No  |
| >Basic Film Box SOP Class                       | 1.2.840.10008.5.1.1.2  | Yes | No  |
| >Basic Grayscale Image Box SOP Class            | 1.2.840.10008.5.1.1.4  | Yes | No  |
| >Printer SOP Class                              | 1.2.840.10008.5.1.1.16 | Yes | No  |

| SOP Class Name                  | SOP Class UID          | SCU | SCP |
|---------------------------------|------------------------|-----|-----|
| >Basic Annotation Box SOP Class | 1.2.840.10008.5.1.1.15 | Yes | No  |

Any SOP specific behavior above is documented later in this conformance statement in the applicable SOP specific conformance section.

#### 4.2.4.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

##### 4.2.4.2.1. General

The maximum PDU Size that the Print AE will use is not configurable.

The DICOM standard application context is specified below.

**Table 68: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

##### 4.2.4.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

Print AE can have only one open connection at a given time.

**Table 69: Number of associations as an Association Initiator for this AE**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 1     |

##### 4.2.4.2.3. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 70: DICOM Implementation Class and Version for Print AE**

| Property                 | Value                |
|--------------------------|----------------------|
| Implementation Class UID | 1.3.46.670589.58.8.0 |

|                             |          |
|-----------------------------|----------|
| Implementation Version Name | ISCV 8.0 |
|-----------------------------|----------|

#### 4.2.4.2.4. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 71: Communication Failure Behavior**

| Exception     | Behavior  |
|---------------|---|
| ARTIM Timeout | The association is closed and the reason is logged. |

#### 4.2.4.3. Association Initiation Policy

The Application Entity will respond on a received reject Association attempt as shown in next table.

**Table 72: Association Rejection response**

| Result                   | Source  | Reason/Diagnosis  | Behavior  |
|--------------------------|---|---|---|
| 1 - rejected-permanent   | 1 - DICOM UL service-user                                     | 1 - no-reason-given   | The user is informed. Details are logged in central log file. |
|                          |   | 2 - application-context-name-not supported                    | The user is informed. Details are logged in central log file. |
|                          |   | 3 - calling-AE-title-not-recognized                           | The user is informed. Details are logged in central log file. |
|                          |   | 7 - called-AE-title-not-recognized                            | The user is informed. Details are logged in central log file. |
|                          | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given   | The user is informed. Details are logged in central log file. |
|                          |   | 2 - protocol-version-not-supported                            | The user is informed. Details are logged in central log file. |
|                          |   | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                                      |
| 2 - local-limit-exceeded | The user is informed. Details are logged in central log file. |   |   |
| 2 - rejected-transient   | 1 - DICOM UL service-user                                     | 1 - no-reason-given   | The user is informed. Details are logged in central log file. |
|                          |   | 2 - application-context-name-not-supported                    | The user is informed. Details are logged in central log file. |
|                          |   | 3 - calling-AE-title-not-recognized                           | The user is informed. Details are logged in central log file. |

| Result | Source  | Reason/Diagnosis                   | Behavior  |
|--------|---|------------------------------------|---|
|        |   | 7 - called-AE-title-not-recognized | The user is informed. Details are logged in central log file. |
|        | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                | The user is informed. Details are logged in central log file. |
|        |   | 2 - protocol-version-not-supported | The user is informed. Details are logged in central log file. |
|        | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion           | The user is informed. Details are logged in central log file. |
|        |   | 2 - local-limit-exceeded           | The user is informed. Details are logged in central log file. |

The behavior of the AE on receiving an association abort is summarized in the next table.

**Table 73: Association Abort Handling**

| Source  | Reason/Diagnosis                | Behavior   |
|---|---------------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU            | When received, terminates the connection and logs the event. |
|   | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|   | 4 - unrecognized-PDU-parameter  | When received, terminates the connection and logs the event. |
|   | 5 - unexpected-PDU-parameter    | When received, terminates the connection and logs the event. |
|   | 6 - invalid-PDU-parameter-value | When received, terminates the connection and logs the event. |

#### 4.2.4.3.1. (Real-World) Activity – Print Management as SCU

##### 4.2.4.3.1.1. Description and Sequencing of Activities

The sequence of interactions between the IntelliSpace Cardiovascular Print AE and a remote printer AE to print one film sheet is presented as follows:

After the print job is selected on IntelliSpace Cardiovascular a connection with the DICOM printer will be made.

The print job consists of data describing the images and graphics to be printed as well as the requested layout and other parameters. One print job on the IntelliSpace Cardiovascular may result in a number of film sessions with the printer equal to the number of printed film sheets. Each film sheet within the print job is internally processed, converted to a STANDARD/1,1 page and then an association towards the remote Print Server is established and the page image is sent with or without annotation to the selected DICOM printer.

The printer prints the print job and sends a successful response back to the IntelliSpace Cardiovascular. The IntelliSpace Cardiovascular reports the success on the screen for the user.

Once the transmission of the film sheet is completed, the association with the printer is closed.

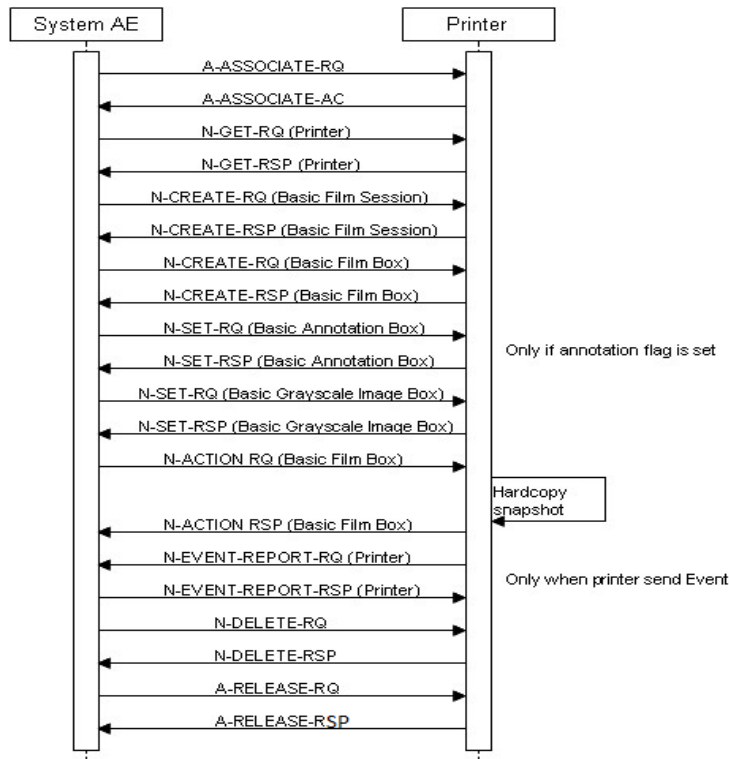


Figure 17: (Real World) Activity - Print Management As SCU

#### 4.2.4.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.



**Table 74: Proposed Presentation Contexts for (Real-World) Activity – Print Management As SCU**

| Presentation Context Table                      |                        |                           |                     |      |                      |
|---|------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                                 |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name  | UID                    | Name List                 | UID List            |      |                      |
| Print Job SOP Class                             | 1.2.840.10008.5.1.1.14 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|   |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Basic Annotation Box SOP Class                  | 1.2.840.10008.5.1.1.15 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|   |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Basic Grayscale Print Management Meta SOP Class | 1.2.840.10008.5.1.1.9  |                           |                     | SCU  | None                 |
| >Basic Film Session SOP Class                   | 1.2.840.10008.5.1.1.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|   |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| >Basic Film Box SOP Class                       | 1.2.840.10008.5.1.1.2  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|   |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| >Basic Grayscale Image Box SOP Class            | 1.2.840.10008.5.1.1.4  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|   |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

**Presentation Context Table**

| Abstract Syntax    |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
|--------------------|------------------------|---------------------------|---------------------|------|----------------------|
| Name               | UID                    | Name List                 | UID List            |      |                      |
| >Printer SOP Class | 1.2.840.10008.5.1.1.16 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|                    |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                    |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

This section specifies each IOD created (including private IOD's).

Abbreviations used in the Module table for the column "Presence of Value" are:

- ALWAYS        The attribute is always present with a value
- EMPTY        The attribute is always present without any value (attribute sent zero length)
- VNAP         The attribute is always present and its Value is Not Always Present (attribute sent zero length if no value is present)
- ANAP         The attribute is present under specified condition – if present then it will always have a value

The abbreviations used in the Module table for the column "Source" are:

- AUTO         The attribute value is generated automatically
- CONFIG       The attribute value source is a configurable parameter
- COPY         The attribute value source is another SOP instance
- FIXED        The attribute value is hard-coded in the application
- IMPLICIT     The attribute value source is a user-implicit setting
- MPPS         The attribute value is the same as that use for Modality Performed Procedure Step
- MWL         The attribute value source is a Modality Worklist
- USER         The attribute value source is explicit user input

**4.2.4.3.1.3. SOP Specific Conformance for Basic Film Session SOP Class of the Basic Grayscale Print Management Meta SOP Class**

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

**Exceptions:**

The print job cannot be completed by the printer:

1. Printer errors are handled as given in the next table.

2. DICOM transfer errors to the printer are treated as normal DICOM transfer errors and are recorded appropriately.
3. The printer can use the Basic Annotation Box SOP Class when the annotation flag is set. A control on the SOP Classes during setup of the Association is used to check of the printer known this SOP Class.

**Table 75: DICOM Command Response Status Handling Behavior**

| Service Status  | Error Code | Further Meaning       | Behavior       |
|-----------------|------------|-----------------------|----------------|
| Success         | 0000       | Success               | Log; Continue. |
| Warning/Failure | xxxx       | (any warning/failure) | Log; Continue. |
| Error           | xxxx       | (any error)           | Log; Abort.    |

#### 4.2.4.3.1.3.1.

#### Dataset Specific Conformance for Basic Film Session SOP Class N-CREATE-SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 76: Basic Film Session Presentation Module**

| Attribute Name   | Tag       | VR | Value | Presence of Value | Source | Comment |
|------------------|-----------|----|-------|-------------------|--------|---------|
| Number of Copies | 2000,0010 | IS |       | ANAP              | USER   | -       |
| Print Priority   | 2000,0020 | CS |       | ANAP              | USER   | -       |

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 77: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning                   | Behavior   |
|----------------|------------|-----------------------------------|--|
| Success        | 0000       | Film Session successfully created | The print job continues.                           |
| Warning        | B600       | Memory Allocation not supported   | The print job continues and the warning is logged. |

**Table 78: DICOM Command Communication Failure Behavior**

| Exception                | Behavior  |
|--------------------------|---|
| ARTIM Time-out           | Print job Fails   |
| Reply Time-out           | The association is rejected.  |
| Association Time-out SCU | The association is released.  |
| Association aborted      | The Print job is marked as failed. The reason is logged and reported to the user. |

#### 4.2.4.3.1.4. SOP Specific Conformance for Print Job SOP Class of the

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

**Exceptions:**

The print job cannot be completed by the printer:

1. Printer errors are handled as given in the next table.
2. DICOM transfer errors to the printer are treated as normal DICOM transfer errors and are recorded appropriately.
3. The printer can use the Basic Annotation Box SOP Class when the annotation flag is set. A control on the SOP Classes during setup of the Association is used to check of the printer known this SOP Class.

**Table 79: DICOM Command Response Status Handling Behavior**

| Service Status  | Error Code | Further Meaning       | Behavior       |
|-----------------|------------|-----------------------|----------------|
| Success         | 0000       | Success               | Log; Continue. |
| Warning/Failure | xxxx       | (any warning/failure) | Log; Continue. |
| Error           | xxxx       | (any error)           | Log; Abort.    |

#### 4.2.4.3.1.4.1. Dataset Specific Conformance for Print Job N-EVENT-REPORT SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

IntelliSpace Cardiovascular does not respond to N-EVENT-REPORT from the Printer.

**Note:**

N-EVENT-REPORT is an asynchronous message from the printer in situations such as no film supply, low cartridge, print door opened, etc. IntelliSpace Cardiovascular does not handle this and responds with either ABORT or releasing the association. On the User Interface the Print Job is displayed as failed and the user needs to resend the image.

#### 4.2.4.3.1.5. SOP Specific Conformance for Basic Annotation Box SOP Class of the

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

**Exceptions:**

The print job cannot be completed by the printer:

1. Printer errors are handled as given in the next table.
2. DICOM transfer errors to the printer are treated as normal DICOM transfer errors and are recorded appropriately.

3. The printer can use the Basic Annotation Box SOP Class when the annotation flag is set. A control on the SOP Classes during setup of the Association is used to check of the printer known this SOP Class.

**Table 80: DICOM Command Response Status Handling Behavior**

| Service Status  | Error Code | Further Meaning       | Behavior       |
|-----------------|------------|-----------------------|----------------|
| Success         | 0000       | Success               | Log; Continue  |
| Warning/Failure | xxxx       | (any warning/failure) | Log; Continue. |
| Error           | xxxx       | (any error)           | Log; Abort.    |

#### 4.2.4.3.1.5.1.

#### Dataset Specific Conformance for Basic Annotation Box SOP Class N-SET-SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 81: Basic Annotation Presentation Module**

| Attribute Name      | Tag       | VR | Value | Presence of Value | Source | Comment                            |
|---------------------|-----------|----|-------|-------------------|--------|------------------------------------|
| Annotation Position | 2030,0010 | US |       | ALWAYS            | AUTO   | -                                  |
| Text String         | 2030,0020 | LO |       | ALWAYS            | AUTO   | Contains Patient Name (0010,0010). |

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 82: DICOM Command Communication Failure Behavior**

| Exception           | Behavior  |
|---------------------|---|
| Timeout             | The association is closed and the reason is logged. |
| Association aborted | The association is closed and the reason is logged. |

#### 4.2.4.3.1.6. SOP Specific Conformance for Printer SOP Class of the Basic Grayscale Print Management Meta SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

#### Exceptions:

The print job cannot be completed by the printer:

1. Printer errors are handled as given in the next table.

2. DICOM transfer errors to the printer are treated as normal DICOM transfer errors and are recorded appropriately.
3. The printer can use the Basic Annotation Box SOP Class when the annotation flag is set. A control on the SOP Classes during setup of the Association is used to check of the printer known this SOP Class.

**Table 83: DICOM Command Response Status Handling Behavior**

| Service Status  | Error Code | Further Meaning       | Behavior         |
|-----------------|------------|-----------------------|------------------|
| Success         | 0000       | Success               | Print Successful |
| Warning/Failure | xxxx       | (any warning/failure) | Log; Continue.   |
| Error           | xxxx       | (any error)           | Log; Abort.      |

**4.2.4.3.1.6.1. Dataset Specific Conformance for Printer SOP Class N-EVENT-REPORT-SCP**

Details regarding the Dataset Specific response behavior will be reported in this section.

IntelliSpace Cardiovascular does not respond to N-EVENT-REPORT from the Printer.

**Note:**

N-EVENT-REPORT is an asynchronous message from the printer in situations such as no film supply, low cartridge, print door opened, etc. IntelliSpace Cardiovascular does not handle this and responds with either ABORT or releasing the association. On the User Interface the Print Job is displayed as failed and the user needs to resend the image.

**4.2.4.3.1.6.2. Dataset Specific Conformance for Printer SOP Class N-GET-SCU**

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 84: Printer Module**

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------|-----------|----|-------|-------------------|--------|---------|
| Manufacturer              | 0008,0070 | LO |       | ALWAYS            | AUTO   | -       |
| Manufacturer's Model Name | 0008,1090 | LO |       | ALWAYS            | AUTO   | -       |
| Device Serial Number      | 0018,1000 | LO |       | ALWAYS            | AUTO   | -       |
| Software Versions         | 0018,1020 | LO |       | ALWAYS            | AUTO   | -       |
| Date of Last Calibration  | 0018,1200 | DA |       | ALWAYS            | AUTO   | -       |
| Time of Last Calibration  | 0018,1201 | TM |       | ALWAYS            | AUTO   | -       |
| Printer Status            | 2110,0010 | CS |       | ALWAYS            | AUTO   | -       |
| Printer Name              | 2110,0030 | LO |       | ALWAYS            | AUTO   | -       |

### 4.2.4.3.1.7. SOP Specific Conformance for Basic Film Box SOP Class of the Basic Grayscale Print Management Meta SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The Print AE conforms to the Basic Film Box SOP Class. No data elements are discarded or coerced by the Print AE.

**Exceptions:**

The print job cannot be completed by the printer:

1. Printer errors are handled as given in the next table.
2. DICOM transfer errors to the printer are treated as normal DICOM transfer errors and are recorded appropriately.
3. The printer can use the Basic Annotation Box SOP Class when the annotation flag is set. A control on the SOP Classes during setup of the Association is used to check of the printer known this SOP Class.

**Table 85: DICOM Command Response Status Handling Behavior**

| Service Status  | Error Code | Further Meaning       | Behavior       |
|-----------------|------------|-----------------------|----------------|
| Success         | 0000       | Success               | Log; Continue  |
| Warning/Failure | xxxx       | (any warning/failure) | Log; Continue. |
| Error           | xxxx       | (any error)           | Log; Abort.    |

### 4.2.4.3.1.7.1. Dataset Specific Conformance for Basic Film Box SOP Class N-CREATE-SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 86: Basic Film Box Presentation Module**

| Attribute Name               | Tag       | VR | Value  | Presence of Value | Source | Comment |
|------------------------------|-----------|----|--|-------------------|--------|---------|
| Image Display Format         | 2010,0010 | ST | STANDARD,<br>Value 2: 1,1, 1,2, 2,1,<br>2,2, 2,3, 3,2, 3,3, 3,4,<br>3,5, 4,4, 4,5, 4,6 | ALWAYS            | AUTO   | -       |
| Annotation Display Format ID | 2010,0030 | CS | ANNOTATION   | ALWAYS            | AUTO   | -       |
| Film Orientation             | 2010,0040 | CS | LANDSCAPE,<br>PORTRAIT   | ALWAYS            | AUTO   | -       |

**Table 87: Basic Film Box Relationship Module**

| Attribute Name                   | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------------------|-----------|----|-------|-------------------|--------|---------|
| Referenced Film Session Sequence | 2010,0500 | SQ |       | ALWAYS            | AUTO   | -       |
| >Referenced SOP Class UID        | 0008,1150 | UI |       | ALWAYS            | AUTO   | -       |
| >Referenced SOP Instance UID     | 0008,1155 | UI |       | ALWAYS            | AUTO   | -       |

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 88: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning   | Behavior  |
|----------------|------------|---|---|
| Success        | 0000       | Film Box successfully created   | The print job continues.                                    |
| Warning        | B605       | Requested Min Density or Max Density outside of Printer's operating Range | The print job continues and the warning is logged.          |
| Failure        | C616       | There is an existing Film Box that has not been printed                   | The print job is marked as failed and the reason is logged. |

**Table 89: DICOM Command Communication Failure Behavior**

| Exception                | Behavior  |
|--------------------------|---|
| ARTIM Time-out           | Print job Fails.  |
| Reply Time-out           | The association is rejected.  |
| Association Time-out SCU | The association is released.  |
| Association aborted      | The Print job is marked as failed. The reason is logged and reported to the user. |

**4.2.4.3.1.7.2. Dataset Specific Conformance for Basic Film Box SOP Class N-ACTION-SCU**

Details regarding the Dataset Specific response behavior will be reported in this section.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.



**Table 90: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning   | Behavior   |
|----------------|------------|---|--|
| Success        | 0000       | Film accepted for printing  | The print job continues.   |
| Warning        | B603       | Film Box SOP Instance Hierarchy does not contain Image Box SOP Instances  | The print job continues and the warning is logged and reported to the user.          |
|                | B604       | Image Size is larger than Image Box Size – The Image has been de-magnified  | The print job continues and the warning is logged and reported to the user.          |
|                | B609       | Image Size is larger than Image Box Size – The Image has been cropped to fit  | The print job continues and the warning is logged and reported to the user.          |
|                | B60A       | Image Size or combined Print Image Size is larger than Image Box Size – The Image or combined Print Image has been decimated to fit | The print job continues and the warning is logged and reported to the user.          |
| Failure        | C602       | Unable to create Print Job SOP Instance – Print Queue is full   | The print job is marked as failed and the reason is logged and reported to the user. |
|                | C603       | Image Size is larger than Image Box Size  | The print job is marked as failed and the reason is logged and reported to the user. |
|                | C613       | Combined Print Image Size is larger than Image Box Size   | The print job is marked as failed and the reason is logged and reported to the user. |

**Table 91: DICOM Command Communication Failure Behavior**

| Exception                | Behavior  |
|--------------------------|---|
| ARTIM Time-out           | Print job Fails   |
| Reply Time-out           | The association is rejected   |
| Association Time-out SCU | The association is released.  |
| Association aborted      | The Print job is marked as failed. The reason is logged and reported to the user. |

#### 4.2.4.3.1.8. SOP Specific Conformance for Basic Grayscale Image Box SOP Class of the Basic Grayscale Print Management Meta SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The Print AE conforms to the Basic Grayscale Image Box SOP Class. No data elements are discarded or coerced by the Print AE.

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**Exceptions:**

The print job cannot be completed by the printer:

1. Printer errors are handled as given in the next table.
2. DICOM transfer errors to the printer are treated as normal DICOM transfer errors and are recorded appropriately.
3. The printer can use the Basic Annotation Box SOP Class when the annotation flag is set. A control on the SOP Classes during setup of the Association is used to check of the printer known this SOP Class.

**Table 92: DICOM Command Response Status Handling Behavior**

| Service Status  | Error Code | Further Meaning       | Behavior       |
|-----------------|------------|-----------------------|----------------|
| Success         | 0000       | Success               | Log; Continue  |
| Warning/Failure | xxxx       | (any warning/failure) | Log; Continue. |
| Error           | xxxx       | (any error)           | Log; Abort.    |

**4.2.4.3.1.8.1.**

**SCU**

**Dataset Specific Conformance for Basic Grayscale Image Box SOP Class N-SET-**

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 93: Image Box Pixel Presentation Module**

| Attribute Name                 | Tag       | VR | Value        | Presence of Value | Source | Comment               |
|--------------------------------|-----------|----|--------------|-------------------|--------|-----------------------|
| Image Box Position             | 2020,0010 | US |              | ALWAYS            | AUTO   | -                     |
| Basic Grayscale Image Sequence | 2020,0110 | SQ |              | ALWAYS            | AUTO   | -                     |
| >Samples per Pixel             | 0028,0002 | US | 1            | ALWAYS            | AUTO   | -                     |
| >Photometric Interpretation    | 0028,0004 | CS | MONOCHROME2  | ALWAYS            | AUTO   | -                     |
| >Planar Configuration          | 0028,0006 | US |              | ANAP              | CONFIG | Additional attribute. |
| >Rows                          | 0028,0010 | US |              | ALWAYS            | AUTO   | -                     |
| >Columns                       | 0028,0011 | US |              | ALWAYS            | AUTO   | -                     |
| >Pixel Aspect Ratio            | 0028,0034 | IS | Value 1: 1\1 | ALWAYS            | AUTO   | -                     |
| >Bits Allocated                | 0028,0100 | US |              | ALWAYS            | AUTO   | -                     |
| >Bits Stored                   | 0028,0101 | US |              | ALWAYS            | AUTO   | -                     |
| >High Bit                      | 0028,0102 | US |              | ALWAYS            | AUTO   | -                     |
| >Pixel Representation          | 0028,0103 | US |              | ALWAYS            | AUTO   | -                     |
| >Window Center                 | 0028,1050 | DS |              | ANAP              | CONFIG | Additional attribute. |
| >Window Width                  | 0028,1051 | DS |              | ANAP              | CONFIG | Additional attribute. |

|             |           |           |  |        |      |   |
|-------------|-----------|-----------|--|--------|------|---|
| >Pixel Data | 7FE0,0010 | OW/<br>OB |  | ALWAYS | AUTO | - |
|-------------|-----------|-----------|--|--------|------|---|

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 94: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning   | Behavior   |
|----------------|------------|---|--|
| Success        | 0000       | Image successfully stored in Image Box  | The print job continues.   |
| Warning        | B604       | Image Size is larger than Image Box Size – The Image has been de-magnified  | The print job continues and the warning is logged and reported to the user.          |
|                | B605       | Requested Min Density or Max Density outside of Printer’s operating Range   | The print job continues and the warning is logged and reported to the user.          |
|                | B609       | Image Size is larger than Image Box Size – The Image has been cropped to fit  | The print job continues and the warning is logged and reported to the user.          |
|                | B60A       | Image Size or combined Print Image Size is larger than Image Box Size – The Image or combined Print Image has been decimated to fit | The print job continues and the warning is logged and reported to the user.          |
| Error          | C603       | Image Size is larger than Image Box Size  | The print job is marked as failed and the reason is logged and reported to the user. |
|                | C605       | Insufficient Memory in Printer to store the Image   | The print job is marked as failed and the reason is logged and reported to the user. |
|                | C613       | Combined Print Image Size is larger than Image Box Size   | The print job is marked as failed and the reason is logged and reported to the user. |

**Table 95: DICOM Command Communication Failure Behavior**

| Exception                | Behavior  |
|--------------------------|---|
| ARTIM Time-out           | Print job Fails   |
| Reply Time-out           | The association is rejected.  |
| Association Time-out SCU | The association is released.  |
| Association aborted      | The Print job is marked as failed. The reason is logged and reported to the user. |

#### 4.2.4.4. Association Acceptance Policy

Not applicable, Print AE does not accept any associations.

## 4.2.5. Query Retrieve as SCP AE

Details of this specific Application Entity is specified in this section.

### 4.2.5.1. SOP Classes

The Query/Retrieve SCP AE is used for handling incoming Query/Retrieve requests. The actual sending of DICOM Instances (images, objects) from IntelliSpace Cardiovascular Server to remote system is handled by another AE. The Query/Retrieve SCP AE makes use of the following DICOM functions:

- Verification as SCP, which uses C-ECHO service element.
- Query as SCP, which uses C-FIND as service element.
- Retrieve as SCP, which uses C-MOVE as service element.
- Patient / Study are always updates with the latest information for the exported studies.

This Application Entity provides Standard Conformance to the following SOP Classes.

**Table 96: SOP Classes for Query Retrieve as SCP AE**

| SOP Class Name                                      | SOP Class UID                 | SCU | SCP |
|---|-------------------------------|-----|-----|
| Verification SOP Class                              | 1.2.840.10008.1.1             | No  | Yes |
| Hardcopy Grayscale Image Storage (Retired)          | 1.2.840.10008.5.1.1.29        | Yes | No  |
| Hardcopy Color Image Storage (Retired)              | 1.2.840.10008.5.1.1.30        | Yes | No  |
| Computed Radiography Image Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.1     | Yes | No  |
| Digital X-Ray Image Storage - For Pres. SOP         | 1.2.840.10008.5.1.4.1.1.1.1   | Yes | No  |
| Digital X-Ray Image Storage - For Proc. SOP         | 1.2.840.10008.5.1.4.1.1.1.1.1 | Yes | No  |
| Digital Mammography X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.2   | Yes | No  |
| Digital Mammography X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.2.1 | Yes | No  |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP  | 1.2.840.10008.5.1.4.1.1.1.3   | Yes | No  |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP  | 1.2.840.10008.5.1.4.1.1.1.3.1 | Yes | No  |
| CT Image Storage SOP Class                          | 1.2.840.10008.5.1.4.1.1.2     | Yes | No  |
| Enhanced CT Image Storage [Note 1]                  | 1.2.840.10008.5.1.4.1.1.2.1   | Yes | Yes |
| Ultrasound Multi-frame Image Storage (Retired)      | 1.2.840.10008.5.1.4.1.1.3     | Yes | No  |
| Ultrasound Multi-frame Image Storage SOP Class      | 1.2.840.10008.5.1.4.1.1.3.1   | Yes | No  |
| MR Image Storage SOP Class                          | 1.2.840.10008.5.1.4.1.1.4     | Yes | No  |
| Enhanced MR Image Storage [Note 1]                  | 1.2.840.10008.5.1.4.1.1.4.1   | Yes | Yes |
| MR Spectroscopy Storage [Note 1]                    | 1.2.840.10008.5.1.4.1.1.4.2   | Yes | Yes |
| Nuclear Medicine Image Storage (Retired) [Note 1]   | 1.2.840.10008.5.1.4.1.1.5     | Yes | Yes |
| Ultrasound Image Storage (Retired)                  | 1.2.840.10008.5.1.4.1.1.6     | Yes | No  |
| Ultrasound Image Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.6.1   | Yes | No  |

| SOP Class Name  | SOP Class UID                    | SCU | SCP |
|---|----------------------------------|-----|-----|
| Secondary Capture Image Storage SOP Class                           | 1.2.840.10008.5.1.4.1.1.7        | Yes | No  |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class    | 1.2.840.10008.5.1.4.1.1.7.1      | Yes | No  |
| Multi-frame Grayscale Byte SC Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.7.2      | Yes | No  |
| Multi-frame Grayscale Word SC Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.7.3      | Yes | No  |
| Multi-frame True Color Secondary Capture Image Storage              | 1.2.840.10008.5.1.4.1.1.7.4      | Yes | No  |
| Standalone Overlay Storage SOP Class (Retired)                      | 1.2.840.10008.5.1.4.1.1.8        | Yes | No  |
| Standalone Curve Storage SOP Class (Retired)                        | 1.2.840.10008.5.1.4.1.1.9        | Yes | No  |
| General ECG Waveform Storage SOP Class                              | 1.2.840.10008.5.1.4.1.1.9.1.2    | Yes | No  |
| Ambulatory ECG Waveform Storage [Note 1]                            | 1.2.840.10008.5.1.4.1.1.9.1.3    | Yes | Yes |
| Standard Hemodynamic Waveform Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.9.2.1    | Yes | No  |
| Cardiac Electrophysiology Waveform Storage [Note 1]                 | 1.2.840.10008.5.1.4.1.1.9.3.1    | Yes | Yes |
| Basic Voice Audio Waveform Storage [Note 1]                         | 1.2.840.10008.5.1.4.1.1.9.4.1    | Yes | Yes |
| Standalone Modality LUT Storage (Retired)                           | 1.2.840.10008.5.1.4.1.1.10       | Yes | No  |
| Grayscale Softcopy Presentation State Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.11.1     | Yes | No  |
| Color Softcopy Presentation State Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.11.2     | Yes | No  |
| Pseudo-Color Softcopy Presentation State Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.11.3     | Yes | Yes |
| Blending Softcopy Presentation State Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.11.4     | Yes | Yes |
| X-Ray Angiographic Image Storage SOP Class                          | 1.2.840.10008.5.1.4.1.1.12.1     | Yes | No  |
| Enhanced XA Image Storage [Note 1]                                  | 1.2.840.10008.5.1.4.1.1.12.1.1   | Yes | Yes |
| X-Ray Radiofluoroscopic Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.12.2     | Yes | No  |
| Enhanced XRF Image Storage [Note 1]                                 | 1.2.840.10008.5.1.4.1.1.12.2.1   | Yes | Yes |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired)       | 1.2.840.10008.5.1.4.1.1.12.3     | Yes | No  |
| Nuclear Medicine Image Storage SOP Class                            | 1.2.840.10008.5.1.4.1.1.20       | Yes | No  |
| Raw Data Storage SOP Class  | 1.2.840.10008.5.1.4.1.1.66       | Yes | No  |
| Spatial Registration Storage [Note 1]                               | 1.2.840.10008.5.1.4.1.1.66.1     | Yes | Yes |
| Spatial Fiducials Storage [Note 1]                                  | 1.2.840.10008.5.1.4.1.1.66.2     | Yes | Yes |
| Real World Value Mapping Storage [Note 1]                           | 1.2.840.10008.5.1.4.1.1.67       | Yes | Yes |
| VL Endoscopic Image Storage [Note 1]                                | 1.2.840.10008.5.1.4.1.1.77.1.1   | Yes | Yes |
| Video Endoscopic Image Storage [Note 1]                             | 1.2.840.10008.5.1.4.1.1.77.1.1.1 | Yes | Yes |
| VL Microscopic Image Storage [Note 1]                               | 1.2.840.10008.5.1.4.1.1.77.1.2   | Yes | Yes |
| Video Microscopic Image Storage[Note 1]                             | 1.2.840.10008.5.1.4.1.1.77.1.2.1 | Yes | Yes |
| VL Slide-Coordinates Microscopic Image Storage [Note 1]             | 1.2.840.10008.5.1.4.1.1.77.1.3   | Yes | Yes |
| VL Photographic Image Storage [Note 1]                              | 1.2.840.10008.5.1.4.1.1.77.1.4   | Yes | Yes |

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| SOP Class Name   | SOP Class UID                    | SCU | SCP |
|--|----------------------------------|-----|-----|
| Video Photographic Image Storage[Note 1]                       | 1.2.840.10008.5.1.4.1.1.77.1.4.1 | Yes | Yes |
| Ophthalmic Photography 8 Bit Image Storage [Note 1]            | 1.2.840.10008.5.1.4.1.1.77.1.5.1 | Yes | Yes |
| Ophthalmic Photography 16 Bit Image Storage [Note 1]           | 1.2.840.10008.5.1.4.1.1.77.1.5.2 | Yes | Yes |
| Stereometric Relationship Storage [Note 1]                     | 1.2.840.10008.5.1.4.1.1.77.1.5.3 | Yes | Yes |
| Detail SR Storage - Trial (Retired)                            | 1.2.840.10008.5.1.4.1.1.88.3     | Yes | No  |
| Basic Text SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.11    | Yes | No  |
| Enhanced SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.22    | Yes | No  |
| Comprehensive SR SOP Class                                     | 1.2.840.10008.5.1.4.1.1.88.33    | Yes | No  |
| Procedure Log Storage SOP Class                                | 1.2.840.10008.5.1.4.1.1.88.40    | Yes | No  |
| Mammography CAD SR [Note 1]                                    | 1.2.840.10008.5.1.4.1.1.88.50    | Yes | Yes |
| Key Object Selection Document Storage SOP Class                | 1.2.840.10008.5.1.4.1.1.88.59    | Yes | No  |
| Chest CAD SR [Note 1]  | 1.2.840.10008.5.1.4.1.1.88.65    | Yes | Yes |
| X-Ray Radiation Dose SR SOP Class                              | 1.2.840.10008.5.1.4.1.1.88.67    | Yes | No  |
| Encapsulated PDF Storage                                       | 1.2.840.10008.5.1.4.1.1.104.1    | Yes | No  |
| Positron Emission Tomography Image Storage SOP Class           | 1.2.840.10008.5.1.4.1.1.128      | Yes | No  |
| Standalone PET Curve Storage SOP Class (Retired)               | 1.2.840.10008.5.1.4.1.1.129      | Yes | No  |
| RT Image Storage SOP Class                                     | 1.2.840.10008.5.1.4.1.1.481.1    | Yes | No  |
| RT Dose Storage SOP Class                                      | 1.2.840.10008.5.1.4.1.1.481.2    | Yes | No  |
| RT Structure Set Storage SOP Class                             | 1.2.840.10008.5.1.4.1.1.481.3    | Yes | No  |
| RT Beams Treatment Record Storage [Note 1]                     | 1.2.840.10008.5.1.4.1.1.481.4    | Yes | Yes |
| RT Plan Storage SOP Class                                      | 1.2.840.10008.5.1.4.1.1.481.5    | Yes | No  |
| RT Brachy Treatment Record Storage [Note 1]                    | 1.2.840.10008.5.1.4.1.1.481.6    | Yes | Yes |
| RT Treatment Summary Record Storage [Note 1]                   | 1.2.840.10008.5.1.4.1.1.481.7    | Yes | Yes |
| RT Ion Plan Storage [Note 1]                                   | 1.2.840.10008.5.1.4.1.1.481.8    | Yes | Yes |
| RT Ion Beams Treatment Record Storage [Note 1]                 | 1.2.840.10008.5.1.4.1.1.481.9    | Yes | Yes |
| Patient Root QR Information Model - FIND SOP Class             | 1.2.840.10008.5.1.4.1.2.1.1      | No  | Yes |
| Patient Root QR Information Model - MOVE SOP Class             | 1.2.840.10008.5.1.4.1.2.1.2      | No  | Yes |
| Study Root QR Information Model - FIND SOP Class               | 1.2.840.10008.5.1.4.1.2.2.1      | No  | Yes |
| Study Root QR Information Model - MOVE SOP Class               | 1.2.840.10008.5.1.4.1.2.2.2      | No  | Yes |
| PatientStudy Only QR Info. Model - FIND SOP Class (Retired)    | 1.2.840.10008.5.1.4.1.2.3.1      | No  | Yes |
| PatientStudy Only QR Info. Model - MOVE SOP Class (Retired)    | 1.2.840.10008.5.1.4.1.2.3.2      | No  | Yes |
| Philips Private X-Ray Image Storage                            | 1.3.46.670589.2.3.1.1            | Yes | No  |
| Philips Private Reconstructed X-ray Storage                    | 1.3.46.670589.2.4.1.1            | Yes | No  |
| Philips Private iE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1            | Yes | No  |
| Philips Private Xcelera Info Object Storage                    | 1.3.46.670589.2.6.1.1            | Yes | No  |

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| SOP Class Name   | SOP Class UID          | SCU | SCP |
|--|------------------------|-----|-----|
| Philips Private ViewForum 3D Volume New Storage          | 1.3.46.670589.5.0.1.1  | Yes | No  |
| Philips Private ViewForum 3D Volume Object New Storage   | 1.3.46.670589.5.0.2.1  | Yes | No  |
| Philips Private ViewForum Surface New Storage            | 1.3.46.670589.5.0.3.1  | Yes | No  |
| Philips Private ViewForum MR Cardio New Storage          | 1.3.46.670589.5.0.8.1  | Yes | No  |
| Philips Private ViewForum CT Synthetic Image Storage     | 1.3.46.670589.5.0.9    | Yes | No  |
| Philips Private ViewForum MR Synthetic Image Storage     | 1.3.46.670589.5.0.10   | Yes | No  |
| Philips Private ViewForum MR Cardio Analysis New Storage | 1.3.46.670589.5.0.11.1 | Yes | No  |
| Philips Private ViewForum CX Synthetic Image Storage     | 1.3.46.670589.5.0.12   | Yes | No  |
| Philips Private ViewForum Perfusion Storage              | 1.3.46.670589.5.0.13   | Yes | No  |
| Philips Private ViewForum Perfusion Analysis Storage     | 1.3.46.670589.5.0.14   | Yes | No  |

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.

#### 4.2.5.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

##### 4.2.5.2.1. General

The DICOM standard application context is specified below.

**Table 97: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

##### 4.2.5.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

The number of associations that Query Retrieve SCP AE can handle is up to 10. For the verification service at least one association can be handled simultaneously. The Query Retrieve SCP AE will only accept DICOM associations from other DICOM nodes whose AE titles are listed in the IntelliSpace Cardiovascular configuration files. The storage part of the Query Retrieve SCP function can handle maximum of 5 associations simultaneously.

**Table 98: Number of associations as an Association Initiator for this AE (C-STORE)**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 5     |

**Table 99: Number of associations as an Association Acceptor for this AE (C-FIND, C-MOVE)**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 5     |

**Table 100: Number of associations as an Association Acceptor for this AE (C-ECHO)**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 1     |

### 4.2.5.2.3. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 101: DICOM Implementation Class and Version for Query Retrieve as SCP AE**

| Property                    | Value                |
|-----------------------------|----------------------|
| Implementation Class UID    | 1.3.46.670589.58.8.0 |
| Implementation Version Name | ISCV 8.0             |

### 4.2.5.2.4. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 102: Communication Failure Behavior**

| Exception     | Behavior  |
|---------------|---|
| ARTIM Timeout | The association is released and the reason is logged. |

### 4.2.5.3. Association Initiation Policy

The Application Entity will respond on a received reject Association attempt as shown in next table.



**Table 103: Association Rejection response**

| Result  | Source  | Reason/Diagnosis                           | Behavior  |
|---|---|--|---|
| 1 - rejected-permanent  | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|   |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|   |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|   | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|   | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
|   | 2 - rejected-transient  | 1 - DICOM UL service-user                  | 1 - no-reason-given   |
| 2 - application-context-name-not-supported                    |   |  | The user is informed. Details are logged in central log file. |
| 3 - calling-AE-title-not-recognized                           |   |  | The user is informed. Details are logged in central log file. |
| 7 - called-AE-title-not-recognized                            |   |  | The user is informed. Details are logged in central log file. |
| 2 - DICOM UL service-provider (ACSE related function)         |   | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
| 3 - DICOM UL service-provider (Presentation related function) |   | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |

The behavior of the AE on receiving an association abort is summarized in the next table.

**Table 104: Association Abort Handling**

| Source  | Reason/Diagnosis                | Behavior   |
|---|---------------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU            | When received, terminates the connection and logs the event. |
|   | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|   | 4 - unrecognized-PDU-parameter  | When received, terminates the connection and logs the event. |
|   | 5 - unexpected-PDU-parameter    | When received, terminates the connection and logs the event. |
|   | 6 - invalid-PDU-parameter-value | When received, terminates the connection and logs the event. |

### 4.2.5.3.1. (Real-World) Activity – Image Export

#### 4.2.5.3.1.1. Description and Sequencing of Activities

**Normal flow of events:**

1. IntelliSpace Cardiovascular accepts the set up request of the remote node. Once the connection has been set up IntelliSpace Cardiovascular receives the query request. In response IntelliSpace Cardiovascular will send (0 of more) responses in the result. The connection will be closed.
2. A new connection will be set up for the retrieve request. If request was successful an association with the store remote node will be set up.
3. The requested data will be sending to the store remote node
4. Connection with the store remote node and the request retrieve node will be closed.
5. Patient Study data will be updated with the latest information. (Refer to the tables in section [4.2.1.3.3.3 SOP Specific Conformance for Storage SOP Classes](#) for the list of updated patient and study attributes.)

After the C-MOVE request the Query/Retrieve as SCP (C-STORE) will only export the requested instances. IntelliSpace Cardiovascular send these instances intermediate during the C-MOVE responses or not intermediate than the C-MOVE status "PENDING" is sending to the Remote AE.

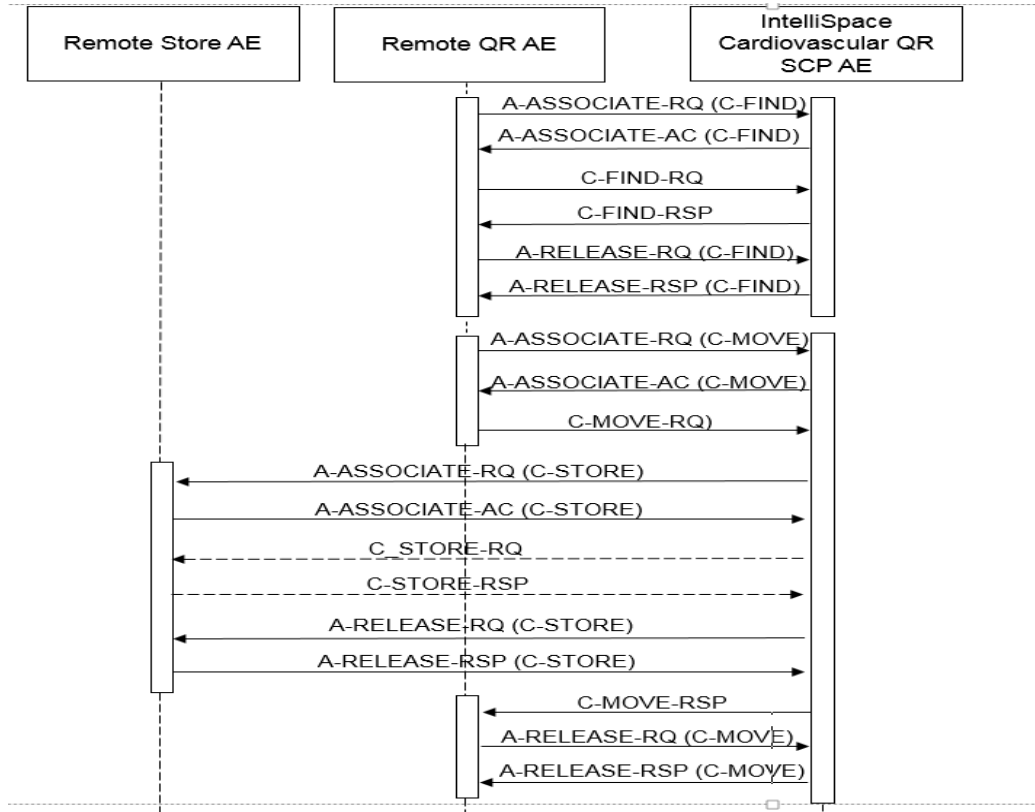


Figure 18: (Real World) Activity - Image Export

#### 4.2.5.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 105: Proposed Presentation Contexts for (Real-World) Activity – Image Export

| Presentation Context Table                 |                        |                           |                     |      |                      |
|--|------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                            |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                                       | UID                    | Name List                 | UID List            |      |                      |
| Hardcopy Grayscale Image Storage (Retired) | 1.2.840.10008.5.1.1.29 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Hardcopy Color Image Storage (Retired)     | 1.2.840.10008.5.1.1.30 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |

**Presentation Context Table**

| Abstract Syntax                                     |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Computed Radiography Image Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.1     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Pres. SOP         | 1.2.840.10008.5.1.4.1.1.1.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Proc. SOP         | 1.2.840.10008.5.1.4.1.1.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Mammography X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax                                     |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Mammography X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP  | 1.2.840.10008.5.1.4.1.1.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP  | 1.2.840.10008.5.1.4.1.1.1.3.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone Modality LUT Storage (Retired)           | 1.2.840.10008.5.1.4.1.1.10    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

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**Presentation Context Table**

| Abstract Syntax  |                                | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|--------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                            | Name List   | UID List                        |      |                      |
|  |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Encapsulated PDF Storage                                     | 1.2.840.10008.5.1.4.1.1.10.4.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Grayscale Softcopy Presentation State Storage SOP Class      | 1.2.840.10008.5.1.4.1.1.11.1   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Color Softcopy Presentation State Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.11.2   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| X-Ray Angiographic Image Storage SOP Class                   | 1.2.840.10008.5.1.4.1.1.12.1   | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|  |                                | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                                | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                                | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax   |                              | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|---|------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                          | Name List   | UID List                        |      |                      |
|   |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| X-Ray Radiofluoroscopic Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.12.2 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                              | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.12.3 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|   |                              | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|   |                              | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                              | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|   |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Positron Emission Tomography Image Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.12.8 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                              | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                              | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                              | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Standalone PET Curve Storage SOP Class (Retired)              | 1.2.840.10008.5.1.4.1.1.12.9 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |

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| Abstract Syntax                                |                            | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|----------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                        | Name List   | UID List                        |      |                      |
|  |                            | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                            | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| CT Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.2  | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                            | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                            | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                            | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Nuclear Medicine Image Storage SOP Class       | 1.2.840.10008.5.1.4.1.1.20 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                            | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                            | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                            | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Ultrasound Multi-frame Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.3  | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|  |                            | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                            | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|  |                            | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                            | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                            | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |



**Presentation Context Table**

| Abstract Syntax                                |                                   | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|-----------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                               | Name List   | UID List                        |      |                      |
| Ultrasound Multi-frame Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.3.1       | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|  |                                   | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                                   | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                   | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|  |                                   | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|  |                                   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| MR Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.4         | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                   | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| RT Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.48<br>1.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                                   | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |

**Presentation Context Table**

| Abstract Syntax                    |                                   | Transfer Syntax                                   |                        | Role | Extended Negotiation |
|------------------------------------|-----------------------------------|---|------------------------|------|----------------------|
| Name                               | UID                               | Name List   | UID List               |      |                      |
| RT Dose Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.48<br>1.2 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2    | SCU  | None                 |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1    |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2      |      |                      |
| RT Structure Set Storage SOP Class | 1.2.840.10008.5.1.4.1.1.48<br>1.3 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2    | SCU  | None                 |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1    |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2      |      |                      |
| RT Plan Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.48<br>1.5 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2    | SCU  | None                 |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1    |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2      |      |                      |
| Ultrasound Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.6         | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50 | SCU  | None                 |
|                                    |                                   | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70 |      |                      |
|                                    |                                   | RLE Lossless                                      | 1.2.840.10008.1.2.5    |      |                      |
|                                    |                                   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2    |      |                      |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1    |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2      |      |                      |
| Ultrasound Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.6.1       | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50 | SCU  | None                 |
|                                    |                                   | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70 |      |                      |

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**Presentation Context Table**

| Abstract Syntax                           |                            | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|---|----------------------------|---|---------------------------------|------|----------------------|
| Name                                      | UID                        | Name List   | UID List                        |      |                      |
|   |                            | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                            | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|   |                            | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|   |                            | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|   |                            | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                            | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Raw Data Storage SOP Class                | 1.2.840.10008.5.1.4.1.1.66 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                            | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                            | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7  | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|   |                            | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|   |                            | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                            | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
|   |                            | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|   |                            | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                            | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |

## Presentation Context Table

| Abstract Syntax  |                             | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|-----------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                         | Name List   | UID List                        |      |                      |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Multi-frame Grayscale Byte SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.2 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                             | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Multi-frame Grayscale Word SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.3 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                               | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|-------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                           | Name List   | UID List                        |      |                      |
|  |                               | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                               | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                               | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|  |                               | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Multi-frame True Color Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.4   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                               | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                               | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                               | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                               | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|  |                               | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Standalone Overlay Storage SOP Class (Retired)         | 1.2.840.10008.5.1.4.1.1.8     | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                               | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                               | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Basic Text SR SOP Class                                | 1.2.840.10008.5.1.4.1.1.88.11 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |

**Presentation Context Table**

| Abstract Syntax                              |                               | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-------------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                           | Name List                 | UID List            |      |                      |
|  |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Enhanced SR SOP Class                        | 1.2.840.10008.5.1.4.1.1.88.22 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Detail SR Storage - Trial (Retired)          | 1.2.840.10008.5.1.4.1.1.88.3  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Comprehensive SR SOP Class                   | 1.2.840.10008.5.1.4.1.1.88.33 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| X-Ray Radiation Dose SR SOP Class            | 1.2.840.10008.5.1.4.1.1.88.67 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Standalone Curve Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.9     | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                               | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                               | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

**Presentation Context Table**

| Abstract Syntax                                 |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
| General ECG Waveform Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.9.1.2 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standard Hemodynamic Waveform Storage SOP Class | 1.2.840.10008.5.1.4.1.1.9.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Procedure Log Storage SOP Class                 | 1.2.840.10008.5.1.4.1.1.88.40 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Key Object Selection Document Storage SOP Class | 1.2.840.10008.5.1.4.1.1.88.59 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
| Enhanced CT Image Storage SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.2.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced MR Image Storage SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.4.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax   |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| MR Spectroscopy Storage SOP Class [Note 1]                    | 1.2.840.10008.5.1.4.1.1.4.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Nuclear Medicine Image Storage (Retired)SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.5     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ambulatory ECG Waveform Storage SOP Class [Note 1]            | 1.2.840.10008.5.1.4.1.1.9.1.3 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Cardiac Electrophysiology Waveform Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.9.3.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   | 1.2.840.10008.5.1.4.1.1.11.3  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |



## Presentation Context Table

| Abstract Syntax   |                                | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|--------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                            | Name List                                   | UID List                        |      |                      |
| Pseudo-Color Softcopy Presentation State Storage SOP Class [Note 1] |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Basic Voice Audio Waveform Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.9.4.1  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Blending Softcopy Presentation State Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.11.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced XA Image Storage SOP Class [Note 1]                        | 1.2.840.10008.5.1.4.1.1.12.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced XRF Image Storage SOP Class [Note 1]                       | 1.2.840.10008.5.1.4.1.1.12.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |

**Presentation Context Table**

| Abstract Syntax                                     |                                  | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|----------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                              | Name List                                   | UID List                        |      |                      |
| Spatial Registration Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.66.1     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Fiducials Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.66.2     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Real World Value Mapping Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.67       | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Endoscopic Image Storage SOP Class [Note 1]      | 1.2.840.10008.5.1.4.1.1.77.1.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Endoscopic Image Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.77.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax   |                                  | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|----------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                              | Name List                                   | UID List                        |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Microscopic Image Storage SOP Class [Note 1]                   | 1.2.840.10008.5.1.4.1.1.77.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Microscopic Image Storage SOP Class [Note 1]                | 1.2.840.10008.5.1.4.1.1.77.1.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Slide-Coordinates Microscopic Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.77.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Photographic Image Storage SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.77.1.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                  | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |

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**Presentation Context Table**

| Abstract Syntax  |                                  | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|----------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                              | Name List                                   | UID List                        |      |                      |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Photographic Image Storage SOP Class [Note 1]            | 1.2.840.10008.5.1.4.1.1.77.1.4.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ophthalmic Photography 8 Bit Image Storage SOP Class [Note 1]  | 1.2.840.10008.5.1.4.1.1.77.1.5.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                  | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Ophthalmic Photography 16 Bit Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.77.1.5.2 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                  | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                  | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|----------------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                              | Name List                 | UID List            |      |                      |
| Stereometric Relationship Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.77.1.5.3 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                  | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                  | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Mammography CAD SR SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.88.50    | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                  | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                  | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Chest CAD SR SOP Class [Note 1]                        | 1.2.840.10008.5.1.4.1.1.88.65    | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                  | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                  | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Beams Treatment Record Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.48.1.4   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                  | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                  | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Brachy Treatment Record Storage SOP Class [Note 1]  | 1.2.840.10008.5.1.4.1.1.48.1.6   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                  | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                  | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Treatment Summary Record Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.48.1.7   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                  | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                   | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                               | Name List                 | UID List            |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Plan Storage SOP Class [Note 1]                         | 1.2.840.10008.5.1.4.1.1.48<br>1.8 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Beams Treatment Record Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.48<br>1.9 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private X-Ray Image Storage                            | 1.3.46.670589.2.3.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Reconstructed X-ray Storage                    | 1.3.46.670589.2.4.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private iE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Xcelera Info Object Storage                    | 1.3.46.670589.2.6.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |

**Presentation Context Table**

| Abstract Syntax  |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                    | Name List                 | UID List            |      |                      |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume New Storage          | 1.3.46.670589.5.0.1.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Synthetic Image Storage     | 1.3.46.670589.5.0.10   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio Analysis New Storage | 1.3.46.670589.5.0.11.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CX Synthetic Image Storage     | 1.3.46.670589.5.0.12   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Storage              | 1.3.46.670589.5.0.13   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                       | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                   | Name List                 | UID List            |      |                      |
| Philips Private ViewForum Perfusion Analysis Storage   | 1.3.46.670589.5.0.14  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume Object New Storage | 1.3.46.670589.5.0.2.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Surface New Storage          | 1.3.46.670589.5.0.3.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio New Storage        | 1.3.46.670589.5.0.8.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CT Synthetic Image Storage   | 1.3.46.670589.5.0.9   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

Note 1: Not available in default configuration. Please consult customer service representative to enable this.

#### 4.2.5.3.1.3. SOP Specific Conformance for Storage SOP Classes

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

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Not mentioned SOP classes are also supported, but only with the stored transfer syntax. This implies that not mentioned SOP classes are handled in such manner that what comes in will be sent out.

- The DICOM Store SCU exports the same attribute values as were imported into IntelliSpace Cardiovascular.
- The DICOM Store SCU updates the patient study with the latest information.
- The DICOM Store SCU supports all transfer syntaxes that are supported by DICOM import.
- The DICOM Store SCU supports conversion of transfer syntax (must be prepared to do a conversion from the transfer syntax in which the data is stored to the transfer syntax which is negotiated with the remote DICOM Store SOP Specific Conformance for SOP Classes.
- Only the DICOM instances of services where both parties agreed upon are stored, this will be reported.

#### 4.2.5.3.1.3.1. Dataset Specific Conformance for C-STORE-RQ

Details regarding the Dataset Specific response behavior will be reported in this section. This includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

The possible status response during the C-STORE-SCU request are listed here:

**Table 106: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning                          | Behavior       |
|----------------|------------|--|----------------|
| Success        | 0000       | Successful stored                        | Log; Continue. |
| Refused        | A700       | Refused: Out of Resources                | Log; Continue. |
| Error          | 0110       | Error: Processing Failure                | Log; Continue. |
|                | A900       | Error: Data Set does not match SOP Class | Log; Continue. |
|                | C000       | Error: cannot understand                 | Log; Continue. |
| Warning        | B000       | Coercion of Data Elements                | Log; Continue. |
|                | B007       | Data Set does not match SOP Class        | Log; Continue. |
|                | B006       | Elements Discarded                       | Log; Continue. |

Next table shows the possible Communication Failure during C-STORE request.

**Table 107: DICOM Command Communication Failure Behavior**

| Exception            | Behavior   |
|----------------------|--|
| Timeout              | The association released and the reason is logged. |
| Association aborted. | The association released and the reason is logged. |

**Exceptions:**

1. If, after setting up the connection, no data can be sent to the external DICOM node for 2 minutes, IntelliSpace Cardiovascular will retry once and then it will abort the connection and reports error
2. If an error occurs on IntelliSpace Cardiovascular while setting up the connection, IntelliSpace Cardiovascular will abort the connection and reports an error
3. If an error occurs on the external DICOM node while setting up the connection, IntelliSpace Cardiovascular will abort all actions related to that connection and reports an error.
4. If no agreement between the two parties can be reached concerning communication parameters the connection will be closed and no data transfer will take place. IntelliSpace Cardiovascular reports an error.
5. When a network error occurs during connection set up or during data transfer, IntelliSpace Cardiovascular will abort all actions related to the connection and reports and error.

During DICOM based store, transfer negotiations may indicate that the original format of the data is not accepted by the target node.

In such cases, the remote store server will try to apply one of the transfer syntax conversions indicated by '+', in order to get to transfer syntax that is supported by the external system. The Transfer syntax conversion is supported from SCU to SCP.

| Source Syntax                               | Destination Syntax |     |     |
|---|--------------------|-----|-----|
|   | ILE                | ELE | EBE |
| ILE   | -                  | +   | +   |
| ELE   | +                  | -   | +   |
| EBE   | +                  | +   | -   |
| JPEG Baseline                               | -                  | -   | -   |
| JPEG Lossless Non-hierarchical /Proc 14     | -                  | -   | -   |
| JPEG Lossless FOP Non-Hierarchical 14       | +                  | +   | +   |
| JPEG 2000 Image Compression (Lossless Only) | -                  | -   | -   |
| RLE   | +                  | +   | +   |

**Figure 19: Transfer Syntax Conversion from Source to Destination**

The Archive AE conforms to the SOP classes of the Storage Service Class. No data elements are discarded or coerced by the Archive AE.

The list of updated patient and study attributes are mentioned in the tables in section [4.2.1.3.3.3 SOP Specific Conformance for Storage SOP Classes](#).

**4.2.5.4. Association Acceptance Policy**

The Application Entity may reject Association attempts as shown in the table below.

**Table 108: Association Reject Reasons**

| Result  | Source  | Reason/Diagnosis                           | Behavior  |
|---|---|--|---|
| 1 - rejected permanent  | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|   |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|   |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|   | 2 - DICOM UL service provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|   | 3 - DICOM UL service provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
|   | 2 - rejected-transient  | 1 - DICOM UL service-user                  | 1 - no-reason-given   |
| 2 - application-context-name-not-supported                    |   |  | The user is informed. Details are logged in central log file. |
| 3 - calling-AE-title-not-recognized                           |   |  | The user is informed. Details are logged in central log file. |
| 7 - called-AE-title-not-recognized                            |   |  | The user is informed. Details are logged in central log file. |
| 2 - DICOM UL service provider (ACSE related function)         |   | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
| 3 - DICOM UL service provider (Presentation related function) |   | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |

The behavior of the AE for sending an association abort is summarized in next table.

**Table 109: Association Abort Policies**

| Source  | Reason/Diagnosis                | Behavior   |
|---|---------------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU            | When received, terminates the connection and logs the event. |
|   | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|   | 4 - unrecognized-PDU parameter  | When received, terminates the connection and logs the event. |
|   | 5 - unexpected-PDU parameter    | When received, terminates the connection and logs the event. |
|   | 6 - invalid-PDU-parameter value | When received, terminates the connection and logs the event. |

#### 4.2.5.4.1. (Real-World) Activity – Verification as SCP

##### 4.2.5.4.1.1. Description and Sequencing of Activities

The Query/Retrieve as SCP AE accepts associations from systems that wish to verify application level communication using the C-ECHO command.

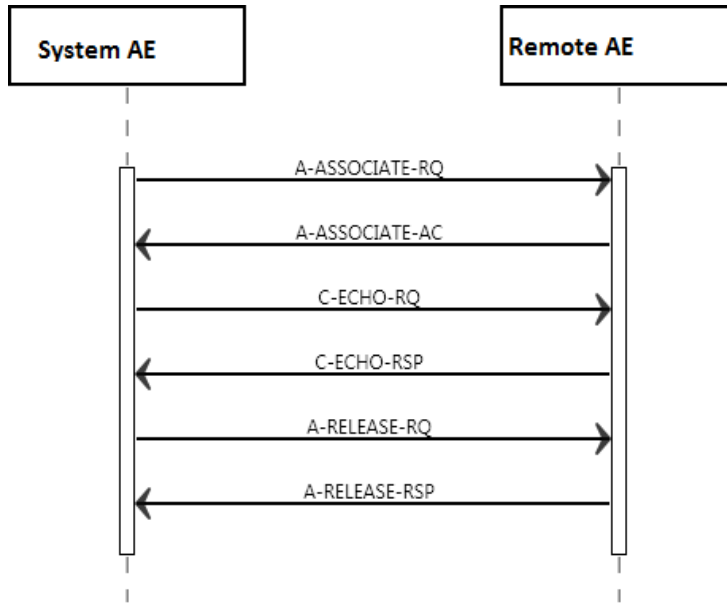


Figure 20: (Real World) Activity - Verification as SCP

#### 4.2.5.4.1.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 110: Acceptable Presentation Contexts for (Real-World) Activity – Verification as SCP

| Presentation Context Table |                   |                           |                     |      |                      |
|----------------------------|-------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax            |                   | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                       | UID               | Name List                 | UID List            |      |                      |
| Verification SOP Class     | 1.2.840.10008.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|                            |                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                            |                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

#### 4.2.5.4.1.3. SOP Specific Conformance for Verification SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The Query/Retrieve as SCP AE provides standard conformance to Verification SOP Class

The Query/Retrieve as SCP (C-ECHO) accept all contexts in the intersection of the proposed and acceptable Presentation Context. This means that the Query/Retrieve as SCP AE will accept multiple proposed Presentation

Contexts with the same SOP Class but different Transfer Syntaxes, so there will be no checks for duplicate Presentation Contexts.

#### 4.2.5.4.1.3.1. Dataset Specific Conformance for Verification C-ECHO SCP

Details regarding the Dataset Specific response behavior will be reported in this section.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 111: Status Response**

| Service Status | Error Code | Further Meaning | Behavior             |
|----------------|------------|-----------------|----------------------|
| Success        | 0000       | Confirmation    | Message in log file. |

#### 4.2.5.4.2. (Real-World) Activity – FIND as SCP

##### 4.2.5.4.2.1. Description and Sequencing of Activities

IntelliSpace Cardiovascular allows the clinical user to query and retrieve data from other systems in the DICOM network. In communications with other nodes, IntelliSpace Cardiovascular operates as a DICOM Query/Retrieve SCP and DICOM Store SCU, which are compatible with DICOM Query/Retrieve SCU and Store SCP provided by other products.

Query/Retrieve as SCP AE accepts associations from systems that wish to query IntelliSpace Cardiovascular database using the C-FIND command.

##### 4.2.5.4.2.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

**Table 112: Acceptable Presentation Contexts for (Real-World) Activity – FIND As SCP**

| Presentation Context Table                         |                             |                           |                     |      |                      |
|--|-----------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                                    |                             | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name   | UID                         | Name List                 | UID List            |      |                      |
| Patient Root QR Information Model - FIND SOP Class | 1.2.840.10008.5.1.4.1.2.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                             | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

**Presentation Context Table**

| Abstract Syntax   |                             | Transfer Syntax           |                     | Role | Extended Negotiation |
|---|-----------------------------|---------------------------|---------------------|------|----------------------|
| Name  | UID                         | Name List                 | UID List            |      |                      |
|   |                             | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Study Root QR Information Model - FIND SOP Class            | 1.2.840.10008.5.1.4.1.2.2.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                             | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                             | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| PatientStudy Only QR Info. Model - FIND SOP Class (Retired) | 1.2.840.10008.5.1.4.1.2.3.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                             | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                             | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

#### 4.2.5.4.2.3. SOP Specific Conformance for Patient Root QR Information Model - FIND SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The Query/Retrieve as SCP provides standard conformance.

The Query/Retrieve as SCP accepts all contexts in the intersection of the proposed and acceptable Presentation Context. This means that the Query/Retrieve as SCP will accept multiple proposed Presentation Contexts with the same SOP Class but different Transfer Syntaxes, so there will be no checks for duplicate Presentation Contexts.

If the C-FIND query is such that more than 1000 matches are found the Query/Retrieve SCP will return an error “out of resources” indicating there are more matches than the system can handle.

If a wildcards are used in a C-FIND, all matching records and all null records are returned by IntelliSpace Cardiovascular.

#### 4.2.5.4.2.3.1. Dataset Specific Conformance for Patient Root QR Information Model - FIND SOP Class C-FIND-SCP

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 113: Requested Query Keys for Patient Root Information Model**

| Patient Root Information Model    |           |        |                                      |                               |
|-----------------------------------|-----------|--------|--------------------------------------|-------------------------------|
| Attribute Name                    | Tag       | VR     | Type Of Matching                     | Comment                       |
| Query/Retrieve Level              | 0008,0052 | CS     |                                      | Patient, Study, Series, image |
| Specific Character Set            | 0008,0005 | CS     |                                      | -                             |
| Q/R Patient level                 |           |        |                                      |                               |
| Patient ID                        | 0010,0020 | LO     | Single Value, Wildcard, Universal    | -                             |
| Patient's Birth Date              | 0010,0030 | DA     | Single Value, Universal              | -                             |
| Patient's Name                    | 0010,0010 | PN     | Single Value, Universal, WildCard    | -                             |
| Patient's Sex                     | 0010,0040 | CS     | Single Value, Universal, WildCard    | -                             |
| Q/R Study level                   |           |        |                                      |                               |
| Accession Number                  | 0008,0050 | SH     | Single Value, Universal, WildCard    | -                             |
| Issuer of Patient ID              | 0010,0021 | LO     | Single Value, Universal, WildCard    | -                             |
| Modalities in Study               | 0008,0061 | CS     | Universal                            | -                             |
| Number of Study Related Instances | 0020,1208 | IS     | Universal                            | -                             |
| Number of Study Related Series    | 0020,1206 | IS     | Universal                            | -                             |
| Referring Physician's Name        | 0008,0090 | PN     | Single Value, Universal, WildCard    | -                             |
| Study Date                        | 0008,0020 | DA     | Range, Single Value, Universal       | -                             |
| Study ID                          | 0020,0010 | SH     | Single Value, Universal, WildCard    | -                             |
| Study Instance UID                | 0020,000D | UI     | List Of UID, Single Value, Universal | -                             |
| Study Time                        | 0008,0030 | T<br>M | Range, Single Value, Universal       | -                             |
| Q/R Series level                  |           |        |                                      |                               |
| Body Part Examined                | 0018,0015 | CS     |                                      | -                             |
| Modality                          | 0008,0060 | CS     | Single Value, Universal              | -                             |



| Performing Physician's Name        | 0008,1050 | PN |                                      | - |
|------------------------------------|-----------|----|--------------------------------------|---|
| Protocol Name                      | 0018,1030 | LO |                                      | - |
| Series Instance UID                | 0020,000E | UI | List Of UID, Single Value, Universal | - |
| Series Number                      | 0020,0011 | IS | Single Value, Universal              | - |
| Number of Series Related Instances | 0020,1209 | IS | Universal                            |   |
| Series Description                 | 0008,103E | LO | Single value                         |   |
| Q/R Image level                    |           |    |                                      |   |
| Instance Number                    | 0020,0013 | IS | Single Value, Universal              | - |
| SOP Class UID                      | 0008,0016 | UI | List Of UID, Single Value, Universal |   |
| SOP Instance UID                   | 0008,0018 | UI | List Of UID, Single Value, Universal | - |
| Rows                               | 0028,0010 | US | Universal                            |   |
| Columns                            | 0028,0011 | US | Universal                            |   |
| Bits Allocated                     | 0028,0100 | US | Universal                            |   |
| Number of Frames                   | 0028,0008 | IS | Universal                            |   |

Note: See chapter 6 Support of Character Sets for details about VR attributes as PN.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

Possible Status Responses during C-FIND responses are listed here:

**Table 114: Status Response**

| Service Status | Error Code | Further Meaning           | Behavior   |
|----------------|------------|---------------------------|--|
| Success        | 0000       | Matching is complete      | No final identifier is supplied. Logged and continued.   |
| Failed         | A900       | Invalid dataset           | Related fields (0000,0901) (0000,0902)   |
| Pending        | FF01       | Current match is supplied | Matches are continuing; Current match is supplied and any Optional Keys were supported in the same manner as Required Keys. (Related fields: identifier) |

| Service Status | Error Code | Further Meaning  | Behavior  |
|----------------|------------|------------------|---|
|                | FF01       | Warning          | Matches are continuing; Warning that one or more Optional Keys were not supported for existence and/or matching for this identifier (Related fields: identifier). |
| Refused        | A700       | Out of resources | Related fields (0000,0902)  |

If a query returns more than 1000 results, the system sends an “out of resources” messages back to the client instead of returning query results.

Possible communication failures during the query process are:

**Table 115: DICOM Command Communication Failure Behavior**

| Exception           | Behavior  |
|---------------------|---|
| Timeout             | The association is released and the reason is logged. |
| Association aborted | The association is released and the reason is logged. |

#### 4.2.5.4.2.4. SOP Specific Conformance for Study Root QR Information Model - FIND SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The IntelliSpace Cardiovascular Query/Retrieve SCP AE provides standard conformance to the Study Root Q/R Information model.

#### 4.2.5.4.2.4.1. Dataset Specific Conformance for Study Root QR Information Model - FIND SOP Class C-FIND-SCP

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 116: Requested Query Keys for Study Root Information Model**

| Study Root Information Model |           |    |                         |                               |
|------------------------------|-----------|----|-------------------------|-------------------------------|
| Attribute Name               | Tag       | VR | Type Of Matching        | Comment                       |
| Query/Retrieve Level         | 0008,0052 | CS |                         | Patient, Study, Series, image |
| Specific Character Set       | 0008,0005 | CS |                         | -                             |
| Q/R Study level              |           |    |                         |                               |
| Accession Number             | 0008,0050 | SH | Single Value, Universal | -                             |
| Patient ID                   | 0010,0020 | LO | Single Value            | -                             |

|                                    |           |        |   |                                       |
|------------------------------------|-----------|--------|---|---------------------------------------|
| Patient's Birth Date               | 0010,0030 | DA     | Single Value,<br>Universal, WildCard    | -                                     |
| Patient's Name                     | 0010,0010 | PN     | Single Value,<br>Universal, WildCard    | Wildcard matching not case sensitive. |
| Patient's Sex                      | 0010,0040 | CS     | Single Value,<br>Universal              | -                                     |
| Referring Physician's Name         | 0008,0090 | PN     | Single Value,<br>Universal              | -                                     |
| Study Date                         | 0008,0020 | DA     | Range, Single Value,<br>Universal       | -                                     |
| Study ID                           | 0020,0010 | SH     | Single Value,<br>Universal, WildCard    | -                                     |
| Study Instance UID                 | 0020,000D | UI     | List Of UID, Single<br>Value, Universal | -                                     |
| Study Time                         | 0008,0030 | T<br>M | Single Value,<br>Universal              | -                                     |
| Number of Study Related Series     | 0020,1206 | IS     | Universal                               |                                       |
| Number of Study Related Instances  | 0020,1208 | IS     | Universal                               |                                       |
| Instance Availability              | 0008,0056 | CS     |   | ONLINE                                |
| <b>Q/R Series level</b>            |           |        |   |                                       |
| Modality                           | 0008,0060 | CS     | Single Value,<br>Universal              | -                                     |
| Series Instance UID                | 0020,000E | UI     | List Of UID, Single<br>Value, Universal | -                                     |
| Series Number                      | 0020,0011 | IS     | Single Value,<br>Universal              | -                                     |
| Number of Series Related Instances | 0020,1209 | IS     | Universal                               |                                       |
| Series Description                 | 0008,103E | LO     | Single value                            |                                       |
| <b>Q/R Image level</b>             |           |        |   |                                       |
| Instance Number                    | 0020,0013 | IS     | Single Value,<br>Universal              | -                                     |
| SOP Instance UID                   | 0008,0018 | UI     | List Of UID, Single<br>Value, Universal | -                                     |
| SOP Class UID                      | 0008,0016 | UI     | Universal                               |                                       |
| Rows                               | 0028,0010 | US     | Universal                               |                                       |

|                        |           |    |           |        |
|------------------------|-----------|----|-----------|--------|
| Columns                | 0028,0011 | US | Universal |        |
| Bits Allocated         | 0028,0100 | US | Universal |        |
| Number of Frames       | 0028,0008 | IS | Universal |        |
| Instance Availability* | 0008,0056 | CS |           | ONLINE |

Note: See chapter 6 Support of Character Sets for details about VR attributes as PN.

\*Note: Required image level attributes are not available for Image Level responses. Because these attributes are not in the Database, these have to be captured from the object. This is difficult for archived Studies (removed from repository) in case of OFFLINE.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 117: Status Response**

| Service Status | Error Code | Further Meaning  | Behavior   |
|----------------|------------|--|--|
| Success        | 0000       | Matching is complete   | The C-FIND request handling is completed, no more C-FIND responses are sent. |
| Refused        | A700       | Out of Resources   | N/A  |
| Failed         | A900       | Identifier does not match SOP class  | N/A  |
|                | C000       | Unable to process  | The C-FIND request cannot be parsed  |
| Cancel         | FE00       | Matching terminated due to Cancel Request  | The C-FIND request is canceled, no more C-FIND responses are sent.           |
| Pending        | FF00       | Matches are continuing – Current match is supplied and any optional keys were supported in the same manner as required keys          | The C-FIND responses are continuing.   |
|                | FF01       | Matches are continuing – Warning that one or more optional keys were not supported for existence and/or matching for this identifier | The C-FIND responses are continuing.   |

**Table 118: DICOM Command Communication Failure Behavior**

| Exception      | Behavior  |
|----------------|---|
| ARTIM Time-out | The query fails in case of association setup. The reason is logged. |
| Reply Time-out | The query fails and association is aborted. The reason is logged.   |

#### 4.2.5.4.2.5. SOP Specific Conformance for PatientStudy Only QR Info. Model - FIND SOP Class (Retired)

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The IntelliSpace Cardiovascular Query/Retrieve SCP AE provides standard conformance to the Patient/ Study only Q/R Information model.

#### 4.2.5.4.2.5.1. Dataset Specific Conformance for PatientStudy Only QR Info. Model - FIND SOP Class C-FIND-SCP

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 119: Requested Query Keys for Patient/Study Only Information Model**

| Patient/Study Only Information Model |           |    |                                   |                                       |
|--------------------------------------|-----------|----|-----------------------------------|---------------------------------------|
| Attribute Name                       | Tag       | VR | Type Of Matching                  | Comment                               |
| Query/Retrieve Level                 | 0008,0052 | CS |                                   | PATIENT, STUDY.                       |
| Specific Character Set               | 0008,0005 | CS |                                   | -                                     |
| Q/R Patient level                    |           |    |                                   |                                       |
| Patient ID                           | 0010,0020 | LO | Single Value, Universal, WildCard | -                                     |
| Patient's Birth Date                 | 0010,0030 | DA | Range, Single Value, Universal    | -                                     |
| Patient's Name                       | 0010,0010 | PN | Single Value, Universal, WildCard | Wildcard matching not case sensitive. |
| Patient's Sex                        | 0010,0040 | CS | Single Value, Universal           | -                                     |
| Q/R Study level                      |           |    |                                   |                                       |
| Accession Number                     | 0008,0050 | SH |                                   | -                                     |
| Referring Physician's Name           | 0008,0090 | PN |                                   | -                                     |
| Study Date                           | 0008,0020 | DA | Single Value, Range               | -                                     |
| Study ID                             | 0020,0010 | SH | Single Value, Wildcard, Universal | -                                     |
| Study Instance UID                   | 0020,000D | UI |                                   | -                                     |
| Study Time                           | 0008,0030 | TM |                                   | -                                     |

Note: See chapter 6 Support of Character Sets for details about VR attributes as PN.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

The table with possible Status Responses for C-FIND request handling is shown here:

Document ID : HSDP-1413380  
 Document Status : Approved  
 Document Template ID : SNIP-IOCC-T-3.6.1.02  
 Document Template version : 1.0

**Table 120: Status Response**

| Service Status | Error Code | Further Meaning  | Behavior  |
|----------------|------------|--|---|
| Success        | 0000       | Matching is complete   | The C-FIND request handling is completed, no more C-FIND responses are sent. status logged; continued |
| Refused        | A700       | Out of Resources   | N/A   |
| Failed         | A900       | Identifier does not match SOP class  | N/A   |
|                | C000       | Unable to process  | The C-FIND request cannot be parsed.  |
| Cancel         | FE00       | Matching terminated due to Cancel Request  | The C-FIND request is canceled, no more C-FIND responses are sent.                                    |
| Pending        | FF00       | Matches are continuing – Current match is supplied and any optional keys were supported in the same manner as required keys          | The C-FIND responses are continuing.  |
|                | FF01       | Matches are continuing – Warning that one or more optional keys were not supported for existence and/or matching for this identifier | The C-FIND responses are continuing.  |

Below can be seen the table with the possible communication failures during the C-FIND request handling:

**Table 121: DICOM Command Communication Failure Behavior**

| Exception      | Behavior  |
|----------------|---|
| ARTIM Time-out | The query fails in case of association setup. The reason is logged. |
| Reply Time-out | The query fails and association is aborted. The reason is logged.   |

### 4.2.5.4.3. (Real-World) Activity – MOVE as SCP

#### 4.2.5.4.3.1. Description and Sequencing of Activities

The Query/Retrieve as SCP AE accepts associations from systems that wish to retrieve instances from IntelliSpace Cardiovascular database using the C-MOVE service. The Query/Retrieve as SCP AE accepts all contexts in the intersection of the proposed and acceptable Presentation Context. This means that the Query/Retrieve as SCP AE will accept multiple proposed Presentation Contexts with the same SOP Class but different Transfer Syntaxes, so there will be no checks for duplicate Presentation Contexts.

#### 4.2.5.4.3.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

**Table 122: Acceptable Presentation Contexts for (Real-World) Activity – MOVE As SCP**

| Presentation Context Table                                  |                             |                           |                     |      |                      |
|---|-----------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax   |                             | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name  | UID                         | Name List                 | UID List            |      |                      |
| Patient Root QR Information Model - MOVE SOP Class          | 1.2.840.10008.5.1.4.1.2.1.2 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                             | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                             | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Study Root QR Information Model - MOVE SOP Class            | 1.2.840.10008.5.1.4.1.2.2.2 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                             | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                             | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| PatientStudy Only QR Info. Model - MOVE SOP Class (Retired) | 1.2.840.10008.5.1.4.1.2.3.2 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                             | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                             | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

**4.2.5.4.3.3. SOP Specific Conformance for Patient Root QR Information Model - MOVE SOP Class**

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The IntelliSpace Cardiovascular Query/Retrieve as SCP AE provides standard conformance to Patient Root Q/R Information Model – MOVE SOP Class.

The Query/Retrieve as SCP AE supports all Query/Retrieve SOP classes. A C-STORE association is built after the C-MOVE request. The Query/Retrieve as SCP AE does not send intermediate C-MOVE responses with status pending.

**4.2.5.4.3.3.1. Dataset Specific Conformance for Patient Root QR Information Model - MOVE SOP Class C-MOVE-SCP**

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 123: Identifiers for MOVE Patient Root Information Model as SCP**

| Patient Root Information Model |           |    |                            |
|--------------------------------|-----------|----|----------------------------|
| Attribute Name                 | Tag       | VR | Comment                    |
| Query/Retrieve Level           | 0008,0052 | CS | -                          |
| Q/R Patient level              |           |    |                            |
| Patient ID                     | 0010,0020 | LO | -                          |
| Q/R Study level                |           |    |                            |
| Study Instance UID             | 0020,000D | UI | Single Value, List of UIDs |
| Q/R Series level               |           |    |                            |
| Series Instance UID            | 0020,000E | UI | Single Value, List of UIDs |
| Q/R Image level                |           |    |                            |
| SOP Instance UID               | 0008,0018 | UI | Single Value               |

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 124: Status Response**

| Service Status | Error Code | Further Meaning               | Behavior  |
|----------------|------------|-------------------------------|---|
| Success        | 0000       | Sub-operations complete       | No final identifier is supplied Related fields (0000, 1020) (0000, 1021) (0000, 1022) (0000, 1023). |
| Warning        | B000       | Sub-operations complete       | One or more failures Related fields (0000, 1020) (0000, 1022) (0000,1023).                          |
| Failed         | A900       | Invalid dataset               | Related fields (0000, 0901) (0000, 0902).   |
|                | C001       | Unable to process             | Related fields (0000, 0901) (0000, 0902).   |
| Pending        | FF00       | Sub-operations are continuing | The move job continues.   |

**Table 125: DICOM Command Communication Failure Behavior**

| Exception      | Behavior  |
|----------------|---|
| ARTIM Time-out | The query fails in case of association setup. The reason is logged. |
| Reply Time-out | The query fails and association is aborted. The reason is logged.   |

#### 4.2.5.4.3.4. SOP Specific Conformance for Study Root QR Information Model - MOVE SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.



The IntelliSpace Cardiovascular Query/Retrieve as SCP AE provides standard conformance to Study Root Q/R Information Model – MOVE SOP Class.

#### 4.2.5.4.3.4.1. Dataset Specific Conformance for Study Root QR Information Model - MOVE SOP Class C-MOVE-SCP

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 126: Identifiers for MOVE Study Root Information Model as SCP**

| Study Root Information Model |           |    |                           |
|------------------------------|-----------|----|---------------------------|
| Attribute Name               | Tag       | VR | Comment                   |
| Query/Retrieve Level         | 0008,0052 | CS | -                         |
| Q/R Study level              |           |    |                           |
| Study Instance UID           | 0020,000D | UI | Single Value, List of UID |
| Q/R Series level             |           |    |                           |
| Series Instance UID          | 0020,000E | UI | Single Value, List of UID |
| Q/R Image level              |           |    |                           |
| SOP Instance UID             | 0008,0018 | UI | Single Value, List of UID |

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 127: Status Response**

| Service Status | Error Code | Further Meaning         | Behavior   |
|----------------|------------|-------------------------|--|
| Success        | 0000       | Sub-operations complete | No final identifier is supplied. Related fields (0000,1020) (0000,1021) (0000,1022) (0000,1023). |
| Warning        | B000       | Sub-operations complete | One or more failures. Related fields (0000, 1020) (0000, 1022) (0000, 1023).                     |
| Failed         | A900       | Invalid dataset         | Related fields (0000, 0901) (0000, 0902).  |
|                | C001       | Unable to process       | Related fields (0000, 0901) (0000, 0902).  |

**Table 128: DICOM Command Communication Failure Behavior**

| Exception      | Behavior  |
|----------------|---|
| ARTIM Time-out | The query fails in case of association setup. The reason is logged. |

| Exception      | Behavior  |
|----------------|---|
| Reply Time-out | The query fails and association is aborted. The reason is logged. |

#### 4.2.5.4.3.5. SOP Specific Conformance for Patient Study Only QR Info. Model - MOVE SOP Class (Retired)

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The IntelliSpace Cardiovascular Query/Retrieve as SCP AE provides standard conformance to Patient/Study Only Q/R Information Model – MOVE SOP Class.

#### 4.2.5.4.3.5.1. Dataset Specific Conformance for PatientStudy Only QR Info. Model - MOVE SOP Class C-MOVE-SCP

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 129: Identifiers for MOVE Patient/Study Only Information Model as SCP**

| Patient/Study Only Information Model |           |    |                           |
|--------------------------------------|-----------|----|---------------------------|
| Attribute Name                       | Tag       | VR | Comment                   |
| Query/Retrieve Level                 | 0008,0052 | CS | -                         |
| Q/R Patient level                    |           |    |                           |
| Patient ID                           | 0010,0020 | LO | -                         |
| Q/R Study level                      |           |    |                           |
| Study Instance UID                   | 0020,000D | UI | Single Value, List of UID |

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 130: Status Response**

| Service Status | Error Code | Further Meaning         | Behavior  |
|----------------|------------|-------------------------|---|
| Success        | 0000       | Sub-operations complete | No final identifier is supplied Related fields (0000, 1020) (0000, 1021) (0000, 1022) (0000, 1023). |
| Warning        | B000       | Sub-operations complete | One or more failures Related fields (0000, 1020) (0000, 1022) (0000, 1023).                         |
| Failed         | A900       | Invalid dataset         | Related fields (0000, 0901) (0000, 0902).   |
|                | C001       | Unable to process       | Related fields (0000, 0901) (0000, 0902).   |

**Table 131: DICOM Command Communication Failure Behavior**

| Exception      | Behavior  |
|----------------|---|
| ARTIM Time-out | The query fails in case of association setup. The reason is logged. |
| Reply Time-out | The query fails and association is aborted. The reason is logged.   |

#### 4.2.6. Query Retrieve as SCU AE

Details of this specific Application Entity is specified in this section.

##### 4.2.6.1. SOP Classes

The Query/Retrieve SCU AE is used for sending Query/Retrieve requests to remote system. The actual import of DICOM Instances (images, objects) into IntelliSpace Cardiovascular Server is handled by another AE. The Query/Retrieve SCU AE makes use of the following DICOM functions:

- Query / Retrieve SCU, which uses C-ECHO as service element.
- Query as SCU, which uses C-FIND as service element.
- Retrieve as SCU, which uses C-MOVE as service element.

This Application Entity provides Standard Conformance to the following SOP Classes.

**Table 132: SOP Classes for Query Retrieve as SCU AE**

| SOP Class Name                                   | SOP Class UID               | SCU | SCP |
|--|-----------------------------|-----|-----|
| Verification SOP Class                           | 1.2.840.10008.1.1           | Yes | No  |
| Study Root QR Information Model - FIND SOP Class | 1.2.840.10008.5.1.4.1.2.2.1 | Yes | No  |
| Study Root QR Information Model - MOVE SOP Class | 1.2.840.10008.5.1.4.1.2.2.2 | Yes | No  |

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.

##### 4.2.6.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

###### 4.2.6.2.1. General

The DICOM standard application context is specified below.

**Table 133: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

#### 4.2.6.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

**Table 134: Number of associations as an Association Initiator for this AE**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 5     |

#### 4.2.6.2.3. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 135: DICOM Implementation Class and Version for Query Retrieve as SCU AE**

| Property                    | Value                |
|-----------------------------|----------------------|
| Implementation Class UID    | 1.3.46.670589.58.8.0 |
| Implementation Version Name | ISCV 8.0             |

#### 4.2.6.2.4. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 136: Communication Failure Behavior**

| Exception     | Behavior  |
|---------------|---|
| ARTIM Timeout | The association is released and the reason is logged. |

#### 4.2.6.3. Association Initiation Policy

The Application Entity will respond on a received reject Association attempt as shown in next table.

**Table 137: Association Rejection response**

| Result  | Source  | Reason/Diagnosis                           | Behavior  |
|---|---|--|---|
| 1 - rejected-permanent  | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|   |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|   |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|   | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|   | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
|   | 2 - rejected-transient  | 1 - DICOM UL service-user                  | 1 - no-reason-given   |
| 2 - application-context-name-not-supported                    |   |  | The user is informed. Details are logged in central log file. |
| 3 - calling-AE-title-not-recognized                           |   |  | The user is informed. Details are logged in central log file. |
| 7 - called-AE-title-not-recognized                            |   |  | The user is informed. Details are logged in central log file. |
| 2 - DICOM UL service-provider (ACSE related function)         |   | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
| 3 - DICOM UL service-provider (Presentation related function) |   | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |

The behavior of the AE on receiving an association abort is summarized in the next table.

**Table 138: Association Abort Handling**

| Source  | Reason/Diagnosis                | Behavior   |
|---|---------------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU            | When received, terminates the connection and logs the event. |
|   | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|   | 4 - unrecognized-PDU-parameter  | When received, terminates the connection and logs the event. |
|   | 5 - unexpected-PDU-parameter    | When received, terminates the connection and logs the event. |
|   | 6 - invalid-PDU-parameter-value | When received, terminates the connection and logs the event. |

#### 4.2.6.3.1. (Real-World) Activity – Verification as SCU

##### 4.2.6.3.1.1. Description and Sequencing of Activities

As defined the Network AE acts as a Verification SCP for any Remote SCU as Verification SCU.

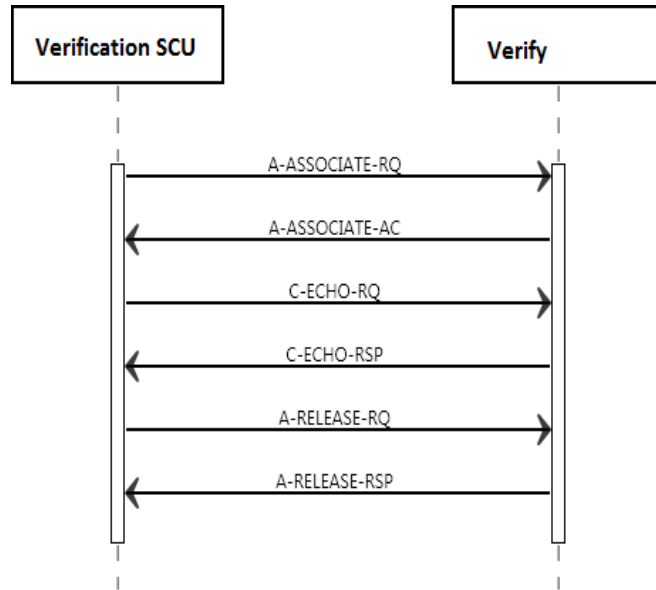


Figure 21: Sequencing of Verification

#### 4.2.6.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 139: Proposed Presentation Contexts for (Real-World) Activity – Verification as SCU

| Presentation Context Table |                   |                           |                     |      |                      |
|----------------------------|-------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax            |                   | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                       | UID               | Name List                 | UID List            |      |                      |
| Verification SOP Class     | 1.2.840.10008.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|                            |                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                            |                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

Note: No extended negotiations supported by IntelliSpace Cardiovascular Network AE.

#### 4.2.6.3.1.3. SOP Specific Conformance for Verification SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

### 4.2.6.3.1.3.1. Dataset Specific Conformance for Verification C-ECHO SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 140: Status Response**

| Service Status | Error Code | Further Meaning      | Behavior                      |
|----------------|------------|----------------------|-------------------------------|
| Success        | 0000       | Matching is complete | Continue; information logged. |

### 4.2.6.3.2. (Real-World) Activity – FIND as SCU

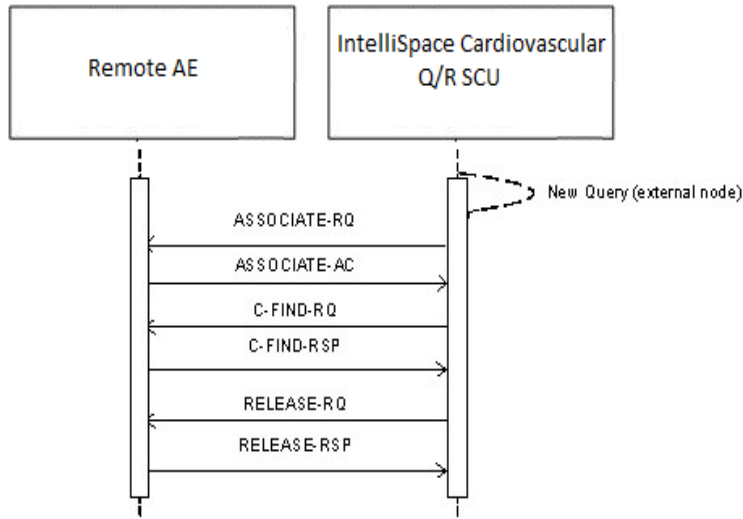
#### 4.2.6.3.2.1. Description and Sequencing of Activities

The Query/Retrieve as SCU AE initiates associations to other systems that support the Study Root Query/Retrieve C-FIND service.

**Normal flow of events for C-FIND:**

1. The user selects criteria's where to query on and after that, IntelliSpace Cardiovascular sets up a connection with the selected external DICOM node.
2. Based on query results, the user selected on or more entries to be retrieved. The retrieve request will be send to the remote DICOM node.
3. In response, the external DICOM node returns (0 or more) query results in the form of a list of studies that meet the search criteria entered earlier by the clinical user. The user selects the studies to retrieve from the external DICOM node.
4. When the requested instances are stored, the remote host closes the connection with IntelliSpace Cardiovascular.





**Figure 22: (Real World) Activity - FIND As SCU**

**Normal flow of events for C-MOVE:**

1. Based on query results, the user selected on or more entries to be retrieved.
2. IntelliSpace Cardiovascular sets up a request connection with the external DICOM node that provided the query results, and negotiates communication parameters.
3. IntelliSpace Cardiovascular sends a retrieve request to the external DICOM node. The external DICOM node sets up a store connection with the Store SCP. Connection set up take place and is only accepted by the Store SCP, if the Query/Retrieve SCU has an open retrieve connection with the external DICOM node. Meanwhile it is possible to send C-MOVE-RSP PENDING to the IntelliSpace Cardiovascular server.
4. The external DICOM node sends over the requested DICOM instance data.
5. The connection will be closed by IntelliSpace Cardiovascular.

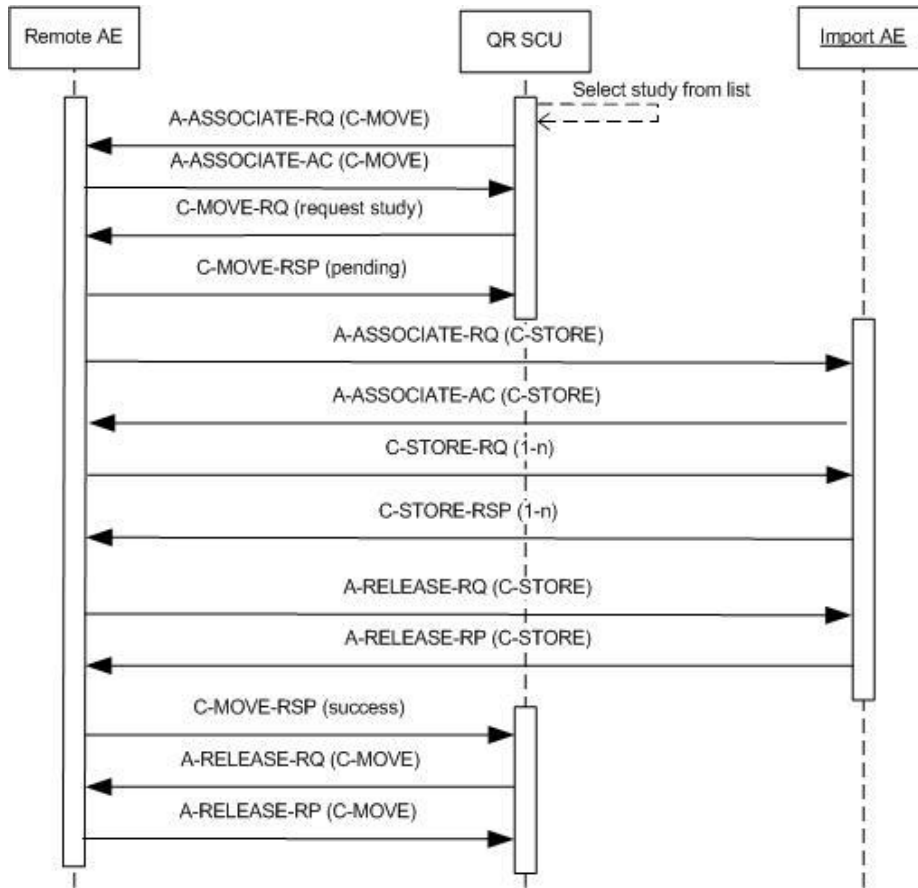


Figure 23: Flow diagram Retrieve DICOM image data from external DICOM node.

#### 4.2.6.3.2.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 141: Proposed Presentation Contexts for (Real-World) Activity – FIND As SCU

| Presentation Context Table                       |                             |                           |                     |      |                      |
|--|-----------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                                  |                             | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name   | UID                         | Name List                 | UID List            |      |                      |
| Study Root QR Information Model - FIND SOP Class | 1.2.840.10008.5.1.4.1.2.2.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                             | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                             | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

### 4.2.6.3.2.3. SOP Specific Conformance for Study Root QR Information Model - FIND SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

Only Study level queries are supported.

The Query/Retrieve as SCU AE supports queries based on the combination of the following (Study level) attributes and attribute matching types (as defined in [DICOM] PS 3.4).

#### 4.2.6.3.2.3.1. Dataset Specific Conformance for Study Root QR Information Model - FIND SOP Class C-FIND-SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 142: Supported Query Keys for Study Root Information Model**

| Study Root Information Model |           |    |                                    |   |
|------------------------------|-----------|----|------------------------------------|---|
| Attribute Name               | Tag       | VR | Type Of Matching                   | Comment   |
| Query/Retrieve Level         | 0008,0052 | CS |                                    | -   |
| Specific Character Set       | 0008,0005 | CS |                                    | -   |
| Q/R Study level              |           |    |                                    |   |
| Accession Number             | 0008,0050 | SH | Single Value, Universal, WildCard  | -   |
| Modalities in Study          | 0008,0061 | CS | Single Value, Universal            | CT, CR, DX, ECG, EPS, IVUS, MG, MR, NM, OT, PT, RF, US, XA  |
| Patient ID                   | 0010,0020 | LO | Single Value, Universal, WildCard  | It's called MRN here.   |
| Patient's Birth Date         | 0010,0030 | DA | Single Value, Universal            | -   |
| Patient's Name               | 0010,0010 | PN | Single Value, Universal, WildCard, | -   |
| Patient's Sex                | 0010,0040 | CS | Single Value, Universal            | All,M,F,O,U   |
| Study Date                   | 0008,0020 | DA | Range, Single Value, Universal     | All,Today,Yesterday,Last 2 days,Last 3 days, Last 4 days, Last 7 days, Last 10 days, Last 30 days, This Week, Last week, This month, Last Month, Last 2 months, This year, Last year. |
| Study Instance UID           | 0020,000D | UI | Universal                          | -   |
| Institution Name             | 0008,0080 | LO | Universal                          | All   |

**Note:** The Patient’s Name key attribute matching type is implicitly converted from Single Value matching to Wild Card matching by adding a Wild Card "\*" character at the end of its value.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 143: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning  | Behavior                  |
|----------------|------------|--|---------------------------|
| Success        | 0000       | Matching is complete   | Continue, Log.            |
| Refused        | A700       | Refused – Out of resources   | Log; Release association. |
| Failed         | A900       | Error – Identifier does not match SOP class  | Log; Release association. |
|                | C001       | Error – Unable to process  | Log; Release association. |
| Cancel         | FE00       | Matching terminated due to cancel request  | Log; Release association. |
| Pending        | FF00       | Matches are continuing – current match is supplied and any optional keys were supported in the same manner as required keys          | Continue                  |
|                | FF01       | Matches are continuing – warning that one or more optional keys were not supported for existence and/or matching for this identifier | Continue                  |

**Table 144: DICOM Command Communication Failure Behavior**

| Exception           | Behavior  |
|---------------------|---|
| Timeout             | The association is released and the reason is logged. |
| Association aborted | The association is released and the reason is logged. |

### 4.2.6.3.3. (Real-World) Activity – MOVE as SCU

#### 4.2.6.3.3.1. Description and Sequencing of Activities

The Query/Retrieve as SCU AE initiates associations to other systems that support the Study Root Query/Retrieve C-MOVE service.

#### 4.2.6.3.3.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

**Table 145: Proposed Presentation Contexts for (Real-World) Activity – MOVE As SCU**

| Presentation Context Table                       |                             |                           |                     |      |                      |
|--|-----------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                                  |                             | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name   | UID                         | Name List                 | UID List            |      |                      |
| Study Root QR Information Model - MOVE SOP Class | 1.2.840.10008.5.1.4.1.2.2.2 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                             | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                             | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

#### 4.2.6.3.3.3. SOP Specific Conformance for Study Root QR Information Model - MOVE SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

Only Study level queries are supported. The Query/Retrieve as SCU AE supports queries based on the combination of the following (Study level) attributes and attribute matching types (as defined in [DICOM] PS 3.4).

#### 4.2.6.3.3.3.1. Dataset Specific Conformance for Study Root QR Information Model - MOVE SOP Class C-MOVE-SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

**Table 146: Identifiers for MOVE Study Root Information Model as SCU**

| Study Root Information Model |           |    |         |
|------------------------------|-----------|----|---------|
| Attribute Name               | Tag       | VR | Comment |
| Query/Retrieve Level         | 0008,0052 | CS | -       |
| Q/R Study level              |           |    |         |
| Study Instance UID           | 0020,000D | UI | -       |

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 147: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning                       | Behavior                  |
|----------------|------------|---------------------------------------|---------------------------|
| Success        | 0000       | Sub-operations complete – no failures | Continue.                 |
| Refused        | A700       | Refused – Out of resources            | Log; Release association. |

| Service Status | Error Code | Further Meaning                                 | Behavior   |
|----------------|------------|---|--|
| Failed         | A900       | Error – Identifier does not match SOP class     | Log; Release association.  |
|                | C001       | Error – Unable to process                       | Log; Release association.  |
| Warning        | B000       | Sub-operations complete – one or more failures  | The SCP has retrieved all requested images. Release association. |
| Cancel         | FE00       | Sub-operations terminated due to cancel request | Log; Release association.  |
| Pending        | FF00       | Sub-operations are continuing                   | Continue.  |
|                | FF01       | Sub-operations are continuing                   | Continue.  |

**Exceptions:**

1. The maximum number of parallel query/retrieve is reached. The request is queued by FIFO order.
2. At any point in time, an error occurs in the network or on the external DICOM node; IntelliSpace Cardiovascular will close the connection and report an error
3. If an error occurs during data transfer, IntelliSpace Cardiovascular will close the connection and report an error
4. If an error occurs on the external DICOM node while setting up the connection, IntelliSpace Cardiovascular will abort all actions related to that connection and report an error.

**Table 148: DICOM Command Communication Failure Behavior**

| Exception           | Behavior  |
|---------------------|---|
| Timeout             | The association is released and the reason is logged. |
| Association aborted | The association is released and the reason is logged. |

**4.2.6.4. Association Acceptance Policy**

Not applicable, the Query/Retrieve SCU AE doesn't accept any associations from other DICOM nodes.

**4.2.7. Send AE**

Details of this specific Application Entity is specified in this section.

**4.2.7.1. SOP Classes**

Send AE, for its functioning, makes use of following DICOM functions:

- Verification as SCU, which uses C-ECHO service element.
- Storage as SCU, which uses C-STORE as service element.

- Patient / Study are always updates with the latest information for the exported studies.  
 These DICOM functions will be described in the following subsections.

This Application Entity provides Standard Conformance to the following SOP Classes.

**Table 149: SOP Classes for Send AE**

| SOP Class Name  | SOP Class UID                 | SCU | SCP |
|---|-------------------------------|-----|-----|
| Verification SOP Class  | 1.2.840.10008.1.1             | Yes | No  |
| Hardcopy Grayscale Image Storage (Retired)                    | 1.2.840.10008.5.1.1.29        | Yes | No  |
| Hardcopy Color Image Storage (Retired)                        | 1.2.840.10008.5.1.1.30        | Yes | No  |
| Computed Radiography Image Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.1     | Yes | No  |
| Digital X-Ray Image Storage - For Pres. SOP                   | 1.2.840.10008.5.1.4.1.1.1.1   | Yes | No  |
| Digital X-Ray Image Storage - For Proc. SOP                   | 1.2.840.10008.5.1.4.1.1.1.1.1 | Yes | No  |
| Digital Mammography X-Ray Image Storage - Pres. SOP           | 1.2.840.10008.5.1.4.1.1.1.2   | Yes | No  |
| Digital Mammography X-Ray Image Storage - Proc. SOP           | 1.2.840.10008.5.1.4.1.1.1.2.1 | Yes | No  |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP            | 1.2.840.10008.5.1.4.1.1.1.3   | Yes | No  |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP            | 1.2.840.10008.5.1.4.1.1.1.3.1 | Yes | No  |
| Standalone Modality LUT Storage (Retired)                     | 1.2.840.10008.5.1.4.1.1.10    | Yes | No  |
| Encapsulated PDF Storage                                      | 1.2.840.10008.5.1.4.1.1.104.1 | Yes | No  |
| Standalone VOI LUT Storage SOP Class (Retired)                | 1.2.840.10008.5.1.4.1.1.11    | Yes | No  |
| Grayscale Softcopy Presentation State Storage SOP Class       | 1.2.840.10008.5.1.4.1.1.11.1  | Yes | No  |
| X-Ray Angiographic Image Storage SOP Class                    | 1.2.840.10008.5.1.4.1.1.12.1  | Yes | No  |
| X-Ray Radiofluoroscopic Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.12.2  | Yes | No  |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.12.3  | Yes | No  |
| Positron Emission Tomography Image Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.128   | Yes | No  |
| Standalone PET Curve Storage SOP Class (Retired)              | 1.2.840.10008.5.1.4.1.1.129   | Yes | No  |
| CT Image Storage SOP Class                                    | 1.2.840.10008.5.1.4.1.1.2     | Yes | No  |
| Nuclear Medicine Image Storage SOP Class                      | 1.2.840.10008.5.1.4.1.1.20    | Yes | No  |
| Ultrasound Multi-frame Image Storage (Retired)                | 1.2.840.10008.5.1.4.1.1.3     | Yes | No  |
| Ultrasound Multi-frame Image Storage SOP Class                | 1.2.840.10008.5.1.4.1.1.3.1   | Yes | No  |
| MR Image Storage SOP Class                                    | 1.2.840.10008.5.1.4.1.1.4     | Yes | No  |
| RT Image Storage SOP Class                                    | 1.2.840.10008.5.1.4.1.1.481.1 | Yes | No  |
| RT Dose Storage SOP Class                                     | 1.2.840.10008.5.1.4.1.1.481.2 | Yes | No  |
| RT Structure Set Storage SOP Class                            | 1.2.840.10008.5.1.4.1.1.481.3 | Yes | No  |
| RT Plan Storage SOP Class                                     | 1.2.840.10008.5.1.4.1.1.481.5 | Yes | No  |
| Ultrasound Image Storage (Retired)                            | 1.2.840.10008.5.1.4.1.1.6     | Yes | No  |

| SOP Class Name   | SOP Class UID                 | SCU | SCP |
|--|-------------------------------|-----|-----|
| Ultrasound Image Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.6.1   | Yes | No  |
| Raw Data Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.66    | Yes | No  |
| Secondary Capture Image Storage SOP Class                        | 1.2.840.10008.5.1.4.1.1.7     | Yes | No  |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1   | Yes | No  |
| Multi-frame Grayscale Byte SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.2   | Yes | No  |
| Multi-frame Grayscale Word SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.3   | Yes | No  |
| Multi-frame True Color Secondary Capture Image Storage           | 1.2.840.10008.5.1.4.1.1.7.4   | Yes | No  |
| Standalone Overlay Storage SOP Class (Retired)                   | 1.2.840.10008.5.1.4.1.1.8     | Yes | No  |
| Basic Text SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.11 | Yes | No  |
| Enhanced SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.22 | Yes | No  |
| Detail SR Storage - Trial (Retired)                              | 1.2.840.10008.5.1.4.1.1.88.3  | Yes | No  |
| Comprehensive SR SOP Class                                       | 1.2.840.10008.5.1.4.1.1.88.33 | Yes | No  |
| X-Ray Radiation Dose SR SOP Class                                | 1.2.840.10008.5.1.4.1.1.88.67 | Yes | No  |
| Standalone Curve Storage SOP Class (Retired)                     | 1.2.840.10008.5.1.4.1.1.9     | Yes | No  |
| General ECG Waveform Storage SOP Class                           | 1.2.840.10008.5.1.4.1.1.9.1.2 | Yes | No  |
| Standard Hemodynamic Waveform Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.9.2.1 | Yes | No  |
| Procedure Log Storage SOP Class                                  | 1.2.840.10008.5.1.4.1.1.88.40 | Yes | No  |
| Key Object Selection Document Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.88.59 | Yes | No  |
| Philips Private X-Ray Image Storage                              | 1.3.46.670589.2.3.1.1         | Yes | No  |
| Philips Private Reconstructed X-ray Storage                      | 1.3.46.670589.2.4.1.1         | Yes | No  |
| Philips Private iE33 3D NEO Presentation State Subpage Storage   | 1.3.46.670589.2.5.1.1         | Yes | No  |
| Philips Private Xcelera Info Object Storage                      | 1.3.46.670589.2.6.1.1         | Yes | No  |
| Philips Private ViewForum 3D Volume New Storage                  | 1.3.46.670589.5.0.1.1         | Yes | No  |
| Philips Private ViewForum MR Synthetic Image Storage             | 1.3.46.670589.5.0.10          | Yes | No  |
| Philips Private ViewForum MR Cardio Analysis New Storage         | 1.3.46.670589.5.0.11.1        | Yes | No  |
| Philips Private ViewForum CX Synthetic Image Storage             | 1.3.46.670589.5.0.12          | Yes | No  |
| Philips Private ViewForum Perfusion Storage                      | 1.3.46.670589.5.0.13          | Yes | No  |
| Philips Private ViewForum Perfusion Analysis Storage             | 1.3.46.670589.5.0.14          | Yes | No  |
| Philips Private ViewForum 3D Volume Object New Storage           | 1.3.46.670589.5.0.2.1         | Yes | No  |
| Philips Private ViewForum Surface New Storage                    | 1.3.46.670589.5.0.3.1         | Yes | No  |
| Philips Private ViewForum MR Cardio New Storage                  | 1.3.46.670589.5.0.8.1         | Yes | No  |
| Philips Private ViewForum CT Synthetic Image Storage             | 1.3.46.670589.5.0.9           | Yes | No  |

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.



## 4.2.7.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

### 4.2.7.2.1. General

The DICOM standard application context is specified below.

**Table 150: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

### 4.2.7.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

For IntelliSpace Cardiovascular the maximum number of associations limited by the availability of the system resources. The license number of the external DICOM nodes is one of these limits.

**Table 151: Number of associations as an Association Initiator for this AE**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 5     |

### 4.2.7.2.3. Asynchronous Nature

The implementation supports negotiation of multiple outstanding transactions, along with the maximum number of outstanding transactions supported.

**Table 152: Asynchronous nature as an Association Initiator for this AE**

| Description   | Value                    |
|---|--------------------------|
| Maximum number of outstanding asynchronous transactions | Limit of system resource |

### 4.2.7.2.4. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 153: DICOM Implementation Class and Version for Send AE**

| Property                    | Value                |
|-----------------------------|----------------------|
| Implementation Class UID    | 1.3.46.670589.58.8.0 |
| Implementation Version Name | ISCV 8.0             |

#### 4.2.7.2.5. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 154: Communication Failure Behavior**

| Exception     | Behavior  |
|---------------|---|
| ARTIM Timeout | The association is closed and the reason is logged. |

#### 4.2.7.3. Association Initiation Policy

The Application Entity will respond on a received reject Association attempt as shown in next table.

**Table 155: Association Rejection response**

| Result                   | Source  | Reason/Diagnosis  | Behavior  |
|--------------------------|---|---|---|
| 1 - rejected-permanent   | 1 - DICOM UL service-user                                     | 1 - no-reason-given   | The user is informed. Details are logged in central log file. |
|                          |   | 2 - application-context-name-not supported                    | The user is informed. Details are logged in central log file. |
|                          |   | 3 - calling-AE-title-not-recognized                           | The user is informed. Details are logged in central log file. |
|                          |   | 7 - called-AE-title-not-recognized                            | The user is informed. Details are logged in central log file. |
|                          | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given   | The user is informed. Details are logged in central log file. |
|                          |   | 2 - protocol-version-not-supported                            | The user is informed. Details are logged in central log file. |
|                          | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                                      | The user is informed. Details are logged in central log file. |
| 2 - local-limit-exceeded |   | The user is informed. Details are logged in central log file. |   |
| 2 - rejected-transient   | 1 - DICOM UL service-user                                     | 1 - no-reason-given   | The user is informed. Details are logged in central log file. |

| Result | Source  | Reason/Diagnosis                           | Behavior  |
|--------|---|--|---|
|        |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|        |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|        | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|        |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|        | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|        |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |

The behavior of the AE on receiving an association abort is summarized in the next table.

**Table 156: Association Abort Handling**

| Source  | Reason/Diagnosis                | Behavior   |
|---|---------------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU            | When received, terminates the connection and logs the event. |
|   | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|   | 4 - unrecognized-PDU-parameter  | When received, terminates the connection and logs the event. |
|   | 5 - unexpected-PDU-parameter    | When received, terminates the connection and logs the event. |
|   | 6 - invalid-PDU-parameter-value | When received, terminates the connection and logs the event. |

### 4.2.7.3.1. (Real-World) Activity – Verification as SCU

#### 4.2.7.3.1.1. Description and Sequencing of Activities

As defined the Network AE acts as a Verification SCP for any Remote SCU as Verification SCU.

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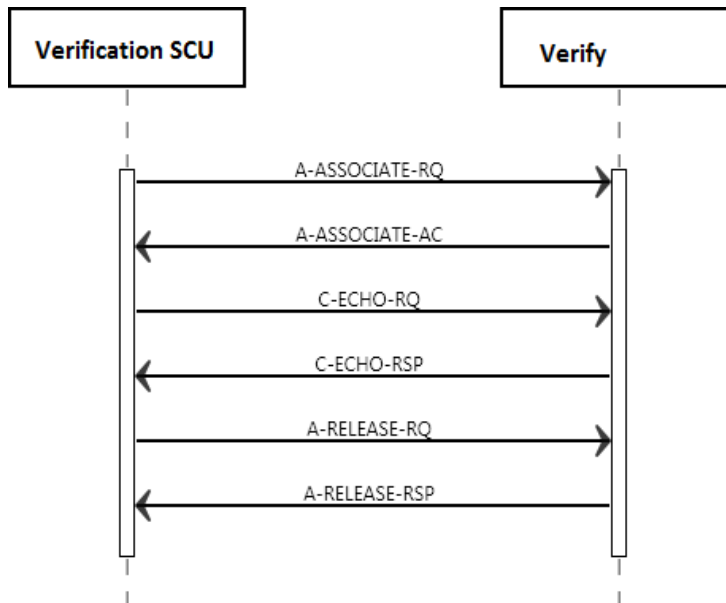


Figure 24: Sequence of Verification SCU.

#### 4.2.7.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 157: Proposed Presentation Contexts for (Real-World) Activity – Verification as SCU

| Presentation Context Table |                   |                           |                     |      |                      |
|----------------------------|-------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax            |                   | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                       | UID               | Name List                 | UID List            |      |                      |
| Verification SOP Class     | 1.2.840.10008.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|                            |                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                            |                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

### 4.2.7.3.1.3. SOP Specific Conformance for Verification SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

#### 4.2.7.3.1.3.1. Dataset Specific Conformance for Verification C-ECHO SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 158: Status Response**

| Service Status | Error Code | Further Meaning | Behavior                               |
|----------------|------------|-----------------|--|
| Success        | 0000       | Complete        | Continue; matching information logged. |

### 4.2.7.3.2. (Real-World) Activity – Image Export

#### 4.2.7.3.2.1. Description and Sequencing of Activities

**Normal flow of events:**

1. The user selects one or more studies from the list of studies being displayed.
2. After selection of the external DICOM node, IntelliSpace Cardiovascular sets up a store connection and negotiates communications parameters with this external DICOM node. Connection set up is executed according to the DICOM Store protocols, with IntelliSpace Cardiovascular acting as a DICOM Store SCU.
3. After this connection is set up, IntelliSpace Cardiovascular sends the user selected study to the external DICOM node. Upon completion of this, the connection is closed. Start and end of the connection and data transfer are logged.
4. Patient Study data will be updated with the latest information. (Refer to the tables in section [4.2.1.3.3.3 SOP Specific Conformance for Storage SOP Classes](#) for the list of updated patient and study attributes.)

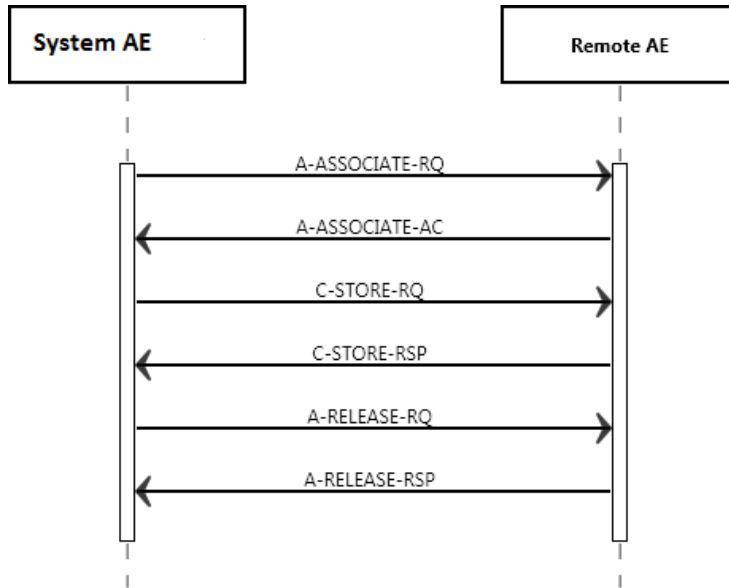


Figure 25: (Real World) Activity - Image Export (Data Export)

#### 4.2.7.3.2.2. Proposed Presentation Contexts

The proposed presentation contexts are defined in the next table.

Table 159: Proposed Presentation Contexts for (Real-World) Activity – Image Export

| Presentation Context Table                   |                           |                           |                     |      |                      |
|--|---------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                              |                           | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name   | UID                       | Name List                 | UID List            |      |                      |
| Hardcopy Grayscale Image Storage (Retired)   | 1.2.840.10008.5.1.1.29    | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                           | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                           | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Hardcopy Color Image Storage (Retired)       | 1.2.840.10008.5.1.1.30    | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                           | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                           | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Computed Radiography Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                           | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

**Presentation Context Table**

| Abstract Syntax                                     |                               | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|-------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                   | UID List                        |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Pres. SOP         | 1.2.840.10008.5.1.4.1.1.1.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital X-Ray Image Storage - For Proc. SOP         | 1.2.840.10008.5.1.4.1.1.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Mammography X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Mammography X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax                                    |                                | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|--------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                            | Name List                                   | UID List                        |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP | 1.2.840.10008.5.1.4.1.1.1.3    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP | 1.2.840.10008.5.1.4.1.1.1.3.1  | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone Modality LUT Storage (Retired)          | 1.2.840.10008.5.1.4.1.1.1.0    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Encapsulated PDF Storage                           | 1.2.840.10008.5.1.4.1.1.1.04.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Standalone VOI LUT Storage SOP Class (Retired)     | 1.2.840.10008.5.1.4.1.1.1.1    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|  |                                | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |



**Presentation Context Table**

| Abstract Syntax   |                                  | Transfer Syntax                                   |                                     | Role | Extended Negotiation |
|---|----------------------------------|---|-------------------------------------|------|----------------------|
| Name  | UID                              | Name List   | UID List                            |      |                      |
| Grayscale Softcopy Presentation State Storage SOP Class       | 1.2.840.10008.5.1.4.1.1.1<br>1.1 | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                 |      |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2                   |      |                      |
| X-Ray Angiographic Image Storage SOP Class                    | 1.2.840.10008.5.1.4.1.1.1<br>2.1 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.5<br>0          | SCU  | None                 |
|   |                                  | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                 |      |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.9<br>0 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                 |      |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2                   |      |                      |
|   |                                  | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.5<br>7 [Note 1] |      |                      |
|   |                                  | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.7<br>0          |      |                      |
| X-Ray Radiofluoroscopic Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.1<br>2.2 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                 | SCU  | None                 |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.9<br>0 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                 |      |                      |
|   |                                  | Implicit VR Little Endian                         | 1.2.840.10008.1.2                   |      |                      |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.1<br>2.3 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.5<br>0          | SCU  | None                 |
|   |                                  | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                 |      |                      |
|   |                                  | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.9<br>0 [Note 1] |      |                      |
|   |                                  | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                 |      |                      |

**Presentation Context Table**

| Abstract Syntax                                      |                             | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|-----------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                         | Name List   | UID List                        |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Positron Emission Tomography Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.128 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Standalone PET Curve Storage SOP Class (Retired)     | 1.2.840.10008.5.1.4.1.1.129 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| CT Image Storage SOP Class                           | 1.2.840.10008.5.1.4.1.1.12  | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Nuclear Medicine Image Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.120 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |

**Presentation Context Table**

| Abstract Syntax                                |                             | Transfer Syntax                                   |  | Role | Extended Negotiation |
|--|-----------------------------|---|--|------|----------------------|
| Name   | UID                         | Name List   | UID List                               |      |                      |
| Ultrasound Multi-frame Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.3   | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.5<br>0             | SCU  | None                 |
|  |                             | RLE Lossless                                      | 1.2.840.10008.1.2.5                    |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                    |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                    |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2                      |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.7<br>0             |      |                      |
| Ultrasound Multi-frame Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.3.1 | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.5<br>0             | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.5<br>7<br>[Note 1] |      |                      |
|  |                             | RLE Lossless                                      | 1.2.840.10008.1.2.5                    |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.9<br>0 [Note 1]    |      |                      |
|  |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                    |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                    |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2                      |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.7<br>0             |      |                      |
| MR Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.4   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                    | SCU  | None                 |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                    |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.9<br>0 [Note 1]    |      |                      |

**Presentation Context Table**

| Abstract Syntax                    |                                   | Transfer Syntax                                   |                                     | Role | Extended Negotiation |
|------------------------------------|-----------------------------------|---|-------------------------------------|------|----------------------|
| Name                               | UID                               | Name List   | UID List                            |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2                   |      |                      |
| RT Image Storage SOP Class         | 1.2.840.10008.5.1.4.1.1.4<br>81.1 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                 | SCU  | None                 |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                 |      |                      |
|                                    |                                   | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.9<br>0 [Note 1] |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2                   |      |                      |
| RT Dose Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.4<br>81.2 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                 | SCU  | None                 |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                 |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2                   |      |                      |
| RT Structure Set Storage SOP Class | 1.2.840.10008.5.1.4.1.1.4<br>81.3 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                 | SCU  | None                 |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                 |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2                   |      |                      |
| Ultrasound Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.6         | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.5<br>0          | SCU  | None                 |
|                                    |                                   | RLE Lossless                                      | 1.2.840.10008.1.2.5                 |      |                      |
|                                    |                                   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2                 |      |                      |
|                                    |                                   | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1                 |      |                      |
|                                    |                                   | Implicit VR Little Endian                         | 1.2.840.10008.1.2                   |      |                      |
|                                    |                                   | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.7<br>0          |      |                      |
| Ultrasound Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.6.<br>1   | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.5<br>0          | SCU  | None                 |

**Presentation Context Table**

| Abstract Syntax                           |                            | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|---|----------------------------|---|---------------------------------|------|----------------------|
| Name                                      | UID                        | Name List   | UID List                        |      |                      |
|   |                            | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                            | RLE Lossless                                      | 1.2.840.10008.1.2.5             |      |                      |
|   |                            | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|   |                            | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|   |                            | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                            | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|   |                            | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Raw Data Storage SOP Class                | 1.2.840.10008.5.1.4.1.1.66 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                            | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                            | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7  | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          | SCU  | None                 |
|   |                            | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                            | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|   |                            | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             |      |                      |
|   |                            | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|   |                            | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|   |                            | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |

## Presentation Context Table

| Abstract Syntax  |                                    | Transfer Syntax                                       |                                    | Role                   | Extended Negotiation |
|--|------------------------------------|---|------------------------------------|------------------------|----------------------|
| Name   | UID                                | Name List   | UID List                           |                        |                      |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1        | Explicit VR Big Endian                                | 1.2.840.10008.1.2.2                | SCU                    | None                 |
|  |                                    | JPEG Lossless Non-hierarchical /Proc 14               | 1.2.840.10008.1.2.4.57<br>[Note 1] |                        |                      |
|  |                                    | JPEG 2000 Image Compression (Lossless Only)           | 1.2.840.10008.1.2.4.90<br>[Note 1] |                        |                      |
|  |                                    | Explicit VR Little Endian                             | 1.2.840.10008.1.2.1                |                        |                      |
|  |                                    | Implicit VR Little Endian                             | 1.2.840.10008.1.2                  |                        |                      |
|  |                                    | JPEG Baseline (Process 1)                             | 1.2.840.10008.1.2.4.50             |                        |                      |
|  |                                    | JPEG Lossless, Non-Hierarchical, FOP (Process 14)     | 1.2.840.10008.1.2.4.70             |                        |                      |
|  |                                    | Multi-frame Grayscale Byte SC Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.2        |                        |                      |
| JPEG Lossless Non-hierarchical /Proc 14                          | 1.2.840.10008.1.2.4.57<br>[Note 1] |   |                                    |                        |                      |
| JPEG 2000 Image Compression (Lossless Only)                      | 1.2.840.10008.1.2.4.90<br>[Note 1] |   |                                    |                        |                      |
| Explicit VR Little Endian  | 1.2.840.10008.1.2.1                |   |                                    |                        |                      |
| Implicit VR Little Endian  | 1.2.840.10008.1.2                  |   |                                    |                        |                      |
| JPEG Baseline (Process 1)  | 1.2.840.10008.1.2.4.50             |   |                                    |                        |                      |
| JPEG Lossless, Non-Hierarchical, FOP (Process 14)                | 1.2.840.10008.1.2.4.70             |   |                                    |                        |                      |
| Multi-frame Grayscale Word SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.3        |   |                                    | Explicit VR Big Endian | 1.2.840.10008.1.2.2  |
|  |                                    | JPEG Lossless Non-hierarchical /Proc 14               | 1.2.840.10008.1.2.4.57<br>[Note 1] |                        |                      |

## Presentation Context Table

| Abstract Syntax  |                             | Transfer Syntax                                   |                                 | Role | Extended Negotiation |
|--|-----------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                         | Name List   | UID List                        |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                             | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Multi-frame True Color Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.4 | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                             | JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 [Note 1] |      |                      |
|  |                             | JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
|  |                             | JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50          |      |                      |
|  |                             | JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70          |      |                      |
| Standalone Overlay Storage SOP Class (Retired)         | 1.2.840.10008.5.1.4.1.1.8   | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                             | Explicit VR Little Endian                         | 1.2.840.10008.1.2.1             |      |                      |
|  |                             | Implicit VR Little Endian                         | 1.2.840.10008.1.2               |      |                      |
| Basic Text SR SOP Class                                |                             | Explicit VR Big Endian                            | 1.2.840.10008.1.2.2             | SCU  | None                 |

**Presentation Context Table**

| Abstract Syntax                              |                                     | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-------------------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                                 | Name List                 | UID List            |      |                      |
|  | 1.2.840.10008.5.1.4.1.1.8<br>8.11   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                     | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Enhanced SR SOP Class                        | 1.2.840.10008.5.1.4.1.1.8<br>8.22   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                     | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                     | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Detail SR Storage - Trial (Retired)          | 1.2.840.10008.5.1.4.1.1.8<br>8.3    | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                     | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                     | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Comprehensive SR SOP Class                   | 1.2.840.10008.5.1.4.1.1.8<br>8.33   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                     | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                     | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| X-Ray Radiation Dose SR SOP Class            | 1.2.840.10008.5.1.4.1.1.8<br>.88.67 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                     | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                     | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Standalone Curve Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.9           | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                     | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                     | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| General ECG Waveform Storage SOP Class       | 1.2.840.10008.5.1.4.1.1.9.<br>1.2   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                     | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                     | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
|  |                                     | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |



**Presentation Context Table**

| Abstract Syntax                                 |                                | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|--------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                            | Name List                                   | UID List                        |      |                      |
| Standard Hemodynamic Waveform Storage SOP Class | 1.2.840.10008.5.1.4.1.1.9.2.1  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Procedure Log Storage SOP Class                 | 1.2.840.10008.5.1.4.1.1.8.8.40 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Key Object Selection Document Storage SOP Class | 1.2.840.10008.5.1.4.1.1.8.8.59 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
| Enhanced CT Image Storage SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.2.1    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced MR Image Storage SOP Class [Note 1]    | 1.2.840.10008.5.1.4.1.1.4.1    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| MR Spectroscopy Storage SOP Class [Note 1]      | 1.2.840.10008.5.1.4.1.1.4.2    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
|   | 1.2.840.10008.5.1.4.1.1.5      | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |

## Presentation Context Table

| Abstract Syntax   |                               | Transfer Syntax                            |                                 | Role | Extended Negotiation |
|---|-------------------------------|--|---------------------------------|------|----------------------|
| Name  | UID                           | Name List                                  | UID List                        |      |                      |
| Nuclear Medicine Image Storage (Retired)SOP Class [Note 1]          |                               | JPEG 2000 Image Compression (Lossless Only | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                               | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Ambulatory ECG Waveform Storage SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.9.1.3 | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Cardiac Electrophysiology Waveform Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.9.3.1 | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Pseudo-Color Softcopy Presentation State Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.1.1.3 | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Basic Voice Audio Waveform Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.9.4.1 | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
| Blending Softcopy Presentation State Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.1.1.4 | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                               | Explicit VR Little Endian                  | 1.2.840.10008.1.2.1             |      |                      |
|   |                               | Implicit VR Little Endian                  | 1.2.840.10008.1.2               |      |                      |
|   |                               | Explicit VR Big Endian                     | 1.2.840.10008.1.2.2             | SCU  | None                 |

**Presentation Context Table**

| Abstract Syntax                                     |                                    | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|------------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                                | Name List                                   | UID List                        |      |                      |
| Enhanced XA Image Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.1<br>2.1.1 | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Enhanced XRF Image Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.1<br>2.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Registration Storage SOP Class [Note 1]     | 1.2.840.10008.5.1.4.1.1.6<br>6.1   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Spatial Fiducials Storage SOP Class [Note 1]        | 1.2.840.10008.5.1.4.1.1.6<br>6.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Real World Value Mapping Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.6<br>7     | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                    | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Endoscopic Image Storage SOP Class [Note 1]      | 1.2.840.10008.5.1.4.1.1.7<br>7.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                    | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

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**Presentation Context Table**

| Abstract Syntax   |                                      | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|---|--------------------------------------|---|---------------------------------|------|----------------------|
| Name  | UID                                  | Name List                                   | UID List                        |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Endoscopic Image Storage SOP Class [Note 1]                 | 1.2.840.10008.5.1.4.1.1.7<br>7.1.1.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Microscopic Image Storage SOP Class [Note 1]                   | 1.2.840.10008.5.1.4.1.1.7<br>7.1.2   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Video Microscopic Image Storage SOP Class [Note 1]                | 1.2.840.10008.5.1.4.1.1.7<br>7.1.2.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| VL Slide-Coordinates Microscopic Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.7<br>7.1.3   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|   |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|   |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                      | Transfer Syntax                             |                                     | Role | Extended Negotiation |
|--|--------------------------------------|---|-------------------------------------|------|----------------------|
| Name   | UID                                  | Name List                                   | UID List                            |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2                   |      |                      |
| VL Photographic Image Storage SOP Class [Note 1]               | 1.2.840.10008.5.1.4.1.1.7<br>7.1.4   | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2                 | SCU  | None                 |
|  |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.5<br>7[Note 1]  |      |                      |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.9<br>0 [Note 1] |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1                 |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2                   |      |                      |
| Video Photographic Image Storage SOP Class [Note 1]            | 1.2.840.10008.5.1.4.1.1.7<br>7.1.4.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2                 | SCU  | None                 |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.9<br>0 [Note 1] |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1                 |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2                   |      |                      |
| Ophthalmic Photography 8 Bit Image Storage SOP Class [Note 1]  | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.1 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2                 | SCU  | None                 |
|  |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.5<br>7[Note 1]  |      |                      |
|  |                                      | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.9<br>0 [Note 1] |      |                      |
|  |                                      | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1                 |      |                      |
|  |                                      | Implicit VR Little Endian                   | 1.2.840.10008.1.2                   |      |                      |
| Ophthalmic Photography 16 Bit Image Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.7<br>7.1.5.2 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2                 | SCU  | None                 |
|  |                                      | JPEG Lossless Non-hierarchical /Proc 14     | 1.2.840.10008.1.2.4.5<br>7[Note 1]  |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                  | Transfer Syntax                             |                                 | Role | Extended Negotiation |
|--|----------------------------------|---|---------------------------------|------|----------------------|
| Name   | UID                              | Name List                                   | UID List                        |      |                      |
|  |                                  | JPEG 2000 Image Compression (Lossless Only) | 1.2.840.10008.1.2.4.90 [Note 1] |      |                      |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Stereometric Relationship Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.77.1.5.3 | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Mammography CAD SR SOP Class [Note 1]                  | 1.2.840.10008.5.1.4.1.1.88.50    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| Chest CAD SR SOP Class [Note 1]                        | 1.2.840.10008.5.1.4.1.1.88.65    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Beams Treatment Record Storage SOP Class [Note 1]   | 1.2.840.10008.5.1.4.1.1.481.4    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Brachy Treatment Record Storage SOP Class [Note 1]  | 1.2.840.10008.5.1.4.1.1.481.6    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |
|  |                                  | Implicit VR Little Endian                   | 1.2.840.10008.1.2               |      |                      |
| RT Treatment Summary Record Storage SOP Class [Note 1] | 1.2.840.10008.5.1.4.1.1.481.7    | Explicit VR Big Endian                      | 1.2.840.10008.1.2.2             | SCU  | None                 |
|  |                                  | Explicit VR Little Endian                   | 1.2.840.10008.1.2.1             |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                                   | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                               | Name List                 | UID List            |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Plan Storage SOP Class [Note 1]                         | 1.2.840.10008.5.1.4.1.1.4<br>81.8 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| RT Ion Beams Treatment Record Storage SOP Class [Note 1]       | 1.2.840.10008.5.1.4.1.1.4<br>81.9 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private X-Ray Image Storage                            | 1.3.46.670589.2.3.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Reconstructed X-ray Storage                    | 1.3.46.670589.2.4.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private iE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private Xcelera Info Object Storage                    | 1.3.46.670589.2.6.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume New Storage                | 1.3.46.670589.5.0.1.1             | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

**Presentation Context Table**

| Abstract Syntax  |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|------------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                    | Name List                 | UID List            |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Synthetic Image Storage     | 1.3.46.670589.5.0.10   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio Analysis New Storage | 1.3.46.670589.5.0.11.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CX Synthetic Image Storage     | 1.3.46.670589.5.0.12   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Storage              | 1.3.46.670589.5.0.13   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Perfusion Analysis Storage     | 1.3.46.670589.5.0.14   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum 3D Volume Object New Storage   | 1.3.46.670589.5.0.2.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum Surface New Storage            | 1.3.46.670589.5.0.3.1  | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |

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**Presentation Context Table**

| Abstract Syntax                                      |                       | Transfer Syntax           |                     | Role | Extended Negotiation |
|--|-----------------------|---------------------------|---------------------|------|----------------------|
| Name   | UID                   | Name List                 | UID List            |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum MR Cardio New Storage      | 1.3.46.670589.5.0.8.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |
| Philips Private ViewForum CT Synthetic Image Storage | 1.3.46.670589.5.0.9   | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|  |                       | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                       | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

Note 1: Not available in default configuration. Please consult customer service representative to enable this.

#### 4.2.7.3.2.3. SOP Specific Conformance for Storage SOP Classes

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

No data elements are discarded or coerced by the Send Image AE.

#### 4.2.7.3.2.3.1. Dataset Specific Conformance for C-STORE-RQ

Details regarding the Dataset Specific response behavior will be reported in this section. This includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

Possible status responses during C-STORE request are listed in the next table:

**Table 160: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning                          | Behavior         |
|----------------|------------|--|------------------|
| Success        | 0000       | Successful stored                        | Reason is logged |
| Refused        | A700       | Refused: Out of Resources                | Reason is logged |
| Failure        | 0110       | Error: Processing Failure                | Reason is logged |
|                | A900       | Error: Data Set does not match SOP Class | Reason is logged |
|                | C000       | Error: cannot understand                 | Reason is logged |
| Warning        | B000       | Coercion of Data Elements                | Reason is logged |

| Service Status | Error Code | Further Meaning                   | Behavior         |
|----------------|------------|-----------------------------------|------------------|
|                | B007       | Data Set does not match SOP Class | Reason is logged |
|                | B006       | Elements Discarded                | Reason is logged |

**Exceptions:**

1. The clinical user cancels the 'Send' request. If the request is already active, the store connection will be closed and no more data will be sent. If the request is not active yet, no connection will be initiated and no data will be sent.
2. If, after setting up the connection, no data can be sent to the external DICOM node, for 2 minutes, IntelliSpace Cardiovascular will retry once and then it will abort the connection. IntelliSpace Cardiovascular reports an error.
3. If an error occurs on IntelliSpace Cardiovascular while setting up the connection, IntelliSpace Cardiovascular aborts and reports an error.
4. If an error occurs on the external DICOM node while setting up the connection, IntelliSpace Cardiovascular will aborts all actions related to that connection. IntelliSpace Cardiovascular reports an error.
5. If no agreement between the two parties can be reached concerning communication parameters the connection will be closed and no data transfer will take place. IntelliSpace Cardiovascular reports an error.
6. When a network error occurs during connection set up or during data transfer, IntelliSpace Cardiovascular will abort all actions related to the connection and reports an error.
7. If an error occurs on IntelliSpace Cardiovascular during data transfer, IntelliSpace Cardiovascular will notify the external DICOM node of this problem and after that close the connection. IntelliSpace Cardiovascular reports an error.
8. If an error occurs on the external DICOM node during data transfer, this causes the connection to be aborted. IntelliSpace Cardiovascular reports an error.

**Notes:**

1. If the Institution Name is present in private DICOM object data it is taken from there (this only applies for CD import) If not - step 2.
2. If HIS is present and "resolve institution from HIS configured", then it is taken from HIS. If not - step 3.
3. If DICOM tag - Issuer of Patient ID (0010, 0021) in the Patient Identification Module - is not empty, Institution Name is taken from there. If not - step 4.
4. Institution Name is taken from the configuration data - default institution per AE\_TITLE defined in the Service Tool (DICOM import page).

During DICOM based store, transfer negotiations may indicate that the original format of the data is not accepted by the target node.

In such cases, the remote store server will try to apply one of the transfer syntax conversions indicated by '+', in order to get to transfer syntax that is supported by the external system. The Transfer syntax conversion is supported from SCU to SCP.

| Source Syntax                               | Destination Syntax |     |     |
|---|--------------------|-----|-----|
|   | ILE                | ELE | EBE |
| ILE   | -                  | +   | +   |
| ELE   | +                  | -   | +   |
| EBE   | +                  | +   | -   |
| JPEG Baseline                               | -                  | -   | -   |
| JPEG Lossless Non-hierarchical /Proc 14     | -                  | -   | -   |
| JPEG Lossless FOP Non-Hierarchical 14       | +                  | +   | +   |
| JPEG 2000 Image Compression (Lossless Only) | -                  | -   | -   |
| RLE   | +                  | +   | +   |

**Figure 26: Transfer Syntax Conversion from Source to Destination**

No data elements are discarded or coerced by the Archive AE.

The list of updated patient and study attributes are mentioned in the tables in section 4.2.1.3.3.3 [SOP Specific Conformance for Storage SOP Classes](#).

Possible communication failures during the C-STORE request are listed here:

**Table 161: DICOM Command Communication Failure Behavior**

| Exception           | Behavior  |
|---------------------|---|
| Timeout             | The association is closed and the reason is logged. |
| Association aborted | The association is closed and the reason is logged. |

#### 4.2.7.4. Association Acceptance Policy

Not applicable, the Send AE doesn't accept any associations.

#### 4.2.8. Storage Commitment AE

Details of this specific Application Entity is specified in this section.

## 4.2.8.1. SOP Classes

IntelliSpace Cardiovascular will support DICOM Storage Commitment as SCP, only for asynchronous workflow. The C-STORE, N-ACTION and N-EVENT-REPORT will be handled in a separate association. In the next sections the storage commitment behavior of IntelliSpace Cardiovascular will be explained in detail.

This Storage Commitment Application Entity provides Standard Conformance to the following SOP Classes.

**Table 162: SOP Classes for Storage Commitment AE**

| SOP Class Name                          | SOP Class UID        | SCU | SCP |
|---|----------------------|-----|-----|
| Verification SOP Class                  | 1.2.840.10008.1.1    | No  | Yes |
| Storage Commitment Push Model SOP Class | 1.2.840.10008.1.20.1 | No  | Yes |

Note that any SOP specific behavior is documented later in this conformance statement in the applicable SOP class specific conformance section.

## 4.2.8.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

### 4.2.8.2.1. General

The DICOM standard application context is specified below.

**Table 163: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

### 4.2.8.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

For the verification service only one can be handled at a time.

**Table 164: Number of associations as an Association Initiator for this AE**

| Description                                 | Value                    |
|---|--------------------------|
| Maximum number of simultaneous associations | Limit of system resource |

### 4.2.8.2.3. Asynchronous Nature

The implementation supports negotiation of multiple outstanding transactions, along with the maximum number of outstanding transactions supported.

**Table 165: Asynchronous nature as an Association Initiator for this AE**

| Description   | Value                    |
|---|--------------------------|
| Maximum number of outstanding asynchronous transactions | Limit of system resource |

### 4.2.8.2.4. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 166: DICOM Implementation Class and Version for Storage Commitment AE**

| Property                    | Value                |
|-----------------------------|----------------------|
| Implementation Class UID    | 1.3.46.670589.58.8.0 |
| Implementation Version Name | ISCV 8.0             |

### 4.2.8.2.5. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 167: Communication Failure Behavior**

| Exception     | Behavior  |
|---------------|---|
| ARTIM Timeout | The association is closed and the reason is logged. |

### 4.2.8.3. Association Initiation Policy

Not applicable, Storage Commitment AE does not initiate any associations.

### 4.2.8.4. Association Acceptance Policy

The Application Entity may reject Association attempts as shown in the table below.

**Table 168: Association Reject Reasons**

| Result  | Source  | Reason/Diagnosis                           | Behavior  |
|---|---|--|---|
| 1 - rejected permanent  | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|   |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|   |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|   | 2 - DICOM UL service provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|   | 3 - DICOM UL service provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
|   | 2 - rejected-transient  | 1 - DICOM UL service-user                  | 1 - no-reason-given   |
| 2 - application-context-name-not-supported                    |   |  | The user is informed. Details are logged in central log file. |
| 3 - calling-AE-title-not-recognized                           |   |  | The user is informed. Details are logged in central log file. |
| 7 - called-AE-title-not-recognized                            |   |  | The user is informed. Details are logged in central log file. |
| 2 - DICOM UL service provider (ACSE related function)         |   | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
| 3 - DICOM UL service provider (Presentation related function) |   | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |

The behavior of the AE for sending an association abort is summarized in next table.

**Table 169: Association Abort Policies**

| Source  | Reason/Diagnosis                | Behavior  |
|---|---------------------------------|---|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | Notifies Remote AE, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | Notifies Remote AE, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU            | Notifies Remote AE, terminates the connection and logs the event. |
|   | 2 - unexpected-PDU              | Notifies Remote AE, terminates the connection and logs the event. |
|   | 4 - unrecognized-PDU parameter  | Notifies Remote AE, terminates the connection and logs the event. |
|   | 5 - unexpected-PDU parameter    | Notifies Remote AE, terminates the connection and logs the event. |
|   | 6 - invalid-PDU-parameter value | Notifies Remote AE, terminates the connection and logs the event. |

#### 4.2.8.4.1. (Real-World) Activity – Verification as SCP

##### 4.2.8.4.1.1. Description and Sequencing of Activities

The Storage Commitment AE as SCP AE accepts associations from systems that wish to verify application level communication using the C-ECHO command.

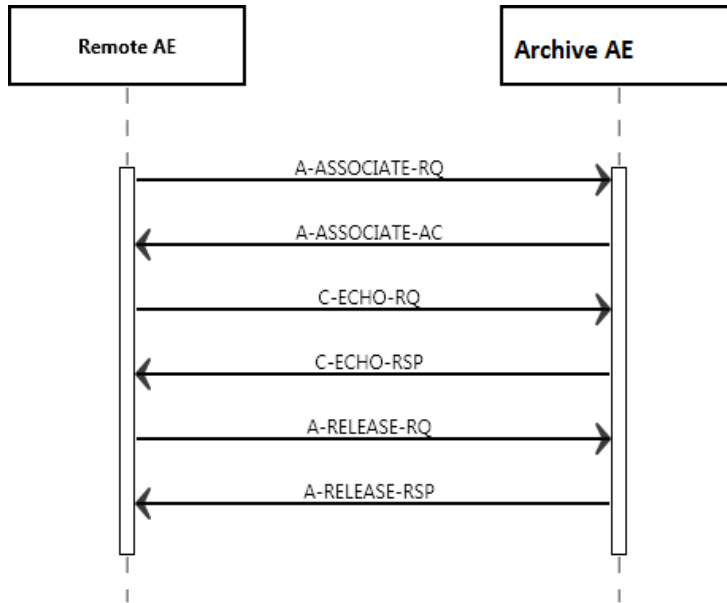


Figure 27: (Real-World) Activity – Verification as SCP

#### 4.2.8.4.1.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 170: Acceptable Presentation Contexts for (Real-World) Activity – Verification as SCP

| Presentation Context Table |                   |                           |                     |      |                      |
|----------------------------|-------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax            |                   | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                       | UID               | Name List                 | UID List            |      |                      |
| Verification SOP Class     | 1.2.840.10008.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|                            |                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                            |                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

#### 4.2.8.4.1.3. SOP Specific Conformance for Verification SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

The Storage Commitment AE provides standard conformance to the verification SOP class.

#### 4.2.8.4.1.3.1. Dataset Specific Conformance for Verification C-ECHO SCP

Details regarding the Dataset Specific response behavior will be reported in this section.



This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 171: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning                  | Behavior   |
|----------------|------------|----------------------------------|--|
| Success        | 0000       | Success, Confirmation            | The SCU has successfully send C-ECHO.                                      |
| Failure        | xxxx       | Problems with sending the C-ECHO | The SCU failed to send the C-ECHO; user is notified. The reason is logged. |

#### 4.2.8.4.2. (Real-World) Activity – Storage Commitment Push Model AS SCP

##### 4.2.8.4.2.1. Description and Sequencing of Activities

IntelliSpace Cardiovascular will support DICOM Storage commitment as SCP, only for asynchronous workflow. The C-STORE, N-ACTION and N-EVENT-REPORT will be handled in a separate association.

##### Normal Flow of Events:

1. The external DICOM node set up storage commit request connection and negotiates communication parameters with the IntelliSpace Cardiovascular server.
2. After the connection is setup, the external DICOM node sends a storage commit request for the data, where the responsibility has to be taken over by the IntelliSpace Cardiovascular server.
3. The IntelliSpace Cardiovascular server responds to the external DICOM node that the request is correctly received.
4. The external DICOM node will close the connection.

##### When the data is correctly archived (archived and verified):

1. The IntelliSpace Cardiovascular server set up storage commit response connection and negotiates communication parameters with the external DICOM node that made the request.
2. It could also response when it is only present on the repository (configuration option).
3. After the connection is setup, the IntelliSpace Cardiovascular server sends the storage commit response, for the request it received, to the external DICOM node.
4. The IntelliSpace Cardiovascular server will close the connection.

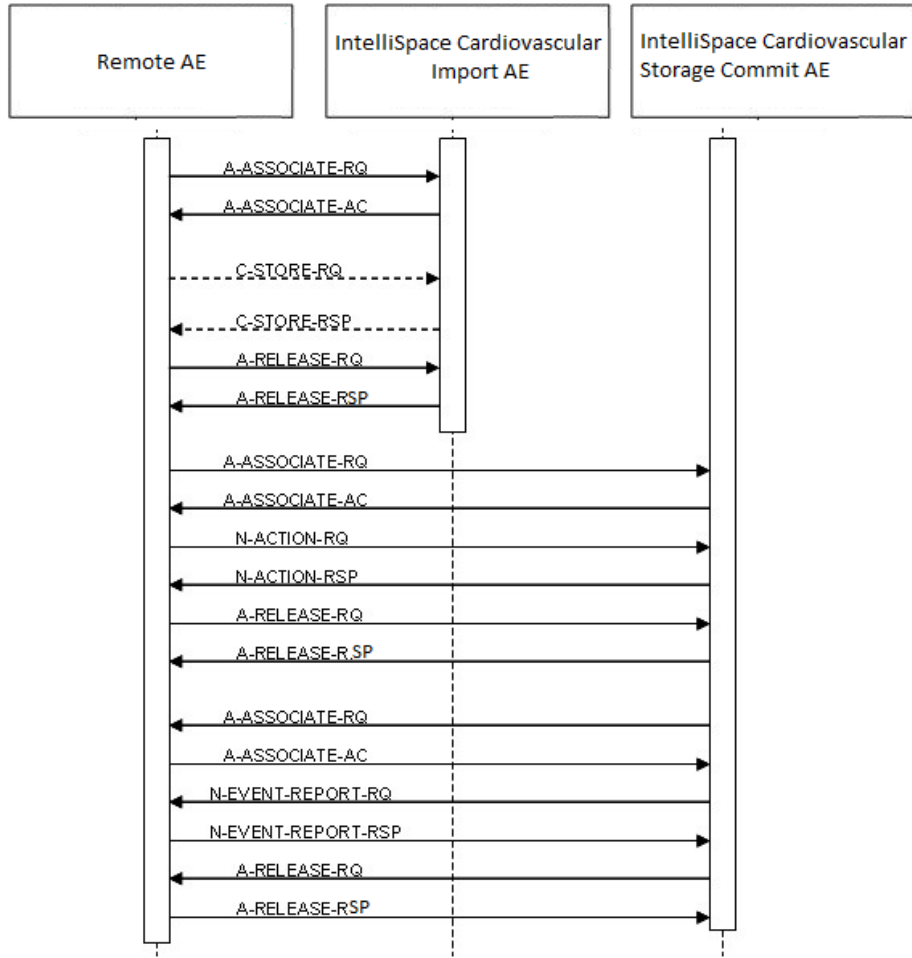


Figure 28: (Real World) Activity - Storage Commitment Push Model as SCP

#### 4.2.8.4.2.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 172: Acceptable Presentation Contexts for (Real-World) Activity – Storage Commitment Push Model AS SCP

| Presentation Context Table              |                      |                           |                     |      |                      |
|---|----------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                         |                      | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                                    | UID                  | Name List                 | UID List            |      |                      |
| Storage Commitment Push Model SOP Class | 1.2.840.10008.1.20.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|   |                      | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|   |                      | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

### 4.2.8.4.2.3. SOP Specific Conformance for Storage Commitment Push Model SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

#### 4.2.8.4.2.3.1. Dataset Specific Conformance for Storage Commitment Push Model SOP Class N-EVENT-REPORT-SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

The Storage Commitment AE accepts all contexts in the intersection of the proposed and acceptable Presentation Context. This means that the Storage Commitment AE will accept multiple proposed Presentation Contexts with the same SOP Class but different Transfer Syntaxes, so there will be no checks for duplicate Presentation Contexts.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 173: Status Response**

| Service Status | Error Code | Further Meaning    | Description  |
|----------------|------------|--------------------|--|
| Success        | 0000       | Success            | The storage commitment result has been successfully received. continue |
| Error          | 0110       | Processing Failure | Send notification; Log.  |

**Table 174: DICOM Command Communication Failure Behavior**

| Exception           | Behavior  |
|---------------------|---|
| Timeout             | The association is closed and the reason is logged. |
| Association aborted | The association is closed and the reason is logged. |

#### 4.2.8.4.2.3.2. Dataset Specific Conformance for Storage Commitment Push Model SOP Class N-ACTION-SCP

All details regarding the specific conformance, including response behavior to all status codes, both from an application level and communication errors are provided in following tables for N-ACTION.

**Table 175: Storage Commitment Attribute for N-ACTION-RSP**

| Attribute Name                   | Tag       | Comment |
|----------------------------------|-----------|---------|
| <b>Storage Commitment Module</b> |           |         |
| Transaction UID                  | 0008,1195 |         |
| Referenced SOP Sequence          | 0008,1199 |         |

| Attribute Name               | Tag       | Comment |
|------------------------------|-----------|---------|
| >Referenced SOP Class UID    | 0008,1150 |         |
| >Referenced SOP Instance UID | 0008,1155 |         |

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 176: Status Response**

| Service Status     | Error Code | Further Meaning                            | Behavior  |
|--------------------|------------|--|---|
| Success            | 0000       | Operation complete                         | The request for storage commitment is considered successfully stored.         |
| Other than Success | xxxx       | Problems with sending the N-ACTION Request | The request for storage commitment is marked as failed. The reason is logged. |

**Table 177: DICOM Command Communication Failure Behavior**

| Exception                | Behavior  |
|--------------------------|---|
| ARTIM Time-out           | The reason is logged.   |
| Reply Time-out           | The association is released. Continues with waiting for storage commitment. |
| Association Time-out SCU | The association is released. Continues with waiting for storage commitment. |
| Association aborted      | Continues with waiting for storage commitment.                              |

**Exceptions:**

1. Not correctly archived within the verify delay + 8 hours, IntelliSpace Cardiovascular responds with a failure.
2. All instances in the request have to be correctly archived, when one of them fails, the response will be reported with failure. Within the verify delay + 8 hours, IntelliSpace Cardiovascular responds with a failure.
3. The N-EVENT Report to the Modality is queued when Modality is off-line. Once the Modality Associates to the ISCV COMMIT SCP AE, ISCV checks and sends all remaining N-EVENT Reports for that Modality.
4. IntelliSpace Cardiovascular will close the connection if no data is received within 2 minutes after the setup.
5. If a network error occurs during set up of a connection or during data transfer, this is reported. IntelliSpace Cardiovascular will abort the connection and data transfer will not be completed.
6. If an error occurs on IntelliSpace Cardiovascular during data transfer, IntelliSpace Cardiovascular will notify the external DICOM node of this problem and after that close the connection. IntelliSpace Cardiovascular reports an error.
7. If an error occurs on the external DICOM node during data transfer, this causes the connection to be aborted. IntelliSpace Cardiovascular reports an error.

## 4.2.9. PDF\_REPORT AE

Details of this specific Application Entity is specified in this section. This Application Entity is implemented by the report converter service.

### 4.2.9.1. SOP Classes

PDF\_REPORT AE, for its functioning, makes use of following DICOM functions:

- Storage as SCU, which uses C-STORE as service element.

The PDF\_REPORT AE is an internal AE that exports the Encapsulated PDF Instances to Archive AE that deals with IntelliSpace Cardiovascular Database.

This Application Entity provides Standard Conformance to the following SOP Classes.

**Table 178: SOP Classes for Send AE**

| SOP Class Name           | SOP Class UID                 | SCU | SCP |
|--------------------------|-------------------------------|-----|-----|
| Encapsulated PDF Storage | 1.2.840.10008.5.1.4.1.1.104.1 | Yes | No  |

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.

### 4.2.9.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

#### 4.2.9.2.1. General

The DICOM standard application context is specified below.

**Table 179: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

## 4.2.9.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

For IntelliSpace Cardiovascular the maximum number of associations limited by the availability of the system resources. The license number of the external DICOM nodes is one of these limits.

**Table 180: Number of associations as an Association Initiator for this AE**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 5     |

## 4.2.9.2.3. Asynchronous Nature

The implementation supports negotiation of multiple outstanding transactions, along with the maximum number of outstanding transactions supported.

**Table 181: Asynchronous nature as an Association Initiator for this AE**

| Description   | Value                    |
|---|--------------------------|
| Maximum number of outstanding asynchronous transactions | Limit of System Resource |

## 4.2.9.2.4. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 182: DICOM Implementation Class and Version for Send AE**

| Property                    | Value                |
|-----------------------------|----------------------|
| Implementation Class UID    | 1.3.46.670589.58.8.0 |
| Implementation Version Name | ISCV 8.0             |

## 4.2.9.2.5. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 183: Communication Failure Behavior**

| Exception     | Behavior  |
|---------------|---|
| ARTIM Timeout | The association is closed and the reason is logged. |

### 4.2.9.3. Association Initiation Policy

The Application Entity will respond on a received reject Association attempt as shown in next table.

**Table 184: Association Rejection response**

| Result                 | Source  | Reason/Diagnosis                           | Behavior  |
|------------------------|---|--|---|
| 1 - rejected-permanent | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|                        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|                        |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|                        | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|                        | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|                        |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
| 2 - rejected-transient | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|                        |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|                        |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|                        | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|                        |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|                        | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|                        |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |

The behavior of the AE on receiving an association abort is summarized in the next table.

**Table 185: Association Abort Handling**

| Source  | Reason/Diagnosis                | Behavior   |
|---|---------------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU            | When received, terminates the connection and logs the event. |
|   | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|   | 4 - unrecognized-PDU-parameter  | When received, terminates the connection and logs the event. |
|   | 5 - unexpected-PDU-parameter    | When received, terminates the connection and logs the event. |
|   | 6 - invalid-PDU-parameter-value | When received, terminates the connection and logs the event. |

### 4.2.9.3.1. (Real-World) Activity – Image Export

#### 4.2.9.3.1.1. Description and Sequencing of Activities

#### 4.2.9.3.1.2. Proposed Presentation Contexts

The proposed presentation contexts are defined in the next table.

**Table 186: Proposed Presentation Contexts for (Real-World) Activity – Image Export**

| Presentation Context Table |                                   |                           |                     |      |                      |
|----------------------------|-----------------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax            |                                   | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                       | UID                               | Name List                 | UID List            |      |                      |
| Encapsulated PDF Storage   | 1.2.840.10008.5.1.4.1.1.104<br>.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|                            |                                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                            |                                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |



### 4.2.9.3.1.3. SOP Specific Conformance for Storage SOP Classes

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

#### 4.2.9.3.1.3.1. Dataset Specific Conformance for C-STORE-RQ

Details regarding the Dataset Specific response behavior will be reported in this section.

This includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

Possible status responses during C-STORE request are listed in the next table:

**Table 187: DICOM command response status handling behavior**

| Service Status | Error Code | Further Meaning                          | Behavior       |
|----------------|------------|--|----------------|
| Success        | 0000       | Successful stored                        | Log; continue. |
| Refused        | A700       | Refused: Out of Resources                | Log; continue. |
| Failure        | 0110       | Error: Processing Failure                | Log; continue. |
|                | A900       | Error: Data Set does not match SOP Class | Log; continue. |
|                | C000       | Error: cannot understand                 | Log; continue. |
| Warning        | B000       | Coercion of Data Elements                | Log; continue. |
|                | B007       | Data Set does not match SOP Class        | Log; continue. |
|                | B006       | Elements Discarded                       | Log; continue. |

### 4.2.9.4. Association Acceptance Policy

Not applicable, the PDF\_REPORT AE doesn't accept any associations.

### 4.2.10. MWL AE

MWL is implemented by using the functionality of the IntelliBridge Enterprise system.

- For information when using IBE ≤ B.13 details of this specific Application Entity are specified in this section.
- For information when using IBE ≥ B.14 details of this specific Application Entity are specified in the applicable IBE DICOM Conformance Statement

#### 4.2.10.1. SOP Classes

This Application Entity provides Standard Conformance to the following SOP Classes.

**Table 188: SOP Classes for MWL AE**

| SOP Class Name         | SOP Class UID     | SCU | SCP |
|------------------------|-------------------|-----|-----|
| Verification SOP Class | 1.2.840.10008.1.1 | No  | Yes |

| SOP Class Name                                       | SOP Class UID          | SCU | SCP |
|--|------------------------|-----|-----|
| Modality Worklist Information Model - FIND SOP Class | 1.2.840.10008.5.1.4.31 | No  | Yes |

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.

#### 4.2.10.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

##### 4.2.10.2.1. General

The DICOM standard application context is specified below.

**Table 189: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

##### 4.2.10.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Acceptor is specified here.

**Table 190: Number of associations as an Association Acceptor for this AE**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 1     |

##### 4.2.10.2.3. Asynchronous Nature

The implementation supports negotiation of multiple outstanding transactions, along with the maximum number of outstanding transactions supported.

##### 4.2.10.2.4. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 191: DICOM Implementation Class and Version for MWL AE**

| Property                    | Value                  |
|-----------------------------|------------------------|
| Implementation Class UID    | 1.3.46.670589.49.1.1.1 |
| Implementation Version Name | IBE_1_1_1              |

### 4.2.10.2.5. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 192: Communication Failure Behavior**

| Exception           | Behavior  |
|---------------------|---|
| Timeout             | IntelliBridge considers an ARTIM Timeout of 30 seconds as a communication failure |
| Association aborted | Not Associated  |
| Failed to connect   | Not Associated  |

### 4.2.10.3. Association Acceptance Policy

The behavior of this Application Entity is summarized in the next Table.

**Table 193: Response Status**

| Service Status | Error Code | Further Meaning                           | Behavior   |
|----------------|------------|---|--|
| Success        | 0000       | e.g. Matching is complete                 | e.g. The SCP has successfully returned all matching information e.g.                 |
| Refused        | A700       | Out of Resources                          | A response is sent with this status code. Reason is Logged and released association. |
| Failure        | C000       | Unable to process                         | A response is send with this status code. The reason is logged in the file.          |
| Pending        | FF00       | Current match is supplied                 | Matches are continuing; Current match is supplied.                                   |
| Cancel         | FE00       | Matching terminated due to Cancel Request | A response is sent with this status code.Reason is logged and released association.  |

The Application Entity may reject Association attempts as shown in the table below

**Table 194: Association Rejection Reasons**

| Result                 | Source | Reason/Diagnosis    | Behavior  |
|------------------------|--------|---------------------|---|
| 1 - rejected-permanent |        | 1 - no-reason-given | The user is informed. Details are logged in central log file. |

| Result  | Source  | Reason/Diagnosis                           | Behavior  |   |
|---|---|--|---|---|
|   | 1 - DICOM UL service-user                                     | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |   |
|   |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |   |
|   |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |   |
|   | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |   |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |   |
|   | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |   |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |   |
|   | 2 - rejected-transient  | 1 - DICOM UL service-user                  | 1 - no-reason-given   | The user is informed. Details are logged in central log file. |
|   |   |  | 2 - application-context-name-not-supported                    | The user is informed. Details are logged in central log file. |
| 3 - calling-AE-title-not-recognized                           |   |  | The user is informed. Details are logged in central log file. |   |
| 7 - called-AE-title-not-recognized                            |   |  | The user is informed. Details are logged in central log file. |   |
| 2 - DICOM UL service-provider (ACSE related function)         |   | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |   |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |   |
| 3 - DICOM UL service-provider (Presentation related function) |   | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |   |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |   |

The behavior of the AE on receiving an Association abort is summarized in the next table.

**Table 195: Association Abort Handling**

| Source  | Reason/Diagnosis         | Behavior   |
|---|--------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified | When received, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU     | When received, terminates the connection and logs the event. |

| Source | Reason/Diagnosis                | Behavior   |
|--------|---------------------------------|--|
|        | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|        | 4 - unrecognized-PDU-parameter  | When received, terminates the connection and logs the event. |
|        | 5 - unexpected-PDU-parameter    | When received, terminates the connection and logs the event. |
|        | 6 - invalid-PDU-parameter-value | When received, terminates the connection and logs the event. |

### 4.2.10.3.1. (Real-World) Activity – Verification as SCP

#### 4.2.10.3.1.1. Description and Sequencing of Activities

The MWL AE receives application level communication using the C-ECHO command.

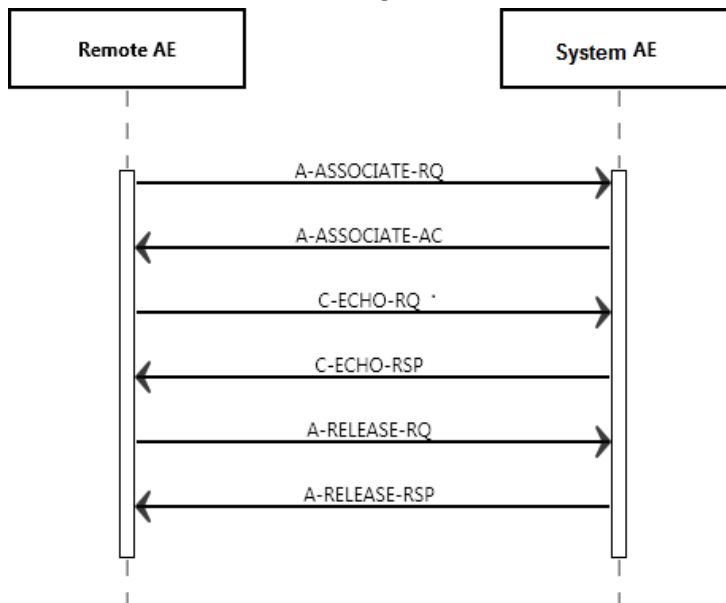


Figure 29: (Real World) Activity - Verification as SCP

#### 4.2.10.3.1.2. Proposed Presentation Contexts

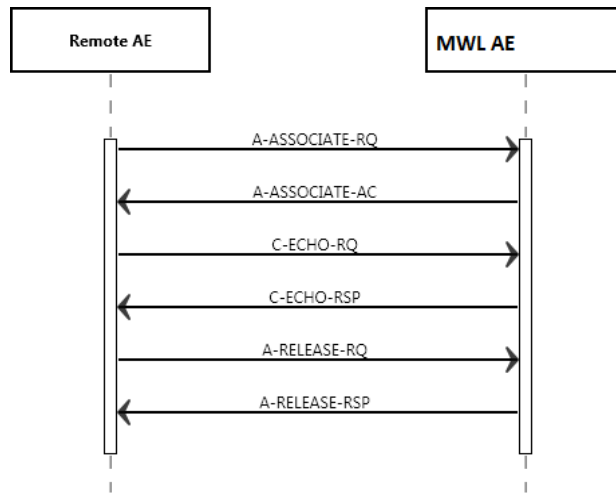
The presentation contexts are defined in the next table.

**Table 196: Proposed Presentation Contexts for (Real-World) Activity – Verification as SCP**

| Presentation Context Table |                   |                           |                   |                            |                      |
|----------------------------|-------------------|---------------------------|-------------------|----------------------------|----------------------|
| Abstract Syntax            |                   | Transfer Syntax           |                   | Role                       | Extended Negotiation |
| Name                       | UID               | Name List                 | UID List          |                            |                      |
| Verification SOP Class     | 1.2.840.10008.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2 | SCP Role: 1<br>SCU Role: 1 | None                 |
|                            |                   |                           | .2                |                            |                      |
|                            |                   | Explicit VR Little Endian | 1.2.840.10008.1.2 |                            |                      |
|                            |                   | Implicit VR Little Endian | 1.2.840.10008.1.2 |                            |                      |
|                            |                   |                           | .1                |                            |                      |

### 4.2.10.3.1.3. SOP Specific Conformance for Verification SOP Class

The MWL AE provides standard conformance to Verification SOP Class.



**Figure 30: (Real World) Activity - Verification as SCP**

**Table 197: Status Response**

| Service Status | Error Code | Further Meaning                     | Behavior   |
|----------------|------------|-------------------------------------|--|
| Success        | 0000       | Matching is complete                | Association will be released. Message logged in IntelliBridge Enterprise |
| Failure        | A900       | Identifier does not match SOP Class | Reason will be logged  |

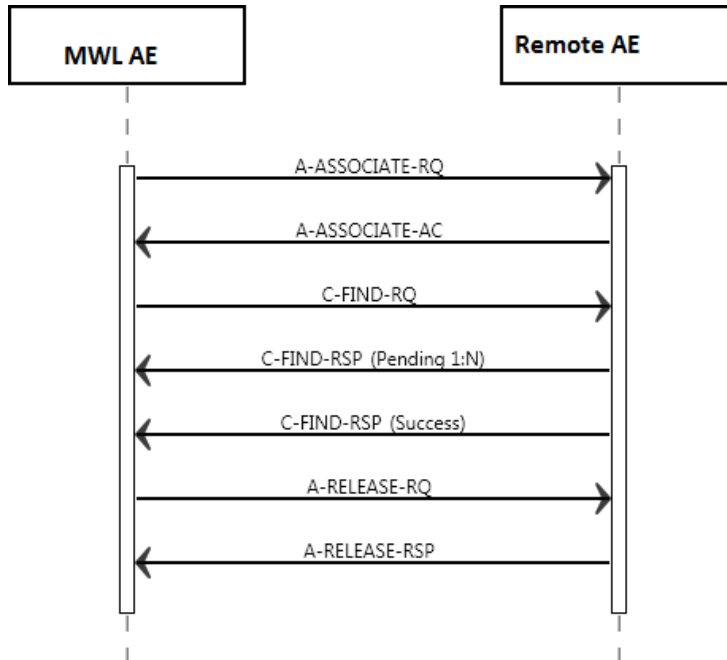
**Table 198: DICOM Command Communication Failure Behavior**

| Exception           | Description           |
|---------------------|-----------------------|
| REPLAY TIMEOUT      | Reason will be logged |
| ASSOCIATION ABORTED | Reason will be logged |
| ASSOCIATION TIMEOUT | Reason will be logged |

### 4.2.10.3.2. (Real-World) Activity – Modality Worklist as SCP

#### 4.2.10.3.2.1. Description and Sequencing of Activities

MWL SCP accepts associations from systems that wish to have an up-to-date Modality Worklist using the C-FIND Service Element.



**Figure 31: (Real World) Activity - Modality Worklist as SCP**

#### 4.2.10.3.2.2. Accepted Presentation Contexts

MWL SCP will accept the presentation contexts as given in the table below.

**Table 199: Acceptable Presentation Contexts for (Real-World) Activity – Modality worklist as SCP**

| Presentation Context Table                             |                        |                           |                     |      |                      |
|--|------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax  |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name   | UID                    | Name List                 | UID List            |      |                      |
| Modality Worklist Information Model - C-FIND SOP Class | 1.2.840.10008.5.1.4.31 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCP  | None                 |
|  |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|  |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

### 4.2.10.3.2.3. SOP Specific Conformance for Modality Worklist Information Model C-FIND SOP Class

This section and sub-section includes the manufacturer SOP and Dataset specific information as well as the status codes and their corresponding behavior.

#### 4.2.10.3.2.3.1. Dataset Specific Conformance for Modality Worklist Information Model C-FIND SCP

The supported C-Find request keys and the DICOM command communication behavior are shown in the following tables. The standard as well as the specific status codes and their corresponding behavior are also specified.

**Table 200: Modality Worklist Return keys supported**

| Attribute Name                       | Tag       | VR | Remark/ Comment                        | Matching Key Supported | Return Key Supported |
|--------------------------------------|-----------|----|--|------------------------|----------------------|
| <b>SOP Common Module</b>             |           |    |  |                        |                      |
| Specific Character Set               | 0008,0005 | CS | Always return the values in ISO_IR100  | N                      | Y                    |
| Timezone Offset From UTC             | 0008,0201 | SH |  | Y                      | N                    |
| <b>Patient Identification Module</b> |           |    |  |                        |                      |
| Patient's Name                       | 0010,0010 | PN | Returns Value. Type of Matching:S,*,U  | Y                      | Y                    |
| Patient ID                           | 0010,0020 | LO | Returns Value. Type of Matching:S,*,U  | Y                      | Y                    |
| Issuer of Patient ID                 | 0010,0021 | LO | Returns value. Type of Matching :S,*,U | Y                      | Y                    |



| Attribute Name   | Tag       | VR | Remark/ Comment  | Matching Key Supported | Return Key Supported |
|--|-----------|----|--|------------------------|----------------------|
| <b>Patient Demographic Module</b>                      |           |    |  |                        |                      |
| Patient's Birth Date                                   | 0010,0030 | DA |  | Y                      | Y                    |
| Patient's Sex  | 0010,0040 | CS | Returns value. Type of Matching :S,U   | Y                      | Y                    |
| Patient's Size   | 0010,1020 | DS | Returns value.   | N                      | Y                    |
| Patient's Weight                                       | 0010,1030 | DS | Returns value.   | N                      | Y                    |
| Confidentiality Constraint on Patient Data Description | 0040,3001 | LO | Returns Empty  | N                      | Y                    |
| <b>Patient Medical Module</b>                          |           |    |  |                        |                      |
| Medical Alerts   | 0010,2000 | LO | Returns Empty  | N                      | Y                    |
| Contrast Allergies                                     | 0010,2110 | LO | Returns Empty  | N                      | Y                    |
| Pregnancy Status                                       | 0010,21C0 | US | Returns Empty  | N                      | Y                    |
| Special Needs  | 0038,0050 | LO | Returns Empty  | N                      | Y                    |
| Patient State  | 0038,0500 | LO | Returns Empty  | N                      | Y                    |
| <b>Visit Relationship Module</b>                       |           |    |  |                        |                      |
| Referenced Patient Sequence                            | 0008,1120 | SQ | Sequence is returned empty   | N/A                    | Y                    |
| > Referenced SOP Class UID                             | 0008,1150 | UI |  | N                      | N                    |
| > Referenced SOP Instance UID                          | 0008,1155 | UI |  | N                      | N                    |
| <b>Visit Identification Module</b>                     |           |    |  |                        |                      |
| Admission ID   | 0038,0010 | LO | Returns Empty  | N                      | Y                    |
| <b>Visit Status Module</b>                             |           |    |  |                        |                      |
| Current Patient Location                               | 0038,0300 | LO | Returns Value  | N                      | Y                    |
| Visit Status ID  | 0038,0008 | CS | Returns value.   | N                      | Y                    |
| <b>Scheduled Procedure Step Module</b>                 |           |    |  |                        |                      |
| Scheduled Procedure Step Sequence                      | 0040,0100 | SQ | The Attributes of the Scheduled Procedure Step shall only be retrieved with Sequence Matching. The Scheduled Procedure Step Sequence shall contain only a single Item. | N/A                    | N/A                  |
| > Modality   | 0008,0060 | CS | Returns Value. Type of Matching :S,U.  | Y                      | Y                    |
| > Scheduled Station AE Title                           | 0040,0001 | AE | Mapped in Rhapsody Table ModalityExamCode_Mapping  | Y                      | Y                    |
| > Scheduled Procedure Step Start Date                  | 0040,0002 | DA |  | Y                      | Y                    |

| Attribute Name                          | Tag       | VR | Remark/ Comment  | Matching Key Supported | Return Key Supported |
|---|-----------|----|--|------------------------|----------------------|
| > Scheduled Procedure Step Start Time   | 0040,0003 | TM | SPS Time matching only supported when SPS Date is provided as matching key | Y                      | Y                    |
| > Scheduled Performing Physician's Name | 0040,0006 | PN |  | Y                      | Y                    |
| > Scheduled Procedure Step Description  | 0040,0007 | LO |  | N                      | Y                    |
| > Scheduled Protocol Code Sequence      | 0040,0008 | SQ |  | N/A                    | Y                    |
| >> Code Value                           | 0008,0100 | SH |  | Y                      | Y                    |
| >> Coding Scheme Designator             | 0008,0102 | SH |  | N                      | Y                    |
| >> Code Meaning                         | 0008,0104 | LO |  | N                      | Y                    |
| > Scheduled Procedure Step ID           | 0040,0009 | SH |  | N                      | Y                    |
| > Scheduled Station Name                | 0040,0010 | SH | Copied from Scheduled Station AE Title.                                    | N                      | Y                    |
| > Scheduled Procedure Step Location     | 0040,0011 | SH | Returns Empty  | N                      | Y                    |
| > Scheduled Procedure Step Status       | 0040,0020 | CS | Currently, only one value supported is "SCHEDULED".                        | N                      | Y                    |
| <b>Requested Procedure Module</b>       |           |    |  |                        |                      |
| Referenced Study Sequence               | 0008,1110 | SQ | Returns Empty  | N/A                    | Y                    |
| > Referenced SOP Class UID              | 0008,1150 | UI | 1.2.840.10008.3.1.2.3.1  | N                      | N                    |
| > Referenced SOP Instance UID           | 0008,1155 | UI |  | N                      | N                    |
| Study Instance UID                      | 0020,000D | UI |  | N                      | Y                    |
| Requested Procedure Description         | 0032,1060 | LO |  | Y                      | Y                    |
| Requested Procedure Code Sequence       | 0032,1064 | SQ |  | N/A                    | Y                    |
| > Code Value                            | 0008,0100 | SH |  | N                      | Y                    |
| > Coding Scheme Designator              | 0008,0102 | SH |  | N                      | Y                    |
| > Code Meaning                          | 0008,0104 | LO |  | N                      | Y                    |
| Requested Procedure ID                  | 0040,1001 | SH | Returns Value. Type of Matching: S,U                                       | Y                      | Y                    |
| Reason for the Requested Procedure      | 0040,1002 | LO |  | N                      | Y                    |
| Requested Procedure Priority            | 0040,1003 | SH | Returns Empty  | N                      | Y                    |

| Attribute Name                        | Tag       | VR | Remark/ Comment                               | Matching Key Supported | Return Key Supported |
|---------------------------------------|-----------|----|---|------------------------|----------------------|
| Patient Transport Arrangements        | 0040,1004 | LO | Returns Empty                                 | N                      | Y                    |
| <b>Imaging Service Request Module</b> |           |    |   |                        |                      |
| Accession Number                      | 0008,0050 | SH |   | Y                      | Y                    |
| Referring Physician's Name            | 0008,0090 | PN | Returns the value.<br>Type of Matching : S,U. | Y                      | Y                    |
| Requesting Physician                  | 0032,1032 | PN | Returns Empty                                 | N                      | Y                    |

**Notes:**

Keys that are specified in the C-FIND-RQ but are not supported by the MWL AE and are type 2 or 3 are returned empty.

**Table 201: Status Response**

| Service Status | Error Code | Further Meaning           | Behavior  |
|----------------|------------|---------------------------|---|
| Success        | 0000       | Matching is complete      | A response is sent with this status code.                                   |
| Failure        | C000       | Unable to process         | A response is send with this status code. The reason is logged in the file. |
| Pending        | FF00       | Current match is supplied | Matches are continuing; Current match is supplied.                          |

Note : Cancel request is not supported by IntelliSpace Cardiovascular.

**Table 202: Communication Failure Behavior**

| Exception           | Behavior   |
|---------------------|--|
| Timeout             | The association is released and the reason is logged |
| Association Aborted | The association is released and the reason is logged |

## 4.2.11. MPPS AE

MPPS is implemented by using the functionality of the IntelliBridge Enterprise system.

- For information when using IBE ≤ B.13 details of this specific Application Entity are specified in this section.
- For information when using IBE ≥ B.14 details of this specific Application Entity are specified in the applicable IBE DICOM Conformance Statement

### 4.2.11.1. SOP Classes

This Application Entity provides Standard Conformance to the following SOP Classes.

**Table 203: SOP Classes for MPPS AE**

| SOP Class Name                              | SOP Class UID           | SCU | SCP |
|---|-------------------------|-----|-----|
| Verification SOP Class                      | 1.2.840.10008.1.1       | No  | Yes |
| Modality Performed Procedure Step SOP Class | 1.2.840.10008.3.1.2.3.3 | Yes | Yes |

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.

#### 4.2.11.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

##### 4.2.11.2.1. General

The DICOM standard application context is specified below.

**Table 204: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

##### 4.2.11.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

**Table 205: Number of associations as an Association Initiator for this AE**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 1     |

**Table 206: Number of associations as an Association Acceptor for this AE**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 1     |

##### 4.2.11.2.3. Asynchronous Nature

The implementation supports negotiation of multiple outstanding transactions, along with the maximum number of outstanding transactions supported.

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Document Template version : 1.0

**Table 207: Asynchronous nature as an Association Initiator for this AE**

| Description   | Value |
|---|-------|
| Maximum number of outstanding asynchronous transactions | 1     |

#### 4.2.11.2.4. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 208: DICOM Implementation Class and Version for MPPS AE**

| Property                    | Value                  |
|-----------------------------|------------------------|
| Implementation Class UID    | 1.3.46.670589.49.1.1.1 |
| Implementation Version Name | IBE_1_1_1              |

#### 4.2.11.2.5. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 209: Communication Failure Behavior**

| Exception                | Behavior  |
|--------------------------|---|
| Timeout                  | IntelliBridge considers an ARTIM Timeout of 30 seconds as a communication failure |
| e.g. Association aborted |   |
| e.g. Failed to connect   |   |

#### 4.2.11.3. Association Initiation Policy

The behavior of this Application Entity is summarized in the next Table.

**Table 210: Response Status Handler Behavior**

| Service Status | Error Code | Further Meaning           | Behavior   |
|----------------|------------|---------------------------|--|
| Success        | 0000       | e.g. Matching is complete | e.g. The SCP has successfully returned all matching information e.g.                 |
| Refused        | A700       | Out of Resources          | A response is sent with this status code. Reason is Logged and released association. |
| Failure        | C000       | Unable to process         | A response is send with this status code. The reason is logged in the file.          |

| Service Status | Error Code | Further Meaning                           | Behavior   |
|----------------|------------|---|--|
| Pending        | FF00       | Current match is supplied                 | Matches are continuing; Current match is supplied.                             |
| Cancel         | FE00       | Matching terminated due to Cancel Request | A response is sent with status code.reason is logged and released association. |

The Application Entity will respond to a received Association rejection as shown in the next table.

**Table 211: Association Rejection response**

| Result  | Source  | Reason/Diagnosis                           | Behavior  |
|---|---|--|---|
| 1 - rejected-permanent                                | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|   |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|   |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|   | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|   | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
|   | 2 - rejected-transient  | 1 - DICOM UL service-user                  | 1 - no-reason-given   |
| 2 - application-context-name-not-supported            |   |  | The user is informed. Details are logged in central log file. |
| 3 - calling-AE-title-not-recognized                   |   |  | The user is informed. Details are logged in central log file. |
| 7 - called-AE-title-not-recognized                    |   |  | The user is informed. Details are logged in central log file. |
| 2 - DICOM UL service-provider (ACSE related function) |   | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |

| Result | Source  | Reason/Diagnosis         | Behavior  |
|--------|---|--------------------------|---|
|        | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion | The user is informed. Details are logged in central log file. |
|        |   | 2 - local-limit-exceeded | The user is informed. Details are logged in central log file. |

The behavior of the AE on receiving an Association abort is summarized in the next table.

**Table 212: Association Abort Handling**

| Source  | Reason/Diagnosis                | Behavior   |
|---|---------------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU            | When received, terminates the connection and logs the event. |
|   | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|   | 4 - unrecognized-PDU-parameter  | When received, terminates the connection and logs the event. |
|   | 5 - unexpected-PDU-parameter    | When received, terminates the connection and logs the event. |
|   | 6 - invalid-PDU-parameter-value | When received, terminates the connection and logs the event. |

### 4.2.11.3.1. (Real-World) Activity – Modality Performed Procedure Step as SCU

#### 4.2.11.3.1.1. Description and Sequencing of Activities

MPPS SCU & SCP accepts the Modality Performed Procedure Step messages from remote SCUs and automatically forward them to remote SCPs as a SCU.

#### 4.2.11.3.1.2. SOP Specific Conformance for Modality Performed Procedure Step SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

#### 4.2.11.3.1.2.1. Dataset Specific Conformance for Modality Performed Procedure Step SOP Class N-CREATE-SCU

Details regarding the Dataset Specific response behavior will be reported in this section.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 213: Status Response**

| Service Status | Error Code | Further Meaning         | Behavior  |
|----------------|------------|-------------------------|---|
| Success        | 0000       | Success, Confirmation   | Message in log file                                 |
| Failed/Warning | xxxx       | All errors and warnings | The error/warning codes are received but not logged |

#### 4.2.11.3.1.2.2.

#### Dataset Specific Conformance for Modality Performed Procedure Step SOP

##### Class N-SET-SCU

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 214: Status Response**

| Service Status | Error Code | Further Meaning         | Behavior  |
|----------------|------------|-------------------------|---|
| Success        | 0000       | Success , Confirmation  | Message in Log file                                 |
| Failed/Warning | xxxx       | All errors and warnings | The error/warning codes are received but not logged |

Note : Implicit Little Endian VR transfer syntax is not supported by IntelliSpace Cardiovascular

#### 4.2.11.3.2. (Real-World) Activity – Verification as SCP

##### 4.2.11.3.2.1. Description and Sequencing of Activities

The MPPS AE receives application level communication using the C-ECHO command.



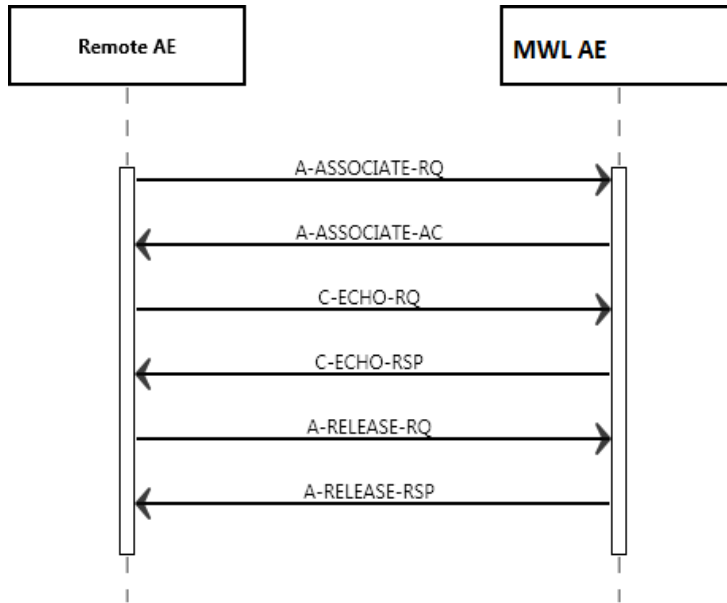


Figure 32: (Real World) Activity - Verification as SCP

#### 4.2.11.3.2.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 215: Proposed Presentation Contexts for (Real-World) Activity – Verification as SCP

| Presentation Context Table |                   |                           |                         |                            |                      |
|----------------------------|-------------------|---------------------------|-------------------------|----------------------------|----------------------|
| Abstract Syntax            |                   | Transfer Syntax           |                         | Role                       | Extended Negotiation |
| Name                       | UID               | Name List                 | UID List                |                            |                      |
| Verification SOP Class     | 1.2.840.10008.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2<br>.2 | SCP Role: 1<br>SCU Role: 1 | None                 |
|                            |                   | Explicit VR Little Endian | 1.2.840.10008.1.2<br>.1 |                            |                      |
|                            |                   | Implicit VR Little Endian | 1.2.840.10008.1.2       |                            |                      |

#### 4.2.11.3.2.3. SOP Specific Conformance for Verification SOP Class

The MPPS AE provides standard conformance to Verification SOP Class.

**Table 216: Status Response**

| Service Status | Error Code | Further Meaning                     | Behavior   |
|----------------|------------|-------------------------------------|--|
| Success        | 0000       | Matching is complete                | Association will be released. Message logged in IntelliBridge Enterprise |
| Failure        | A900       | Identifier does not match SOP Class | Reason will be logged  |

**Table 217: DICOM Command Communication Failure Behavior**

| Exception           | Description           |
|---------------------|-----------------------|
| REPLAY TIMEOUT      | Reason will be logged |
| ASSOCIATION ABORTED | Reason will be logged |
| ASSOCIATION TIMEOUT | Reason will be logged |

### 4.2.11.3.3. (Real-World) Activity – Modality Performed Procedure Step as SCP

#### 4.2.11.3.3.1. Description and Sequencing of Activities

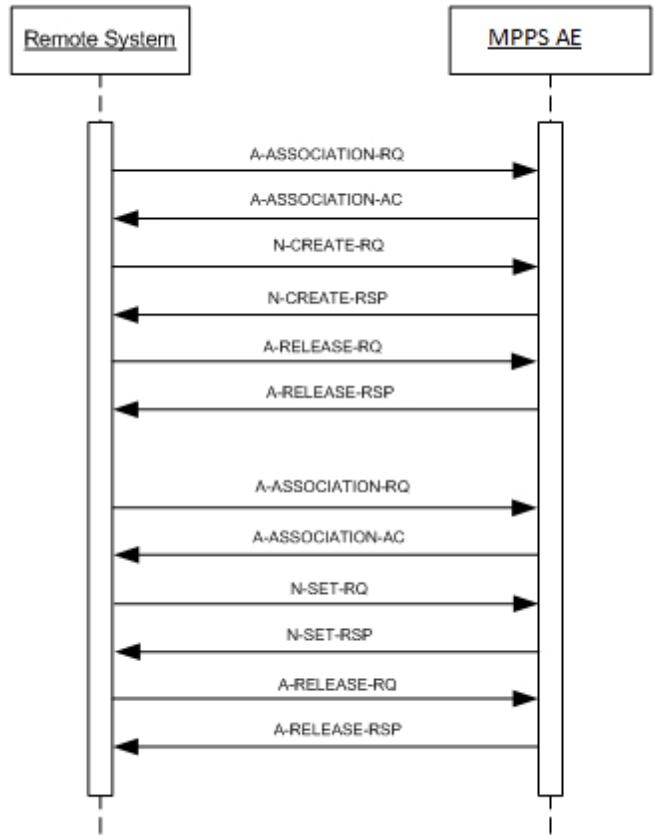


Figure 33: (Real-World) Activity – MPPS as SCP

#### 4.2.11.3.3.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 218: Acceptable Presentation Contexts for (Real-World) Activity – Modality Performed Procedure Step as SCP

| Presentation Context Table                  |                      |                           |                    |      |                      |
|---|----------------------|---------------------------|--------------------|------|----------------------|
| Abstract Syntax                             |                      | Transfer Syntax           |                    | Role | Extended Negotiation |
| Name  | UID                  | Name List                 | UID List           |      |                      |
| Modality Performed Procedure Step SOP Class | 1.2.840.10008.3.1.2. | Explicit VR Big Endian    | 1.2.840.10008.1.2. | SCP  | None                 |
|   | 3.3                  | Explicit VR Little Endian | 1.2.840.10008.1.2. |      |                      |
|   |                      |                           | 2                  |      |                      |
|   |                      |                           | 1                  |      |                      |

**Presentation Context Table**

| Abstract Syntax |     | Transfer Syntax           |                   | Role | Extended Negotiation |
|-----------------|-----|---------------------------|-------------------|------|----------------------|
| Name            | UID | Name List                 | UID List          |      |                      |
|                 |     | Implicit VR Little Endian | 1.2.840.10008.1.2 |      |                      |

### 4.2.11.3.3.3. SOP Specific Conformance for Modality Performed Procedure Step SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

#### 4.2.11.3.3.3.1. Dataset Specific Conformance for Modality Performed Procedure Step SOP Class N-CREATE-SCP

Details regarding the Dataset Specific response behavior will be reported in this section.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 219: Status Response**

| Service Status | Error Code | Further Meaning         | Behavior            |
|----------------|------------|-------------------------|---------------------|
| Success        | 0000       | Success ,Confirmation   | Message in log file |
| Failed         | 0121       | Missing attribute value | Any failure         |

Note :

- The IntelliSpace Cardiovascular supports all mandatory and optional attributes. It works as a MPPS Forwarder and forwards the received MPPS to another MPPS SCP.
- The IntelliSpace Cardiovascular re-opens a Completed or Discontinued instance of a Study upon receipt of a new N-CREATE request. This is a known limitation and will be fixed in a later release.

#### 4.2.11.3.3.3.2. Dataset Specific Conformance for Modality Performed Procedure Step SOP Class N-SET-SCP

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 220: Status Response**

| Service Status | Error Code | Further Meaning         | Behavior            |
|----------------|------------|-------------------------|---------------------|
| Success        | 0000       | Success ,Confirmation   | Message in log file |
| Failed         | 0121       | Missing attribute value | Any Failure         |

## 4.2.12. IAN AE

Details of this specific Application Entity is specified in this section.

### 4.2.12.1. SOP Classes

IAN AE, for its functioning, makes use of following DICOM functions:

- Instance Availability Notification as SCU, which uses N-CREATE as service element.

These DICOM functions will be described in the following subsections.

This Application Entity provides Standard Conformance to the following SOP Classes.

**Table 221: SOP Classes for IAN AE**

| SOP Class Name                         | SOP Class UID          | SCU | SCP |
|--|------------------------|-----|-----|
| Instance Availability Notification SOP | 1.2.840.10008.5.1.4.33 | Yes | No  |
| Verification SOP Class                 | 1.2.840.10008.1.1      | Yes | No  |

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.

### 4.2.12.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

#### 4.2.12.2.1. General

The DICOM standard application context is specified below.

**Table 222: DICOM Application Context**

| Description              | Value                 |
|--------------------------|-----------------------|
| Application Context Name | 1.2.840.10008.3.1.1.1 |

#### 4.2.12.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

For IntelliSpace Cardiovascular the maximum number of associations limited by the availability of the system resources. The license number of the external DICOM nodes is one of these limits.

**Table 223: Number of associations as an Association Initiator for this AE**

| Description                                 | Value |
|---|-------|
| Maximum number of simultaneous associations | 5     |

#### 4.2.12.2.3. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

**Table 224: DICOM Implementation Class and Version for Instance Availability Notification AE**

| Property                    | Value                |
|-----------------------------|----------------------|
| Implementation Class UID    | 1.3.46.670589.58.8.0 |
| Implementation Version Name | ISCV 8.0             |

#### 4.2.12.2.4. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

**Table 225: Communication Failure Behavior**

| Exception     | Behavior  |
|---------------|---|
| ARTIM Timeout | The association is closed and the reason is logged. |

#### 4.2.12.3. Association Initiation Policy

The Application Entity will respond on a received reject Association attempt as shown in next table.

**Table 226: Association Rejection response**

| Result  | Source  | Reason/Diagnosis                           | Behavior  |
|---|---|--|---|
| 1 - rejected-permanent  | 1 - DICOM UL service-user                                     | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - application-context-name-not-supported | The user is informed. Details are logged in central log file. |
|   |   | 3 - calling-AE-title-not-recognized        | The user is informed. Details are logged in central log file. |
|   |   | 7 - called-AE-title-not-recognized         | The user is informed. Details are logged in central log file. |
|   | 2 - DICOM UL service-provider (ACSE related function)         | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
|   | 3 - DICOM UL service-provider (Presentation related function) | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |
|   | 2 - rejected-transient  | 1 - DICOM UL service-user                  | 1 - no-reason-given   |
| 2 - application-context-name-not-supported                    |   |  | The user is informed. Details are logged in central log file. |
| 3 - calling-AE-title-not-recognized                           |   |  | The user is informed. Details are logged in central log file. |
| 7 - called-AE-title-not-recognized                            |   |  | The user is informed. Details are logged in central log file. |
| 2 - DICOM UL service-provider (ACSE related function)         |   | 1 - no-reason-given                        | The user is informed. Details are logged in central log file. |
|   |   | 2 - protocol-version-not-supported         | The user is informed. Details are logged in central log file. |
| 3 - DICOM UL service-provider (Presentation related function) |   | 1 - temporary-congestion                   | The user is informed. Details are logged in central log file. |
|   |   | 2 - local-limit-exceeded                   | The user is informed. Details are logged in central log file. |

The behavior of the AE on receiving an association abort is summarized in the next table.

**Table 227: Association Abort Handling**

| Source  | Reason/Diagnosis                | Behavior   |
|---|---------------------------------|--|
| 0 - DICOM UL service-user (initiated abort)     | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
| 2 - DICOM UL service-provider (initiated abort) | 0 - reason-not-specified        | When received, terminates the connection and logs the event. |
|   | 1 - unrecognized-PDU            | When received, terminates the connection and logs the event. |
|   | 2 - unexpected-PDU              | When received, terminates the connection and logs the event. |
|   | 4 - unrecognized-PDU-parameter  | When received, terminates the connection and logs the event. |
|   | 5 - unexpected-PDU-parameter    | When received, terminates the connection and logs the event. |
|   | 6 - invalid-PDU-parameter-value | When received, terminates the connection and logs the event. |

### 4.2.12.3.1. (Real-World) Activity – Verification as SCU

#### 4.2.12.3.1.1. Description and Sequencing of Activities

As defined the Network AE acts as a Verification SCP for any Remote SCU as Verification SCU.



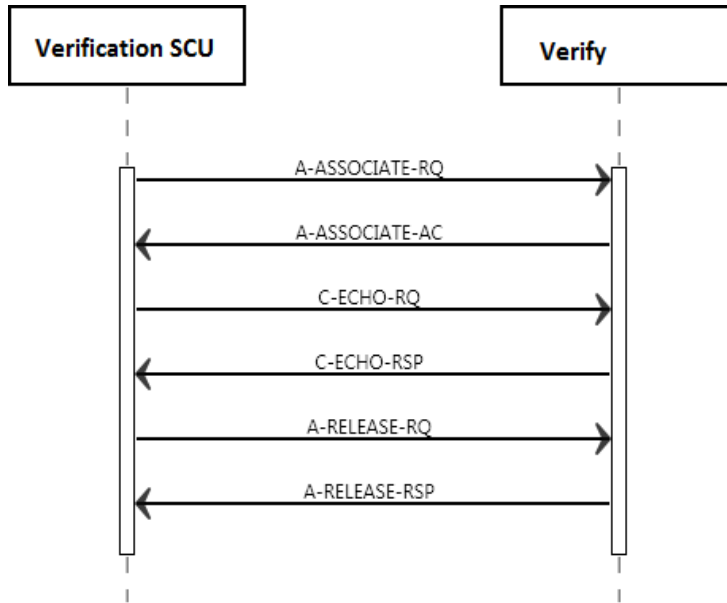


Figure 34: Sequence of Verification SCU.

#### 4.2.12.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 228: Proposed Presentation Contexts for (Real-World) Activity – Verification as SCU

| Presentation Context Table |                   |                           |                     |      |                      |
|----------------------------|-------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax            |                   | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                       | UID               | Name List                 | UID List            |      |                      |
| Verification SOP Class     | 1.2.840.10008.1.1 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|                            |                   | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                            |                   | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

#### 4.2.12.3.1.3. SOP Specific Conformance for Verification SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

### 4.2.12.3.1.3.1. Dataset Specific Conformance for Verification C-ECHO SCU

Detail regarding the Dataset Specific response behavior will be reported in this section.

This part of the section includes the dataset specific behavior, i.e. error codes, error and exception handling, time-outs, etc.

**Table 229: Status Response**

| Service Status | Error Code | Further Meaning | Behavior  |
|----------------|------------|-----------------|-----------|
| Success        | 0000       | Complete        | Continue. |

### 4.2.12.3.2. (Real-World) Activity – Instance Availability Notification as SCU

#### 4.2.12.3.2.1. Description and Sequencing of Activities

**Normal flow of events:**

- If so configured, IntelliSpace Cardiovascular will create and send an Instance Availability Notification SOP Class Instance when it has imported a C-STORE Instance(s) with status SUCCESS.
- Every Association for a C-STORE import will create an IAN Instance per Study Instance UID.
- Additional Series for the specific Study Instance UID will result in a new IAN object sent with all Series included in the Referenced Series Sequence (0008, 1115).

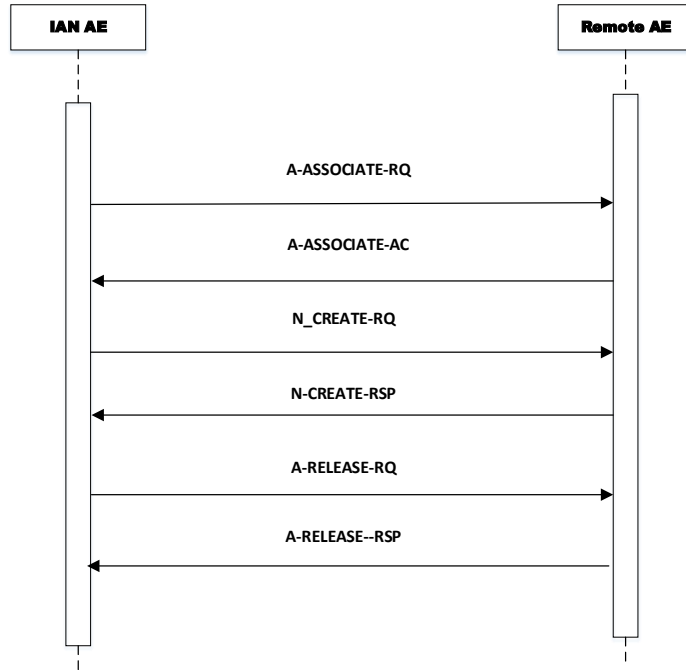


Figure 35: (Real World) Activity – Instance Availability Notification as SCU

#### 4.2.12.3.2.2. Proposed Presentation Contexts

The proposed presentation contexts are defined in the next table.

Table 230: Proposed Presentation Contexts for (Real-World) Activity – Instance Availability Notification

| Presentation Context Table         |                        |                           |                     |      |                      |
|------------------------------------|------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax                    |                        | Transfer Syntax           |                     | Role | Extended Negotiation |
| Name                               | UID                    | Name List                 | UID List            |      |                      |
| Instance Availability Notification | 1.2.840.10008.5.1.4.33 | Explicit VR Big Endian    | 1.2.840.10008.1.2.2 | SCU  | None                 |
|                                    |                        | Explicit VR Little Endian | 1.2.840.10008.1.2.1 |      |                      |
|                                    |                        | Implicit VR Little Endian | 1.2.840.10008.1.2   |      |                      |

### 4.2.12.3.2.3. SOP Specific Conformance for Instance Availability Notification SOP Class

IntelliSpace Cardiovascular provides standard conformance to the DICOM Instance Availability Notification Service Class as a SCU.

IntelliSpace Cardiovascular will create and send an Instance Availability Notification SOP Class Instance when it has imported a C-STORE Instance(s) with status SUCCESS. Every Association for a C-STORE import will create an IAN Instance. Additional Series for the specific Study Instance UID will result in a new IAN object sent with all Series included in the Referenced Series Sequence (0008,1115).

IAN SOP Class Instances created will always contain ONLINE as Instance Availability (0008,0056), Which means that every instance is always available on IntelliSpace Cardiovascular after sent of IAN to the Remote System.

#### 4.2.12.3.2.3.1. Dataset Specific Conformance for Instance Availability Notification N-CREATE-RQ

Detail regarding the Dataset Specific response behavior will be reported in this section.

**Table 231: Instance Availability Notification Module**

| Attribute Name                               | Tag       | VR | Value  | Presence of Value | Source | Comment                        |
|--|-----------|----|--------|-------------------|--------|--------------------------------|
| Referenced Performed Procedure Step Sequence | 0008,1111 | SQ |        | ALWAYS            |        | Sequence value is always empty |
| Study Instance UID                           | 0020,000D | UI |        | ALWAYS            | COPY   | Copied from imported object    |
| Referenced Series Sequence                   | 0008,1115 | SQ |        | ALWAYS            | COPY   | Copied from imported object    |
| >Series Instance UID                         | 0020,000E | UI |        | ALWAYS            | COPY   | Copied from imported object    |
| >Referenced SOP Sequence                     | 0008,1199 | SQ |        | ALWAYS            | COPY   | Copied from imported object    |
| >>Instance Availability                      | 0008,0056 | CS | ONLINE | ALWAYS            | FIXED  |                                |
| >>Retrieve AE Title                          | 0008,0054 | AE |        | ALWAYS            | COPY   | Copied from imported object    |
| >> Referenced SOP Class UID                  | 0008,1150 | UI |        | ALWAYS            | COPY   | Copied from imported object    |
| >> Referenced SOP Instance UID               | 0008,1155 | UI |        | ALWAYS            | COPY   | Copied from imported object    |

**Table 232: Status Response**

| Service Status     | Error Code | Further Meaning                            | Behavior  |
|--------------------|------------|--|---|
| Success            | 0000       | Operation complete                         | The request for Instance Availability Notification is considered successfully stored.         |
| Other than Success | xxxx       | Problems with sending the N-CREATE Request | The request for Instance Availability Notification is marked as failed. The reason is logged. |

Possible communication failures during the N-CREATE request are listed here:

**Table 233: DICOM Command Communication Failure Behavior**

| Exception           | Behavior  |
|---------------------|---|
| Timeout             | The association is closed and the reason is logged. |
| Association aborted | The association is closed and the reason is logged. |

#### 4.2.12.4. Association Acceptance Policy

Not applicable, the IAN AE doesn't accept any associations.

#### 4.2.13. Web Services AE

IntelliSpace Cardiovascular 8.0 implements the following DICOMweb Services

- Retrieve Transaction (WADO-RS)
- Search Transaction (QIDO-RS)
- Store transaction (STOW-RS)

##### 4.2.13.1. Search Transaction

IntelliSpace Cardiovascular 8.0 is an Origin Server for the QIDO-RS service. It receives QIDO-RS requests at STUDY and SERIES and INSTANCE level. On receiving the request, IntelliSpace Cardiovascular 8.0 responds with a set of matching responses.

IntelliSpace Cardiovascular 8.0 does not support non-hierarchical query model.

**Table 234: QIDO-RS Specification**

| Options                               | Restrictions   |
|---------------------------------------|--|
| Request URL                           | {SERVICE}/qidors/<br>{SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application. |
| Media Types Supported (Accept header) | Restricted to "application/dicom+json"   |

Note: IntelliSpace Cardiovascular 8.0 does not support media type 'application/dicom+xml'.

### 4.2.13.1.1. QIDO-RS Query Matching Keys

The following attributes are supported for matching keys by IntelliSpace Cardiovascular 8.0

**Table 235: Matching Keys supported for QIDO-RS**

| Attribute              | Tag         | Type of Matching |
|------------------------|-------------|------------------|
| <b>STUDY Level</b>     |             |                  |
| StudyDate              | 0008,0020   | R, S             |
| StudyTime              | 0008,0030   | R, S             |
| AccessionNumber        | 0008,0050   | S, *             |
| ModalitiesInStudy      | 0008,0061   | S                |
| ReferringPhysicianName | 0008,0090   | S, *             |
| PatientName            | 0010,0010   | S, *             |
| PatientID              | 0010,0020   | S, *             |
| StudyInstanceUID       | 0020,000D   | S                |
| StudyID                | 0020,0010   | S, *             |
| <b>SERIES Level</b>    |             |                  |
| Modality               | 00080060    | S                |
| SeriesInstanceUID      | 0020000E    | S                |
| SeriesNumber           | 00200011    | S, *             |
| <b>Instance Level</b>  |             |                  |
| SOP Class UID          | (0008,0016) | S                |
| SOP Instance UID       | (0008,0018) | S                |
| Instance Number        | (0020,0013) | S                |

'R' - Range Matching

'\*' – Wildcard Matching

'S' – Single Value Matching

### 4.2.13.1.2. QIDO-RS Query Return Keys

The following attributes are returned by IntelliSpace Cardiovascular 8.0

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Document Template version : 1.0

**Table 236: Return Keys supported for QIDO-RS**

| Attribute                          | Tag         |
|------------------------------------|-------------|
| <b>STUDY Level</b>                 |             |
| Study Date                         | (0008,0020) |
| Study Time                         | (0008,0030) |
| Accession Number                   | (0008,0050) |
| Instance Availability              | (0008,0056) |
| Modalities in Study                | (0008,0061) |
| Referring Physician's Name         | (0008,0090) |
| Retrieve URL                       | (0008,1190) |
| Patient's Name                     | (0010,0010) |
| Patient ID                         | (0010,0020) |
| Patient's Birth Date               | (0010,0030) |
| Patient's Sex                      | (0010,0040) |
| Study Instance UID                 | (0020,000D) |
| Study ID                           | (0020,0010) |
| Number of Study Related Series     | (0020,1206) |
| Number of Study Related Instances  | (0020,1208) |
| <b>SERIES Level</b>                |             |
| Modality                           | (0008,0060) |
| Series Description                 | (0008,103E) |
| Retrieve URL                       | (0008,1190) |
| Series Instance UID                | (0020,000E) |
| Series Number                      | (0020,0011) |
| Number of Series Related Instances | (0020,1209) |
| <b>Instance Level</b>              |             |
| SOP Class UID                      | (0008,0016) |
| SOP Instance UID                   | (0008,0018) |
| Retrieve URL                       | (0008,1190) |
| Instance Number                    | (0020,0013) |

### 4.2.13.1.3. QIDO Response Status Codes

**Table 237: Status Codes**

| Service Status | HTTP Status Code | QIDO-RS Description   |
|----------------|------------------|---|
| Success        | 200              | The request was processed and the response is sent.   |
| Failure        | 204              | There are no results matching the Query   |
|                | 400              | The request is not recognized status is sent in the following conditions:<br>If the request is bad.<br>If the query contains unsupported tags.<br>If query contains invalid tag Values. |
|                | 405              | the web server is configured in a way that does not allow you to perform a search query to server   |
|                | 406              | The server cannot produce a response matching the list of acceptable values defined in the request's content  |
|                | 500              | Internal Server Error   |

### 4.2.13.2. Retrieve Transaction as Origin Server

- DICOM Requester (Retrieve Study/Series/Instance DICOM Objects)
- Frame Pixel Data Requester (Retrieve Instance Frame)
- Metadata Requester (Retrieve Metadata of the requested Instance)
- Bulkdata Requester (Retrieve Bulkdata)

These requests are HTTP/1.1 GET requests.

#### 4.2.13.2.1. WADO-RS Retrieve Study

This allows a client to obtain all the DICOM instances associated with the given Study Unique Identifier (UID). Each DICOM instance of the study is sent as a separate part in a multi-part MIME response.

**Table 238: WADO-RS Retrieve Study**

| Options                            | Restrictions   |
|------------------------------------|--|
| Request URL                        | {SERVICE}/wadors/studies/{StudyInstanceUID}<br><br>Where,<br>{SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application.<br>{StudyInstanceUID} is the study instance UID for a single study. |
| Data Types Supported (Accept Type) | Restricted to multipart/related;type=application/dicom;[transfer-syntax={TransferSyntaxUID}]   |



| Options  | Restrictions  |
|--|---|
| Transfer Syntaxes Supported (transfer-syntax Accept parameter) | DICOM data will be returned in the transfer syntax ISCV 8.0 has stored the DICOM data   |
| DICOM Response   | Content-Type: multipart/related; type=application/dicom; boundary={MessageBoundary}<br><br>The entire multipart response contains every instance for the specified Study.<br><br>Each item in the multipart response represents a DICOM SOP Instance with the following http headers:<br>•Content-Type: application/dicom |
| SOP Class Restrictions   | Restricted to SOP classes supported by IntelliSpace Cardiovascular 8.0  |
| Size restrictions  | For Study level retrieval the DICOM data is streamed in continuous chunks   |

#### 4.2.13.2.2. WADO-RS Retrieve Series

This allows a client to obtain all the DICOM instances associated with the given Series Unique Identifier (UID) for a Study. Each DICOM instance of the series is sent as a separate part in a multi-part MIME response.

**Table 239: WADO-RS Retrieve Series**

| Options  | Restrictions   |
|--|--|
| Request URL  | {SERVICE}/wadors/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}<br>Where,<br>{SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application.<br>{StudyInstanceUID} is the study instance UID for a single study.<br>{SeriesInstanceUID} is the series instance UID for a single series. |
| Data Types Supported (Accept Type)                             | Restricted to multipart/related; type=application/dicom; [transfer-syntax={TransferSyntaxUID}]   |
| Transfer Syntaxes Supported (transfer-syntax Accept parameter) | DICOM data will be returned in the transfer syntax ISCV 8.0 has stored the DICOM data  |
| DICOM Response   | Content-Type: multipart/related; type=application/dicom; boundary={MessageBoundary}<br><br>The entire multipart response contains every instance for the specified Series.<br><br>Each item in the multipart response represents a DICOM SOP Instance with the following http headers:<br>•Content-Type: application/dicom                           |

| Options                | Restrictions   |
|------------------------|--|
| SOP Class Restrictions | Restricted to SOP classes supported by IntelliSpace Cardiovascular 8.0     |
| Size restrictions      | For Series level retrieval the DICOM data is streamed in continuous chunks |

### 4.2.13.2.3. WADO-RS Retrieve Instance

This allows a client to obtain a specified SOP Instance associated with a study and series. The SOP Instance is sent as a separate part in a multi-part MIME message with each SOP Instance as a DICOM P10 byte stream (application/dicom) encoded in a single part.

**Table 240: WADO-RS Retrieve Instance**

| Options  | Restrictions   |
|--|--|
| Request URL  | {SERVICE}/wadors/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/instances/{SOPInstanceUID}<br><br>{SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application. |
| Data Types Supported (Accept Type)                             | Restricted to multipart/related; type=application/dicom; [transfer-syntax={TransferSyntaxUID}]   |
| Transfer Syntaxes Supported (transfer-syntax Accept parameter) | DICOM data will be returned in the transfer syntax ISCV 8.0 has stored the DICOM data  |
| DICOM Response   | Content-Type: multipart/related; type=application/dicom; boundary={MessageBoundary}  |
| SOP Class Restrictions   | Restricted to SOP classes supported by IntelliSpace Cardiovascular 8.0   |
| Size restrictions  | Not applicable   |

### 4.2.13.2.4. WADO-RS Retrieve Frames

This allows a client to retrieve the DICOM frames for a given set of frame numbers. The response is pixel data and is encapsulated in a multipart MIME response.

**Table 241: WADO-RS Retrieve Frames**

| Options     | Restrictions  |
|-------------|---|
| Request URL | {SERVICE}/wadors/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/instances/{SOPInstanceUID}/frames/{FrameList}<br><br>{FrameList} is a comma or %2C separated list frame numbers, in ascending order, contained within an instance. |

| Options   | Restrictions  |
|---|---|
| Data Types Supported (Accept Type)                              | Restricted to multipart/related;type=application/octet-stream ; [transfer-syntax={TransferSyntaxUID}], multipart/related;type=image/jpeg ; [transfer-syntax={TransferSyntaxUID}]  |
| Transfer Syntaxes Supported (transfer-syntax Accept parameter ) | Multipart/related; type= {MediaType} which Specifies that the response can be pixel data encoded using a {MediaType/transfersyntaxUID}<br>All transfer syntax UID's supported by ISCV 8.0 are supported.  |
| DICOM Response  | Content-Type:<br>multipart/related; type=application/octet-stream; boundary={MessageBoundary}<br>multipart/related; type=image/jpeg; boundary={MessageBoundary}<br><br>The entire multipart response contains all requested Frames for the specified Instance.<br><br>The frames will be returned in the order specified by the Frame List. |
| SOP Class Restrictions  | Restricted to SOP classes supported by IntelliSpace Cardiovascular 8.0  |
| Size restrictions   | Not applicable  |

#### 4.2.13.2.5. WADO-RS Retrieve Bulk Data

This allows a client to retrieve the bulk (pixel) data for a DICOM instance. The response is bulk data and is encapsulated in a multipart MIME response.

**Table 242: WADO-RS Retrieve Bulk Data**

| Options                            | Restrictions   |
|------------------------------------|--|
| Request URL                        | {SERVICE}/wadors/bulk/{bulkstring}   |
| Data Types Supported (Accept Type) | Restricted to Multipart/related; type=application/octet-stream [transfer-syntax={TransferSyntaxUID}] |

| Options  | Restrictions  |
|--|---|
| Transfer Syntaxes Supported (transfer-syntax Accept parameter) | Bulk data will be returned in the transfer syntax IntelliSpace Cardiovascular 8.0 has stored the bulk data  |
| DICOM Response   | Content-Type:<br>multipart/related; type=application/octet-stream; boundary={MessageBoundary}<br><br>The entire multipart response contains the complete bulk data. |
| SOP Class Restrictions   | Not applicable  |
| Size restrictions  | Not applicable  |

Note: IntelliSpace Cardiovascular 8.0 sends bulk data only in 'application/octet-stream' with the information about the transfer syntaxes.

#### 4.2.13.2.6. WADO-RS Retrieve Metadata

This allows a requestor to retrieve DICOM instances presented as instance metadata with bulk data removed. The response is metadata for DICOM attributes in XML or JSON response formats (In key value pair). The data in bulk data fields will be replaced with a URL which can be used to get the actual bulk data separately.

The XML response will be a multi-part MIME message with each SOP Instance returned as a separate XML document and encoded as a single part.

**Table 243: WADO-RS Retrieve Metadata**

| Options                            | Restrictions   |
|------------------------------------|--|
| Request URL                        | {SERVICE}/wadors/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/instances/{SOPInstanceUID}/metadata<br>{SERVICE}/wadors/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/metadata<br>{SERVICE}/wadors/studies/{StudyInstanceUID}/metadata<br><br>{SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application. |
| Data Types Supported (Accept Type) | application/dicom+json   |

| Options  | Restrictions  |
|--|---|
| Transfer Syntaxes Supported (transfer-syntax Accept parameter) | Not applicable for Metadata   |
| SOP Class Restrictions   | Restricted to SOP classes supported by IntelliSpace Cardiovascular 8.0  |
| Size restrictions  | Not Applicable  |
| Other  | In a scenario where the DICOM instance has multiple OB/OW private elements /overlays they are currently returned as part of metadata calls. |

Note: Data Type format 'application/dicom+xml' is not supported by IntelliSpace Cardiovascular 8.0

## 4.2.13.2.7. WADO Response Status Codes

**Table 244: Status Codes**

| Service Status | HTTP Status Code | WADO–RS Description                                 |
|----------------|------------------|---|
| Success        | 200              | The request was processed and the response is sent. |
| Failure        | 400              | The request is incorrect or not recognized          |
|                | 401              | Unauthorized  |
|                | 404              | There are no results matching the request           |
|                | 406              | Not acceptable                                      |

Note :

1. IntelliSpace Cardiovascular 8.0 does not support Rendered Media Types
2. IntelliSpace Cardiovascular 8.0 returns the data with same transfer syntax as it was originally stored
3. IntelliSpace Cardiovascular 8.0 does not support capability search option for any of the web services.
4. IntelliSpace Cardiovascular 8.0 does not support the **UC** and **UR** VR types.

## 4.2.13.3. Store Transaction (STOW-RS) as Origin Server

### 4.2.13.3.1. Supported Store Transactions

The following Study transaction resources are supported:

- Study resource - /studies/{study}

**Table 245: General Parameters**

| Options                             | Restrictions           |
|-------------------------------------|------------------------|
| Media type supported (Content Type) | application/dicom      |
| Media type supported (Accept Type)  | application/dicom+json |

Note:

- IntelliSpace Cardiovascular 8.0 does not support accept type ‘application/dicom+xml’
- IntelliSpace Cardiovascular 8.0 does not support any of the bulkdata media types like jp2, mp4, gif, jpx, jpeg, png and mpeg2

### 4.2.13.3.2. Supported DICOM Objects for Store Transaction

**Table 246: Supported SOP class**

| SOP Class Name                          | SOP Class UID        |
|---|----------------------|
| Storage Commitment Push Model SOP Class | 1.2.840.10008.1.20.1 |

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| SOP Class Name   | SOP Class UID                 |
|--|-------------------------------|
| Hardcopy Grayscale Image Storage (Retired)                       | 1.2.840.10008.5.1.1.1.29      |
| Hardcopy Color Image Storage (Retired)                           | 1.2.840.10008.5.1.1.1.30      |
| Computed Radiography Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.1     |
| Digital X-Ray Image Storage - For Pres. SOP                      | 1.2.840.10008.5.1.4.1.1.1.1   |
| Digital X-Ray Image Storage - For Proc. SOP                      | 1.2.840.10008.5.1.4.1.1.1.1.1 |
| Digital Mammography X-Ray Image Storage - Pres. SOP              | 1.2.840.10008.5.1.4.1.1.1.2   |
| Digital Mammography X-Ray Image Storage - Proc. SOP              | 1.2.840.10008.5.1.4.1.1.1.2.1 |
| Digital Intra-oral X-Ray Image Storage - Pres. SOP               | 1.2.840.10008.5.1.4.1.1.1.3   |
| Digital Intra-oral X-Ray Image Storage - Proc. SOP               | 1.2.840.10008.5.1.4.1.1.1.3.1 |
| CT Image Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.2     |
| Ultrasound Multi-frame Image Storage (Retired)                   | 1.2.840.10008.5.1.4.1.1.3     |
| Ultrasound Multi-frame Image Storage SOP Class                   | 1.2.840.10008.5.1.4.1.1.3.1   |
| MR Image Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.4     |
| Ultrasound Image Storage (Retired)                               | 1.2.840.10008.5.1.4.1.1.6     |
| Ultrasound Image Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.6.1   |
| Secondary Capture Image Storage SOP Class                        | 1.2.840.10008.5.1.4.1.1.7     |
| Multi-frame Single Bit Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.1   |
| Multi-frame Grayscale Byte SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.2   |
| Multi-frame Grayscale Word SC Image Storage SOP Class            | 1.2.840.10008.5.1.4.1.1.7.3   |
| Multi-frame True Color Secondary Capture Image Storage           | 1.2.840.10008.5.1.4.1.1.7.4   |
| Standalone Overlay Storage SOP Class (Retired)                   | 1.2.840.10008.5.1.4.1.1.8     |
| Standalone Curve Storage SOP Class (Retired)                     | 1.2.840.10008.5.1.4.1.1.9     |
| General ECG Waveform Storage SOP Class                           | 1.2.840.10008.5.1.4.1.1.9.1.2 |
| Standard Hemodynamic Waveform Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.9.2.1 |
| Standalone Modality LUT Storage (Retired)                        | 1.2.840.10008.5.1.4.1.1.10    |
| Standalone VOI LUT Storage SOP Class (Retired)                   | 1.2.840.10008.5.1.4.1.1.11    |
| Grayscale Softcopy Presentation State Storage SOP Class          | 1.2.840.10008.5.1.4.1.1.11.1  |
| X-Ray Angiographic Image Storage SOP Class                       | 1.2.840.10008.5.1.4.1.1.12.1  |
| X-Ray Radiofluoroscopic Image Storage SOP Class                  | 1.2.840.10008.5.1.4.1.1.12.2  |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired)    | 1.2.840.10008.5.1.4.1.1.12.3  |
| Nuclear Medicine Image Storage SOP Class                         | 1.2.840.10008.5.1.4.1.1.20    |
| Raw Data Storage SOP Class                                       | 1.2.840.10008.5.1.4.1.1.66    |
| Encapsulated PDF Storage   | 1.2.840.10008.5.1.4.1.1.104.1 |
| Positron Emission Tomography Image Storage SOP Class             | 1.2.840.10008.5.1.4.1.1.128   |

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| SOP Class Name   | SOP Class UID                 |
|--|-------------------------------|
| Standalone PET Curve Storage SOP Class (Retired)               | 1.2.840.10008.5.1.4.1.1.129   |
| RT Image Storage SOP Class                                     | 1.2.840.10008.5.1.4.1.1.481.1 |
| RT Dose Storage SOP Class                                      | 1.2.840.10008.5.1.4.1.1.481.2 |
| RT Structure Set Storage SOP Class                             | 1.2.840.10008.5.1.4.1.1.481.3 |
| RT Plan Storage SOP Class                                      | 1.2.840.10008.5.1.4.1.1.481.5 |
| Detail SR Storage - Trial (Retired)                            | 1.2.840.10008.5.1.4.1.1.88.3  |
| Basic Text SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.11 |
| Enhanced SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.22 |
| Comprehensive SR SOP Class                                     | 1.2.840.10008.5.1.4.1.1.88.33 |
| Procedure Log Storage SOP Class                                | 1.2.840.10008.5.1.4.1.1.88.40 |
| Key Object Selection Document Storage SOP Class                | 1.2.840.10008.5.1.4.1.1.88.59 |
| X-Ray Radiation Dose SR SOP Class                              | 1.2.840.10008.5.1.4.1.1.88.67 |
| Study Root QR Information Model - MOVE SOP Class               | 1.2.840.10008.5.1.4.1.2.2.2   |
| Philips Private X-Ray Image Storage                            | 1.3.46.670589.2.3.1.1         |
| Philips Private Reconstructed X-ray Storage                    | 1.3.46.670589.2.4.1.1         |
| Philips Private iE33 3D NEO Presentation State Subpage Storage | 1.3.46.670589.2.5.1.1         |
| Philips Private Xcelera Info Object Storage                    | 1.3.46.670589.2.6.1.1         |
| Philips Private ViewForum 3D Volume New Storage                | 1.3.46.670589.5.0.1.1         |
| Philips Private ViewForum MR Synthetic Image Storage           | 1.3.46.670589.5.0.10          |
| Philips Private ViewForum MR Cardio Analysis New Storage       | 1.3.46.670589.5.0.11.1        |
| Philips Private ViewForum CX Synthetic Image Storage           | 1.3.46.670589.5.0.12          |
| Philips Private ViewForum Perfusion Storage                    | 1.3.46.670589.5.0.13          |
| Philips Private ViewForum Perfusion Analysis Storage           | 1.3.46.670589.5.0.14          |
| Philips Private ViewForum 3D Volume Object New Storage         | 1.3.46.670589.5.0.2.1         |
| Philips Private ViewForum Surface New Storage                  | 1.3.46.670589.5.0.3.1         |
| Philips Private ViewForum MR Cardio New Storage                | 1.3.46.670589.5.0.8.1         |
| Philips Private ViewForum CT Synthetic Image Storage           | 1.3.46.670589.5.0.9           |

**Table 247: Supported Transfer Syntaxes**

| Transfer Syntax Name                              | Transfer Syntax UID    |
|---|------------------------|
| JPEG 2000 Image Compression (Lossless Only)       | 1.2.840.10008.1.2.4.90 |
| JPEG Lossless, Non-Hierarchical, FOP (Process 14) | 1.2.840.10008.1.2.4.70 |
| JPEG Baseline (Process 1)                         | 1.2.840.10008.1.2.4.50 |
| JPEG Lossless Non-hierarchical /Proc 14           | 1.2.840.10008.1.2.4.57 |
| RLE Lossless                                      | 1.2.840.10008.1.2.5    |

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**Table 248: Transfer Syntaxes supported for conversion**

| Transfer Syntax Name             | Transfer Syntax UID |
|----------------------------------|---------------------|
| Implicit VR Little Endian        | 1.2.840.10008.1.2   |
| Explicit VR Little Endian        | 1.2.840.10008.1.2.1 |
| Explicit VR Big Endian (Retired) | 1.2.840.10008.1.2.2 |

### 4.2.13.3.3. Status Code Behavior

**Table 249: Status Code Behaviour**

| Service Status | HTTP Status Code             | Condition   |
|----------------|------------------------------|---|
| Success        | 200_Success                  | Requested operation was processed without error.  |
|                | 202_Accepted                 | The request is accepted but on failure on warning on some Instances<br>Additional information is present in the response body |
| Failure        | 400                          | The request is incorrect or not recognized  |
|                | 401                          | Unauthorized  |
|                | 404                          | Service not found   |
|                | 406                          | Not acceptable  |
|                | 409 (Conflict)               | Study Instance UID mismatch   |
|                | 415 (Unsupported Media type) | The origin server does not support the media type specified in the Content-Type header field of the request                   |
|                | 500_Internal Server Error    | The server cannot process the request because of an internal error.   |

## 4.3. Network Interfaces

### 4.3.1. Physical Network Interfaces

The System provides only DICOM V3.0 TCP/IP Network Communication Support as defined in PS 3.8 of the standard. TCP/IP is the only protocol stack supported.

Supported physical medium include:

IEEE 802.3-1995, 10BASE-T

IEEE 802.3-1995, 100BASE-TX (Fast Ethernet)

IEEE 802.3, 1000BASE-X (Fiber Optic Gigabit Ethernet).

The TCP/IP Stack as supported by the underlying Operating System.

The API is the WinSock 2 interface as supported by the underlying Operating System.

## 4.3.2. Additional Protocols

IntelliSpace Cardiovascular operates according to DICOM protocols, in the application layer of standardized communications networks. From this perspective the system supports a number of protocol stacks and physical network media. The system supports DICOM protocols on top of the TCP/IP version 4.

A Point-to-Point Protocol (PPP) Connection over dial-up line in the same network is possible.

## 4.4. Configuration

Any implementation's DICOM conformance may be dependent upon configuration, which takes place at the time of installation. Issues concerning configuration are addressed in this section.

### 4.4.1. AE Title/Presentation Address Mapping

An important installation issue is the translation from AE title to presentation address. How this is to be performed is described here.

In IntelliSpace Cardiovascular the local Network and Media AE titles as well as the IP Address and the TCP listen port associated with these AE are configurable. The different AE's in IntelliSpace Cardiovascular can be configured to use the same AE title.

IntelliSpace Cardiovascular only accepts associations of AE Titles that are configured in IntelliSpace Cardiovascular.

Due to variety of network configurations that exist worldwide, no performance guaranties can be given with respect to the time it takes to complete the execution of a job.

#### 4.4.1.1. Local AE Titles

The local AE title mapping and configuration are specified as:

**Table 250: AE Title configuration table**

| Application Entity       | Default AE Title | Default TCP/IP Port |
|--------------------------|------------------|---------------------|
| Image Import AE          | INTURISPRO_SCP   | 104                 |
| Send AE                  | SEND_SCU         | NA                  |
| Auto Export AE           | INTURISPRO_SCU   | 104                 |
| Storage Commitment AE    | STCO_SCP         | 4000                |
| Query/Retrieve as SCU AE | QR_SCU           | NA                  |
| Query/Retrieve as SCP AE | QR_SCP           | 7000                |
| Print AE                 | VIEWER_PRINT_SCU | 104                 |

| Application Entity | Default AE Title | Default TCP/IP Port |
|--------------------|------------------|---------------------|
| Archive AE         | Configurable     | Configurable        |
| MWL AE             | SCP1             | 5111                |
| MPPS AE            | SCP1             | 5111                |

#### 4.4.1.2. Remote AE Title/Presentation Address Mapping

The configuration of the remote application is specified here.

**Table 251: Remote AE Title Configuration Table**

| AE Configuration | Description   |
|------------------|---|
| Image Import AE  | Import AE Title   |
|                  | Hostname  |
|                  | IP-address  |
|                  | Listen Port   |
|                  | Allowed AE Title  |
|                  | Processing delay  |
|                  | Archive data (yes/no)   |
|                  | TTL (Time To Live) When not archiving. Import TTL is no also (yes/No) |
| Auto Export AE   | SCP AE Title  |
|                  | SCU AE Title  |
|                  | Server IP Address   |
|                  | Port number   |
|                  | station name  |
|                  | Instance name   |
|                  | Department name.  |
|                  | Server Name   |
|                  | Server description (not needed/configurable for DICOM)                |
|                  | Server path (not needed/configurable for DICOM)                       |
|                  | Username (not needed/configurable for DICOM)                          |
|                  | Password (not needed/configurable for DICOM)                          |
|                  | Jpeg Quality Factor (not needed/configurable for DICOM)               |
|                  | Export Rule (selection is possible)                                   |
| Send AE          | AE Title  |
|                  | Send queue TTL (Days)   |
|                  | Client AE Title   |

| AE Configuration         | Description                 |
|--------------------------|-----------------------------|
|                          | Hostname                    |
|                          | IP-address                  |
|                          | Port number                 |
|                          | Logical name                |
| Storage Commitment AE    | AE Title                    |
|                          | Listen port                 |
|                          | Hostname                    |
|                          | Allowed AE Title            |
|                          | Port number                 |
| Query/Retrieve as SCU AE | Q/R SCU AE Title            |
|                          | Q/R SCU DICOM Timeout       |
|                          | Q/R SCU Retrieve Timeout    |
|                          | Store SCU AE Title          |
|                          | Q/R SCP AE Title            |
|                          | Hostname                    |
|                          | IP-Address                  |
|                          | Port number                 |
|                          | Logical name                |
| Query/Retrieve as SCP AE | Q/R SCP AE Title            |
|                          | Listen Port                 |
|                          | Store SCU AE Title          |
|                          | Instance name.              |
|                          | Department name             |
|                          | Station name                |
|                          | Archive data                |
|                          | TTL,                        |
|                          | Allowed Client SCU AE Title |
|                          | Store SCP AE Title          |
|                          | Hostname                    |
|                          | IP-address                  |
|                          | Port number                 |
| Print AE                 | AE Title                    |
|                          | IP-address                  |
|                          | Hostname                    |
| Archive AE               | Store SCU AE Title          |

| AE Configuration | Description                         |
|------------------|-------------------------------------|
|                  | Archive Hostname                    |
|                  | Archive IP-address                  |
|                  | Archive Store SCU AE Title          |
|                  | Archive Store SCP AE Title          |
|                  | Archive SCP port number             |
|                  | Archive Q/R SCP Hostname            |
|                  | Archive Q/R SCP IP-Address          |
|                  | Archive Q/R AE Title                |
|                  | Archive Q/R port number             |
|                  | Fetch Move SCU AE Title             |
|                  | Archive Storage Commit SCP hostname |
|                  | Archive Storage Commit IP-Address   |
|                  | Archive Storage Commit SCP AE Title |
|                  | Archive Storage Commit port number  |
|                  | Read only (yes/no)                  |
|                  | Fetch Time out                      |
|                  | Server Path                         |
|                  | User Name                           |
| MWL AE           | Type                                |
|                  | AE Title                            |
|                  | IP Address                          |
|                  | Port                                |
|                  | Message Types                       |
|                  | Called AE Title Required            |
|                  | Calling AE Title Required           |
|                  | Calling AE Titles                   |
|                  | Relay AE Title                      |
|                  | Relay IP Address                    |
|                  | Relay Port                          |
| MPPS AE          | Type                                |
|                  | AE Title                            |
|                  | IP Address                          |
|                  | Port                                |
|                  | Message Types                       |
|                  | Called AE Title Required            |

| AE Configuration | Description               |
|------------------|---------------------------|
|                  | Calling AE Title Required |
|                  | Calling AE Titles         |
|                  | Relay AE Title            |
|                  | Relay IP Address          |
|                  | Relay Port                |

An important installation issue is the translation from AE title to presentation address. How this is to be performed is described here.

#### 4.4.2. Parameters

The specification of important operational parameters, their default value and range (if configurable) are specified here.

**Table 252: Configuration Parameters Table**

| Parameter   | Configurable   | Default Value   |
|---|----------------|---|
| <b>General Parameters</b>   |                |   |
| Max PDU Receive Size  | No             | 64 Kbytes   |
| Max PDU Send Size   | No             | 64 Kbytes   |
| Time-out for completion of a TCP/IP connect request (Low-level timeout).  | No             | 60 seconds  |
| Time-out awaiting a Response to a DIMSE Request (Low-level timeout).      | No             | 60 seconds  |
| Time-out for waiting for data between TCP/IP-packets (Low-level timeout). | No             | 120 seconds   |
| <b>Storage Parameters</b>   |                |   |
| Storage SCU time-out waiting for a response to a C-STORE RQ               | No             | 60 seconds  |
| Time out for reception  | No             | 2 minutes   |
| Maximum number of simultaneously initiated Associations by the Storage AE | No             | 10  |
| Supported Transfer Syntaxes (separately configurable for each remote AE)  | No             |   |
| <b>Query/Retrieve Parameters (SCU and SCP)</b>                            |                |   |
| Maximum Number of simultaneous Associations (SCU)                         | No             | 1 (C-ECHO), 5 (C-STORE), 5 (C-FIND), 1 (Printer), 1 (Archiving) |
| Q/R SCU DICOM Timeout (SCU)   | Yes {300-1500} | 450 seconds   |
| Q/R SCU Retrieve Timeout (SCU)  | Yes {1..7}     | 1 days  |

| Parameter  | Configurable | Default Value    |
|--|--------------|------------------|
| Q/R best case query response time (SCP)  | No           | 2 seconds        |
| Q/R worst case query response time (SCP)   | No           | 10 seconds       |
| <b>Storage Commitment Specific Parameters()</b>                                  |              |                  |
| Maximum time to wait for cases to be archived                                    | Yes          | Maximum 8 hours  |
| Maximum number of times for retrying sending a response – with one hour interval | Yes          | Maximum 72 times |
| <b>Print Parameters</b>  |              |                  |
| Maximum number of simultaneous Associations                                      | No           | 1                |
| Maximum numbers of connected printers  | No           | 5                |

Additional configuration parameters such as hardware options for e.g. a printer are specified as well.

## 5. Media Interchange

### 5.1. Implementation model

The implementation model identifies the DICOM Application Entities for Media in specific implementation and relates the Application Entities to Real-World Activities.

#### 5.1.1. Application Data Flow Diagram

As part of the implementation model, an application data flow diagram is included. This diagram represents all of the Application Entities present in an implementation and graphically depicts the relationship of the AE's use of DICOM to Real-World Activities.

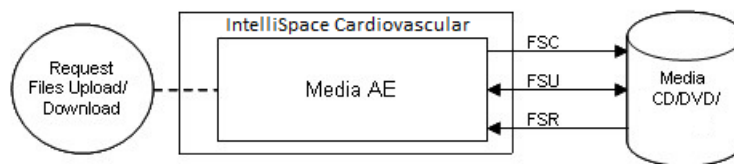


Figure 36: Application Data Flow Diagram

**Note:** DICOM FSU for CD and DVD as Media is not supported.

#### 5.1.2. Functional Definitions of AE's

The Media AE in an IntelliSpace Cardiovascular supports the following functions for CD-R and DVD

- Read the DICOMDIR File from the medium (representing the directory of the DICOM File(s) as recorded on the medium). This information may be displayed as an ordered list of icon images and, if present, with pertinent identifying information (patient name, etc.).
- Read the selected instances from the medium and displays it on the monitor of the View Station. This information is displayed as an ordered list of frames of the selected image or as a dynamic review of the selected image.

And for CD-R, DVD

- Initialize the medium.
- Write a DICOM File-set onto the medium.
- Create a DICOMDIR File.
- Extend the DICOM File-set and update the DICOMDIR File accordingly. (DICOM Media Storage Service Class).

**Note:** It is not possible to finalize the DVDs from IntelliSpace Cardiovascular. Because of this the studies written on DVD by IntelliSpace Cardiovascular can only be read by IntelliSpace Cardiovascular.



### 5.1.3. Sequencing of Real World Activities

A Real World Activity of the Media AE is: The user selects a set of object to write these to the CD/DVD. Then the CD/DVD will be created with the selected objects. Once the CD/DVD has been created, the user can read this CD/DVD on the IntelliSpace Cardiovascular or for transport to another device for reading.

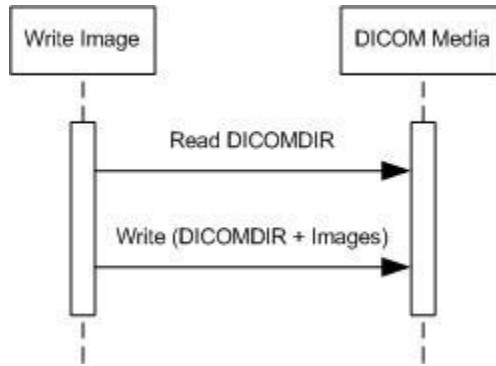


Figure 37: (Real World) Activity - Media.

Another Real World Activity of the Media AE is: A CD/DVD from another system IntelliSpace Cardiovascular or previously created CD/DVD can be read by the IntelliSpace Cardiovascular. The IntelliSpace Cardiovascular cannot append (FSU) to this created CD/DVD.

After data is written to CD/DVD, the CD/DVD is finalized automatically by IntelliSpace Cardiovascular; the finalized CD/DVD can now be read on every CD/DVD reader.

A description of supported Application Profiles of that Media is described in the next table.

Table 253: Conformance Supported Application Profiles

| Application Profile Identifier | Abstract Syntax Name                 | Abstract Syntax UID          | Transfer Syntax Name | Transfer Syntax UID    |
|--------------------------------|--------------------------------------|------------------------------|----------------------|------------------------|
| STD-XABC-CD                    | X-Ray Angiographic Image Storage     | 1.2.840.10008.5.1.4.1.1.12.1 | JPEG Lossless FOP    | 1.2.840.10008.1.2.4.70 |
| STD-XA1K-CD                    | X-Ray Angiographic Image Storage     | 1.2.840.10008.5.1.4.1.1.12.1 | JPEG Lossless FOP    | 1.2.840.10008.1.2.4.70 |
|                                | Secondary Capture Image Storage      | 1.2.840.10008.5.1.4.1.1.7    | ELE                  | 1.2.840.10008.1.2.1    |
| STD-US-ID-SF-CD                | Ultrasound Image Storage             | 1.2.840.10008.5.1.4.1.1.6.1  | ELE                  | 1.2.840.10008.1.2.1    |
| STD-US-ID-SF-DVD               |                                      |                              | RLE                  | 1.2.840.10008.1.2.5    |
| STD-US-ID-MF-CD                | Ultrasound Multi-frame Image Storage | 1.2.840.10008.5.1.4.1.1.3.1  | ELE                  | 1.2.840.10008.1.2.1    |
| STD-US-ID-MF-DVD               |                                      |                              | RLE                  | 1.2.840.10008.1.2.5    |

| Application Profile Identifier | Abstract Syntax Name                  | Abstract Syntax UID          | Transfer Syntax Name | Transfer Syntax UID |
|--------------------------------|---------------------------------------|------------------------------|----------------------|---------------------|
| STD-GEN-CD/ DVD                | Computed Radiography Image Storage    | 1.2.840.10008.5.1.4.1.1.1    | ELE                  | 1.2.840.10008.1.2.1 |
|                                | CT Image Storage                      | 1.2.840.10008.5.1.4.1.1.2    |                      |                     |
|                                | Nuclear Medicine Image Storage        | 1.2.840.10008.5.1.4.1.1.20   |                      |                     |
|                                | X-Ray Angiographic Image Storage      | 1.2.840.10008.5.1.4.1.1.12.1 |                      |                     |
|                                | X-Ray Radiofluoroscopic Image Storage | 1.2.840.10008.5.1.4.1.1.12.2 |                      |                     |
|                                | Ultrasound Multi-frame Image Storage  | 1.2.840.10008.5.1.4.1.1.3.1  |                      |                     |
|                                | MR Image Storage                      | 1.2.840.10008.5.1.4.1.1.4    |                      |                     |
|                                | Ultrasound Image Storage              | 1.2.840.10008.5.1.4.1.1.6.1  |                      |                     |
|                                | Secondary Capture Image Storage       | 1.2.840.10008.5.1.4.1.1.7    |                      |                     |
| ALL                            | Media Storage Directory Storage       | 1.2.840.10008.1.3.10         | ELE                  | 1.2.840.10008.1.2.1 |

## 5.2. AE Specifications

This section in the DICOM Conformance Statement specifies a set of Media Application Entities.

### 5.2.1. Media - Specification

If applicable, this section contains a description of sequencing of Real-World Activities that the AE's require.

Depending on the study size, the viewer can write one or more complete studies to one or more CD's. Furthermore one viewer can review and upload:

- Multi-patient CDs and DVDs;
- Multi-study CDs and DVDs;
- Multi-CD studies.

The supported Application Profiles, their Roles and the Service Class (SC) options, all defined in DICOM terminology, are listed in next table.

**Table 254: AE Media AE related Application Profiles, RWA activities and roles**

| Supported Application Profile                    | Identifier                        | Real-World Activities | Roles |
|--|-----------------------------------|-----------------------|-------|
| 1024 X-Ray Angiographic Studies on CD-R          | STD-XA1K-CD                       | Create File-set       | FSC   |
|  |                                   | Read File-set         | FSR   |
| Basic Cardiac X-RAY Angiographic Studies on CD-R | STD-XABC-CD                       | Create File-set       | FSC   |
|  |                                   | Read File-set         | FSR   |
| CT/MR Studies on CD-R                            | STD-CTMR-CD                       | Create File-set       | FSC   |
|  |                                   | Read File-set         | FSR   |
| General Purpose CD-R Interchange                 | STD-GEN-CD                        | Create File-set       | FSC   |
|  |                                   | Read File-set         | FSR   |
| Image Display (Ultrasound {SF MF})               | STD-US-ID-SF-CDR/STD-US-ID-MF-CDR | Create File-set       | FSC   |
|  |                                   | Read File-set         | FSR   |
| CT/MR Studies on DVD Media                       | STD-CTMR-DVD                      | Create File-set       | FSC   |
|  |                                   | Read File-set         | FSR   |
| General Purpose DVD Interchange with JPEG        | STD-GEN-DVD-JPEG                  | Create File-set       | FSC   |
|  |                                   | Read File-set         | FSR   |
| Image Display (Ultrasound {SF MF})               | STD-US-ID-SF-DVD/STD-US-ID-MF-DVD | Create File-set       | FSC   |
|  |                                   | Read File-set         | FSR   |

### 5.2.1.1. File Meta Information for the Media AE

The Application Entity title is registered in the DICOM File Meta Information header and is supported by the CD/DVD-writer (CD write option) acting only as FSC.

**Table 255: File Meta Information for the Media AE**

| Property                    | Value                |
|-----------------------------|----------------------|
| Implementation Class UID    | 1.3.46.670589.58.8.0 |
| Implementation Version Name | ISCV 8.0             |

## 5.2.1.2. Real-World Activities

The AE specification contains a description of the Real-World Activities, which invoke the particular AE.

### 5.2.1.2.1. RWA - Read File-set

This Media Application Entity has a File-set Reader functionality which is described here.

For the Real World Activity Read File-set (DICOM Reading), the Media AE will act as an FSR using the Interchange option when reading the directory of the medium and when reading the requested images.

#### 5.2.1.2.1.1. Media Storage Application Profile

The table below gives an overview of the supported Application Profiles.

**Table 256: Supported Application Profiles**

| Application Profile                                    | Identifier       | Real World Activity    | Role | SC Option   |
|--|------------------|------------------------|------|-------------|
| CT/MR Studies on CD-R                                  | STD-CTMR-CD      | Read image(s) from CD  | FSR  | Interchange |
| CT/MR Studies on DVD Media                             | STD-CTMR-DVD     | Read image(s) from DVD | FSR  | Interchange |
| General Purpose CD-R Interchange                       | STD_GEN-CD       | Read image(s) from CD  | FSR  | Interchange |
| General Purpose Interchange on DVD Media               | STD-GEN-DVD      | Read image(s) from DVD | FSR  | Interchange |
| Basic cardiac X-Ray Angiographic Studies on CD-R media | STD-XABC-CD      | Read image(s) from CD  | FSR  | Interchange |
| 1024 X-Ray Angiographic Studies on CD-R Media          | STD-XA1K-CD      | Read image(s) from CD  | FSR  | Interchange |
| Image Display (Ultrasound {SF   MF})                   | STD-US-ID-MF-CDR | Read image(s) from CD  | FSR  | Interchange |
|  | STD-US-ID-SF-CDR | Read image(s) from CD  | FSR  | Interchange |

#### 5.2.1.2.1.1.1. Options

Not applicable.

### 5.2.1.2.2. RWA - Create File-set

This Media Application Entity has a File-set Creator functionality which is described here.

For the Real World Activities DICOM Recording the Media AE will write the SOP instances as provided by the RWA to the record able DICOM medium and a corresponding DICOMDIR is created.

#### 5.2.1.2.2.1. Media Storage Application Profile

See table below for an overview of the support of the Application Profiles.

**Table 257: Supported Application Profiles**

| Application Profile                                    | Identifier       | Real World Activity       | Role | SC Option   |
|--|------------------|---------------------------|------|-------------|
| CT/MR Studies on CD-R                                  | STD-CTMR-CD      | Write image(s) to CD-R    | FSC  | Interchange |
| CT/MR Studies on DVD Media                             | STD-CTMR-DVD     | Write image(s) to CD-R    | FSC  | Interchange |
| General Purpose CD-R Interchange                       | STD_GEN-CD       | Write image(s) to CD-R    | FSC  | Interchange |
| General Purpose Interchange on DVD Media               | STD-GEN-DVD      | Write image(s) to DVD-RAM | FSC  | Interchange |
| Basic cardiac X-Ray Angiographic Studies on CD-R media | STD-XABC-CD      | Write image(s) to CD-R    | FSC  | Interchange |
| 1024 X-Ray Angiographic Studies on CD-R Media          | STD-XA1K-CD      | Write image(s) to CD-R    | FSC  | Interchange |
| Image Display (Ultrasound {SF MF})                     | STD-US-ID-MF-CDR | Write image(s) to CD-R    | FSC  | Interchange |
|  | STD-US-ID-SF-CDR | Write image(s) to CD-R    | FSC  | Interchange |
|  | STD-US-ID-SF-DVD | Write image(s) to DVD     | FSC  | Interchange |
|  | STD-US-ID-MF-DVD | Write image(s) to DVD     | FSC  | Interchange |

The following table presents an overview of the defined Photometric Interpretation and Transfer Syntax pairs for the Ultrasound Application Profiles (STD-US-xx-SF/MF...).

**Table 258: Defined Photometric Interpretation and Transfer Syntax Pairs**

| Photometric Interpretation Value | Transfer Syntax Name | Transfer Syntax UID    |
|----------------------------------|----------------------|------------------------|
| MONOCHROME2                      | ELE                  | 1.2.840.10008.1.2.1    |
|                                  | RLE                  | 1.2.840.10008.1.2.5    |
| RGB                              | ELE                  | 1.2.840.10008.1.2.1    |
|                                  | RLE                  | 1.2.840.10008.1.2.5    |
| PALETTE COLOR                    | ELE                  | 1.2.840.10008.1.2.1    |
|                                  | RLE                  | 1.2.840.10008.1.2.5    |
| YBR_FULL                         | RLE                  | 1.2.840.10008.1.2.5    |
| YBR_FULL_422                     | ELE                  | 1.2.840.10008.1.2.1    |
|                                  | JPEG Lossy Baseline  | 1.2.840.10008.1.2.4.50 |
| YBR_PARTIAL_422                  | ELE                  | 1.2.840.10008.1.2.1    |
|                                  | JPEG Lossy Baseline  | 1.2.840.10008.1.2.4.50 |

### 5.2.1.2.2.1.1. Options

In the DICOMDIR file a Basic Directory IOD is present, containing PATIENT, STUDY, SERIES and IMAGE directory record types.

The following table describes the optional directory keys of the Media AE.

**Table 259: Optional Keys**

| Attribute name                   | Tag       | VR | Notes   |
|----------------------------------|-----------|----|---|
| <b>Patient Keys</b>              |           |    |   |
| Patient's Birth Date             | 0010,0030 | DA | Explicit additional DICOMDIR key for Application Profiles STD-XABC-CD and STD-XA1K-CD (VT=2).   |
| Patient's Sex                    | 0010,0040 | CS | Explicit additional DICOMDIR key for Application Profiles STD-XABC-CD and STD-XA1K-CD (VT=2).   |
| <b>Study Keys</b>                |           |    |   |
| Referring Physician's Name       | 0008,0090 | PN | -   |
| Named of Physician Reading Study | 0008,1060 | PN | -   |
| <b>Series Keys</b>               |           |    |   |
| Series Date                      | 0008,0021 | DA | -   |
| Series Time                      | 0008,0031 | TM | -   |
| Institution Name                 | 0008,0080 | LO | Implicit additional DICOMDIR key for STD-US, and STD-GEN, Application Profiles. Explicit additional DICOMDIR key for Application Profiles STD-XABC-CD and STD-XA1K-CD (VT=2). |
| Institution Address              | 0008,0081 | ST | Implicit additional DICOMDIR key for STD-US, and STD-GEN, Application Profiles. Explicit additional DICOMDIR key for Application Profiles STD-XABC-CD and STD-XA1K-CD (VT=2). |
| Series Description               | 0008,103E | LO | -   |
| Performing Physician's Name      | 0008,1050 | PN | Explicit additional DICOMDIR key for Application Profiles STD-XABC-CD and STD-XA1K-CD (VT=2).   |
| Body Part Examined               | 0018,0015 | CS | -   |
| Protocol Name                    | 0018,1030 | LO | -   |
| <b>Image Keys</b>                |           |    |   |
| Image Type                       | 0008,0008 | CS | Explicit additional DICOMDIR key for Application Profiles STD-XABC-CD, STD-XA1K-CD and STD-GEN-CD (VT=1).   |
| Content Date                     | 0008,0023 | DA | -   |
| Content Time                     | 0008,0033 | TM | -   |

During the copy of "PLACED" data of a DSR study on IntelliSpace Cardiovascular to CD/DVD Media, following options are available as the export parameter that will apply to all DSR studies:

- Export As: "DICOM" (default) and
- Compression: "Loop" and
- Compression: "Still".

Both compression values are always "RLE".

### 5.3. Augmented and Private Application Profiles

Not applicable

### 5.4. Media Configuration

Not applicable.

## 6. Support of Character Sets

Any support for character sets in Network and Media services is described here.

**Table 260: Supported DICOM Character Sets with and without Code Extensions**

| Character Set Description ** | Defined Term            |                      | ESC* Sequence   | ISO Registration Number | Code Element | Character Set                |
|------------------------------|-------------------------|----------------------|-----------------|-------------------------|--------------|------------------------------|
|                              | Without code extensions | With code extensions |                 |                         |              |                              |
| Default repertoire           | None                    | ISO 2022 IR 6        | ESC 02/08 04/02 | ISO-IR 6                | G0           | ISO 646                      |
| Chinese                      | GB18030                 | N/A                  |                 |                         |              | GB18030                      |
| Unicode in UTF-8             | ISO_IR 192              | N/A                  |                 |                         |              | ISO_IR 192                   |
| Latin alphabet No. 1         | ISO_IR 100              | ISO 2022 IR 100      | ESC 02/13 04/01 | ISO-IR 100              | G1           | ISO IR 100<br>ISO/IEC 8859-1 |
|                              |                         |                      | ESC 02/08 04/02 | ISO-IR 6                | G0           | ISO 646                      |
| Latin alphabet No. 2         | ISO_IR 101              | ISO 2022 IR 101      | ESC 02/13 04/02 | ISO-IR 101              | G1           | ISO IR 101<br>ISO/IEC 8859-2 |
|                              |                         |                      | ESC 02/08 04/02 | ISO-IR 6                | G0           | ISO 646                      |
| Latin alphabet No. 3         | ISO_IR 109              | ISO 2022 IR 109      | ESC 02/13 04/03 | ISO-IR 109              | G1           | ISO IR 109<br>ISO/IEC 8859-3 |
|                              |                         |                      | ESC 02/08 04/02 | ISO-IR 6                | G0           | ISO 646                      |
| Latin alphabet No. 4         | ISO_IR 110              | ISO 2022 IR 110      | ESC 02/13 04/04 | ISO-IR 110              | G1           | ISO IR 110<br>ISO/IEC 8859-4 |
|                              |                         |                      | ESC 02/08 04/02 | ISO-IR 6                | G0           | ISO 646                      |
| Cyrillic                     | ISO_IR 144              | ISO 2022 IR 144      | ESC 02/13 04/12 | ISO-IR 144              | G1           | ISO IR 144<br>ISO/IEC 8859-5 |
|                              |                         |                      | ESC 02/08 04/02 | ISO-IR 6                | G0           | ISO 646                      |
| Arabic                       | ISO_IR 127              | ISO 2022 IR 127      | ESC 02/13 04/07 | ISO-IR 127              | G1           | ISO IR 127<br>ISO/IEC 8859-6 |
|                              |                         |                      | ESC 02/08 04/02 | ISO-IR 6                | G0           | ISO 646                      |
| Greek                        | ISO_IR 126              | ISO 2022 IR 126      | ESC 02/13 04/06 | ISO-IR 126              | G1           | ISO IR 126<br>ISO/IEC 8859-7 |
|                              |                         |                      | ESC 02/08 04/02 | ISO-IR 6                | G0           | ISO 646                      |
| Hebrew                       | ISO_IR 138              | ISO 2022 IR 138      | ESC 02/13 04/08 | ISO-IR 138              | G1           | ISO IR 138<br>ISO/IEC 8859-8 |



| Character Set Description ** | Defined Term            |                      | ESC* Sequence            | ISO Registration Number | Code Element | Character Set                             |
|------------------------------|-------------------------|----------------------|--------------------------|-------------------------|--------------|---|
|                              | Without code extensions | With code extensions |                          |                         |              |   |
|                              |                         |                      | ESC 02/08 04/02          | ISO-IR 6                | G0           | ISO 646                                   |
| Latin alphabet No. 5         | ISO_IR 148              | ISO 2022 IR 148      | ESC 02/13 04/13          | ISO-IR 148              | G1           | ISO IR 148<br>ISO/IEC 8859-9              |
|                              |                         |                      | ESC 02/08 04/02          | ISO-IR 6                | G0           | ISO 646                                   |
| Japanese                     | ISO_IR 13               | ISO 2022 IR 13       | ESC 02/09 04/09          | ISO-IR 13               | G1           | ISO IR 13<br>JIS X 0201:<br>Katakana      |
|                              |                         |                      | ESC 02/08 04/10          | ISO-IR 14               | G0           | ISO IR 14<br>JIS X 0201: Romaji           |
| Japanese (Multi-byte)        | none                    | ISO 2022 IR 87       | ESC 02/04 04/02          | ISO-IR 87               | G0           | JIS X 0208 : Kanji                        |
|                              |                         | ISO 2022 IR 159      | ESC 02/04 02/08<br>04/04 | ISO-IR 159              | G0           | JIS X 0212:<br>Supplementary<br>Kanji set |
| Thai                         | ISO_IR 166              | ISO 2022 IR 166      | ESC 02/13 05/04          | ISO-IR 166              | G1           | ISO IR 166<br>TIS 620-2533                |
|                              |                         |                      | ESC 02/08 04/02          | ISO-IR 6                | G0           | ISO 646                                   |
| Korean (Multi-byte)          | none                    | ISO 2022 IR 149      | ESC 02/04 02/09<br>04/03 | ISO-IR 149              | G1           | KS X 1001: Hangul<br>and Hanja            |

\*The ESC sequence is applicable only to character set with code extensions.

\*\* Character set is single-byte until stated as multi-byte.

**Notes:**

A DICOM Value Representation of type PN can exist of three component groups in the format:  
 <Alphabetic group>=<Ideographic group>=<Phonetic group>  
 Each component group is separated by the equal sign ("=") as delimiter.

**The behavior of the IntelliSpace Cardiovascular during DICOM data import as SCP**

When IntelliSpace Cardiovascular imports DICOM data with PN type attributes with the above three component groups, then IntelliSpace Cardiovascular uses the alphabetic component group for storage into the internal database.

In case the alphabetic component group is absent; IntelliSpace Cardiovascular uses the ideographic component group for storage into the internal database.

In case both the alphabetic and the ideographic component groups are absent, IntelliSpace Cardiovascular uses the phonetic component group for storage into the internal database.

## **The behavior of IntelliSpace Cardiovascular during DICOM data export as SCU**

When IntelliSpace Cardiovascular exports DICOM data, it uses the internally stored value while exporting the PN type attributes.

IntelliSpace Cardiovascular determines to which component group the internally stored value belongs by searching in the value for the first character which does not belong to the alphabetic component group.

If all characters belong to the alphabetic component group, then only the alphabetic component group is exported and the other two component groups are not exported.

If the first character which does not belong to the alphabetic component group is an ideographic character, then only the ideographic component group is exported and the other two component groups are not exported.

If the first character which does not belong to the alphabetic component group is a phonetic character, then only the phonetic component group is exported and the other two component groups are not exported.

This means that ISCV will always export only one component group.

## **7. Security**

### **7.1. Security Profiles**

IntelliSpace Cardiovascular 8.0 implements secure DICOM communication only for DICOM Web. IntelliSpace Cardiovascular 8.0 allows the use of a conventional (non-secure) DICOM communication or a secure DICOM communication based on the Transport Layer Security (TLS) protocol. If configured IntelliSpace Cardiovascular 8.0 supports the following security measures:

Secure authentication of a node

Integrity and confidentiality of transmitted data

Confidentiality of data on DICOM Media

Generation of audit trail records access control and user authentication

#### **7.1.1. Security use Profiles**

Not supported

#### **7.1.2. Security Transport Connection Profiles**

IntelliSpace Cardiovascular 8.0 conforms to the TLS protocol v1.2 or higher of Secure Transport Connection Profile.

IntelliSpace Cardiovascular 8.0 provides a service accessible tool to configure private keys and certificates of the local and remote DICOM nodes.

Secure communication is a “mode of operation” of IntelliSpace Cardiovascular 8.0 supported by the implementation of the DICOM TLS 1.2 or higher Secure Transport Connection Profile. This functionality will be used by the nodes that can authenticate each other before they exchange DICOM information. For secure communication the TLS protocol v1.2 or

higher is used which provides message authentication, integrity, and confidentiality. Confidentiality is optional and can be controlled by the encryption settings.

IntelliSpace Cardiovascular 8.0 may communicate using the following Cipher:

- TLS\_DHE\_RSA\_WITH\_AES\_128\_GCM\_SHA256
- TLS\_ECDHE\_RSA\_WITH\_AES\_128\_GCM\_SHA256
- TLS\_DHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384
- TLS\_ECDHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384

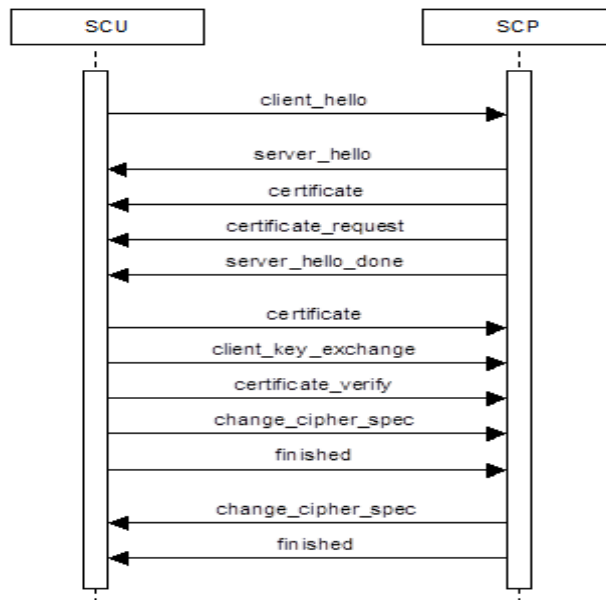
No verification is done on:

- Revocation of certificates
- Limiting the connection to a limited set of IP-addresses

Node authentication with or without encryption is only possible when both nodes have:

- An access to their own private keys
- An access to a copy of the certificate of the other node containing its public key

Figure below presents the message flow of TLS handshake supported by IntelliSpace Cardiovascular 8.0.



### 7.1.3. Digital Signature Profiles

Not supported

## 7.1.4. Media Storage Security Profiles

Not supported

## 7.1.5. Attribute Confidentiality Profiles

No instances of the encrypted attributes data set are created. No transfer syntaxes are supported for encoding/decoding of encrypted attributes data sets.

The table below lists the attributes for de-identification within a patient record. The terms used to describe the replacement value are listed below:

Empty: The attribute value is left empty (zero length).

Free editable: The user can enter or edit the value for an attribute manually.

User selectable: The user can select a predefined list of values for an attribute.

System: The attribute value will be changed automatically by the system. Not configurable.

As is: The attribute value will not be changed. The text field for the attribute is grayed out.

Fixed value: The attribute value is set according a predefined list of values set by the system administrator.

**Table 261: Basic Application Level Confidentiality Profile Attributes**

| Attribute Name                  | Tag       | VR | Replacement Value  | Remarks                      |
|---------------------------------|-----------|----|--|------------------------------|
| Source Application Entity Title | 0002,0016 | AE | new AE title   | System automatically changes |
| Patient's Name                  | 0010,0010 | PN | Empty, Fixed value, As is, Free                              | Free editable                |
| Patient ID (MRN)                | 0010,0020 | LO | Empty, Fixed value, As is, Free                              | Free editable                |
| Patient's Birth Date            | 0010,0030 | DA | Empty, Fixed value, As is, Free                              | Free editable                |
| Patient's Sex                   | 0010,0040 | CS | Empty, Fixed value (Female, Male, Other, Empty), As is, Free | Free editable                |
| Issuer of Patient ID's          | 0010,0021 | LO | Institution name   | Copied from institution name |
| Other Patient IDs               | 0010,1000 | LO | No values  | System automatically changes |
| Other Patient Names             | 0010,1001 | PN | No values  | System automatically changes |
| Patient's Telephone Numbers     | 0010,2154 | SH | No values  | System automatically changes |
| Patient's Address               | 0010,1040 | LO | No values  | System automatically changes |

| Attribute Name              | Tag       | VR | Replacement Value  | Remarks                      |
|-----------------------------|-----------|----|--|------------------------------|
| Country of Residence        | 0010,2150 | LO | No values  | System automatically changes |
| Region of Residence         | 0010,2152 | LO | No values  | System automatically changes |
| Station Name                | 0008,1010 | SH | No values  | System automatically changes |
| Instance Creator UID        | 0008,0014 | UI | new UID  | System automatically changes |
| SOP Instance UID            | 0008,0018 | UI | new UID  | System automatically changes |
| Accession Number            | 0008,0050 | SH | Empty, Fixed value, As is, Free                            | Free editable                |
| Institution Name            | 0008,0080 | LO | Selectable from fixed values. Values will be as configured | Free editable                |
| Referring Physician's Name  | 0008,0090 | PN | Empty, Fixed value, As is, Free                            | Free editable                |
| Performing Physician's Name | 0008,1050 | PN | Empty, Fixed value, As is, Free                            | Free editable                |
| Operators Name              | 0008,1070 | PN | No values  | System automatically changes |
| Study ID                    | 0020,0010 | SH | Empty, Fixed value, As is, Free                            | Free editable                |
| Frame of Reference UID      | 0020,0052 | UI | new UID  | System automatically changes |
| Study Instance UID          | 0020,000D | UI | new UID  | System automatically changes |
| Series Instance UID         | 0020,000E | UI | new UID  | System automatically changes |

### 7.1.6. Network Address Management Profiles

Not supported

### 7.1.7. Time Synchronization Profiles

Not supported

### 7.1.8. Application Configuration Management Profiles

Not supported

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## **7.1.9. Audit Trail Profiles**

Not supported

## **7.2. Association Level Security**

Not supported

## **7.3. Application Level Security**

Not supported

## 8. Annexes of application "Cath Viewer"

### 8.1. IOD Contents

#### 8.1.1. Created SOP Instance

This section specifies each IOD created by this application.

This section specifies each IOD created (including private IOD's). It should specify the attribute name, tag, VR, and value. The value should specify the range and source (e.g. user input, Modality Worklist, automatically generated, etc.). For content items in templates, the range and source of the concept name and concept values should be specified. Whether the value is always present or not shall be specified.

#### Abbreviations used in the IOD tables for the column "Presence of Module" are:

ALWAYS            The module is always present  
 CONDITIONAL    The module is used under specified condition

#### Abbreviations used in the Module table for the column "Presence of Value" are:

ALWAYS            The attribute is always present with a value  
 EMPTY            The attribute is always present without any value (attribute sent zero length)  
 VNAP             The attribute is always present and its Value is Not Always Present  
                       (attribute sent zero length if no value is present)  
 ANAP             The attribute is present under specified condition – if present then it will always have a value

#### The abbreviations used in the Module table for the column "Source" are:

AUTO              The attribute value is generated automatically  
 CONFIG           The attribute value source is a configurable parameter  
 COPY             The attribute value source is another SOP instance  
 FIXED            The attribute value is hard-coded in the application  
 IMPLICIT        The attribute value source is a user-implicit setting  
 MPPS             The attribute value is the same as that use for Modality Performed Procedure Step  
 MWL             The attribute value source is a Modality Worklist  
 USER            The attribute value source is explicit user input

#### 8.1.1.1. List of created SOP Classes

Table 262: List of created SOP Classes

| SOP Class Name                            | SOP Class UID             |
|---|---------------------------|
| Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7 |

## 8.1.1.2. Secondary Capture Image Storage SOP Class

Table 263: IOD of Created Secondary Capture Image Storage SOP Class Instances

| Information Entity | Module                                | Presence Of Module |
|--------------------|---------------------------------------|--------------------|
| Patient            | Patient Module                        | ALWAYS             |
| Study              | General Study Module                  | ALWAYS             |
|                    | Patient Study Module                  | CONDITIONAL        |
| Series             | General Series Module                 | ALWAYS             |
| Equipment          | General Equipment Module              | ALWAYS             |
| Equipment          | SC Equipment Module                   | ALWAYS             |
| Acquisition        | General Acquisition Module            | ALWAYS             |
| Image              | General Image Module                  | ALWAYS             |
|                    | Image Pixel Module                    | ALWAYS             |
|                    | SC Image Module                       | ALWAYS             |
|                    | VOI LUT Module                        | ALWAYS             |
|                    | SOP Common Module                     | ALWAYS             |
|                    | Extended DICOM and Private attributes | ALWAYS             |

Table 264: Patient Module

| Attribute Name       | Tag       | VR | Value | Presence of Value | Source | Comment   |
|----------------------|-----------|----|-------|-------------------|--------|---|
| Patient's Name       | 0010,0010 | PN |       | ALWAYS            | COPY   | -   |
| Patient ID           | 0010,0020 | LO |       | ALWAYS            | COPY   | -   |
| Patient's Birth Date | 0010,0030 | DA |       | VNAP              | COPY   | -   |
| Patient's Birth Time | 0010,0032 | T  |       | ANAP              | COPY   | -   |
|                      |           | M  |       |                   |        |   |
| Patient's Sex        | 0010,0040 | CS |       | ALWAYS            | COPY   | -   |
| Issuer of Patient ID | 0010,0021 | LO |       | ANAP              | COPY   | If Issuer of Patient ID is not present in the imported object, then "Default Institution" will be put by IntelliSpace Cardiovascular. |

Table 265: General Study Module

| Attribute Name | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------|-----------|----|-------|-------------------|--------|---------|
| Study Date     | 0008,0020 | DA |       | ALWAYS            | COPY   | -       |
| Study Time     | 0008,0030 | TM |       | ALWAYS            | COPY   | -       |

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|                                       |           |    |  |        |      |   |
|---------------------------------------|-----------|----|--|--------|------|---|
| Accession Number                      | 0008,0050 | SH |  | VNAP   | COPY | - |
| Referring Physician's Name            | 0008,0090 | PN |  | VNAP   | COPY | - |
| Study Description                     | 0008,1030 | LO |  | ANAP   | COPY | - |
| Name of Physician(s)<br>Reading Study | 0008,1060 | PN |  | ANAP   | COPY | - |
| Study Instance UID                    | 0020,000D | UI |  | ALWAYS | COPY | - |
| Study ID                              | 0020,0010 | SH |  | VNAP   | COPY | - |

**Table 266: Patient Study Module**

| Attribute Name                  | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------------|-----------|----|-------|-------------------|--------|---------|
| Admitting Diagnoses Description | 0008,1080 | LO |       | ANAP              | COPY   | -       |
| Patient's Weight                | 0010,1030 | DS |       | ANAP              | COPY   | -       |

**Table 267: General Series Module**

| Attribute Name                               | Tag       | VR | Value | Presence of Value | Source | Comment |
|--|-----------|----|-------|-------------------|--------|---------|
| Series Date                                  | 0008,0021 | DA |       | ANAP              | COPY   | -       |
| Series Time                                  | 0008,0031 | TM |       | ANAP              | COPY   | -       |
| Modality                                     | 0008,0060 | CS |       | ALWAYS            | COPY   | -       |
| Performing Physician's Name                  | 0008,1050 | PN |       | VNAP              | COPY   |         |
| Series Description                           | 0008,103E | LO |       | ANAP              | COPY   | -       |
| Referenced Performed Procedure Step Sequence | 0008,1111 | SQ |       | ANAP              | COPY   | -       |
| >Referenced SOP Class UID                    | 0008,1150 | UI |       | ALWAYS            | AUTO   | -       |
| >Referenced SOP Instance UID                 | 0008,1155 | UI |       | ALWAYS            | AUTO   | -       |
| Body Part Examined                           | 0018,0015 | CS |       | ANAP              | COPY   | -       |
| Protocol Name                                | 0018,1030 | LO |       | ANAP              | COPY   | -       |
| Series Instance UID                          | 0020,000E | UI |       | ALWAYS            | AUTO   | -       |
| Series Number                                | 0020,0011 | IS |       | VNAP              | COPY   | -       |

|  |           |    |  |      |      |   |
|--|-----------|----|--|------|------|---|
| Performed Procedure Step Start Date      | 0040,0244 | DA |  | ANAP | COPY | - |
| Performed Procedure Step Start Time      | 0040,0245 | TM |  | ANAP | COPY | - |
| Performed Procedure Step ID              | 0040,0253 | SH |  | ANAP | COPY | - |
| Performed Procedure Step Description     | 0040,0254 | LO |  | ANAP | COPY | - |
| Request Attributes Sequence              | 0040,0275 | SQ |  | ANAP | COPY | - |
| Comments on the Performed Procedure Step | 0040,0280 | ST |  | ANAP | COPY | - |

**Table 268: General Equipment Module**

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------|-----------|----|-------|-------------------|--------|---------|
| Manufacturer              | 0008,0070 | LO |       | ALWAYS            | AUTO   | -       |
| Institution Name          | 0008,0080 | LO |       | ALWAYS            | COPY   | -       |
| Station Name              | 0008,1010 | SH |       | ALWAYS            | AUTO   | -       |
| Manufacturer's Model Name | 0008,1090 | LO |       | ALWAYS            | AUTO   | -       |
| Software Versions         | 0018,1020 | LO |       | ALWAYS            | AUTO   | -       |

**Table 269: SC Equipment Module**

| Attribute Name  | Tag       | VR | Value | Presence of Value | Source | Comment |
|-----------------|-----------|----|-------|-------------------|--------|---------|
| Modality        | 0008,0060 | CS |       | ANAP              | COPY   | -       |
| Conversion Type | 0008,0064 | CS | WSD   | ALWAYS            | FIXED  | -       |

**Table 270: General Acquisition Module**

| Attribute Name       | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------|-----------|----|-------|-------------------|--------|---------|
| Acquisition Date     | 0008,0022 | DA |       | ANAP              | COPY   |         |
| Acquisition Time     | 0008,0032 | TM |       | ANAP              | COPY   |         |
| Acquisition DateTime | 0008,002A | DT |       | ANAP              | COPY   |         |

|                      |           |    |  |      |      |  |
|----------------------|-----------|----|--|------|------|--|
| Acquisition Duration | 0018,9073 | FD |  | ANAP | COPY |  |
| Acquisition Number   | 0020,0012 | IS |  | ANAP | COPY |  |

**Table 271: General Image Module**

| Attribute Name      | Tag       | VR | Value                                      | Presence of Value | Source | Comment |
|---------------------|-----------|----|--|-------------------|--------|---------|
| Image Type          | 0008,0008 | CS | Value 1: DERIVED,<br>Value 2:<br>SECONDARY | ALWAYS            | FIXED  | -       |
| Content Date        | 0008,0023 | DA |  | VNAP              | AUTO   | -       |
| Content Time        | 0008,0033 | TM |  | VNAP              | AUTO   | -       |
| Instance Number     | 0020,0013 | IS |  | VNAP              | AUTO   | -       |
| Patient Orientation | 0020,0020 | CS |  | VNAP              | COPY   | -       |

**Table 272: Image Pixel Module**

| Attribute Name             | Tag       | VR    | Value | Presence of Value | Source | Comment |
|----------------------------|-----------|-------|-------|-------------------|--------|---------|
| Samples per Pixel          | 0028,0002 | US    |       | ALWAYS            | AUTO   | -       |
| Photometric Interpretation | 0028,0004 | CS    |       | ALWAYS            | AUTO   | -       |
| Planar Configuration       | 0028,0006 | US    |       | ANAP              | AUTO   | -       |
| Rows                       | 0028,0010 | US    |       | ALWAYS            | AUTO   | -       |
| Columns                    | 0028,0011 | US    |       | ALWAYS            | AUTO   | -       |
| Bits Allocated             | 0028,0100 | US    |       | ALWAYS            | AUTO   | -       |
| Bits Stored                | 0028,0101 | US    |       | ALWAYS            | AUTO   | -       |
| High Bit                   | 0028,0102 | US    |       | ALWAYS            | AUTO   | -       |
| Pixel Representation       | 0028,0103 | US    |       | ALWAYS            | AUTO   | -       |
| Pixel Aspect Ratio         | 0028,0034 | IS    |       | ALWAYS            | AUTO   | -       |
| Pixel Data                 | 7FE0,0010 | OW/OB |       | ALWAYS            | AUTO   | -       |

**Table 273: SC Image Module**

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------|-----------|----|-------|-------------------|--------|---------|
| Date of Secondary Capture | 0018,1012 | DA |       | ANAP              | AUTO   |         |
| Time of Secondary Capture | 0018,1014 | TM |       | ANAP              | AUTO   |         |

**Table 274: VOI LUT Module**

| Attribute Name | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------|-----------|----|-------|-------------------|--------|---------|
| Window Center  | 0028,1050 | DS |       | ANAP              | AUTO   |         |
| Window Width   | 0028,1051 | DS |       | ANAP              | AUTO   |         |

**Table 275: SOP Common Module**

| Attribute Name         | Tag       | VR | Value                     | Presence of Value | Source | Comment   |
|------------------------|-----------|----|---------------------------|-------------------|--------|---|
| Specific Character Set | 0008,0005 | CS |                           | ANAP              | AUTO   | Required if expanded/replacement character set used |
| Instance Creation Date | 0008,0012 | DA |                           | ANAP              | AUTO   | -   |
| Instance Creation Time | 0008,0013 | TM |                           | ANAP              | AUTO   | -   |
| Instance Creator UID   | 0008,0014 | UI |                           | ANAP              | AUTO   | -   |
| SOP Class UID          | 0008,0016 | UI | 1.2.840.10008.5.1.4.1.1.7 | ALWAYS            | FIXED  | -   |
| SOP Instance UID       | 0008,0018 | UI |                           | ALWAYS            | AUTO   | -   |
| Instance Number        | 0020,0013 | IS |                           | ANAP              | AUTO   | -   |

### 8.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

**Table 276: Functionalities**

| Functionality | Type1 | Optional | Private |
|---------------|-------|----------|---------|
| Cath Viewer   | X     |          |         |

#### 8.1.2.1. Usage of the Functionality Cath Viewer

Next table shows the SOP classes supported by the Cath. Viewer.

**Table 277: Supported SOP Classes for functionality Cath Viewer**

| SOP Class name                               | SOP Class UID               |
|--|-----------------------------|
| Computed Radiography Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.1   |
| CT Image Storage SOP Class                   | 1.2.840.10008.5.1.4.1.1.2   |
| Digital X-Ray Image Storage - For Pres. SOP  | 1.2.840.10008.5.1.4.1.1.1.1 |

|   |                               |
|---|-------------------------------|
| Digital X-Ray Image Storage - For Proc. SOP                   | 1.2.840.10008.5.1.4.1.1.1.1.1 |
| MR Image Storage SOP Class                                    | 1.2.840.10008.5.1.4.1.1.4     |
| Nuclear Medicine Image Storage SOP Class                      | 1.2.840.10008.5.1.4.1.1.20    |
| Secondary Capture Image Storage SOP Class                     | 1.2.840.10008.5.1.4.1.1.7     |
| Ultrasound Image Storage SOP Class                            | 1.2.840.10008.5.1.4.1.1.6.1   |
| Ultrasound Multi-frame Image Storage SOP Class                | 1.2.840.10008.5.1.4.1.1.3.1   |
| X-Ray Angiographic Bi-Plane Image Storage SOP Class (Retired) | 1.2.840.10008.5.1.4.1.1.12.3  |
| X-Ray Angiographic Image Storage SOP Class                    | 1.2.840.10008.5.1.4.1.1.12.1  |
| X-Ray Radiofluoroscopic Image Storage SOP Class               | 1.2.840.10008.5.1.4.1.1.12.2  |

### 8.1.3. Attribute Mapping

Not applicable.

### 8.1.4. Coerced/Modified fields

Not applicable.

## 8.2. Data Dictionary of Private Attributes

Not applicable.

## 8.3. Coded Terminology and Templates

Not applicable.

### 8.3.1. Context Groups

Not applicable.

### 8.3.2. Template Specifications

Not applicable.

### 8.3.3. Private code definitions

Not applicable.

## 8.4. Grayscale Image consistency

Not applicable.

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## 8.5. Standard Extended/Specialized/Private SOPs

Not applicable

## 8.6. Private Transfer Syntaxes

Not applicable.

## 9. Annexes of application "Ultrasound Viewer"

### 9.1. IOD Contents

#### 9.1.1. Created SOP Instance

Not Applicable. Ultrasound Viewer does not create SOP Instances.

#### 9.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

**Table 278: Functionalities**

| Functionality     | Type1 | Optional | Private |
|-------------------|-------|----------|---------|
| Ultrasound Viewer | X     | X        |         |

#### 9.1.2.1. Usage of the Functionality Ultrasound Viewer

The following table lists the supported SOP Classes which can be used by this application.

**Table 279: Supported SOP Classes for functionality Ultrasound Viewer**

| SOP Class name   | SOP Class UID                 |
|--|-------------------------------|
| Comprehensive SR SOP Class                                       | 1.2.840.10008.5.1.4.1.1.88.33 |
| Enhanced SR SOP Class  | 1.2.840.10008.5.1.4.1.1.88.22 |
| Secondary Capture Image Storage SOP Class*                       | 1.2.840.10008.5.1.4.1.1.7     |
| Ultrasound Image Storage SOP Class                               | 1.2.840.10008.5.1.4.1.1.6.1   |
| Ultrasound Multi-frame Image Storage SOP Class                   | 1.2.840.10008.5.1.4.1.1.3.1   |
| Ultrasound Multi-frame Image Storage (Retired) SOP Class         | 1.2.840.10008.5.1.4.1.1.3     |
| Ultrasound Image Storage (Retired) SOP Class                     | 1.2.840.10008.5.1.4.1.1.6     |
| Multi-frame True Color Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7.4   |

*Note:*

\* Secondary Capture Image Storage SOP Class (1.2.840.10008.5.1.4.1.1.7) will only be accepted if the attribute "Modality" (0008,0060) contains one of the following values; "US", "IVUS", "SR", "SC", "OT" or "PR".

#### 9.1.3. Attribute Mapping

Not applicable.

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## **9.1.4. Coerced/Modified fields**

Not applicable.

## **9.2. Data Dictionary of Private Attributes**

Not applicable.

## **9.3. Coded Terminology and Templates**

Not applicable.

### **9.3.1. Context Groups**

Not applicable.

### **9.3.2. Template Specifications**

Not applicable.

### **9.3.3. Private code definitions**

Not applicable.

## **9.4. Grayscale Image consistency**

Not applicable.

## **9.5. Standard Extended/Specialized/Private SOPs**

Not applicable.

## **9.6. Private Transfer Syntaxes**

Not applicable.



## 10. Annexes of application "PDF\_REPORT"

### 10.1. IOD Contents

#### 10.1.1. Created SOP Instance

This section specifies each IOD created by this application.

This section specifies each IOD created (including private IOD's). It should specify the attribute name, tag, VR, and value. The value should specify the range and source (e.g. user input, Modality Worklist, automatically generated, etc.). For content items in templates, the range and source of the concept name and concept values should be specified. Whether the value is always present or not shall be specified.

#### Abbreviations used in the IOD tables for the column "Presence of Module" are:

- ALWAYS            The module is always present
- CONDITIONAL    The module is used under specified condition

#### Abbreviations used in the Module table for the column "Presence of Value" are:

- ALWAYS            The attribute is always present with a value
- EMPTY            The attribute is always present without any value (attribute sent zero length)
- VNAP              The attribute is always present and its Value is Not Always Present  
(attribute sent zero length if no value is present)
- ANAP              The attribute is present under specified condition – if present then it will always have a value

#### The abbreviations used in the Module table for the column "Source" are:

- AUTO              The attribute value is generated automatically
- CONFIG            The attribute value source is a configurable parameter
- COPY              The attribute value source is another SOP instance
- FIXED             The attribute value is hard-coded in the application
- IMPLICIT         The attribute value source is a user-implicit setting
- MPPS              The attribute value is the same as that use for Modality Performed Procedure Step
- MWL               The attribute value source is a Modality Worklist
- USER              The attribute value source is explicit user input

#### 10.1.1.1. List of created SOP Classes

Table 280: List of created SOP Classes

| SOP Class Name                     | SOP Class UID                 |
|------------------------------------|-------------------------------|
| Encapsulated PDF Storage SOP Class | 1.2.840.10008.5.1.4.1.1.104.1 |

## 10.1.1.2. Encapsulated PDF Storage SOP Class

**Table 281: IOD of Created Encapsulated PDF Storage SOP Class Instances**

| Information Entity | Module                              | Presence Of Module |
|--------------------|-------------------------------------|--------------------|
| Patient            | Patient Module                      | ALWAYS             |
| Study              | General Study Module                | ALWAYS             |
|                    | Patient Study Module                | CONDITIONAL        |
| Series             | Encapsulated Document Series Module | ALWAYS             |
| Equipment          | General Equipment Module            | ALWAYS             |
|                    | SC Equipment Module                 | ALWAYS             |
| Image              | Encapsulated Document Module        | ALWAYS             |
|                    | SOP Common Module                   | ALWAYS             |

**Table 282: Patient Module**

| Attribute Name       | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------|-----------|----|-------|-------------------|--------|---------|
| Patient's Name       | 0010,0010 | PN |       | ALWAYS            | COPY   | -       |
| Patient ID           | 0010,0020 | LO |       | ALWAYS            | COPY   | -       |
| Issuer of Patient ID | 0010,0021 | LO |       | ANAP              | AUTO   | -       |
| Patient's Birth Date | 0010,0030 | DA |       | VNAP              | COPY   | -       |
| Patient's Birth Time | 0010,0032 | TM |       | ANAP              | COPY   | -       |
| Patient's Sex        | 0010,0040 | CS |       | ALWAYS            | COPY   | -       |
| Other Patient Names  | 0010,1001 | PN |       | ANAP              | COPY   | -       |
| Ethnic Group         | 0010,2160 | SH |       | ANAP              | COPY   | -       |
| Patient Comments     | 0010,4000 | LT |       | ANAP              | COPY   |         |

**Table 283: General Study Module**

| Attribute Name             | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------------|-----------|----|-------|-------------------|--------|---------|
| Study Date                 | 0008,0020 | DA |       | ALWAYS            | AUTO   | -       |
| Study Time                 | 0008,0030 | TM |       | ALWAYS            | AUTO   | -       |
| Accession Number           | 0008,0050 | SH |       | VNAP              | AUTO   |         |
| Referring Physician's Name | 0008,0090 | PN |       | VNAP              | COPY   |         |
| Study Description          | 0008,1030 | LO |       | ANAP              | COPY   |         |
| Study Instance UID         | 0020,000D | UI |       | ALWAYS            | COPY   | -       |
| Study ID                   | 0020,0010 | SH |       | VNAP              | COPY   | -       |

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**Table 284: Patient Study Module**

| Attribute Name                  | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------------|-----------|----|-------|-------------------|--------|---------|
| Admitting Diagnoses Description | 0008,1080 | LO |       | ANAP              | COPY   | -       |

**Table 285: Encapsulated Document Series Module**

| Attribute Name      | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------|-----------|----|-------|-------------------|--------|---------|
| Modality            | 0008,0060 | CS |       | ALWAYS            | AUTO   | -       |
| Series Instance UID | 0020,000E | UI |       | ALWAYS            | AUTO   | -       |
| Series Number       | 0020,0011 | IS |       | ALWAYS            | AUTO   | -       |

**Table 286: General Equipment Module**

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------|-----------|----|-------|-------------------|--------|---------|
| Manufacturer              | 0008,0070 | LO |       | ALWAYS            | AUTO   |         |
| Institution Name          | 0008,0080 | LO |       | ALWAYS            | COPY   |         |
| Station Name              | 0008,1010 | SH |       | ALWAYS            | AUTO   |         |
| Manufacturer's Model Name | 0008,1090 | LO |       | ALWAYS            | AUTO   |         |
| Software Versions         | 0018,1020 | LO |       | ALWAYS            | AUTO   |         |

**Table 287: SC Equipment Module**

| Attribute Name  | Tag       | VR | Value | Presence of Value | Source | Comment |
|-----------------|-----------|----|-------|-------------------|--------|---------|
| Modality        | 0008,0060 | CS |       | ANAP              | AUTO   | -       |
| Conversion Type | 0008,0064 | CS | WSD   | ALWAYS            | AUTO   | -       |

**Table 288: Encapsulated Document Module**

| Attribute Name       | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------|-----------|----|-------|-------------------|--------|---------|
| Content Date         | 0008,0023 | DA |       | VNAP              | AUTO   | -       |
| Acquisition Datetime | 0008,002A | DT |       | VNAP              | AUTO   | -       |
| Content Time         | 0008,0033 | TM |       | VNAP              | AUTO   | -       |

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|                                    |           |    |                 |        |      |   |
|------------------------------------|-----------|----|-----------------|--------|------|---|
| Instance Number                    | 0020,0013 | IS |                 | ALWAYS | AUTO | - |
| Burned In Annotation               | 0028,0301 | CS |                 | ALWAYS | AUTO | - |
| Concept Name Code Sequence         | 0040,A043 | SQ |                 | VNAP   | AUTO | - |
| Verification Flag                  | 0040,A493 | CS |                 | VNAP   | AUTO |   |
| Document Title                     | 0042,0010 | ST |                 | VNAP   | AUTO | - |
| Encapsulated Document              | 0042,0011 | OB |                 | ALWAYS | AUTO | - |
| MIME Type of Encapsulated Document | 0042,0012 | LO | application/pdf | ALWAYS | AUTO | - |

**Table 289: SOP Common Module**

| Attribute Name         | Tag       | VR | Value                         | Presence of Value | Source | Comment |
|------------------------|-----------|----|-------------------------------|-------------------|--------|---------|
| Specific Character Set | 0008,0005 | CS |                               | ANAP              | COPY   |         |
| SOP Class UID          | 0008,0016 | UI | 1.2.840.10008.5.1.4.1.1.104.1 | ALWAYS            | FIXED  | -       |
| SOP Instance UID       | 0008,0018 | UI |                               | ALWAYS            | AUTO   | -       |
| Instance Number        | 0020,0013 | IS |                               | ANAP              | AUTO   |         |

### 10.1.2. Usage of Attributes from Received IOD

Not applicable.

### 10.1.3. Attribute Mapping

Not applicable.

### 10.1.4. Coerced/Modified fields

Not applicable.

## 10.2. Data Dictionary of Private Attributes

Not applicable.

## 10.3. Coded Terminology and Templates

Not applicable.

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## **10.3.1. Context Groups**

Not applicable.

## **10.3.2. Template Specifications**

Not applicable.

## **10.3.3. Private code definitions**

Not applicable.

## **10.4. Grayscale Image consistency**

Not applicable.

## **10.5. Standard Extended/Specialized/Private SOPs**

Not applicable.

## **10.6. Private Transfer Syntaxes**

Not applicable.

## 11. Annexes of application "Echo Module"

### 11.1. Supported IOD's

This section specifies each IOD accepted and / or created by Echo Module.

**ACCEPTED**            The applicable IOD is accepted for storage in the repository of the hosting platform and supported for import in Echo Module for viewing and analysis.

**CREATED**            The Echo Module supports generation of derived data by using the applicable IOD and is able to store this data in the repository of the hosting platform and Echo Module supports creation of KOS objects.

**Table 290: Supported IOD's**

| IOD  |                               | Support  |         |
|--|-------------------------------|----------|---------|
| Name   | UID                           | ACCEPTED | CREATED |
| Encapsulated PDF Storage                               | 1.2.840.10008.5.1.4.1.1.104.1 | Yes      | Yes     |
| Ultrasound Multiframe Image Storage                    | 1.2.840.10008.5.1.4.1.1.3.1   | Yes      | No      |
| Ultrasound Multiframe Image Storage(Retired)           | 1.2.840.10008.5.1.4.1.1.3     | Yes      | No      |
| Ultrasound Image Storage (Retired)                     | 1.2.840.10008.5.1.4.1.1.6     | Yes      | No      |
| Ultrasound Image Storage                               | 1.2.840.10008.5.1.4.1.1.6.1   | Yes      | No      |
| Secondary Capture Image Storage                        | 1.2.840.10008.5.1.4.1.1.7     | Yes      | Yes     |
| Multi-frame True Color Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.4   | Yes      | No      |
| Basic Text SR  | 1.2.840.10008.5.1.4.1.1.88.11 | Yes      | No      |
| Enhanced SR  | 1.2.840.10008.5.1.4.1.1.88.22 | Yes      | No      |
| Comprehensive SR                                       | 1.2.840.10008.5.1.4.1.1.88.33 | Yes      | No      |
| Key Object Selection Document Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.88.59 | Yes      | Yes     |

#### 11.1.1. Contents of Created IOD's

This section specifies in detail the attribute contents of created data objects. Attributes are grouped together by its corresponding module as specified by DICOM standard. Philips private attributes are excluded for specification.

Abbreviations used in the Module table for the column "Presence of Value" are:

**ALWAYS**    The attribute is always present with a value

**EMPTY**     The attribute is always present without any value (attribute sent zero length)

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- VNAP The attribute is always present and its Value is Not Always Present (attribute sent zero length if no value is present)
- ANAP The attribute is present under specified condition – if present then it will always have a value

The abbreviations used in the Module table for the column "Source" are:

- AUTO The attribute value is generated automatically.
- CONFIG The attribute value source is a configurable parameter.
- COPY The attribute value source is another SOP instance
- FIXED The attribute value is hard-coded in the application
- IMPLICIT The attribute value source is a user-implicit setting
- MPPS The attribute value is the same as that use for Modality Performed Procedure Step
- MWL The attribute value source is a Modality Worklist
- USER The attribute value source is explicit user input

### 11.1.1.1. List of created SOP Classes

Table 291: List of created SOP Classes

| SOP Class Name                                  | SOP Class UID                 |
|---|-------------------------------|
| Encapsulated PDF Storage SOP Class              | 1.2.840.10008.5.1.4.1.1.104.1 |
| Secondary Capture Image Storage SOP Class       | 1.2.840.10008.5.1.4.1.1.7     |
| Key Object Selection Document Storage SOP Class | 1.2.840.10008.5.1.4.1.1.88.59 |

### 11.1.1.2. Encapsulated PDF Storage SOP Class

Table 292: IOD of Created Encapsulated PDF Storage SOP Class Instances

| Information Entity | Module                       | Presence Of Module |
|--------------------|------------------------------|--------------------|
| Patient            | Patient                      | ALWAYS             |
| Study              | General Study                | ALWAYS             |
|                    | Patient Study Module         | CONDITIONAL        |
| Series             | Encapsulated Document Series | ALWAYS             |
| Equipment          | General Equipment            | ALWAYS             |
|                    | SC Equipment                 | ALWAYS             |
| Image              | Encapsulated Document        | ALWAYS             |
|                    | SOP Common                   | ALWAYS             |

**Table 293: Patient Module**

| Attribute Name       | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------|-----------|----|-------|-------------------|--------|---------|
| Patient's Name       | 0010,0010 | PN |       | ALWAYS            | COPY   | -       |
| Patient ID           | 0010,0020 | LO |       | ALWAYS            | COPY   | -       |
| Issuer of Patient ID | 0010,0021 | LO |       | ANAP              | AUTO   | -       |
| Patient's Birth Date | 0010,0030 | DA |       | VNAP              | COPY   | -       |
| Patient's Birth Time | 0010,0032 | TM |       | ANAP              | COPY   | -       |
| Patient's Sex        | 0010,0040 | CS |       | ALWAYS            | COPY   | -       |
| Other Patient Names  | 0010,1001 | PN |       | ANAP              | COPY   | -       |
| Ethnic Group         | 0010,2160 | SH |       | ANAP              | COPY   | -       |
| Patient Comments     | 0010,4000 | LT |       | ANAP              | COPY   |         |

**Table 294: General Study Module**

| Attribute Name             | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------------|-----------|----|-------|-------------------|--------|---------|
| Study Date                 | 0008,0020 | DA |       | ALWAYS            | AUTO   | -       |
| Study Time                 | 0008,0030 | TM |       | ALWAYS            | AUTO   | -       |
| Accession Number           | 0008,0050 | SH |       | ALWAYS            | AUTO   | -       |
| Referring Physician's Name | 0008,0090 | PN |       | ALWAYS            | COPY   | -       |
| Study Description          | 0008,1030 | LO |       | ANAP              | COPY   |         |
| Study Instance UID         | 0020,000D | UI |       | ALWAYS            | COPY   | -       |
| Study ID                   | 0020,0010 | SH |       | VNAP              | COPY   | -       |

**Table 295: Patient Study Module**

| Attribute Name                  | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------------|-----------|----|-------|-------------------|--------|---------|
| Admitting Diagnoses Description | 0008,1080 | LO |       | ANAP              | COPY   | -       |



**Table 296: Encapsulated Document Series Module**

| Attribute Name      | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------|-----------|----|-------|-------------------|--------|---------|
| Modality            | 0008,0060 | CS |       | ALWAYS            | AUTO   | -       |
| Series Instance UID | 0020,000E | UI |       | ALWAYS            | AUTO   | -       |
| Series Number       | 0020,0011 | IS |       | ALWAYS            | AUTO   | -       |

**Table 297: General Equipment Module**

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------|-----------|----|-------|-------------------|--------|---------|
| Manufacturer              | 0008,0070 | LO |       | ALWAYS            | AUTO   |         |
| Institution Name          | 0008,0080 | LO |       | ALWAYS            | COPY   |         |
| Station Name              | 0008,1010 | SH |       | ALWAYS            | AUTO   |         |
| Manufacturer's Model Name | 0008,1090 | LO |       | ALWAYS            | AUTO   |         |
| Software Versions         | 0018,1020 | LO |       | ALWAYS            | AUTO   |         |

**Table 298: SC Equipment Module**

| Attribute Name  | Tag       | VR | Value | Presence of Value | Source | Comment |
|-----------------|-----------|----|-------|-------------------|--------|---------|
| Modality        | 0008,0060 | CS |       | ANAP              | AUTO   | -       |
| Conversion Type | 0008,0064 | CS | WSD   | ALWAYS            | AUTO   | -       |

**Table 299: Encapsulated Document Module**

| Attribute Name             | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------------|-----------|----|-------|-------------------|--------|---------|
| Content Date               | 0008,0023 | DA |       | VNAP              | AUTO   | -       |
| Acquisition DateTime       | 0008,002A | DT |       | VNAP              | AUTO   | -       |
| Content Time               | 0008,0033 | TM |       | VNAP              | AUTO   | -       |
| Instance Number            | 0020,0013 | IS |       | ALWAYS            | AUTO   | -       |
| Burned In Annotation       | 0028,0301 | CS |       | ALWAYS            | AUTO   | -       |
| Concept Name Code Sequence | 0040,A043 | SQ |       | VNAP              | AUTO   | -       |
| Verification Flag          | 0040,A493 | CS |       | ANAP              | AUTO   | -       |
| Document Title             | 0042,0010 | ST |       | VNAP              | AUTO   | -       |
| Encapsulated Document      | 0042,0011 | OB |       | ALWAYS            | AUTO   | -       |

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|------------------------------------|-----------|----|-----------------|--------|------|---|
| MIME Type of Encapsulated Document | 0042,0012 | LO | application/pdf | ALWAYS | AUTO | - |
|------------------------------------|-----------|----|-----------------|--------|------|---|

**Table 300: SOP Common Module**

| Attribute Name         | Tag       | VR | Value                         | Presence of Value | Source | Comment |
|------------------------|-----------|----|-------------------------------|-------------------|--------|---------|
| Specific Character Set | 0008,0005 | CS |                               | ANAP              | COPY   |         |
| SOP Class UID          | 0008,0016 | UI | 1.2.840.10008.5.1.4.1.1.104.1 | ALWAYS            | FIXED  | -       |
| SOP Instance UID       | 0008,0018 | UI |                               | ALWAYS            | AUTO   | -       |
| Instance Number        | 0020,0013 | IS |                               | ANAP              | AUTO   |         |

### 11.1.1.3. Secondary Capture Image Storage SOP Class

**Table 301: IOD of Created Secondary Capture Image Storage SOP Class Instances**

| Information Entity | Module                                | Presence Of Module |
|--------------------|---------------------------------------|--------------------|
| Patient            | Patient Module                        | ALWAYS             |
| Study              | General Study Module                  | ALWAYS             |
|                    | Patient Study Module                  | CONDITIONAL        |
| Series             | General Series Module                 | ALWAYS             |
| Equipment          | General Equipment Module              | ALWAYS             |
| Equipment          | SC Equipment Module                   | ALWAYS             |
| Acquisition        | General Acquisition Module            | ALWAYS             |
| Image              | General Image Module                  | ALWAYS             |
|                    | SC Image Module                       | ALWAYS             |
|                    | VOI LUT Module                        | ALWAYS             |
|                    | Image Pixel Module                    | ALWAYS             |
|                    | SOP Common Module                     | ALWAYS             |
|                    | Extended DICOM and Private attributes |                    |

**Table 302: Patient Module**

| Attribute Name       | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------|-----------|----|-------|-------------------|--------|---------|
| Patient's Name       | 0010,0010 | PN |       | ALWAYS            | COPY   | -       |
| Patient ID           | 0010,0020 | LO |       | ALWAYS            | COPY   | -       |
| Issuer of Patient ID | 0010,0021 | LO |       | ANAP              | COPY   | -       |
| Patient's Birth Date | 0010,0030 | DA |       | VNAP              | COPY   | -       |

|               |           |    |  |        |      |   |
|---------------|-----------|----|--|--------|------|---|
| Patient's Sex | 0010,0040 | CS |  | ALWAYS | COPY | - |
|---------------|-----------|----|--|--------|------|---|

**Table 303: General Study Module**

| Attribute Name             | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------------|-----------|----|-------|-------------------|--------|---------|
| Study Date                 | 0008,0020 | DA |       | ALWAYS            | COPY   | -       |
| Study Time                 | 0008,0030 | TM |       | ALWAYS            | COPY   | -       |
| Accession Number           | 0008,0050 | SH |       | ALWAYS            | AUTO   | -       |
| Referring Physician's Name | 0008,0090 | PN |       | VNAP              | COPY   | -       |
| Study Description          | 0008,1030 | LO |       | ANAP              | COPY   | -       |
| Study Instance UID         | 0020,000D | UI |       | ALWAYS            | COPY   | -       |
| Study ID                   | 0020,0010 | SH |       | VNAP              | AUTO   | -       |

**Table 304: Patient Study Module**

| Attribute Name                  | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------------|-----------|----|-------|-------------------|--------|---------|
| Admitting Diagnoses Description | 0008,1080 | LO |       | ANAP              | COPY   | -       |

**Table 305: General Series Module**

| Attribute Name              | Tag       | VR | Value | Presence of Value | Source | Comment |
|-----------------------------|-----------|----|-------|-------------------|--------|---------|
| Series Date                 | 0008,0021 | DA |       | ANAP              | AUTO   | -       |
| Series Time                 | 0008,0031 | TM |       | ANAP              | AUTO   | -       |
| Modality                    | 0008,0060 | CS |       | ALWAYS            | AUTO   | -       |
| Performing Physicians' Name | 0008,1050 | PN |       | VNAP              | AUTO   | -       |
| Series Instance UID         | 0020,000E | UI |       | ALWAYS            | AUTO   | -       |
| Series Number               | 0020,0011 | IS |       | VNAP              | AUTO   | -       |

**Table 306: General Equipment Module**

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source     | Comment |
|---------------------------|-----------|----|-------|-------------------|------------|---------|
| Manufacturer              | 0008,0070 | LO |       | ALWAYS            | COPY, AUTO | -       |
| Institution Name          | 0008,0080 | LO |       | ALWAYS            | COPY       | -       |
| Station Name              | 0008,1010 | SH |       | ALWAYS            | AUTO       | -       |
| Manufacturer's Model Name | 0008,1090 | LO |       | ALWAYS            | AUTO       | -       |
| Software Version          | 0018,1020 | LO |       | ALWAYS            | AUTO       | -       |

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**Table 307: SC Equipment Module**

| Attribute Name  | Tag       | VR | Value | Presence of Value | Source | Comment |
|-----------------|-----------|----|-------|-------------------|--------|---------|
| Modality        | 0008,0060 | CS | US    | ANAP              | AUTO   | -       |
| Conversion Type | 0008,0064 | CS | WSD   | ALWAYS            | FIXED  | -       |

**Table 308: General Acquisition Module**

| Attribute Name       | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------|-----------|----|-------|-------------------|--------|---------|
| Acquisition Date     | 0008,0022 | DA |       | ANAP              | COPY   |         |
| Acquisition Time     | 0008,0032 | TM |       | ANAP              | COPY   |         |
| Acquisition DateTime | 0008,002A | DT |       | ANAP              | COPY   |         |
| Acquisition Duration | 0018,9073 | FD |       | ANAP              | COPY   |         |
| Acquisition Number   | 0020,0012 | IS |       | ANAP              | COPY   |         |

**Table 309: General Image Module**

| Attribute Name          | Tag       | VR | Value   | Presence of Value | Source | Comment |
|-------------------------|-----------|----|---|-------------------|--------|---------|
| Image Type              | 0008,0008 | CS | <b>Value 1:</b><br>DERIVED,<br><b>Value 2:</b><br>SECONDARY | ANAP              | AUTO   | -       |
| Content Date            | 0008,0023 | DA |   | VNAP              | AUTO   | -       |
| Content Time            | 0008,0033 | TM |   | VNAP              | AUTO   | -       |
| Instance Number         | 0020,0013 | IS |   | VNAP              | AUTO   | -       |
| Patient Orientation     | 0020,0020 | CS |   | ANAP              | AUTO   | -       |
| Lossy Image Compression | 0028,2110 | CS |   | VNAP              | AUTO   | -       |

**Table 310: Image Pixel Module**

| Attribute Name             | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------------|-----------|----|-------|-------------------|--------|---------|
| Samples per Pixel          | 0028,0002 | US |       | ALWAYS            | AUTO   | -       |
| Photometric Interpretation | 0028,0004 | CS |       | ALWAYS            | AUTO   | -       |
| Planar Configuration       | 0028,0006 | US |       | ALWAYS            | AUTO   | -       |

|                      |           |           |  |        |      |   |
|----------------------|-----------|-----------|--|--------|------|---|
| Rows                 | 0028,0010 | US        |  | ALWAYS | AUTO | - |
| Columns              | 0028,0011 | US        |  | ALWAYS | AUTO | - |
| Pixel Aspect Ratio   | 0028,0034 | IS        |  | ALWAYS | AUTO | - |
| Bits Allocated       | 0028,0100 | US        |  | ALWAYS | AUTO | - |
| Bits Stored          | 0028,0101 | US        |  | ALWAYS | AUTO | - |
| High Bit             | 0028,0102 | US        |  | ALWAYS | AUTO | - |
| Pixel Representation | 0028,0103 | US        |  | ALWAYS | AUTO | - |
| Pixel Data           | 7FE0,0010 | OW<br>/OB |  | ALWAYS | AUTO | - |

**Table 311: SC Image Module**

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------|-----------|----|-------|-------------------|--------|---------|
| Date of Secondary Capture | 0018,1012 | DA |       | ANAP              | AUTO   |         |
| Time of Secondary Capture | 0018,1014 | TM |       | ANAP              | AUTO   |         |

**Table 312: VOI LUT Module**

| Attribute Name | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------|-----------|----|-------|-------------------|--------|---------|
| Window Center  | 0028,1050 | DS |       | ANAP              | AUTO   |         |
| Window Width   | 0028,1051 | DS |       | ANAP              | AUTO   |         |

**Table 313: SOP Common Module**

| Attribute Name         | Tag       | VR | Value                     | Presence of Value | Source | Comment   |
|------------------------|-----------|----|---------------------------|-------------------|--------|---|
| Specific Character Set | 0008,0005 | CS |                           | ALWAYS            | COPY   | Required if expanded/replacement character set used |
| Instance Creation Date | 0008,0012 | DA |                           | ANAP              | AUTO   | -   |
| Instance Creation Time | 0008,0013 | TM |                           | ANAP              | AUTO   | -   |
| SOP Class UID          | 0008,0016 | UI | 1.2.840.10008.5.1.4.1.1.7 | ALWAYS            | AUTO   | -   |
| SOP Instance UID       | 0008,0018 | UI |                           | ALWAYS            | AUTO   | -   |
| Instance Number        | 0020,0013 | IS |                           | ANAP              | AUTO   | -   |

#### 11.1.1.4. Key Object Selection Document Storage SOP Class

The supported Module and their tags are mentioned below.

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**Table 314: Key Object Selection Document Storage SOP Class - Supported Modules**

| Information Entity | Module                     | Presence Of Module |
|--------------------|----------------------------|--------------------|
| Patient            | Patient                    | ALWAYS             |
| Study              | General Study              | ALWAYS             |
| Series             | Key Object Document Series | ALWAYS             |
| Equipment          | General Equipment          | ALWAYS             |
| Document           | Key Object Document        | ALWAYS             |
|                    | SR Document Content        | ALWAYS             |
|                    | SOP Common                 | ALWAYS             |

**Table 315: Patient Module**

| Attribute Name       | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------|-----------|----|-------|-------------------|--------|---------|
| Patient's Name       | 0010,0010 | PN |       | ALWAYS            | COPY   |         |
| Patient ID           | 0010,0020 | LO |       | ALWAYS            | COPY   |         |
| Issuer of Patient ID | 0010,0021 | LO |       | ANAP              | COPY   |         |
| Patient's Birth Date | 0010,0030 | DA |       | VNAP              | COPY   |         |
| Patient's Sex        | 0010,0040 | CS |       | ALWAYS            | COPY   |         |

**Table 316: General Study Module**

| Attribute Name             | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------------|-----------|----|-------|-------------------|--------|---------|
| Study Date                 | 0080,0020 | DA |       | ALWAYS            | COPY   |         |
| Study Time                 | 0008,0030 | TM |       | ALWAYS            | COPY   |         |
| Accession Number           | 0008,0050 | SH |       | ALWAYS            | COPY   |         |
| Referring Physician's Name | 0008,0090 | PN |       | ALWAYS            | COPY   |         |
| Study Instance UID         | 0020,000D | UI |       | ALWAYS            | AUTO   |         |
| Study ID                   | 0020,0010 | SH |       | VNAP              | COPY   |         |

**Table 317: Key Object Document Series Module**

| Attribute Name                               | Tag       | VR | Value | Presence of Value | Source | Comment |
|--|-----------|----|-------|-------------------|--------|---------|
| Referenced Performed Procedure Step Sequence | 0008,1111 | SQ |       | EMPTY             | AUTO   |         |
| Modality                                     | 0008,0060 | CS | KO    | ALWAYS            | FIXED  |         |
| Series Instance UID                          | 0020,000E | UI |       | ALWAYS            | AUTO   |         |
| Series Number                                | 0020,0011 | IS | 1     | ALWAYS            | FIXED  |         |

**Table 318: General Equipment Module**

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------|-----------|----|-------|-------------------|--------|---------|
| Manufacturer              | 0008,0070 | LO |       | ALWAYS            | AUTO   | -       |
| Institution Name          | 0008,0080 | LO |       | ALWAYS            | COPY   | -       |
| Station Name              | 0008,1010 | SH |       | ALWAYS            | AUTO   | -       |
| Manufacturer's Model Name | 0008,1090 | LO |       | ALWAYS            | AUTO   | -       |
| Software Version          | 0018,1020 | LO |       | ALWAYS            | AUTO   | -       |

**Table 319: Key Object Document Module**

| Attribute Name                                | Tag       | VR | Value | Presence of Value | Source | Comment |
|---|-----------|----|-------|-------------------|--------|---------|
| Content Date                                  | 0008,0023 | DA |       | ALWAYS            | AUTO   |         |
| Content Time                                  | 0008,0033 | TM |       | ALWAYS            | AUTO   |         |
| Instance Number                               | 0020,0013 | IS |       | ALWAYS            | AUTO   |         |
| Current Requested Procedure Evidence Sequence | 0040,A375 | SQ |       | ALWAYS            | AUTO   |         |
| >Referenced Series Sequence                   | 0008,1115 | SQ |       | ALWAYS            | AUTO   |         |
| >>Referenced SOP Sequence                     | 0008,1199 | SQ |       | ALWAYS            | AUTO   |         |
| >>>Referenced SOP Class UID                   | 0008,1150 | UI |       | ALWAYS            | AUTO   |         |

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|--------------------------------|-----------|----|--|--------|------|--|
| >>>Referenced SOP Instance UID | 0008,1155 | UI |  | ALWAYS | AUTO |  |
| >>Series Instance UID          | 0020,000E | UI |  | ALWAYS | AUTO |  |
| >Study Instance UID            | 0020,000D | UI |  | ALWAYS | AUTO |  |

**Table 320: SR Document Content Module**

| Attribute Name              | Tag       | VR | Value             | Presence of Value | Source | Comment                         |
|-----------------------------|-----------|----|-------------------|-------------------|--------|---------------------------------|
| Value Type                  | 0040,A040 | CS | CONTAINER         | ALWAYS            | FIXED  |                                 |
| Concept Name Code Sequence  | 0040,A043 | SQ |                   | ALWAYS            | AUTO   |                                 |
| > Code Value                | 0008,0100 | SH |                   | ALWAYS            | AUTO   |                                 |
| > Coding Scheme Designator  | 0008,0102 | SH | DCM               | ALWAYS            | FIXED  |                                 |
| > Code Meaning              | 0008,0104 | LO |                   | ALWAYS            | AUTO   |                                 |
| Continuity of Content       | 0040,A050 | CS |                   | ALWAYS            | AUTO   |                                 |
| Content Template Sequence   | 0040,A504 | SQ |                   | ALWAYS            | AUTO   |                                 |
| >Mapping Resource           | 0008,0105 | CS | DCMR              | ALWAYS            | FIXED  |                                 |
| >Template Identifier        | 0040,DB00 | CS | 2010              | ALWAYS            | FIXED  |                                 |
| Content Sequence            | 0040,A730 | SQ |                   | ALWAYS            | AUTO   |                                 |
| >Relationship Type          | 0040,A010 | CS | HAS CONCEPT MOD   | ALWAYS            | FIXED  |                                 |
| >Value Type                 | 0040,A040 | CS | CODE              | ALWAYS            | FIXED  |                                 |
| >Concept Name Code Sequence | 0040,A043 | SQ |                   | ALWAYS            | AUTO   |                                 |
| >>Code Value                | 0008,0100 | SH |                   | ALWAYS            | AUTO   |                                 |
| >>Coding Scheme Designator  | 0008,0102 | SH | DCM               | ALWAYS            | FIXED  |                                 |
| >>Code Meaning              | 0008,0104 | LO |                   | ALWAYS            | AUTO   |                                 |
| >Concept Code Sequence      | 0040,A168 | SQ |                   | ANAP              | AUTO   | Present only for quality reason |
| >>Code Value                | 0008,0100 | SH | 111207            | ALWAYS            | FIXED  |                                 |
| >>Coding Scheme Designator  | 0008,0102 | SH | DCM               | ALWAYS            | FIXED  |                                 |
| >>Code Meaning              | 0008,0104 | LO | Image Artifact(s) | ALWAYS            | FIXED  |                                 |
| >Relationship Type          | 0040,A010 | CS | CONTAINS          | ALWAYS            | FIXED  |                                 |
| >Value Type                 | 0040,A040 | CS | IMAGE             | ALWAYS            | FIXED  |                                 |
| >Referenced SOP Sequence    | 0008,1199 | SQ |                   | ALWAYS            | AUTO   |                                 |

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|                               |           |    |  |        |      |  |
|-------------------------------|-----------|----|--|--------|------|--|
| >> Referenced SOP Class UID   | 0008,1150 | UI |  | ALWAYS | AUTO |  |
| >>Referenced SOP Instance UID | 0008,1155 | UI |  | ALWAYS | AUTO |  |

**Table 321: SOP Common Module**

| Attribute Name         | Tag       | VR | Value                         | Presence of Value | Source | Comment |
|------------------------|-----------|----|-------------------------------|-------------------|--------|---------|
| Specific Character Set | 0008,0005 | CS |                               | VNAP              | COPY   |         |
| SOP Class UID          | 0008,0016 | UI | 1.2.840.10008.5.1.4.1.1.88.59 | ALWAYS            | FIXED  |         |
| SOP Instance UID       | 0008,0018 | UI |                               | ALWAYS            | AUTO   |         |
| Instance Number        | 0020,0013 | IS | 1                             | ALWAYS            | FIXED  |         |

**Table 322: Private/ Additional Module**

| Attribute Name              | Tag       | VR | Value | Presence of Value | Source | Comment |
|-----------------------------|-----------|----|-------|-------------------|--------|---------|
| Patient's Telephone Numbers | 0010,2154 | SH |       | ANAP              | COPY   |         |

### 11.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

**Table 323: Functionalities**

| Functionality | Type1 | Optional | Private |
|---------------|-------|----------|---------|
| Viewer        | X     |          |         |

### 11.1.3. Attribute Mapping

Not applicable.

### 11.1.4. Coerced/Modified fields

Not applicable.

## 11.2. Data Dictionary of Private Attributes

Not applicable.

## 11.3. Coded Terminology and Templates

Not applicable.

### 11.3.1. Context Groups

Not applicable.

### 11.3.2. Template Specifications

Not applicable.

### 11.3.3. Private code definitions

Not applicable.

## 11.4. Grayscale Image consistency

Not applicable.

## 11.5. Standard Extended/Specialized/Private SOPs

Not applicable.

**Table 324: List of created SOP Classes**

| SOP Class Name                            | SOP Class UID             |
|---|---------------------------|
| Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7 |

### 11.5.1. Standard Extended/Specialized/Private SOP Instance

#### 11.5.1.1. Secondary Capture Image Storage SOP Class

**Table 325: Extended DICOM and private attributes for Secondary Capture Image Storage SOP Class Instances**

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------|-----------|----|-------|-------------------|--------|---------|
| Patient Telephone Numbers | 0010,2154 | SH |       | ANAP              | AUTO   |         |

## 11.6. Private Transfer Syntaxes

Not applicable.

## 12. Annexes of application “ECG Viewer Applet”

### 12.1. Supported IOD’s

This section specifies each IOD accepted and / or created by ECG Viewer Applet.

**ACCEPTED**                    The applicable IOD is accepted for storage in the repository of the hosting platform and supported for import in ECG Viewer Applet for viewing and analysis.

**CREATED**                    The ECG Viewer Applet does not create SOP Instances.

**Table 326: Supported IOD’s**

| IOD                              |                               | Support  |         |
|----------------------------------|-------------------------------|----------|---------|
| Name                             | UID                           | ACCEPTED | CREATED |
| Twelve Lead ECG Waveform Storage | 1.2.840.10008.5.1.4.1.1.9.1.1 | Yes      | No      |
| General ECG Waveform Storage     | 1.2.840.10008.5.1.4.1.1.9.1.2 | Yes      | No      |

## 13. Annexes of application “Image Viewer Applet”

### 13.1. Supported IOD’s

This section specifies each IOD accepted and / or created by Image Viewer Applet.

**ACCEPTED**                    The applicable IOD is accepted for storage in the repository of the hosting platform and supported for import in Image Viewer Applet for viewing and analysis.

**CREATED**                    The Image Viewer Applet supports generation of derived data by using the applicable IOD and is able to store this data in the repository of the hosting platform.

**Table 327: Supported IOD’s**

| IOD  |                              | Support  |         |
|--|------------------------------|----------|---------|
| Name   | UID                          | ACCEPTED | CREATED |
| Philips Private X-Ray Image Storage                        | 1.3.46.670589.2.3.1.1        | Yes      | No      |
| Philips Private Reconstructed X-ray Storage                | 1.3.46.670589.2.4.1.1        | Yes      | No      |
| Philips Private ViewForum CT Synthetic Image Storage       | 1.3.46.670589.5.0.9          | Yes      | No      |
| Philips Private ViewForum MR Synthetic Image Storage       | 1.3.46.670589.5.0.10         | Yes      | No      |
| Philips Private ViewForum CX Synthetic Image Storage       | 1.3.46.670589.5.0.12         | Yes      | No      |
| Positron Emission Tomography Image Storage                 | 1.2.840.10008.5.1.4.1.1.128  | Yes      | No      |
| Nuclear Medicine Image Storage                             | 1.2.840.10008.5.1.4.1.1.20   | Yes      | No      |
| X-Ray Radiofluoroscopic Image Storage                      | 1.2.840.10008.5.1.4.1.1.12.2 | Yes      | No      |
| X-Ray Angiographic Image Storage                           | 1.2.840.10008.5.1.4.1.1.12.1 | Yes      | No      |
| Ultrasound Image Storage (Retired)                         | 1.2.840.10008.5.1.4.1.1.6    | Yes      | No      |
| Ultrasound Image Storage                                   | 1.2.840.10008.5.1.4.1.1.6.1  | Yes      | No      |
| Secondary Capture Image Storage                            | 1.2.840.10008.5.1.4.1.1.7    | Yes      | Yes     |
| Multi-frame Single Bit Secondary Capture Image Storage     | 1.2.840.10008.5.1.4.1.1.7.1  | Yes      | No      |
| Multi-frame Grayscale Byte Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.2  | Yes      | No      |
| Multi-frame Grayscale Word Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.3  | Yes      | No      |
| Multi-frame True Color Secondary Capture Image Storage     | 1.2.840.10008.5.1.4.1.1.7.4  | Yes      | No      |
| MR Image Storage   | 1.2.840.10008.5.1.4.1.1.4    | Yes      | No      |

|  |                               |     |    |
|--|-------------------------------|-----|----|
| CT Image Storage                               | 1.2.840.10008.5.1.4.1.1.2     | Yes | No |
| Ultrasound Multi-frame Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.3     | Yes | No |
| Ultrasound Multi-frame Image Storage           | 1.2.840.10008.5.1.4.1.1.3.1   | Yes | No |
| Computed Radiography Image Storage             | 1.2.840.10008.5.1.4.1.1.1     | Yes | No |
| Digital X-Ray Image Storage – for Presentation | 1.2.840.10008.5.1.4.1.1.1.1   | Yes | No |
| Digital X-Ray Image Storage – for Processing   | 1.2.840.10008.5.1.4.1.1.1.1.1 | Yes | No |
| MG Mammography for presentation                | 1.2.840.10008.5.1.4.1.1.1.2   | Yes | No |
| MG Mammography for processing                  | 1.2.840.10008.5.1.4.1.1.1.2.1 | Yes | No |

### 13.1.1. Contents of Created IOD's

This section specifies in detail the attribute contents of created data objects. Attributes are grouped together by its corresponding module as specified by DICOM standard. Philips private attributes are excluded for specification.

Abbreviations used in the Module table for the column "Presence of Value" are:

- ALWAYS The attribute is always present with a value
- EMPTY The attribute is always present without any value (attribute sent zero length)
- VNAP The attribute is always present and its Value is Not Always Present (attribute sent zero length if no value is present)
- ANAP The attribute is present under specified condition – if present then it will always have a value

The abbreviations used in the Module table for the column "Source" are:

- AUTO The attribute value is generated automatically
- CONFIG The attribute value source is a configurable parameter
- COPY The attribute value source is another SOP instance
- FIXED The attribute value is hard-coded in the application
- IMPLICIT The attribute value source is a user-implicit setting
- MPPS The attribute value is the same as that use for Modality Performed Procedure Step
- MWL The attribute value source is a Modality Worklist
- USER The attribute value source is explicit user input

#### 13.1.1.1. List of created SOP Classes

Table 328: List of created SOP Classes

| SOP Class Name                            | SOP Class UID             |
|---|---------------------------|
| Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7 |

## 13.1.1.2. Secondary Capture Image Storage SOP Class

Table 329: IOD of Created Secondary Capture Image Storage SOP Class Instances

| Information Entity | Module                   | Presence Of Module |
|--------------------|--------------------------|--------------------|
| Patient            | Patient Module           | ALWAYS             |
| Study              | General Study Module     | ALWAYS             |
| Study              | Patient Study Module     | CONDITIONAL        |
| Series             | General Series Module    | ALWAYS             |
| Equipment          | General Equipment Module | ALWAYS             |
| Equipment          | SC Equipment Module      | ALWAYS             |
| Image              | General Image Module     | ALWAYS             |
|                    | Image Pixel Module       | ALWAYS             |
|                    | VOI LUT Module           | ALWAYS             |
|                    | SOP Common Module        | ALWAYS             |

Table 330: Patient Module

| Attribute Name       | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------|-----------|----|-------|-------------------|--------|---------|
| Patient's Name       | 0010,0010 | PN |       | ALWAYS            | COPY   | -       |
| Patient ID           | 0010,0020 | LO |       | ALWAYS            | COPY   | -       |
| Issuer of Patient ID | 0010,0021 | LO |       | ANAP              | COPY   | -       |
| Patient's Birth Date | 0010,0030 | DA |       | VNAP              | COPY   | -       |
| Patient's Sex        | 0010,0040 | CS |       | ALWAYS            | COPY   | -       |
| Ethnic Group         | 0010,2160 | SH |       | ANAP              | COPY   | -       |

Table 331: General Study Module

| Attribute Name             | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------------|-----------|----|-------|-------------------|--------|---------|
| Study Date                 | 0008,0020 | DA |       | ALWAYS            | COPY   | -       |
| Study Time                 | 0008,0030 | TM |       | ALWAYS            | COPY   | -       |
| Accession Number           | 0008,0050 | SH |       | ALWAYS            | AUTO   | -       |
| Referring Physician's Name | 0008,0090 | PN |       | ALWAYS            | COPY   | -       |
| Study Description          | 0008,1030 | LO |       | ANAP              | COPY   | -       |
| Study Instance UID         | 0020,000D | UI |       | ALWAYS            | COPY   | -       |
| Study ID                   | 0020,0010 | SH |       | VNAP              | COPY   | -       |

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**Table 332: Patient Study Module**

| Attribute Name                  | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------------|-----------|----|-------|-------------------|--------|---------|
| Admitting Diagnoses Description | 0008,1080 | LO |       | ANAP              | COPY   | -       |

**Table 333: General Series Module**

| Attribute Name              | Tag       | VR | Value | Presence of Value | Source | Comment |
|-----------------------------|-----------|----|-------|-------------------|--------|---------|
| Series Date                 | 0008,0021 | DA |       | ANAP              | AUTO   | -       |
| Series Time                 | 0008,0031 | TM |       | ANAP              | AUTO   | -       |
| Modality                    | 0008,0060 | CS |       | ALWAYS            | AUTO   | -       |
| Performing Physicians' Name | 0008,1050 | PN |       | ANAP              | AUTO   | -       |
| Series Instance UID         | 0020,000E | UI |       | ALWAYS            | AUTO   | -       |
| Series Number               | 0020,0011 | IS |       | VNAP              | AUTO   | -       |
| Body Part Examined          | 0018,0015 | CS |       | ANAP              | COPY   | -       |

**Table 334: General Equipment Module**

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------|-----------|----|-------|-------------------|--------|---------|
| Manufacturer              | 0008,0070 | LO |       | ALWAYS            | AUTO   | -       |
| Institution Name          | 0008,0080 | LO |       | ALWAYS            | AUTO   | -       |
| Station Name              | 0008,1010 | SH |       | ALWAYS            | AUTO   | -       |
| Manufacturer's Model Name | 0008,1090 | LO |       | ALWAYS            | AUTO   | -       |
| Software Versions         | 0018,1020 | LO | 8.0.0 | ALWAYS            | AUTO   | -       |

**Table 335: SC Equipment Module**

| Attribute Name  | Tag       | VR | Value | Presence of Value | Source | Comment |
|-----------------|-----------|----|-------|-------------------|--------|---------|
| Modality        | 0008,0060 | CS |       | ANAP              | AUTO   | -       |
| Conversion Type | 0008,0064 | CS | WSD   | ALWAYS            | AUTO   | -       |

**Table 336: General Image Module**

| Attribute Name          | Tag       | VR | Value  | Presence of Value | Source | Comment |
|-------------------------|-----------|----|--|-------------------|--------|---------|
| Image Type              | 0008,0008 | CS | Value 1:<br>DERIVED<br>Value 2:<br>SECONDARY | ANAP              | AUTO   | -       |
| Acquisition Date        | 0008,0022 | DA |  | ANAP              | AUTO   | -       |
| Content Date            | 0008,0023 | DA |  | VNAP              | AUTO   | -       |
| Acquisition Time        | 0008,0032 | TM |  | ANAP              | AUTO   | -       |
| Content Time            | 0008,0033 | TM |  | VNAP              | AUTO   | -       |
| Instance Number         | 0020,0013 | IS |  | VNAP              | AUTO   | -       |
| Patient Orientation     | 0020,0020 | CS |  | ANAP              | AUTO   | -       |
| Lossy Image Compression | 0028,2110 | CS |  | VNAP              | AUTO   | -       |

**Table 337: Image Pixel Module**

| Attribute Name             | Tag       | VR        | Value | Presence of Value | Source | Comment |
|----------------------------|-----------|-----------|-------|-------------------|--------|---------|
| Samples per Pixel          | 0028,0002 | US        |       | ALWAYS            | AUTO   | -       |
| Photometric Interpretation | 0028,0004 | CS        |       | ALWAYS            | AUTO   | -       |
| Planar Configuration       | 0028,0006 | US        |       | ALWAYS            | AUTO   | -       |
| Rows                       | 0028,0010 | US        |       | ALWAYS            | AUTO   | -       |
| Columns                    | 0028,0011 | US        |       | ALWAYS            | AUTO   | -       |
| Pixel Aspect Ratio         | 0028,0034 | IS        |       | ALWAYS            | AUTO   | -       |
| Bits Allocated             | 0028,0100 | US        |       | ALWAYS            | AUTO   | -       |
| Bits Stored                | 0028,0101 | US        |       | ALWAYS            | AUTO   | -       |
| High Bit                   | 0028,0102 | US        |       | ALWAYS            | AUTO   | -       |
| Pixel Representation       | 0028,0103 | US        |       | ALWAYS            | AUTO   | -       |
| Pixel Data                 | 7FE0,0010 | OW/<br>OB |       | ALWAYS            | AUTO   | -       |

**Table 338: VOI LUT Module**

| Attribute Name | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------|-----------|----|-------|-------------------|--------|---------|
| Window Center  | 0028,1050 | DS |       | ANAP              | AUTO   |         |
| Window Width   | 0028,1051 | DS |       | ANAP              | AUTO   |         |



**Table 339: SOP Common Module**

| Attribute Name         | Tag       | VR | Value                     | Presence of Value | Source | Comment   |
|------------------------|-----------|----|---------------------------|-------------------|--------|---|
| Specific Character Set | 0008,0005 | CS |                           | VNAP              | COPY   | Required if expanded/replacement character set used |
| Instance Creation Date | 0008,0012 | DA |                           | ANAP              | AUTO   | -   |
| Instance Creation Time | 0008,0013 | TM |                           | ANAP              | AUTO   | -   |
| SOP Class UID          | 0008,0016 | UI | 1.2.840.10008.5.1.4.1.1.7 | ALWAYS            | FIXED  | -   |
| SOP Instance UID       | 0008,0018 | UI |                           | ALWAYS            | AUTO   | -   |
| Instance Number        | 0020,0013 | IS |                           | ANAP              | AUTO   | -   |

### 13.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

**Table 340: Functionalities**

| Functionality | Type1 | Optional | Private |
|---------------|-------|----------|---------|
| Viewer        | X     |          |         |

### 13.1.3. Attribute Mapping

Not applicable.

### 13.1.4. Coerced/Modified fields

Not applicable.

## 13.2. Data Dictionary of Private Attributes

Not applicable.

## 13.3. Coded Terminology and Templates

Not applicable.

### 13.3.1. Context Groups

Not applicable.

### 13.3.2. Template Specifications

Not applicable.

### 13.3.3. Private code definitions

Not applicable.

### 13.4. Grayscale Image consistency

Not applicable.

### 13.5. Standard Extended/Specialized/Private SOPs

Not applicable.

Table 341: List of created SOP Classes

| SOP Class Name                            | SOP Class UID             |
|---|---------------------------|
| Secondary Capture Image Storage SOP Class | 1.2.840.10008.5.1.4.1.1.7 |

### 13.5.1. Standard Extended/Specialized/Private SOP Instance

#### 13.5.1.1. Secondary Capture Image Storage SOP Class

Table 342: Extended DICOM and private attributes for Secondary Capture Image Storage SOP Class Instances

| Attribute Name            | Tag       | VR | Value | Presence of Value | Source | Comment |
|---------------------------|-----------|----|-------|-------------------|--------|---------|
| Patient Telephone Numbers | 0010,2154 | SH |       | ANAP              | AUTO   |         |
| Image Position            | 0020,0030 | DS |       | ANAP              | AUTO   |         |
| Image Orientation         | 0020,0035 | DS |       | ANAP              | AUTO   |         |

### 13.6. Private Transfer Syntaxes

Not applicable.

## 14. Annexes of application "Study Management Tool"

### 14.1. Supported IOD's

This section specifies each IOD accepted and / or created by Study Management Tool.

**ACCEPTED** The applicable IOD is accepted for storage in the repository of the hosting platform and supported for import in Study Management Tool for viewing and analysis.

**CREATED** The Study Management Tool supports generation of derived data by using the applicable IOD and is able to store this data in the repository of the hosting platform. Study Management Tool supports creation of KOS objects due to "Rejection of imaging instances for Quality Reasons" and "Correction of Modality Worklist Selection"

**Table 343: Supported IOD's**

| IOD  |                              | Support  |         |
|--|------------------------------|----------|---------|
| Name   | UID                          | ACCEPTED | CREATED |
| Philips Private X-Ray Image Storage                        | 1.3.46.670589.2.3.1.1        | Yes      | No      |
| Philips Private Reconstructed X-ray Storage                | 1.3.46.670589.2.4.1.1        | Yes      | No      |
| Philips Private ViewForum CT Synthetic Image Storage       | 1.3.46.670589.5.0.9          | Yes      | No      |
| Philips Private ViewForum MR Synthetic Image Storage       | 1.3.46.670589.5.0.10         | Yes      | No      |
| Philips Private ViewForum CX Synthetic Image Storage       | 1.3.46.670589.5.0.12         | Yes      | No      |
| Positron Emission Tomography Image Storage                 | 1.2.840.10008.5.1.4.1.1.128  | Yes      | No      |
| Nuclear Medicine Image Storage                             | 1.2.840.10008.5.1.4.1.1.20   | Yes      | No      |
| X-Ray Radiofluoroscopic Image Storage                      | 1.2.840.10008.5.1.4.1.1.12.2 | Yes      | No      |
| X-Ray Angiographic Image Storage                           | 1.2.840.10008.5.1.4.1.1.12.1 | Yes      | No      |
| Ultrasound Image Storage (Retired)                         | 1.2.840.10008.5.1.4.1.1.6    | Yes      | No      |
| Ultrasound Image Storage                                   | 1.2.840.10008.5.1.4.1.1.6.1  | Yes      | No      |
| Secondary Capture Image Storage                            | 1.2.840.10008.5.1.4.1.1.7    | Yes      | No      |
| Multi-frame Single Bit Secondary Capture Image Storage     | 1.2.840.10008.5.1.4.1.1.7.1  | Yes      | No      |
| Multi-frame Grayscale Byte Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.2  | Yes      | No      |
| Multi-frame Grayscale Word Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.3  | Yes      | No      |

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|  |                               |     |     |
|--|-------------------------------|-----|-----|
| Multi-frame True Color Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7.4   | Yes | No  |
| MR Image Storage                                       | 1.2.840.10008.5.1.4.1.1.4     | Yes | No  |
| CT Image Storage                                       | 1.2.840.10008.5.1.4.1.1.2     | Yes | No  |
| Ultrasound Multi-frame Image Storage (Retired)         | 1.2.840.10008.5.1.4.1.1.3     | Yes | No  |
| Ultrasound Multi-frame Image Storage                   | 1.2.840.10008.5.1.4.1.1.3.1   | Yes | No  |
| Computed Radiography Image Storage                     | 1.2.840.10008.5.1.4.1.1.1     | Yes | No  |
| Digital X-Ray Image Storage – for Presentation         | 1.2.840.10008.5.1.4.1.1.1.1   | Yes | No  |
| Digital X-Ray Image Storage – for Processing           | 1.2.840.10008.5.1.4.1.1.1.1.1 | Yes | No  |
| MG Mammography for presentation                        | 1.2.840.10008.5.1.4.1.1.1.2   | Yes | No  |
| MG Mammography for processing                          | 1.2.840.10008.5.1.4.1.1.1.2.1 | Yes | No  |
| Key Object Selection Document Storage SOP Class        | 1.2.840.10008.5.1.4.1.1.88.59 | Yes | Yes |

### 14.1.1. Contents of Created IOD's

This section specifies in detail the attribute contents of created data objects. Attributes are grouped together by its corresponding module as specified by DICOM standard. Philips private attributes are excluded for specification.

Abbreviations used in the Module table for the column "Presence of Value" are:

ALWAYS The attribute is always present with a value

EMPTY The attribute is always present without any value (attribute sent zero length)

VNAP The attribute is always present and its Value is Not Always Present (attribute sent zero length if no value is present)

ANAP The attribute is present under specified condition – if present then it will always have a value

The abbreviations used in the Module table for the column "Source" are:

AUTO The attribute value is generated automatically

CONFIG The attribute value source is a configurable parameter

COPY The attribute value source is another SOP instance

FIXED The attribute value is hard-coded in the application

IMPLICIT The attribute value source is a user-implicit setting

MPPS The attribute value is the same as that use for Modality Performed Procedure Step

MWL The attribute value source is a Modality Worklist

USER The attribute value source is explicit user input

## 14.1.1.1. List of created SOP Classes

Table 344: List of created SOP Classes

| SOP Class Name                                  | SOP Class UID                 |
|---|-------------------------------|
| Key Object Selection Document Storage SOP Class | 1.2.840.10008.5.1.4.1.1.88.59 |

## 14.1.1.2. Key Object Selection Document Storage SOP Class

The supported Module and their tags are mentioned below.

Table 345: Key Object Selection Document Storage SOP Class - Supported Modules

| Information Entity | Module                     | Presence Of Module |
|--------------------|----------------------------|--------------------|
| Patient            | Patient                    | ALWAYS             |
| Study              | General Study              | ALWAYS             |
| Series             | Key Object Document Series | ALWAYS             |
| Equipment          | General Equipment          | ALWAYS             |
| Document           | Key Object Document        | ALWAYS             |
|                    | SR Document Content        | ALWAYS             |
|                    | SOP Common                 | ALWAYS             |

Table 346: Patient Module

| Attribute Name       | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------|-----------|----|-------|-------------------|--------|---------|
| Patient's Name       | 0010,0010 | PN |       | ALWAYS            | COPY   |         |
| Patient ID           | 0010,0020 | LO |       | ALWAYS            | COPY   |         |
| Issuer of Patient ID | 0010,0021 | LO |       | ANAP              | COPY   |         |
| Patient's Birth Date | 0010,0030 | DA |       | VNAP              | COPY   |         |
| Patient's Sex        | 0010,0040 | CS |       | ALWAYS            | COPY   |         |

Table 347: General Study Module

| Attribute Name             | Tag       | VR | Value | Presence of Value | Source | Comment |
|----------------------------|-----------|----|-------|-------------------|--------|---------|
| Study Date                 | 0080,0020 | DA |       | ALWAYS            | COPY   |         |
| Study Time                 | 0008,0030 | TM |       | ALWAYS            | COPY   |         |
| Accession Number           | 0008,0050 | SH |       | ALWAYS            | COPY   |         |
| Referring Physician's Name | 0008,0090 | PN |       | ANAP              | COPY   |         |
| Study Instance UID         | 0020,000D | UI |       | ALWAYS            | COPY   |         |

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|          |           |    |  |      |      |  |
|----------|-----------|----|--|------|------|--|
| Study ID | 0020,0010 | SH |  | VNAP | COPY |  |
|----------|-----------|----|--|------|------|--|

**Table 348: Key Object Document Series Module**

| Attribute Name                               | Tag       | VR | Value | Presence of Value | Source | Comment |
|--|-----------|----|-------|-------------------|--------|---------|
| Referenced Performed Procedure Step Sequence | 0008,1111 | SQ |       | EMPTY             | AUTO   |         |
| Modality                                     | 0008,0060 | CS | KO    | ALWAYS            | FIXED  |         |
| Series Instance UID                          | 0020,000E | UI |       | ALWAYS            | AUTO   |         |
| Series Number                                | 0020,0011 | IS | 1     | ALWAYS            | FIXED  |         |

**Table 349: General Equipment Module**

| Attribute Name            | Tag       | VR | Value   | Presence of Value | Source | Comment |
|---------------------------|-----------|----|---------|-------------------|--------|---------|
| Manufacturer              | 0008,0070 | LO | Philips | ALWAYS            | FIXED  | -       |
| Institution Name          | 0008,0080 | LO |         | ALWAYS            | COPY   | -       |
| Station Name              | 0008,1010 | SH |         | ALWAYS            | AUTO   | -       |
| Manufacturer's Model Name | 0008,1090 | LO |         | ALWAYS            | AUTO   | -       |
| Software Versions         | 0018,1020 | LO |         | ALWAYS            | AUTO   | -       |

**Table 350: Key Object Document Module**

| Attribute Name                                | Tag       | VR | Value | Presence of Value | Source | Comment |
|---|-----------|----|-------|-------------------|--------|---------|
| Content Date                                  | 0008,0023 | DA |       | ALWAYS            | AUTO   |         |
| Content Time                                  | 0008,0033 | TM |       | ALWAYS            | AUTO   |         |
| Instance Number                               | 0020,0013 | IS |       | ALWAYS            | AUTO   |         |
| Current Requested Procedure Evidence Sequence | 0040,A375 | SQ |       | ALWAYS            | AUTO   |         |
| >Referenced Series Sequence                   | 0008,1115 | SQ |       | ALWAYS            | AUTO   |         |
| >>Referenced SOP Sequence                     | 0008,1199 | SQ |       | ALWAYS            | AUTO   |         |
| >>>Referenced SOP Class UID                   | 0008,1150 | UI |       | ALWAYS            | AUTO   |         |
| >>>Referenced SOP Instance UID                | 0008,1155 | UI |       | ALWAYS            | AUTO   |         |
| >>Series Instance UID                         | 0020,000E | UI |       | ALWAYS            | AUTO   |         |
| >Study Instance UID                           | 0020,000D | UI |       | ALWAYS            | AUTO   |         |

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**Table 351: SR Document Content Module**

| Attribute Name              | Tag       | VR | Value             | Presence of Value | Source | Comment                         |
|-----------------------------|-----------|----|-------------------|-------------------|--------|---------------------------------|
| Value Type                  | 0040,A040 | CS | CONTAINER         | ALWAYS            | FIXED  |                                 |
| Concept Name Code Sequence  | 0040,A043 | SQ |                   | ALWAYS            | AUTO   |                                 |
| > Code Value                | 0008,0100 | SH |                   | ALWAYS            | AUTO   |                                 |
| > Coding Scheme Designator  | 0008,0102 | SH | DCM               | ALWAYS            | FIXED  |                                 |
| > Code Meaning              | 0008,0104 | LO |                   | ALWAYS            | AUTO   |                                 |
| Continuity of Content       | 0040,A050 | CS |                   | ALWAYS            | AUTO   |                                 |
| Content Template Sequence   | 0040,A504 | SQ |                   | ALWAYS            | AUTO   |                                 |
| >Mapping Resource           | 0008,0105 | CS | DCMR              | ALWAYS            | FIXED  |                                 |
| >Template Identifier        | 0040,DB00 | CS | 2010              | ALWAYS            | FIXED  |                                 |
| Content Sequence            | 0040,A730 | SQ |                   | ALWAYS            | AUTO   |                                 |
| >Relationship Type          | 0040,A010 | CS | HAS CONCEPT MOD   | ALWAYS            | FIXED  |                                 |
| >Value Type                 | 0040,A040 | CS | CODE              | ALWAYS            | FIXED  |                                 |
| >Concept Name Code Sequence | 0040,A043 | SQ |                   | ALWAYS            | AUTO   |                                 |
| >>Code Value                | 0008,0100 | SH |                   | ALWAYS            | AUTO   |                                 |
| >>Coding Scheme Designator  | 0008,0102 | SH | DCM               | ALWAYS            | FIXED  |                                 |
| >>Code Meaning              | 0008,0104 | LO |                   | ALWAYS            | AUTO   |                                 |
| >Concept Code Sequence      | 0040,A168 | SQ |                   | ANAP              | AUTO   | Present only for quality reason |
| >>Code Value                | 0008,0100 | SH | 111207            | ALWAYS            | FIXED  |                                 |
| >>Coding Scheme Designator  | 0008,0102 | SH | DCM               | ALWAYS            | FIXED  |                                 |
| >>Code Meaning              | 0008,0104 | LO | Image Artifact(s) | ALWAYS            | FIXED  |                                 |
| >Relationship Type          | 0040,A010 | CS | CONTAINS          | ALWAYS            | FIXED  |                                 |
| >Value Type                 | 0040,A040 | CS | IMAGE             | ALWAYS            | FIXED  |                                 |
| >Referenced SOP Sequence    | 0008,1199 | SQ |                   | ALWAYS            | AUTO   |                                 |
| >> Referenced SOP Class UID | 0008,1150 | UI |                   | ALWAYS            | AUTO   |                                 |

|                               |           |    |  |        |      |  |
|-------------------------------|-----------|----|--|--------|------|--|
| >>Referenced SOP Instance UID | 0008,1155 | UI |  | ALWAYS | AUTO |  |
|-------------------------------|-----------|----|--|--------|------|--|

**Table 352: SOP Common Module**

| Attribute Name         | Tag       | VR | Value                         | Presence of Value | Source | Comment |
|------------------------|-----------|----|-------------------------------|-------------------|--------|---------|
| Specific Character Set | 0008,0005 | CS |                               | VNAP              | COPY   |         |
| SOP Class UID          | 0008,0016 | UI | 1.2.840.10008.5.1.4.1.1.88.59 | ALWAYS            | FIXED  |         |
| SOP Instance UID       | 0008,0018 | UI |                               | ALWAYS            | AUTO   |         |
| Instance Number        | 0020,0013 | IS | 1                             | ALWAYS            | FIXED  |         |

### 14.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

**Table 353: Functionalities**

| Functionality | Type1 | Optional | Private |
|---------------|-------|----------|---------|
| Viewer        | X     |          |         |

### 14.1.3. Attribute Mapping

Not applicable.

### 14.1.4. Coerced/Modified fields

Not applicable.

## 14.2. Data Dictionary of Private Attributes

Not applicable.

## 14.3. Coded Terminology and Templates

Not applicable.

### 14.3.1. Context Groups

Not applicable.



## **14.3.2. Template Specifications**

Not applicable.

## **14.3.3. Private code definitions**

Not applicable.

## **14.4. Grayscale Image consistency**

Not applicable.

## **14.5. Standard Extended/Specialized/Private SOPs**

Not applicable.

## **14.6. Private Transfer Syntaxes**

Not applicable.

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