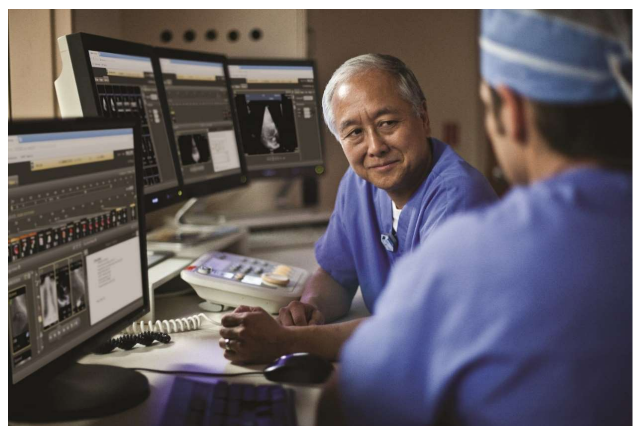
DICOM Conformance Statement

IntelliSpace Cardiovascular 6.2



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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: a) Review the high quality medical study data provided by modalities, and b) 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 the 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.

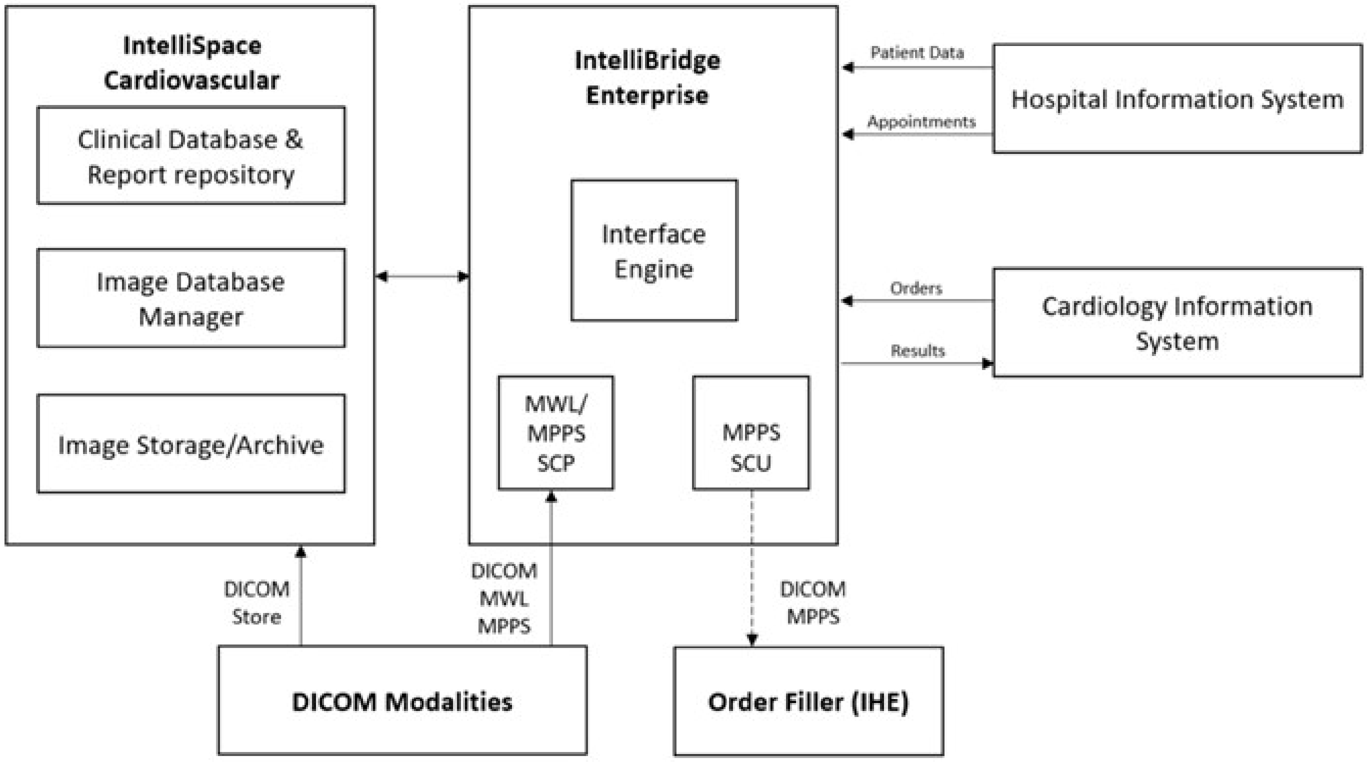


Figure 1: IntelliSpace Cardiovascular Data flow in Network

Table 1: Network Services

SOP Class		User of Service (SCU)	Provider of Service (SCP)
Name	**UID**		
Other			
Verification SOP Class*	1.2.840.10008.1.1	Yes	Yes
Print Management			
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
Query/Retrieve			
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

SOP Class		User of Service (SCU)	Provider of Service (SCP)
Name	UID		
Transfer			
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
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
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

SOP Class		User of Service (SCU)	Provider of Service (SCP)
Name	UID		
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
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

SOP Class		User of Service (SCU)	Provider of Service (SCP)
Name	**UID**		
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 2 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)
Compact Disk-Recordable			
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
DVD			
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
Retrieve Transaction DICOM resources		
Retrieve Study	No	Yes
Retrieve Series	No	Yes
Retrieve Instance	No	Yes
Retrieve Frame	No	Yes
Retrieve Bulkdata	No	Yes
Retrieve Transaction Metadata resources		
Retrieve Study Metadata	No	Yes
Retrieve Series Metadata	No	Yes
Retrieve Instance Metadata	No	Yes
Search Transaction resources		
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

Resource	User Agent	Origin Server
Store transaction resources		
Store Transaction (STOW-RS)	No	Yes

2. Table of Contents

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	16-JUN-2022	First release for IntelliSpace Cardiovascular 6.2

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
IOD	Information Object Definition
ISIS	Information System - Imaging System
MOD	Magneto-Optical Disk
MPPS	Modality Performed Procedure Step
MR	Magnetic Resonance
NEMA	National Electrical Manufacturers Association
NM	Nuclear Medicine
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

Abbreviation/Term	Explanation
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
Note that at any point in time the official standard consists of the most recent yearly edition of the base standard (currently 2022) plus all the supplements and correction items that have been approved as Final Text.

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.

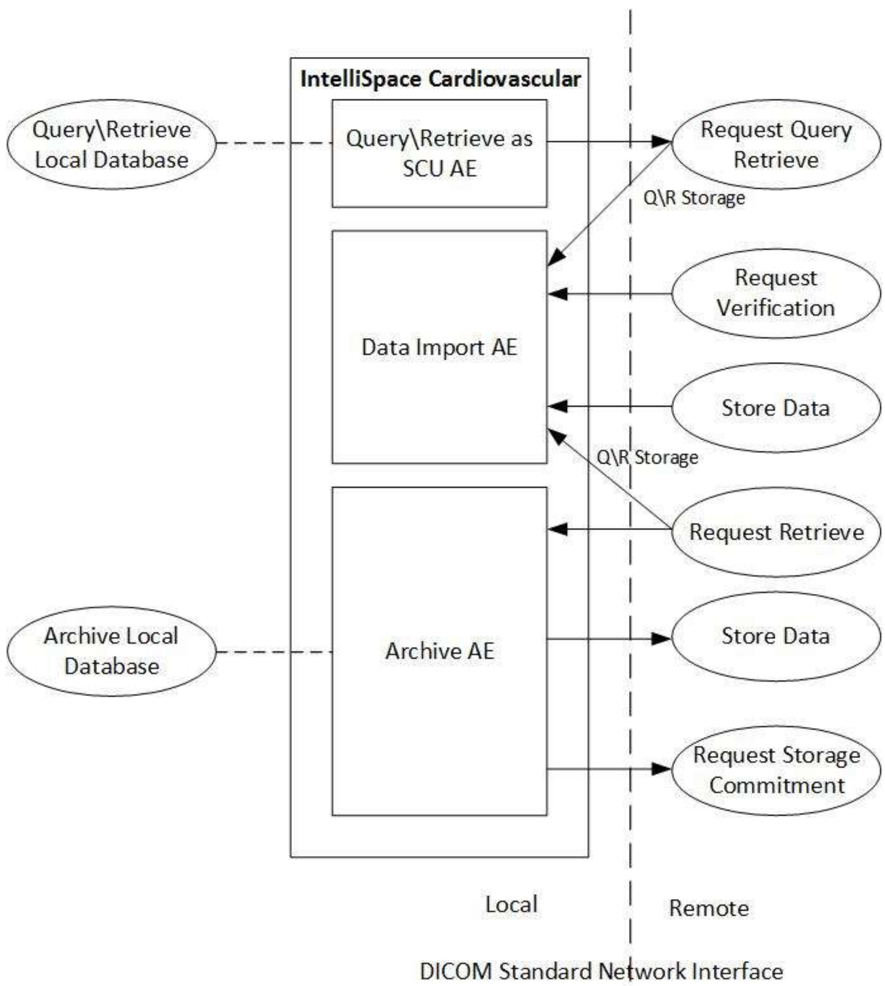


Figure 2: Application Data Flow Diagram (1)

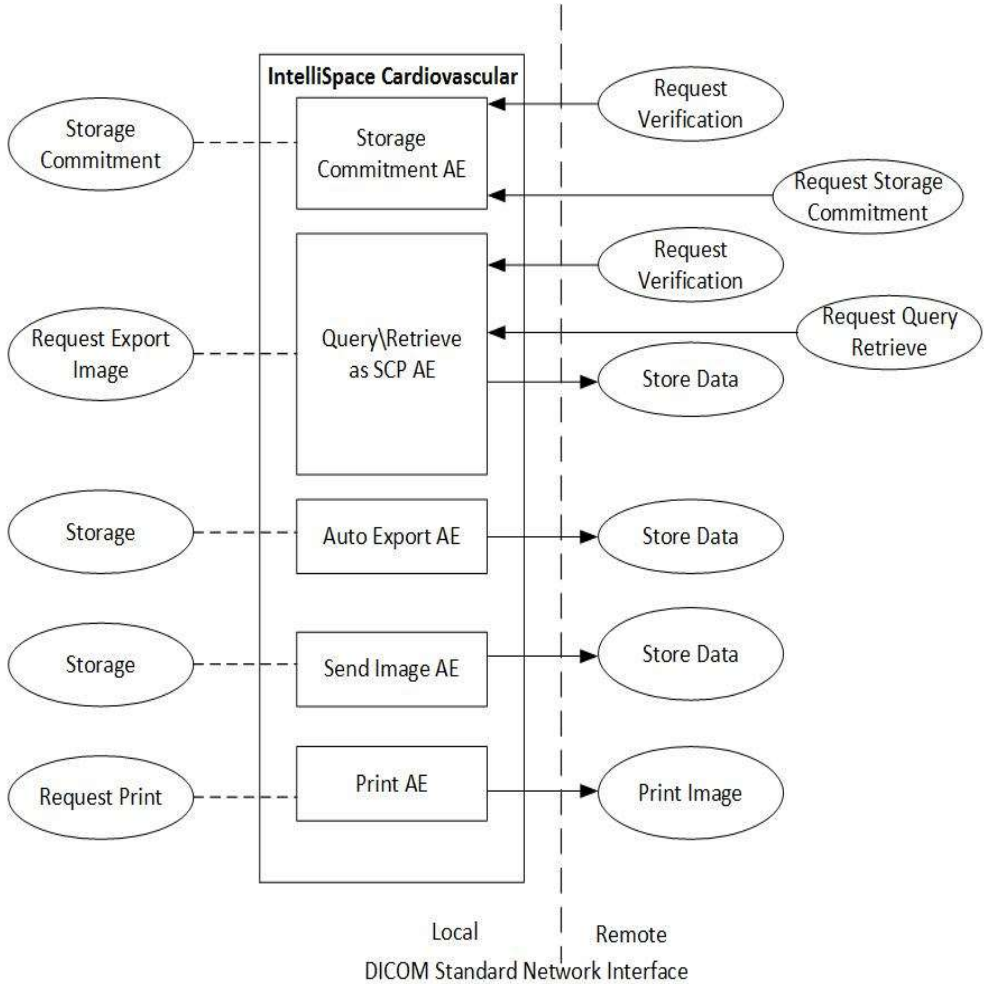


Figure 3: Application Data Flow Diagram (2)

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.

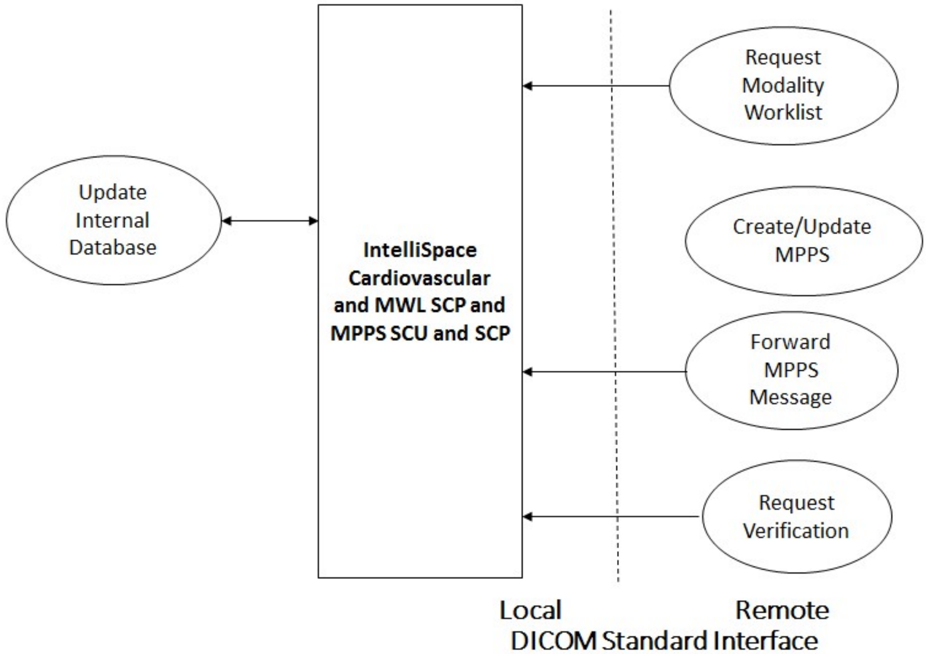


Figure 4: (Real World) Activity – Application Data flow Diagram

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 does 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 (table 19& 20) 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
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

SOP Class Name	SOP Class UID	SCU	SCP
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
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

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

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.

Result	Source	Reason/Diagnosis	Explanation
		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 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.

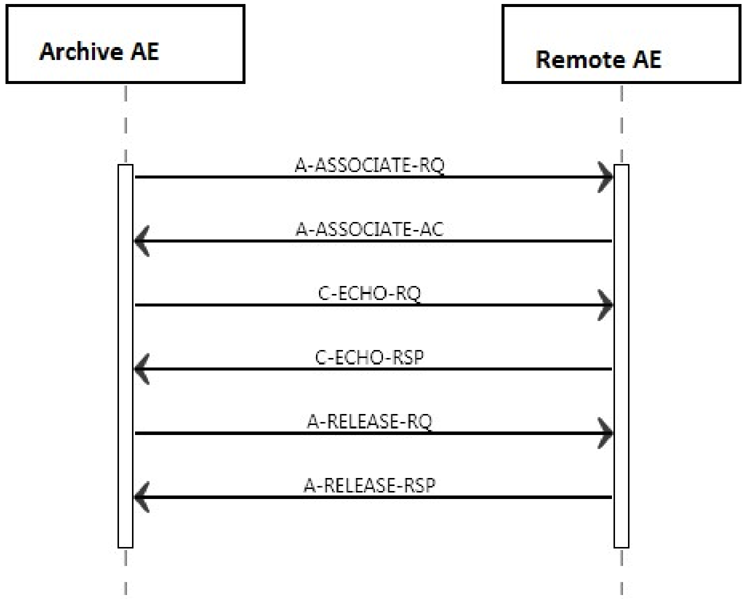


Figure 5: (Real World) Activity - Verification as SCU

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

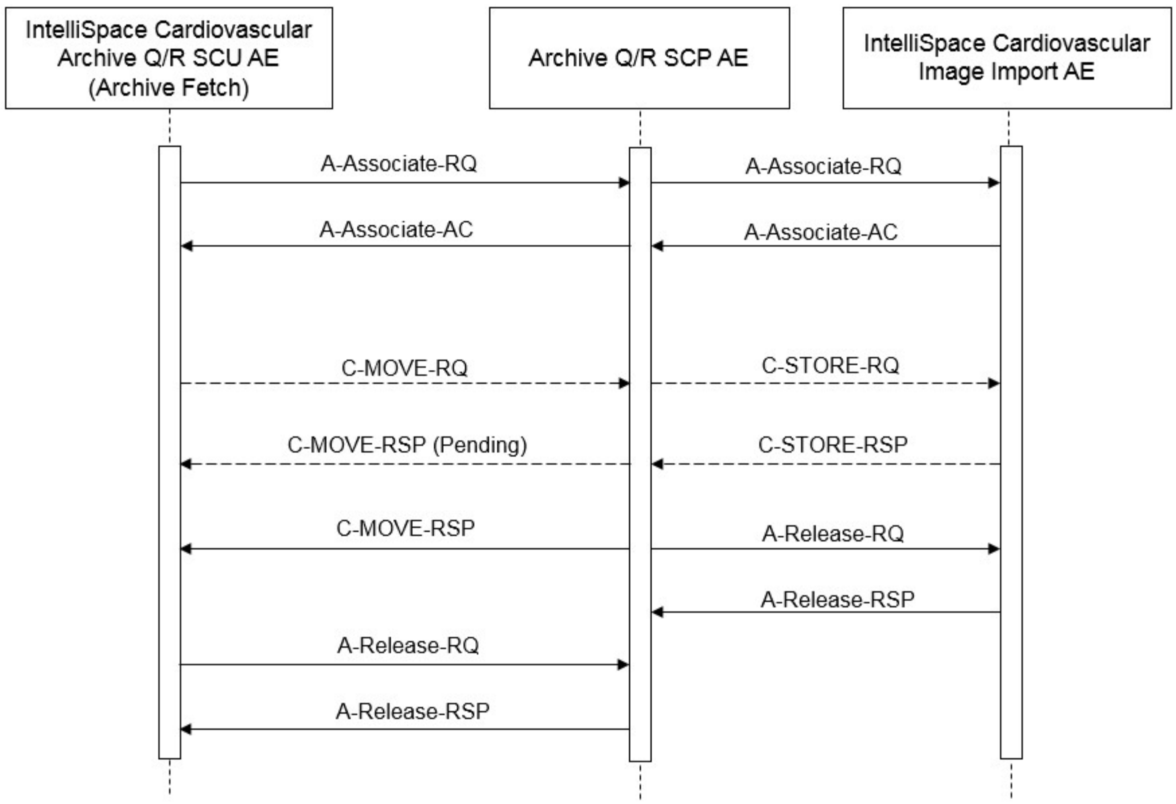


Figure 6: (Real World) Activity - MOVE As SCU (Archive Fetch)

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.

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.

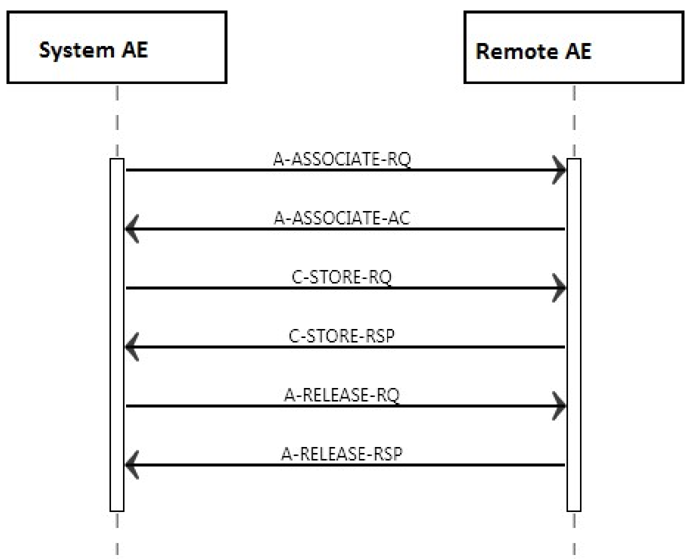


Figure 7: (Real World) Activity – Export of Instances (Archive Storage SCU)

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		
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)	1.2.840.10008.5.1.4.1.1.10	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		
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	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)	1.2.840.10008.5.1.4.1.1.11	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		
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		
X-Ray Angiographic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.1	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	1.2.840.10008.5.1.4.1.1.12.2	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		
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 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	1.2.840.10008.5.1.4.1.1.128	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	1.2.840.10008.5.1.4.1.1.2	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
		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]		
		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	1.2.840.10008.5.1.4.1.1.481.1	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	1.2.840.10008.5.1.4.1.1.481.2	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	1.2.840.10008.5.1.4.1.1.481.3	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		
		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	1.2.840.10008.5.1.4.1.1.66	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]		
		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		
		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 [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 [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	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
		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		
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		
		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
		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		
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]	1.2.840.10008.5.1.4.1.1.11.2	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		
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	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]	1.2.840.10008.5.1.4.1.1.11.4	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
		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		
	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

Enhanced XRF Image Storage 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		
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
		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		
		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]	1.2.840.10008.5.1.4.1.1.77.1.3	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 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		
	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

Video Photographic 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		
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 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	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]	1.2.840.10008.5.1.4.1.1.77.1.5.3	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		
		Implicit VR Little Endian	1.2.840.10008.1.2		
RT Ion Plan Storage SOP Class [Note 1]	1.2.840.10008.5.1.4.1.1.481.8	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]	1.2.840.10008.5.1.4.1.1.481.9	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		
	1.3.46.670589.2.5.1.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None

Philips Private iE33 3D NEO Presentation State Subpage Storage		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		
		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		
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)
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)
Protocol Name	(0018,1030)

Attribute	DICOM Tag
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 Reponses 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	
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.
	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.

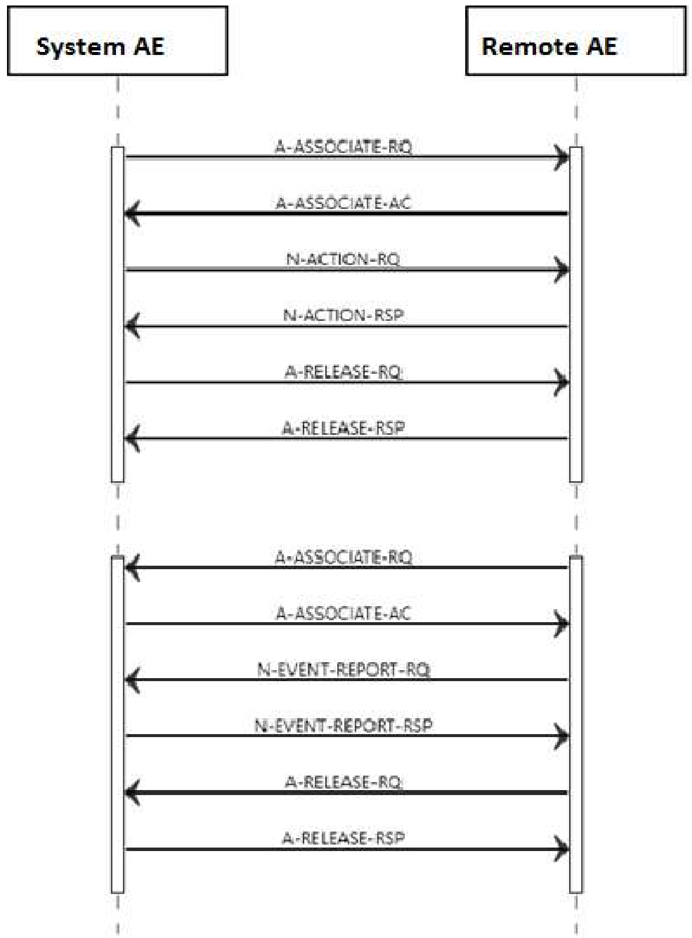


Figure 9: (Real World) Activity - Storage Commitment Push Model AS SCU

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		

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		

4.2.1.3.4.3. 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
Storage Commitment Module		
Transaction UID	0008,1195	-
Referenced SOP Sequence	0008,1199	-
>Referenced SOP Class UID	0008,1150	-

Attribute Name	Tag	Comment
>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
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

Not applicable, Archive AE does not accept associations.

4.2.1.4.1. (Real-World) Activity – Image Import

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.

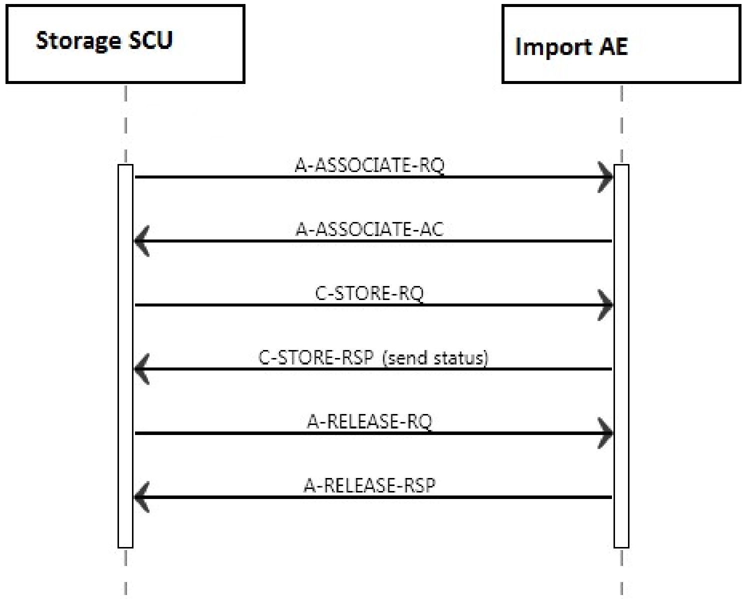


Figure 10: Real World Activity- Storage as SCP

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 30: 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		
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		
	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

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Digital X-Ray Image Storage - For Proc. SOP		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		
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
		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		
Standalone VOI LUT Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.11	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		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		
	1.2.840.10008.5.1.4.1.1.12.2	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		
X-Ray Radiofluoroscopic 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		
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		
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	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)	1.2.840.10008.5.1.4.1.1.129	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		
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
		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	1.2.840.10008.5.1.4.1.1.481.1	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		
		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	1.2.840.10008.5.1.4.1.1.481.2	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	1.2.840.10008.5.1.4.1.1.481.3	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		
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	1.2.840.10008.1.2.4.57[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		
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	1.2.840.10008.1.2.4.57 [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		
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)	1.2.840.10008.1.2.4.90 [Note 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	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		

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		
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		
		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		
		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		

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		
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		
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	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		
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		
		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		

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		
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		
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	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 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]		
		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		

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		
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]		
		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]	1.2.840.10008.5.1.4.1.1.481.4	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]	1.2.840.10008.5.1.4.1.1.481.6	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]	1.2.840.10008.5.1.4.1.1.481.7	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		
RT Ion Plan Storage SOP Class [Note 1]	1.2.840.10008.5.1.4.1.1.481.8	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]	1.2.840.10008.5.1.4.1.1.481.9	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		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name List**	**UID List**		
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		
		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		
		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 31: 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
	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 32: 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 updates 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 33: 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

SOP Class Name	SOP Class UID	SCU	SCP
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
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
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

SOP Class Name	SOP Class UID	SCU	SCP
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 34: 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 35: 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 36: DICOM Implementation Class and Version for Auto Export AE

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

4.2.2.2.4. Communication Failure Handling

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

Table 37: 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 38: 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.
		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 39: 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.

4.2.2.3.1. (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.

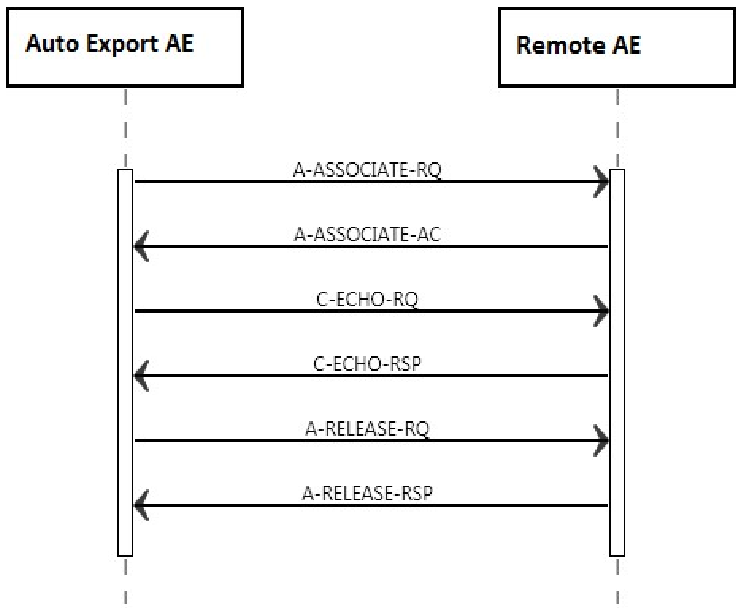


Figure 11: (Real World) Activity - Verification as SCU.

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 40: 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 41: 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.

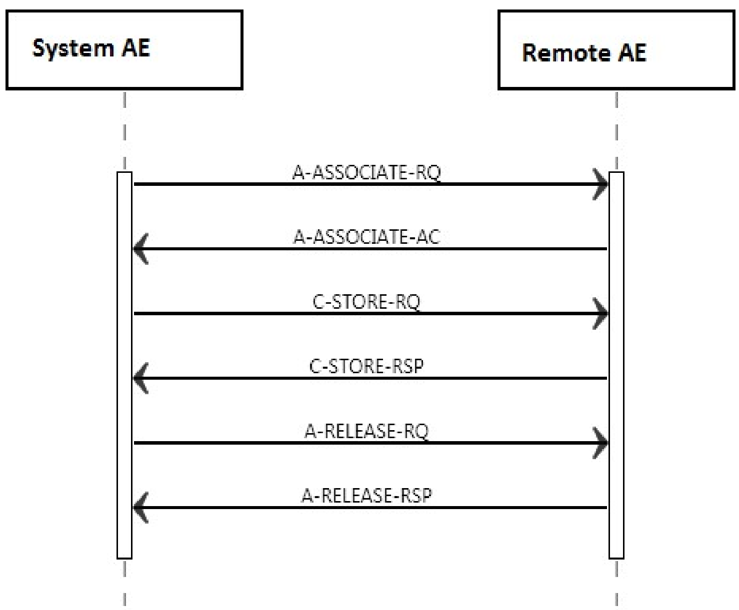


Figure 12: (Real World) Activity - Image Export (Data Export)

4.2.2.3.2.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 42: 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
		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		
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
		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		

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 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		
		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	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)	1.2.840.10008.5.1.4.1.1.11	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		
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		
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	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	1.2.840.10008.5.1.4.1.1.12.2	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	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		
		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		

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
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		
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
		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]		
		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	1.2.840.10008.5.1.4.1.1.481.1	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	1.2.840.10008.5.1.4.1.1.481.2	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	1.2.840.10008.5.1.4.1.1.481.3	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		

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		
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	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 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	1.2.840.10008.5.1.4.1.1.66	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	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]		
		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 [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 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		
		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		
		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	1.2.840.10008.5.1.4.1.1.88.11	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	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	1.2.840.10008.5.1.4.1.1.9.1.2	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		
		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		
	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		
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		
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	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]	1.2.840.10008.5.1.4.1.1.11.4	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
		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	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]	1.2.840.10008.5.1.4.1.1.66.1	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		

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]	1.2.840.10008.5.1.4.1.1.77.1.1.1	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
		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]	1.2.840.10008.5.1.4.1.1.77.1.2.1	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		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]	1.2.840.10008.5.1.4.1.1.77.1.3	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 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]	1.2.840.10008.5.1.4.1.1.77.1.4.1	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 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		

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		
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		
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		
		Implicit VR Little Endian	1.2.840.10008.1.2		
RT Ion Plan Storage SOP Class [Note 1]	1.2.840.10008.5.1.4.1.1.481.8	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]	1.2.840.10008.5.1.4.1.1.481.9	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		
	1.3.46.670589.5.0.1.1	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**		
Philips Private ViewForum 3D Volume New Storage		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		
		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.

4.2.2.3.2.3. 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 43: 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.

Service Status	Error Code	Further Meaning	Behavior
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 table 19 and table 20 respectively.

The possible Communication Failures are given in the following table:

Table 44: 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 45: 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
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

SOP Class Name	SOP Class UID	SCU	SCP
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
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 46: 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 47: 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 48: DICOM Implementation Class and Version for Image Import AE

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

4.2.3.2.4. Communication Failure Handling

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

Table 49: 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 50: 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.

Result	Source	Reason/Diagnosis	Behavior
		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 for sending an association abort is summarized in next table.

Table 51: 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

4.2.3.4.1. (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.

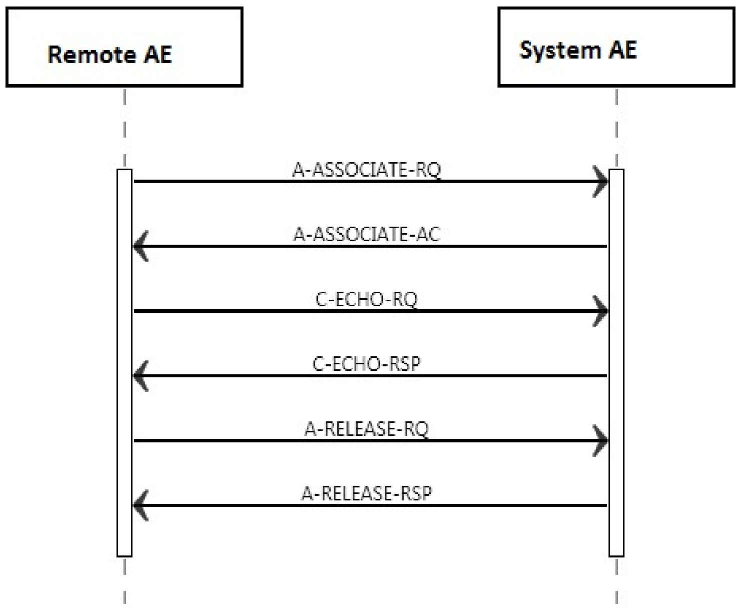


Figure 14: (Real World) Activity - Verification as SCP

4.2.3.4.1.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 52: 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		

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 53: 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

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.

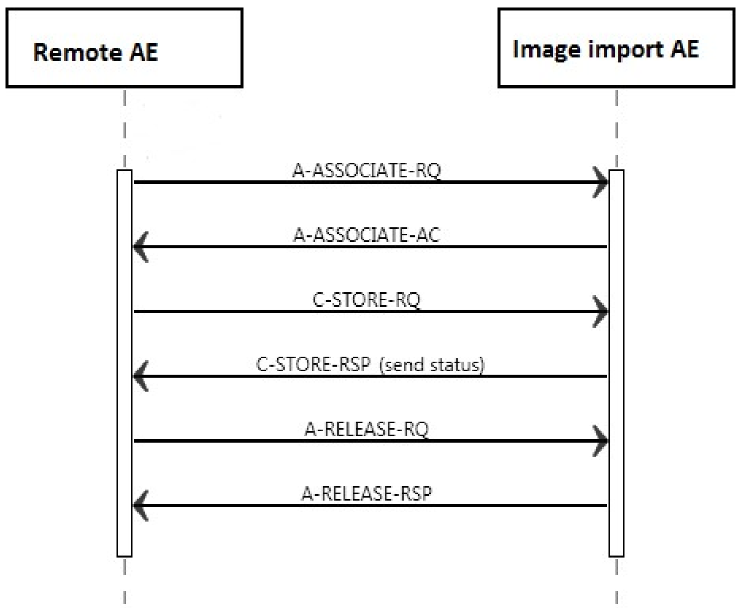


Figure 15: (Real World) Activity - Image Import

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 54: 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		
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
		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		
		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]		

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 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		
Standalone VOI LUT Storage SOP Class (Retired)	1.2.840.10008.5.1.4.1.1.11	Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		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		
		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	1.2.840.10008.5.1.4.1.1.12.2	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)	1.2.840.10008.5.1.4.1.1.12.3	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		
		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	1.2.840.10008.5.1.4.1.1.128	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		

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name List**	**UID List**		
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
		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	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		
		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		
		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	1.2.840.10008.5.1.4.1.1.481.1	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		

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 Dose Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.2	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	1.2.840.10008.5.1.4.1.1.481.3	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		
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	1.2.840.10008.1.2.4.57[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		
		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	1.2.840.10008.5.1.4.1.1.66	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
		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]		
		JPEG Lossless Non-hierarchical /Proc 14	1.2.840.10008.1.2.4.57 [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		
	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

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		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]		
		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		

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	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		
		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		
		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
		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	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		
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		

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		
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	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		
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		
		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
		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	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		
	1.2.840.10008.5.1.4.1.1.77.1.1	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**		
VL Endoscopic Image Storage 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		
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
		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]	1.2.840.10008.5.1.4.1.1.77.1.2	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]	1.2.840.10008.5.1.4.1.1.77.1.2.1	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]		
		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]		
		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]	1.2.840.10008.5.1.4.1.1.77.1.4.1	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]	1.2.840.10008.5.1.4.1.1.77.1.5.1	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]		

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		
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]		
		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]	1.2.840.10008.5.1.4.1.1.481.4	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]	1.2.840.10008.5.1.4.1.1.481.6	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]	1.2.840.10008.5.1.4.1.1.481.7	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		
RT Ion Plan Storage SOP Class [Note 1]	1.2.840.10008.5.1.4.1.1.481.8	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]	1.2.840.10008.5.1.4.1.1.481.9	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		

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
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		
		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		
		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 55: 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 56: 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 57: C-STORE-RSP Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Success	Log: Continue
Refused		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 58: 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.

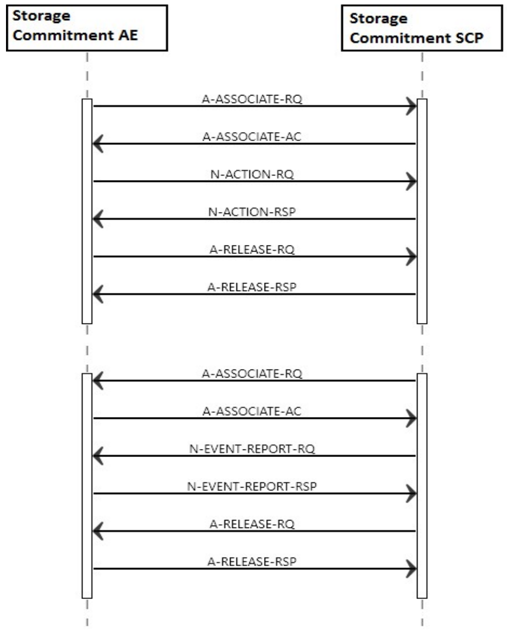


Figure 16: Real World Activity-Storage Commitment SCP

4.2.3.4.3.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 59: 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 60: 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	

Event Type Name	EVENT Type ID	Attribute Name	Tag	Commit
		>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	
		>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 61: 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 62: 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 63: Storage Commitment Attribute for N-ACTION-RSP

Attribute Name	Tag	Comment
Storage Commitment Module		
Transaction UID	0008,1195	
Referenced SOP Sequence	0008,1199	

Below the possible status Reponses for Storage commitment are listed:

Table 64: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	conformation	The association will be released. Reason is logged.
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 65: 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
>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 66: 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 67: 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 68: DICOM Implementation Class and Version for Print AE

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

4.2.4.2.4. Communication Failure Handling

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

Table 69: 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 70: 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.

Result	Source	Reason/Diagnosis	Behavior
		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 71: 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.

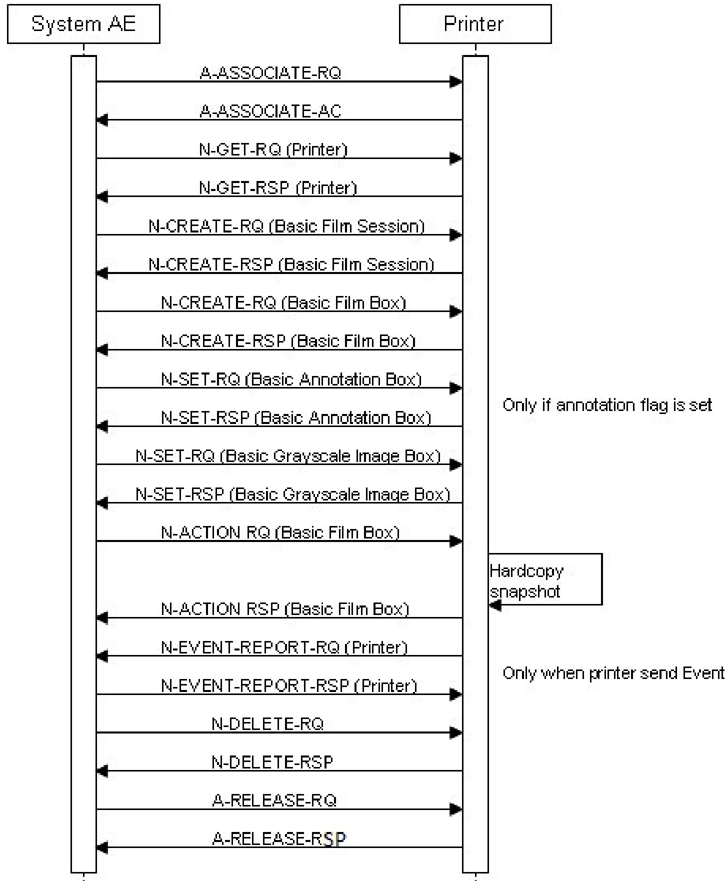


Figure 17: (Real World) Activity - Print Management As SCU

4.2.4.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 72: 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		

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
>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		
>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 73: 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 74: 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 75: 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 76: 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 77: 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 78: 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 79: 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 80: 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 81: DICOM Command Response Status Handling Behavior

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Success	
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 82: 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 Version(s)	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 83: 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 84: Basic Film Box Presentation Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Display Format	2010,0010	ST	STANDARD, Value 2: 1,1, 1,2, 2,1, 2,2, 2,3, 3,2, 3,3, 3,4, 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, PORTRAIT	ALWAYS	AUTO	-

Table 85: 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 86: 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 87: 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 88: 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 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.

4.2.4.3.1.8. 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.

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 90: 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. Dataset Specific Conformance for Basic Grayscale Image Box SOP Class N-SET-SCU

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

Table 91: 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	8	ALWAYS	AUTO	-
>Bits Stored	0028,0101	US	8	ALWAYS	AUTO	-
>High Bit	0028,0102	US	7	ALWAYS	AUTO	-
>Pixel Representation	0028,0103	US	0	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/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 92: 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 93: 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 94: 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
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

SOP Class Name	SOP Class UID	SCU	SCP
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
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

SOP Class Name	SOP Class UID	SCU	SCP
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
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 95: 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 96: Number of associations as an Association Initiator for this AE (C-STORE)

Description	Value
Maximum number of simultaneous associations	5

Table 97: Number of associations as an Association Acceptor for this AE (C-FIND, C-MOVE)

Description	Value
Maximum number of simultaneous associations	5

Table 98: 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 99: DICOM Implementation Class and Version for Query Retrieve as SCP AE

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

4.2.5.2.4. Communication Failure Handling

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

Table 100: 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 101: 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.

Result	Source	Reason/Diagnosis	Behavior
		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 102: 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 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.

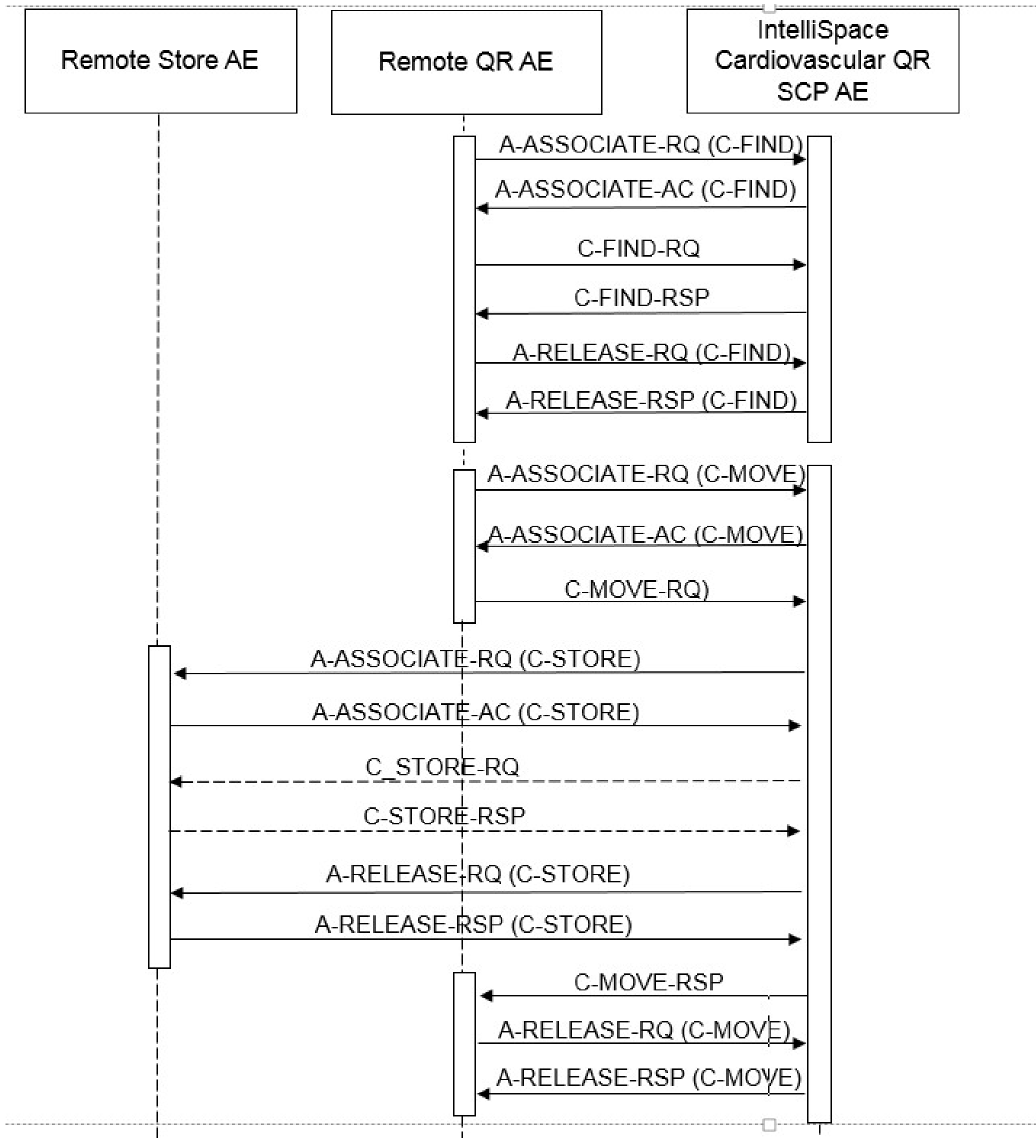


Figure 18: (Real World) Activity - Image Export

4.2.5.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 103: 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		

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		
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		
		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		
		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	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		
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]		
		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	1.2.840.10008.5.1.4.1.1.128	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	1.2.840.10008.5.1.4.1.1.2	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**		
		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		
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	1.2.840.10008.5.1.4.1.1.481.1	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	1.2.840.10008.5.1.4.1.1.481.2	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		
RT Structure Set Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.3	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	1.2.840.10008.5.1.4.1.1.481.5	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		
		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		
	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

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		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]		
		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		

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	1.2.840.10008.5.1.4.1.1.88.11	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	1.2.840.10008.5.1.4.1.1.88.22	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		
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		
		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		

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]	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		
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	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]	1.2.840.10008.5.1.4.1.1.11.4	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		
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]		

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		
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		
		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]		
		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		
	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

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Ophthalmic Photography 16 Bit Image Storage SOP Class [Note 1]		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]	1.2.840.10008.5.1.4.1.1.77.1.5.3	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		
		Implicit VR Little Endian	1.2.840.10008.1.2		
RT Ion Plan Storage SOP Class [Note 1]	1.2.840.10008.5.1.4.1.1.481.8	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]	1.2.840.10008.5.1.4.1.1.481.9	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		
		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 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		
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.

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 104: 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 105: 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 table 20 and table 21 respectively.

4.2.5.4. Association Acceptance Policy

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

Table 106: 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.
	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 107: 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.

Source	Reason/Diagnosis	Behavior
	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.

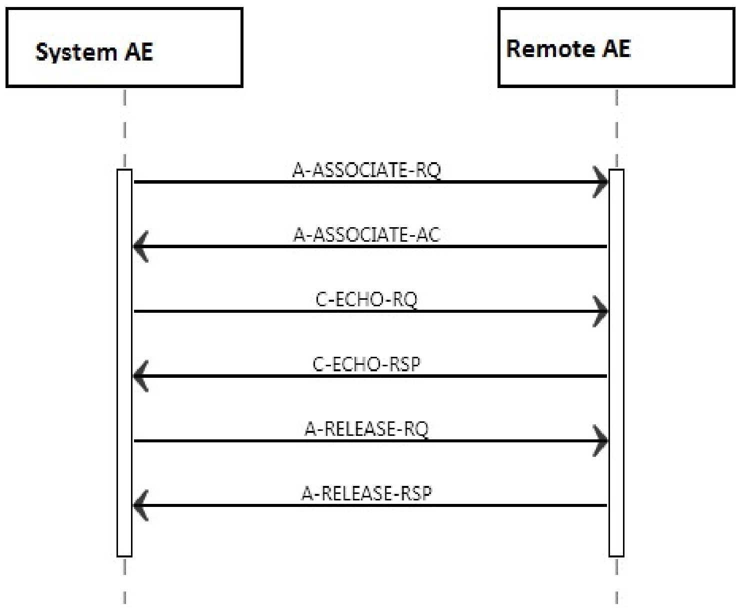


Figure 20: (Real World) Activity - Verification as SCP

4.2.5.4.1.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 108: 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 109: 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 110: 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		
		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 111: 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	TM	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 112: 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)
	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 or returning query results.
Possible communication failures during the query process are:

Table 113: 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 114: 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, Universal, WildCard	-
Patient's Name	0010,0010	PN	Single Value, Universal, WildCard	Wildcard matching not case sensitive.
Patient's Sex	0010,0040	CS	Single Value, Universal	-
Referring Physician's Name	0008,0090	PN	Single Value, Universal	-
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	TM	Single Value, 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
Q/R Series level				
Modality	0008,0060	CS	Single Value, Universal	-
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 Instance UID	0008,0018	UI	List Of UID, Single 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 115: 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 116: 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 117: 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 Reponses for C-FIND request handling is shown here:

Table 118: 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 119: 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 120: 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 121: 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 122: 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 123: 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 124: 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 125: 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 126: 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.

4.2.5.4.3.5. SOP Specific Conformance for PatientStudy 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 127: 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 128: 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 129: 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 130: 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 131: 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 132: 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 133: DICOM Implementation Class and Version for Query Retrieve as SCU AE

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

4.2.6.2.4. Communication Failure Handling

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

Table 134: 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 135: 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.

Result	Source	Reason/Diagnosis	Behavior
		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 136: 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.

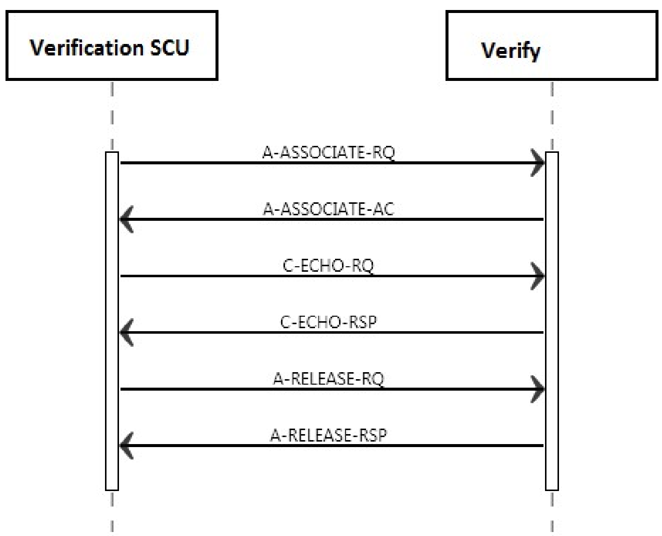


Figure 21: Sequencing of Verification

4.2.6.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 137: 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 138: 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.

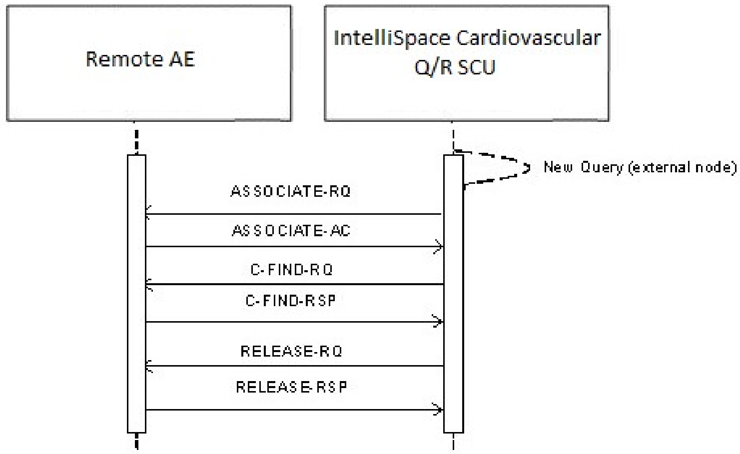


Figure 22: (Real World) Activity - FIND As SCU

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.

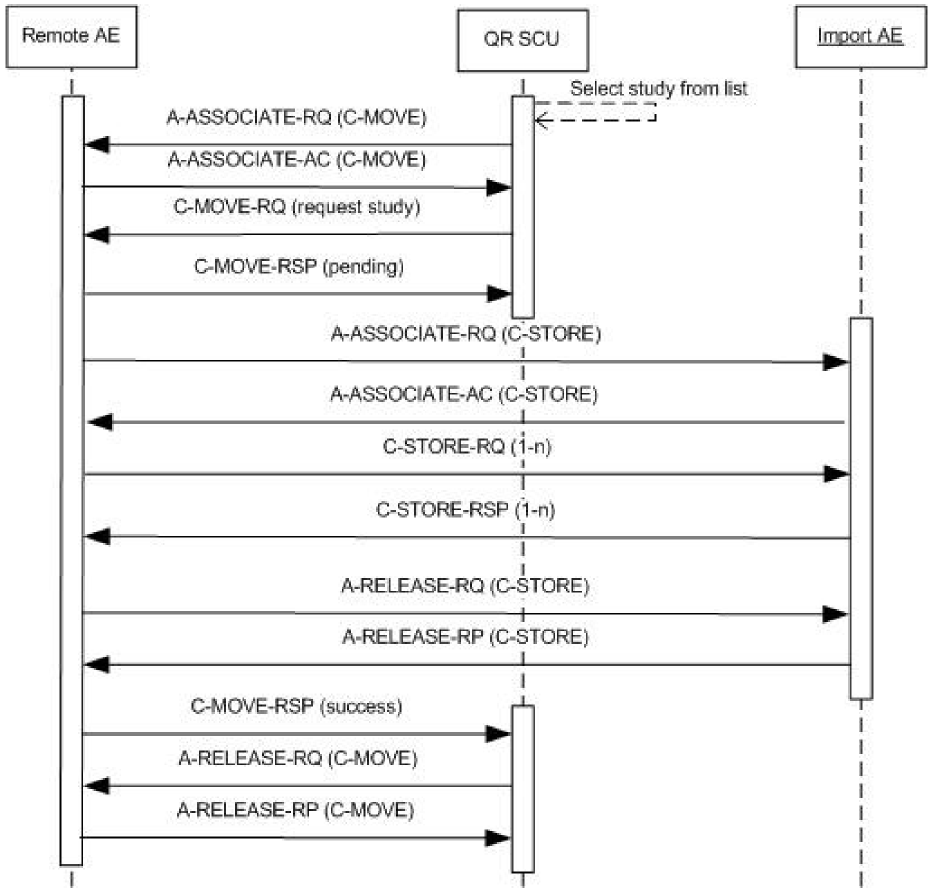


Figure 23: Flow diagram Retrieve DICOM image data from external DICOM node.

4.2.6.3.2.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 139: 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 140: 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 141: 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 142: 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 143: 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 144: 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 145: 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.
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.

Service Status	Error Code	Further Meaning	Behavior
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 de external DICOM node while setting up the connection, IntelliSpace Cardiovascular will abort all actions related to that connection and report an error.

Table 146: 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 147: 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

SOP Class Name	SOP Class UID	SCU	SCP
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
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

SOP Class Name	SOP Class UID	SCU	SCP
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 148: 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 149: 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 150: Asynchronous nature as an Association Initiator for this AE

Description	Value
Maximum number of outstanding asynchronous transactions	Not applicable

4.2.7.2.4. Implementation Identifying Information

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

Table 151: DICOM Implementation Class and Version for Send AE

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

4.2.7.2.5. Communication Failure Handling

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

Table 152: 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 153: 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 154: 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.

Source	Reason/Diagnosis	Behavior
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.

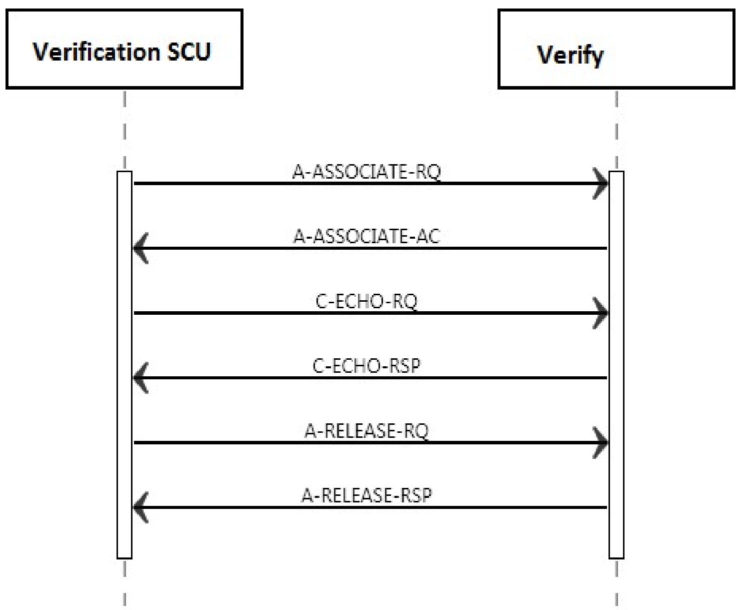


Figure 24: Sequence of Verification SCU.

4.2.7.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 155: 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 156: 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 for the list of updated patient and study attributes.)

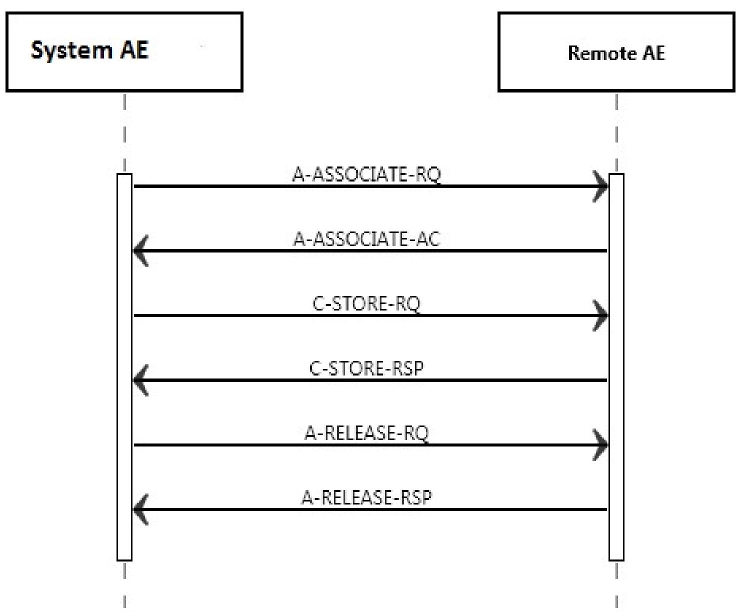


Figure 25: (Real World) Activity - Image Export (Data Export)

4.2.7.3.2.2. Proposed Presentation Contexts

The proposed presentation contexts are defined in the next table.

Table 157: 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		
		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		
		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		

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 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		
		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	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)	1.2.840.10008.5.1.4.1.1.11	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		
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		
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
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		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 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		
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
		Explicit VR Big Endian	1.2.840.10008.1.2.2		
		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 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		

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
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	1.2.840.10008.5.1.4.1.1.2	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		
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
		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		
		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		
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	1.2.840.10008.5.1.4.1.1.481.1	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		
RT Dose Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.2	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	1.2.840.10008.5.1.4.1.1.481.3	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		
		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 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		
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 [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 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]		
		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		
	1.2.840.10008.5.1.4.1.1.8	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		
Standalone Overlay 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		
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
		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		
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
		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]	1.2.840.10008.5.1.4.1.1.11.3	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]	1.2.840.10008.5.1.4.1.1.11.4	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
		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	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]	1.2.840.10008.5.1.4.1.1.66.1	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		

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
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		
		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
		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]	1.2.840.10008.5.1.4.1.1.77.1.2.1	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 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]	1.2.840.10008.5.1.4.1.1.77.1.4.1	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 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	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		
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		
		Implicit VR Little Endian	1.2.840.10008.1.2		
RT Ion Plan Storage SOP Class [Note 1]	1.2.840.10008.5.1.4.1.1.481.8	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]	1.2.840.10008.5.1.4.1.1.481.9	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		
		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		

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 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		
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 158: 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

Service Status	Error Code	Further Meaning	Behavior
	C000	Error: cannot understand	Reason is logged
Warning	B000	Coercion of Data Elements	Reason is logged
	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 table 20 and table 21 respectively.

Possible communication failures during the C-STORE request are listed here:

Table 159: 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 160: 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 161: 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 162: 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 163: 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 164: DICOM Implementation Class and Version for Storage Commitment AE

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

4.2.8.2.5. Communication Failure Handling

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

Table 165: 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 166: 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.

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.
	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 for sending an association abort is summarized in next table.

Table 167: 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.

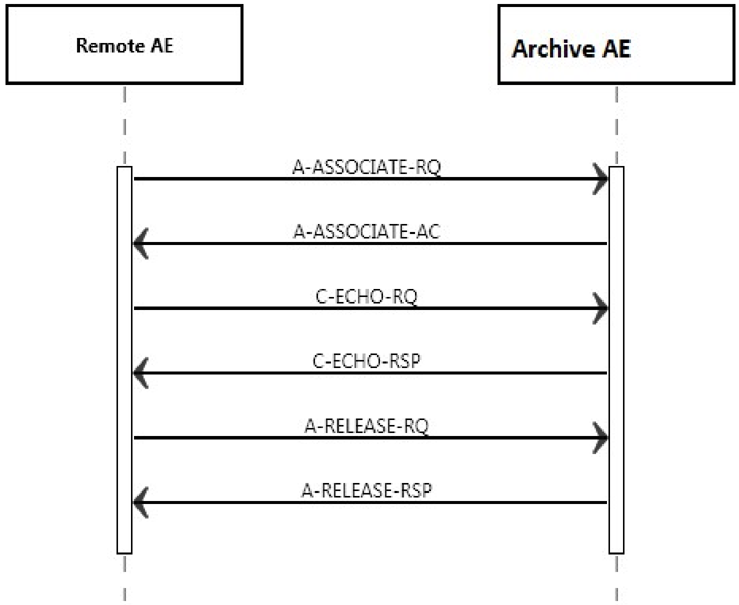


Figure 27: (Real-World) Activity – Verification as SCP

4.2.8.4.1.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 168: 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 169: 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.

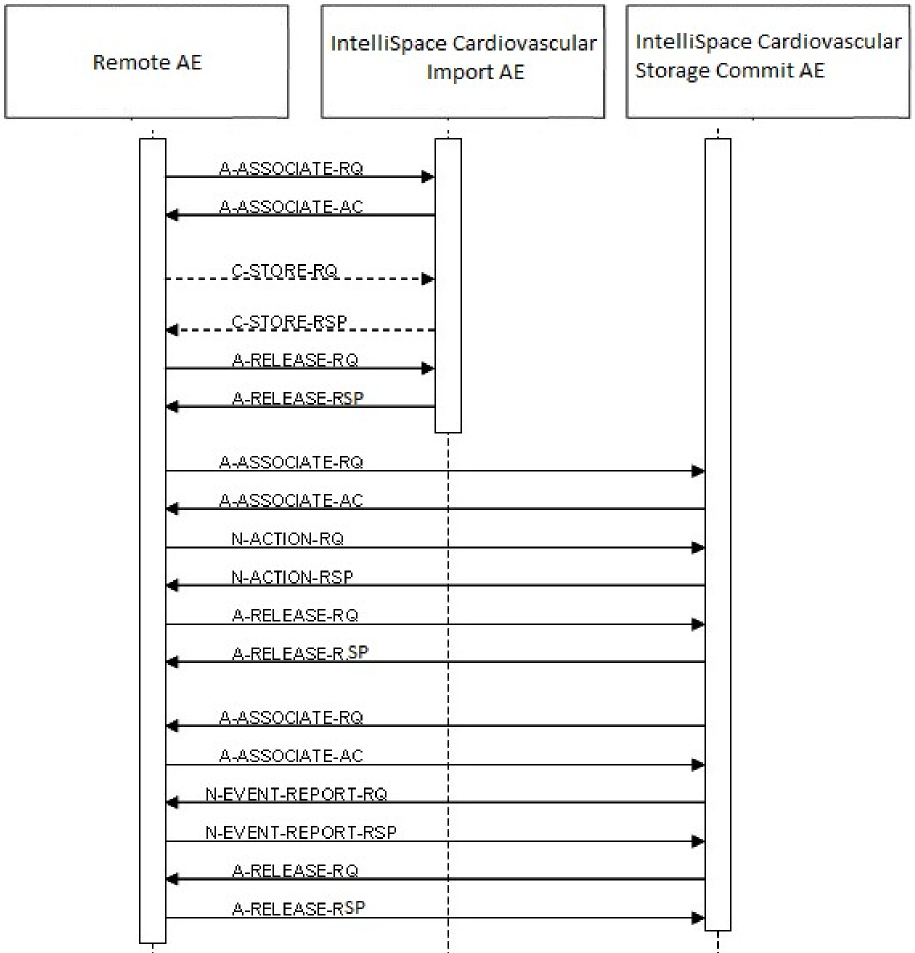


Figure 28: (Real World) Activity - Storage Commitment Push Model as SCP

4.2.8.4.2.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 170: 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 171: 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 172: 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 173: Storage Commitment Attribute for N-ACTION-RSP

Attribute Name	Tag	Comment
Storage Commitment Module		
Transaction UID	0008,1195	
Referenced SOP Sequence	0008,1199	
>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 174: 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 175: 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.

Exception	Behavior
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.

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 176: 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 177: 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 178: 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 179: Asynchronous nature as an Association Initiator for this AE

Description	Value
Maximum number of outstanding asynchronous transactions	Not applicable

4.2.9.2.4. Implementation Identifying Information

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

Table 180: DICOM Implementation Class and Version for Send AE

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

4.2.9.2.5. Communication Failure Handling

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

Table 181: 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 182: 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.

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.
	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 183: 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 184: 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	1.2.840.10008.5.1.4.1.1.104.1	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 185: 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 186: SOP Classes for MWL AE

SOP Class Name	SOP Class UID	SCU	SCP
Verification SOP Class	1.2.840.10008.1.1	No	Yes
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 187: 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 188: 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 189: DICOM Implementation Class and Version for MWL AE

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 190: Communication Failure Behavior

Exception	Behavior
Timeout	IntelliBridge considers an ARTIM Timeout of 30 seconds as a communication failure
Association aborted	
Failed to connect	

4.2.10.3. Association Acceptance Policy

The behavior of this Application Entity is summarized in the next Table.

Table 191: 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	

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

Table 192: Association Rejection 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.
	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 193: 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.

4.2.10.3.1. (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.

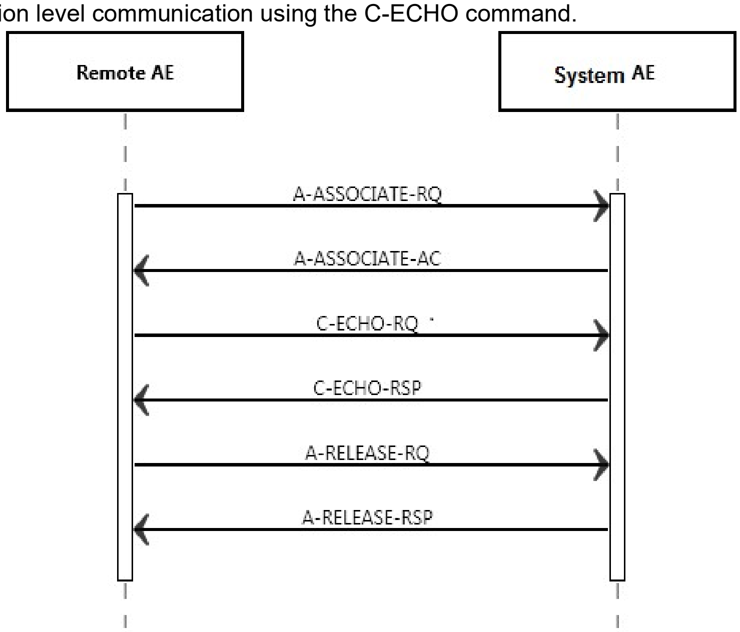


Figure 29: (Real World) Activity - Verification as SCP

4.2.10.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 194: 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	1.2.840.10008.1.2.2	SCP Role: 1 SCU Role: 1	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		Implicit VR Little Endian	1.2.840.10008.1.2		

4.2.10.3.1.3. SOP Specific Conformance for Verification SOP Class

The MWL AE provides standard conformance to Verification SOP Class.

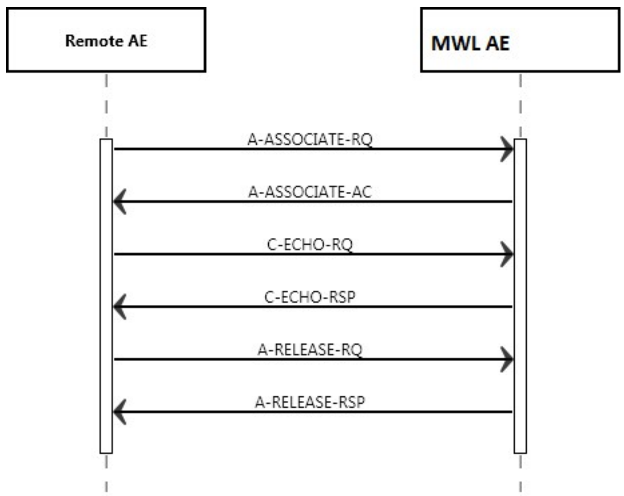


Figure 30: (Real World) Activity - Verification as SCP

Table 195: 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 196: 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.

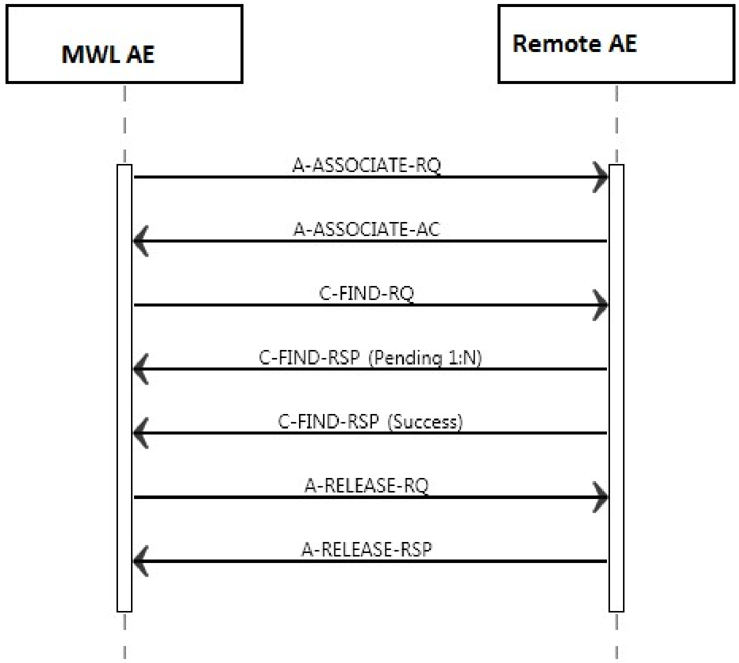


Figure 31: (Real World) Activity - Modality Worklist as SCP

4.2.10.3.2.2. Accepted Presentation Contexts

MWL SCP will accept the presentation contexts as given in the table below.

Table 197: 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 198: Modality Worklist Return keys supported

Attribute Name	Tag	VR	Remark/ Comment	Matching Key Supported	Return Key Supported
SOP Common Module					
Specific Character Set	0008,0005	CS	Always return the values in ISO_IR100	N	Y
Timezone Offset From UTC	0008,0201	SH		Y	N
Patient Identification Module					
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
Patient Demographic Module					
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
Patient Medical Module					
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
Visit Relationship Module					
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
Visit Identification Module					
Admission ID	0038,0010	LO	Returns Empty	N	Y
Visit Status Module					
Current Patient Location	0038,0300	LO	Returns Value	N	Y
Visit Status ID	0038,0008	CS	Returns value.	N	Y
Scheduled Procedure Step Module					
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	SPS Time matching only supported when SPS Date is provided as matching key	Y	Y
> Scheduled Procedure Step Start Time	0040,0003	TM		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

Attribute Name	Tag	VR	Remark/ Comment	Matching Key Supported	Return Key Supported
>> 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
Requested Procedure Module					
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
Patient Transport Arrangements	0040,1004	LO	Returns Empty	N	Y
Imaging Service Request Module					
Accession Number	0008,0050	SH		Y	Y
Referring Physician's Name	0008,0090	PN	Returns the value. 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 199: 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 200: 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 201: 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 202: 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 203: Number of associations as an Association Initiator for this AE

Description	Value
Maximum number of simultaneous associations	1

Table 204: 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.

Table 205: 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 206: DICOM Implementation Class and Version for MPPS AE

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 207: 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 208: 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.
Pending	FF00	Current match is supplied	Matches are continuing; Current match is supplied.
Cancel	FE00	Matching terminated due to Cancel Request	

The Application Entity will respond to a received Association rejection as shown in the next table.

Table 209: 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.

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.
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 210: 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 211: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Success	
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 212: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Success	
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.

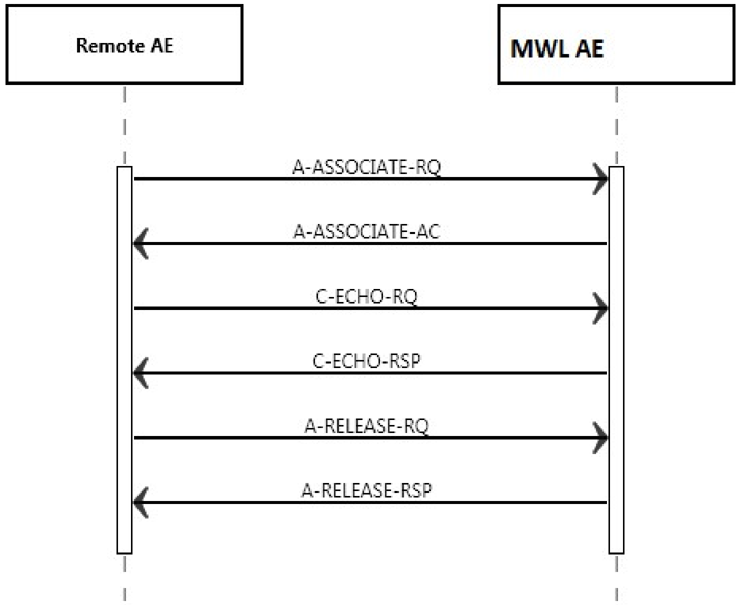


Figure 32: (Real World) Activity - Verification as SCP

4.2.11.3.2.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 213: 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	1.2.840.10008.1.2.2	SCP Role: 1 SCU Role: 1	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		
		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 214: 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 215: 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

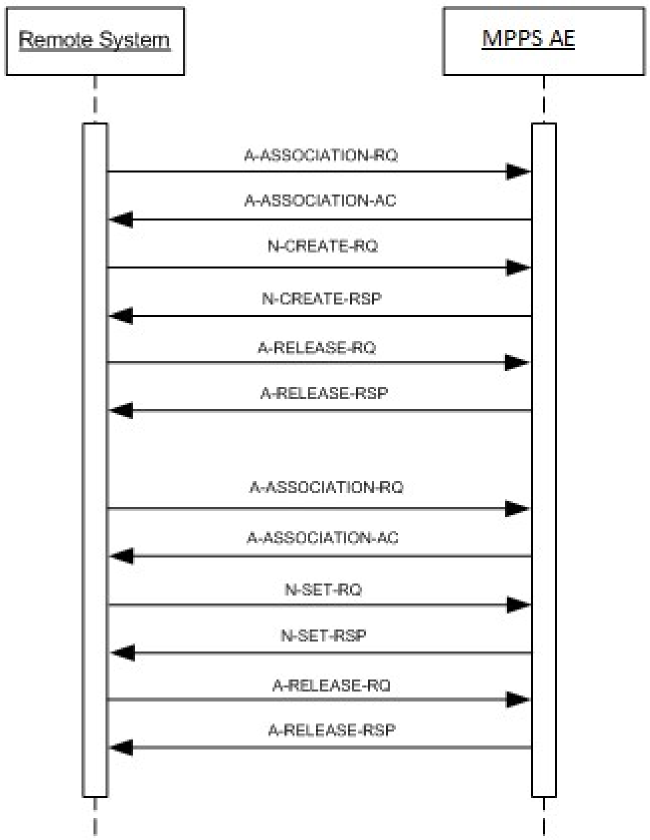


Figure 33: (Real-World) Activity – MPPS as SCP

4.2.11.3.3.2. Accepted Presentation Contexts

The presentation contexts are defined in the next table.

Table 216: 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	1.2.840.10008.3.1.2.3.3	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		

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 217: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Success	
Failed	0121	Missing attribute value	

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 218: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Success	
Failed	0121	Missing attribute value	

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 219: 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 220: 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 221: 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 222: DICOM Implementation Class and Version for Instance Availability Notification AE

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

4.2.12.2.4. Communication Failure Handling

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

Table 223: 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 224: 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 225: 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.

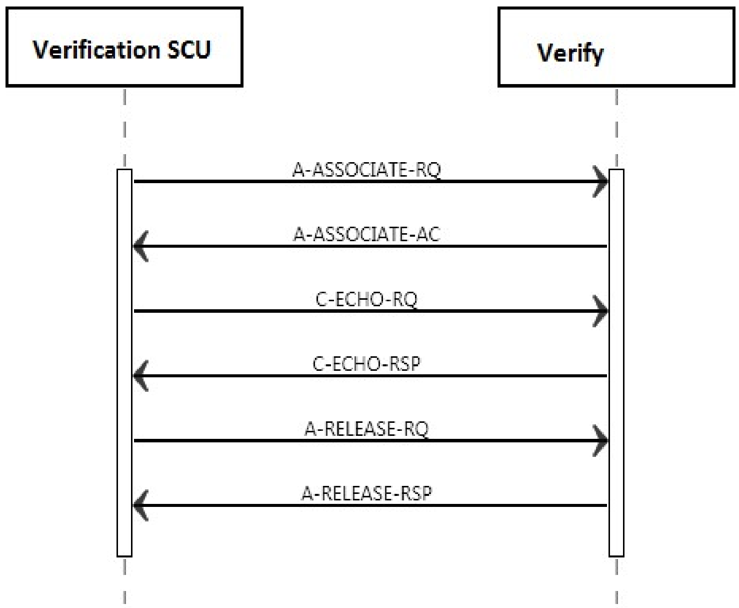


Figure 34: Sequence of Verification SCU.

4.2.12.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 226: 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 227: 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).

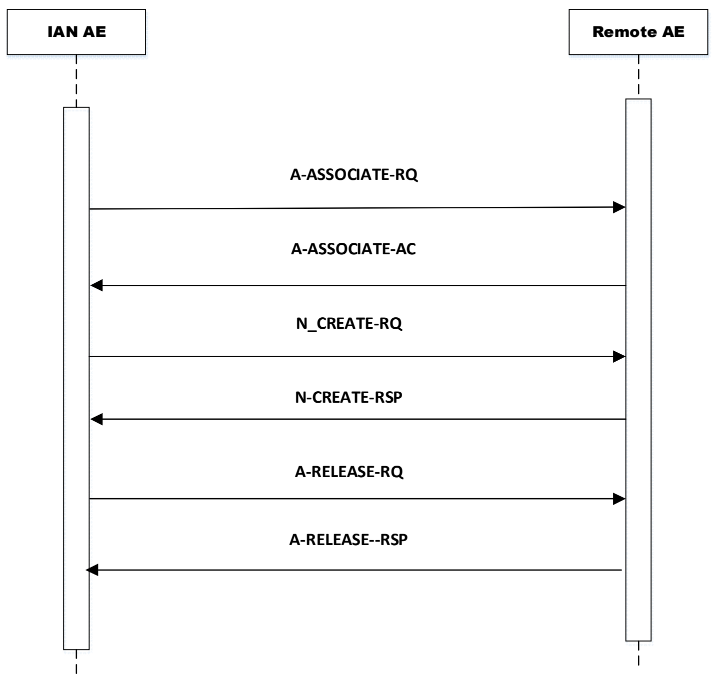


Figure 35: (Real World) Activity – Instance Availability Notification as SCU

4.2.12.3.2.2. Proposed Presentation Contexts

The proposed presentation contexts are defined in the next table.

Table 228: 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 229: Instance Availablity 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 230: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Operation complete	The request for Instance Availability Notification is considered successfully stored.

Service Status	Error Code	Further Meaning	Behavior
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 231: 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 6.2 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 6.2 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 6.2 responds with a set of matching responses. IntelliSpace Cardiovascular 6.2 does not support non-hierarchical query model.

Table 232: QIDO-RS Specification

Options	Restrictions
Request URL	{SERVICE}/qidors/ {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 "multipart/related; "application/dicom+json"

Note: IntelliSpace Cardiovascular 6.2 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 6.2

Table 233: Matching Keys supported for QIDO-RS

Attribute	Tag	Type of Matching
STUDY Level		
StudyDate	0008,0020	R, S
StudyTime	0008,0030	R, S

Attribute	Tag	Type of Matching
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, *
SERIES Level		
Modality	00080060	S
SeriesInstanceUID	0020000E	S
SeriesNumber	00200011	S, *
Instance Level		
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 6.2

Table 234: Return Keys supported for QIDO-RS

Attribute	Tag
STUDY Level	
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)
SERIES Level	
Modality	(0008,0060)
Series Description	(0008,103E)

Attribute	Tag
Retrieve URL	(0008,1190)
Series Instance UID	(0020,000E)
Series Number	(0020,0011)
Number of Series Related Instances	(0020,1209)
Instance Level	
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 235: 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: If the request is bad. If the query contains unsupported tags. 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 236: WADO-RS Retrieve Study

Options	Restrictions
Request URL	{SERVICE}/wadors/studies/{StudyInstanceUID} Where, {SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application. {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}]
Transfer Syntaxes Supported (transfer-syntax Accept parameter)	DICOM data will be returned in the transfer syntax ISCV 6.2 has stored the DICOM data
DICOM Response	Content-Type: multipart/related; type=application/dicom; boundary={MessageBoundary} The entire multipart response contains every instance for the specified Study. Each item in the multipart response represents a DICOM SOP Instance with the following http headers: •Content-Type: application/dicom
SOP Class Restrictions	Restricted to SOP classes supported by IntelliSpace Cardiovascular 6.2
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 237: WADO-RS Retrieve Series

Options	Restrictions
Request URL	{SERVICE}/wadors/studies/{StudyInstanceUID}/series/{SeriesInstanceUID} Where, {SERVICE} is the base URL for the service. This will be a combination of scheme (HTTPS), host, port, and application. {StudyInstanceUID} is the study instance UID for a single study. {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 6.2 has stored the DICOM data
DICOM Response	Content-Type: multipart/related; type=application/dicom; boundary={MessageBoundary} The entire multipart response contains every instance for the specified Series. Each item in the multipart response represents a DICOM SOP Instance with the following http headers: •Content-Type: application/dicom
SOP Class Restrictions	Restricted to SOP classes supported by IntelliSpace Cardiovascular 6.2.
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 238: WADO-RS Retrieve Instance

Options	Restrictions
Request URL	{SERVICE}/wadors/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/instances/{SOPInstanceUID} {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; transfersyntax: {transfersyntaxUID}
Transfer Syntaxes Supported (transfer-syntax Accept parameter)	DICOM data will be returned in the transfer syntax ISCV 6.2 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 6.2.
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 239: WADO-RS Retrieve Frames

Options	Restrictions
Request URL	{SERVICE}/wadors/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/instances/{SOPInstanceUID}/frames/{FrameList} {FrameList} is a comma or %2C separated list frame numbers, in ascending order, contained within an instance.
Data Types Supported (Accept Type)	Restricted to multipart/related;type=application/octet-stream ; transfersyntax: {transfersyntaxUID, multipart/related;type=image/jpeg ; transfersyntax: {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} All transfer syntax UID's supported by ISCV 6.2 are supported.
DICOM Response	Content-Type: multipart/related; type=application/octet-stream; boundary={MessageBoundary} multipart/related; type=image/jpeg; boundary={MessageBoundary} The entire multipart response contains all requested Frames for the specified Instance. The frames will be returned in the order specified by the Frame List.
SOP Class Restrictions	Restricted to SOP classes supported by IntelliSpace Cardiovascular 6.2.
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 240: 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 transfersyntax: {transfersyntaxUID}
Transfer Syntaxes Supported (transfer-syntax Accept parameter)	Bulk data will be returned in the transfer syntax IntelliSpace Cardiovascular 6.2 has stored the bulk data
DICOM Response	Content-Type: multipart/related; type=application/octet-stream; boundary={MessageBoundary} The entire multipart response contains the complete bulk data.
SOP Class Restrictions	Not applicable
Size restrictions	Not applicable

Note: IntelliSpace Cardiovascular 6.2 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 241: WADO-RS Retrieve Metadata

Options	Restrictions
Request URL	{SERVICE}/wadors/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/instances/{SOPInstanceUID}/metadata {SERVICE}/wadors/studies/{StudyInstanceUID}/series/{SeriesInstanceUID}/metadata {SERVICE}/wadors/studies/{StudyInstanceUID}/metadata {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
Transfer Syntaxes Supported (transfer-syntax Accept parameter)	Not applicable for Metadata
SOP Class Restrictions	Restricted to SOP classes supported by IntelliSpace Cardiovascular 6.2
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 6.2

4.2.13.2.7. WADO Response Status Codes

Table 242: 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 6.2 does not support Rendered Media Types
2. IntelliSpace Cardiovascular 6.2 returns the data with same transfer syntax as it was originally stored
3. IntelliSpace Cardiovascular 6.2 does not support capability search option for any of the web services.
4. IntelliSpace Cardiovascular 6.2 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 14: General Parameters

Options	Restrictions
Media type supported (Content Type)	application/dicom
Media type supported (Accept Type)	application/dicom+json

Note:

- IntelliSpace Cardiovascular 6.2 does not support accept type ‘application/dicom+xml’
- IntelliSpace Cardiovascular 6.2 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 15: Supported SOP class

SOP Class Name	SOP Class UID
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1
Hardcopy Grayscale Image Storage (Retired)	1.2.840.10008.5.1.1.29
Hardcopy Color Image Storage (Retired)	1.2.840.10008.5.1.1.30
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

SOP Class Name	SOP Class UID
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
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

SOP Class Name	SOP Class UID
Philips Private ViewForum CT Synthetic Image Storage	1.3.46.670589.5.0.9

Table 2436: 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

Table 2447: 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 18: 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 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 245: 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
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 246: Remote AE Title Configuration Table

AE Configuration	Description
Image Import AE	Import AE Title
	Hostname

AE Configuration	Description
	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
	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,

AE Configuration	Description
	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
	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
	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.

4.4.1.3. Local AE Titles

The local AE title mapping and configuration are specified as:

Table 247: AE Title configuration table

Application Entity	Default AE Title	Default TCP/IP Port

4.4.1.4. Remote AE Title/Presentation Address Mapping

4.4.2. Parameters

The specification of important operational parameters, their default value and range (if configurable) are specified here.

Table 248: Configuration Parameters Table

Parameter	Configurable	Default Value
General Parameters		
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
Storage Parameters		
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	
Query/Retrieve Parameters (SCU and SCP)		
Maximum PDU size	No	64 Kbytes
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
Q/R best case query response time (SCP)	No	2 seconds
Q/R worst case query response time (SCP)	No	10 seconds
Storage Commitment Specific Parameters()		
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

Parameter	Configurable	Default Value
Print Parameters		
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.

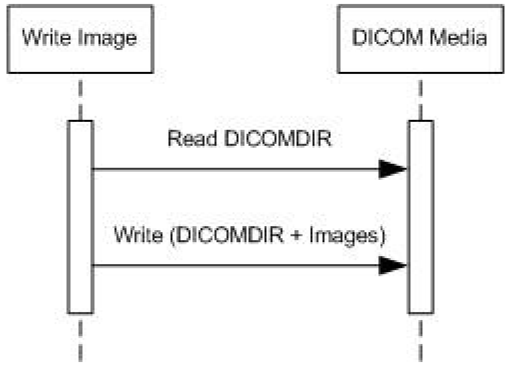


Figure 37: (Real World) Activity - Media.

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 249: 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
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 250: 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 251: File Meta Information for the Media AE

Implementation Class UID	1.3.46.670589.58.6.2
Implementation Version Name	ISCV 6.2

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 252: 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 253: 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 254: 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 255: Optional Keys

Attribute name	Tag	VR	Notes
Patient Keys			
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).
Study Keys			
Referring Physician's Name	0008,0090	PN	-
Named of Physician Reading Study	0008,1060	PN	-
Series Keys			
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	-
Image Keys			
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 256: Supported DICOM Character Sets

Character Set Description	Defined Term	ESC Sequence	ISO Registration Number	Code Element	Character Set
Latin alphabet No. 1	ISO 2022 IR 100	ESC 02/08 04/02	ISO-IR 6	G0	ISO 646
		ESC 02/13 04/01	ISO-IR 100	G1	Supplementary set of ISO 8859
Latin alphabet No. 2	ISO 2022 IR 101	ESC 02/08 04/02	ISO-IR 6	G0	ISO 646
		ESC 02/13 04/02	ISO-IR 101	G1	Supplementary set of ISO 8859
Latin alphabet No. 3	ISO 2022 IR 109	ESC 02/08 04/02	ISO-IR 6	G0	ISO 646
		ESC 02/13 04/03	ISO-IR 109	G1	Supplementary set of ISO 8859
Latin alphabet No. 4	ISO 2022 IR 110	ESC 02/08 04/02	ISO-IR 6	G0	ISO 646
		ESC 02/13 04/04	ISO-IR 110	G1	Supplementary set of ISO 8859
Japanese*	ISO 2022 IR 13	ESC 02/09 04/09	ISO-IR 13	G1	JIS X 0201: Katakana
Japanese*	ISO 2022 IR 87	ESC 02/04 04/02	ISO-IR 87	G0	JIS X 0208: Kanji
Japanese*	ISO 2022 IR 159	ESC 02/04 02/08 04/04	ISO-IR 159	G0	JIS X 0212: Supplementary Kanji set
Greek	ISO_IR 126	ESC 02/08 04/02	ISO-IR 6	G0	ISO 646
		ESC 02/13 04/06	ISO-IR 126	G1	Supplementary set of ISO 8859
Cyrillic	ISO_IR 144	ESC 02/08 04/02	ISO-IR 6	G0	ISO 646
		ESC 02/13 04/12	ISO-IR 144	G1	Supplementary set of ISO 8859
Korean*	ISO 2022 IR 149	ESC 02/04 02/09 04/03	ISO-IR 149	G1	KS X 1001: Hangul and Hanja

Notes:
* IntelliSpace Cardiovascular only supports Japanese Character Set for Patient's Name.
If the internally stored character group has been updated using any Kanji character, this PN attribute will always be exported as "Ideographic" component group.

The following information is valid for Japanese as well as Korean Character Set:
A DICOM Value Representation of type PN can exists of three component groups in the format:
<Single byte character>=<Ideographic character>=<Phonetic character>
Each component group is separated by the equal 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 <Single byte character> component group for storage into the internal database.

In the case the <Single byte character> component group is absent; IntelliSpace Cardiovascular uses the <Ideographic character> component group for storage into the internal database.
In the case both the <Single byte character> and the <Ideographic character> component groups are absent, IntelliSpace Cardiovascular uses the <phonetic character> 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 character group while exporting the PN type attributes.

That means that if the <Single byte character> component group is internally saved, IntelliSpace Cardiovascular only uses this component group during export and the other two component groups are not exported.

And if the <Ideographic character> group is internally saved, then that group is used for export and the other two component groups are not exported.
And if the <Phonetic character> group is internally saved, then that group is used for export and the other two component groups are not exported.

7. Security

7.1. Security Profiles

IntelliSpace Cardiovascular 6.2 implements secure DICOM communication only for DICOM Web. IntelliSpace Cardiovascular 6.2 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 6.2 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 6.2 conforms to the TLS protocol v1.2 or higher of Secure Transport Connection Profile.

IntelliSpace Cardiovascular 6.2 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 6.2 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 6.2 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

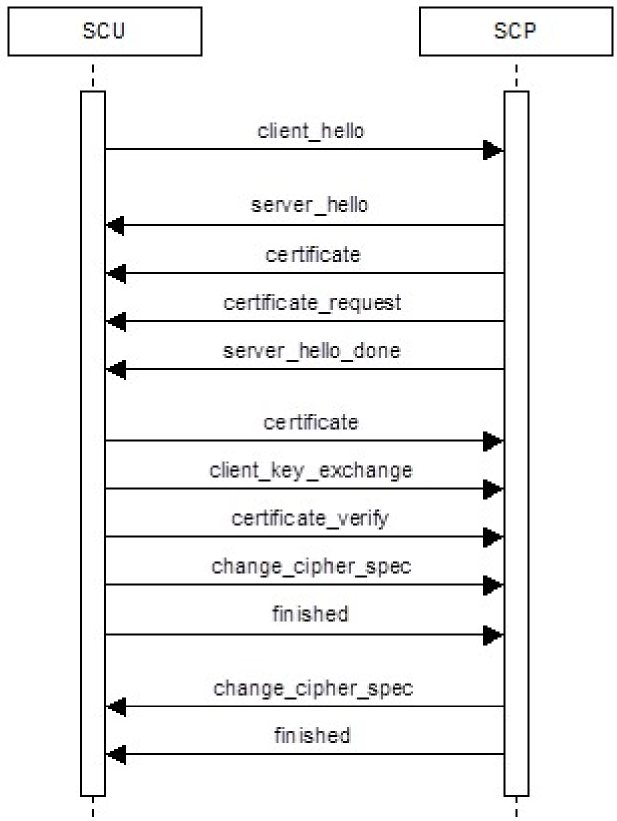
No verification is done on:

- 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 6.2.



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 257: 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
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

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 258: 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 259: 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
Image	General Image Module	ALWAYS
	Image Pixel Module	ALWAYS

	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	ALWAYS

Table 260: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	COPY	-
Patient's Birth Date	0010,0030	DA		VNAP	COPY	-
Patient's Birth Time	0010,0032	TM		ANAP	COPY	-
Patient's Sex	0010,0040	CS	F, M, O	VNAP	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 261: 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	COPY	-
Referring Physician’s Name	0008,0090	PN		ANAP	COPY	-
Study Description	0008,1030	LO		ANAP	COPY	-
Name of Physician(s) Reading Study	0008,1060	PN		ANAP	COPY	-
Study Instance UID	0020,000D	UI		ALWAYS	COPY	-
Study ID	0020,0010	SH		VNAP	COPY	-

Table 262: 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 263: 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		ANAP	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	-
Instance Creation Date	0008,0012	DA		ANAP	AUTO	-
Instance Creation Time	0008,0013	TM		ANAP	AUTO	-
Instance Creator UID	0008,0014	UI		ANAP	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 264: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips	ALWAYS	AUTO	-
Institution Name	0008,0080	LO	Hospital	ANAP	AUTO	-
Manufacturer's Model Name	0008,1090	LO	“ViewForum”	ANAP	AUTO	-
Software Versions	0018,1020	LO	"ViewForum 6.2\PMS5.2 MIMIT EVIIMDictionary"	ANAP	AUTO	-

Table 265: 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	AUTO	-

Table 266: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS	Value 1: DERIVED, Value 2: SECONDARY	ALWAYS	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		VNAP	COPY	-

Table 267: Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Samples per Pixel	0028,0002	US	0x0001=1, 1	ALWAYS	AUTO	-
Photometric Interpretation	0028,0004	CS	MONOCHROME2	ALWAYS	AUTO	-
Planar Configuration	0028,0006	US		ALWAYS	AUTO	-
Rows	0028,0010	US		ALWAYS	AUTO	-
Columns	0028,0011	US		ALWAYS	AUTO	-
Bits Allocated	0028,0100	US	8	ALWAYS	AUTO	-
Bits Stored	0028,0101	US	8	ALWAYS	AUTO	-
High Bit	0028,0102	US	7	ALWAYS	AUTO	-
Pixel Representation	0028,0103	US	0	ALWAYS	AUTO	-

Pixel Data	7FE0,0010	OW/OB		ALWAYS	AUTO	-

Table 268: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Specific Character Set	0008,0005	CS		ANAP	COPY	Required if expanded/replacement character set used
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	-

8.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

Table 269: 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 270: 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.

8.5. Standard Extended/Specialized/Private SOPs

8.5.1. Secondary Capture Image Storage SOP Class

Table 271: Extended DICOM and private attributes for Secondary Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Pregnancy Status	(0010,21C0	US	ISO_IR 100	ANAP	COPY	Required if expanded/replacement character set used
Study Comments	0032,4000	LT	1.2.840.10008.5.1.4.1.1.7	ALWAYS	AUTO	-
Special Needs	0038,0050	LO		ALWAYS	AUTO	-
Patient State	0038,0500	LO		ANAP	AUTO	
Performed Station AE Title	0040,0241	AE		ANAP	AUTO	
Performed Station Name	0040,0242	SH		ANAP	AUTO	
Performed Location	0040,0243	SH		ANAP	AUTO	
Performed Procedure Step End Date	0040,0250	DA		ANAP	AUTO	
Performed Procedure Step End Time	0040,0251	TM		ANAP	AUTO	
Performed Procedure Step Status	0040,0252	CS		ANAP	AUTO	
Performed Procedure Type Description	0 040,0255	LO		ANAP	AUTO	
Film Consumption Sequence	0040,0321	SQ		ANAP	AUTO	

8.6. Private Transfer Syntaxes

Not applicable.

9. Annexes of application "Nuclear Medicine Viewer"

9.1. IOD Contents

9.1.1. Created SOP Instance

This section specifies each IOD created by this application.

Note:

The SOP classes created by Nuclear Medicine Viewer for IntelliSpace Cardiovascular are encoded with transfer syntax DICOM Explicit VR Little Endian (1.2.840.10008.1.2.1) only. Transfer syntax DICOM RLE Lossless (1.2.840.10008.1.2.5) is offered for creation but non-functional in this build.

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

9.1.1.1. List of created SOP Classes

Table 272: 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

9.1.1.2. Secondary Capture Image Storage SOP Class

Table 273: 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
Image	General Image Module	ALWAYS
	Image Pixel Module	ALWAYS
	SC Image Module	ALWAYS
	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	

Table 274: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	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	F, M, O	VNAP	COPY	-

Table 275: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	COPY	-
Study Time	0008,0030	TM		VNAP	COPY	-
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	AUTO	-

Table 276: Patient Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Admitting Diagnoses Description	0008,1080	LO		ANAP	COPY	-

Table 277: 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	-
Series Description	0008,103E	LO		ANAP	AUTO	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		VNAP	AUTO	-

Table 278: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	PHILIPS Nuclear Medicine	VNAP	COPY, AUTO	-

Institution Name	0008,0080	LO		ANAP	COPY, AUTO	-
Station Name	0008,1010	SH		ANAP	COPY, AUTO	-
Software Version(s)	0018,1020	LO	Value 1: AIM_DICOM_200	ANAP	AUTO, COPY	-

Table 279: SC Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS	NM	ANAP	AUTO	-
Conversion Type	0008,0064	CS	WSD	ALWAYS	AUTO	-
Secondary Capture Device Manufacturer	0018,1016	LO		ANAP	AUTO	-
Secondary Capture Device Manufacturer's Model Name	0018,1018	LO	AutoQUANT	ANAP	AUTO	-
Secondary Capture Device Software Version(s)	0018,1019	LO		ANAP	AUTO	-
Digital Image Format Acquired	0018,1023	LO	Screen capture	ANAP	AUTO	-

Table 280: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS	Value 1: DERIVED, 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	-
Derivation Description	0008,2111	ST		ANAP	AUTO	-
Acquisition Number	0020,0012	IS		ANAP	COPY	-
Instance Number	0020,0013	IS		VNAP	AUTO	-
Patient Orientation	0020,0020	CS		VNAP	AUTO	-

Table 281: Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Samples per Pixel	0028,0002	US	3	ALWAYS	AUTO	-
Photometric Interpretation	0028,0004	CS	RGB	ALWAYS	AUTO	-
Planar Configuration	0028,0006	US	0x0000	ALWAYS	AUTO	-
Rows	0028,0010	US		ALWAYS	AUTO	-
Columns	0028,0011	US		ALWAYS	AUTO	-
Bits Allocated	0028,0100	US	8	ALWAYS	AUTO	-
Bits Stored	0028,0101	US	8	ALWAYS	AUTO	-
High Bit	0028,0102	US	7	ALWAYS	AUTO	-
Pixel Representation	0028,0103	US	0x0000	ALWAYS	AUTO	-
Pixel Data	7FE0,0010	OW/OB		ALWAYS	AUTO	-

Table 282: 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 283: 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	-

9.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

Table 284: Functionalities

Functionality	Type1	Optional	Private
AutoQuant	X		X

9.1.2.1. Usage of the Functionality AutoQuant

The following table lists the supported SOP Classes which can be used by this application.

Table 285: Supported SOP Classes for functionality AutoQuant

SOP Class name	SOP Class UID
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

9.1.3. Attribute Mapping

Not applicable.

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.

Table 286: 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

9.5.1. Standard Extended/Specialized/Private SOP Instance

9.5.1.1. Secondary Capture Image Storage SOP Class

Table 287: Extended DICOM and private attributes for Secondary Capture Image Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Referenced Series Sequence	0008,1115	SQ		ALWAYS	AUTO	-
>Referenced Instance Sequence	0008,114A	SQ		ALWAYS	AUTO	-
>>Referenced SOP Class UID	0008,1150	UI		VNAP	AUTO	-
>>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	AUTO	-
>Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-

9.6. Private Transfer Syntaxes

Not applicable.

10. Annexes of application "Ultrasound Analysis Package (QLAB)"

10.1. IOD Contents

10.1.1. Created SOP Instance

This section specifies each IOD created by this application.

Note that the Creation of Philips Private SONOS 7500 Live 3D Cartesian Storage (1.2.840.113543.6.6.1.3.1002) data requires a separate license.

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 288: List of created SOP Classes

SOP Class Name	SOP Class UID
Comprehensive SR SOP Class	1.2.840.10008.5.1.4.1.1.88.33
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
Philips Private SONOS 7500 Live 3D Cartesian Storage	1.2.840.113543.6.6.1.3.1002

10.1.1.2. Comprehensive SR SOP Class

Table 289: IOD of Created Comprehensive SR SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS

Study	General Study Module	ALWAYS
Series	SR Document Series Module	ALWAYS
Equipment	General Equipment Module	ALWAYS
Document	SR Document General Module	ALWAYS
	SR Document Content Module	ALWAYS
	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	ALWAYS

Table 290: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	COPY	-
Patient's Birth Date	0010,0030	DA		VNAP	COPY	-
Patient's Sex	0010,0040	CS	F, M, O	VNAP	COPY	-

Table 291: 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		VNAP	COPY	-
Referring Physician's Name	0008,0090	PN		VNAP	COPY	-
Study Instance UID	0020,000D	UI		ALWAYS	COPY	-
Study ID	0020,0010	SH		EMPTY	AUTO	-

Table 292: SR Document Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS	SR	ALWAYS	AUTO	-
Referenced Performed Procedure Step Sequence	0008,1111	SQ		EMPTY	AUTO	EMPTY
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		ALWAYS	AUTO	-

Table 293: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips	ALWAYS	COPY	-
Manufacturer's Model Name	0008,1090	LO	QLAB	ALWAYS	AUTO	-
Software Version(s)	0018,1020	LO		ALWAYS	AUTO	-

Table 294: SR Document General 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	COPY	-
Performed Procedure Code Sequence	0040,A372	SQ		EMPTY	AUTO	-
Completion Flag	0040,A491	CS	PARTIAL	ALWAYS	AUTO	-
Verification Flag	0040,A493	CS	UNVERIFIED	ALWAYS	AUTO	-

Table 295: SR Document Content Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Value Type	0040,A040	CS	CONTAINER	ALWAYS	AUTO	-
Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO	-
>Code Value	0008,0100	SH		ALWAYS	AUTO	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	AUTO	-
>Code Meaning	0008,0104	LO		ALWAYS	AUTO	-
Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO	-
>Code Value	0008,0100	SH		ALWAYS	AUTO	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	AUTO	-
>Code Meaning	0008,0104	LO		ALWAYS	AUTO	-
Continuity Of Content	0040,A050	CS		ALWAYS	AUTO	-
Content Template Sequence	0040,A504	SQ		ANAP	AUTO	-
>Mapping Resource	0008,0105	CS		ALWAYS	AUTO	
>Template Identifier	0040,DB00	CS		ALWAYS	AUTO	-
Content Sequence	0040,A730	SQ		ANAP	AUTO	-
>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO	-
>Value Type	0040,A040	CS		ALWAYS	AUTO	-
>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO	-
>Continuity Of Content	0040,A050	CS	SEPARATE	ALWAYS	AUTO	-

Table 296: 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
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.88.33	ALWAYS	AUTO	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-

10.1.1.3. Ultrasound Image Storage SOP Class

Table 297: IOD of Created Ultrasound Image Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
Series	General Series Module	ALWAYS
Equipment	General Equipment Module	ALWAYS
Image	General Image Module	ALWAYS
	Image Pixel Module	ALWAYS
	US Image Module	ALWAYS
	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	ALWAYS

Table 298: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	COPY	-

Patient's Birth Date	0010,0030	DA		VNAP	COPY	-
Patient's Sex	0010,0040	CS	F, M, O	VNAP	COPY	-
Other Patient IDs	0010,1000	LO		ANAP	COPY	-
Patient Comments	0010,4000	LT		ANAP	COPY	-

Table 299: 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		VNAP	COPY	-
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 300: 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	US	ALWAYS	COPY	-
Series Description	0008,103E	LO		ANAP	AUTO	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		VNAP	AUTO	-
Performed Procedure Step Start Date	0040,0244	DA		ANAP	AUTO	-
Performed Procedure Step Start Time	0040,0245	TM		ANAP	AUTO	-
Performed Procedure Step ID	0040,0253	SH		ANAP	AUTO	-
Performed Procedure Step Description	0040,0254	LO		ANAP	AUTO	-

Table 301: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips	ALWAYS	AUTO	-
Manufacturer's Model Name	0008,1090	LO	QLAB	ALWAYS	AUTO	-

Table 302: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS		ANAP	AUTO	-
Content Date	0008,0023	DA		VNAP	AUTO	-
Content Time	0008,0033	TM		VNAP	AUTO	-
Derivation Description	0008,2111	ST		ANAP	AUTO	-
Instance Number	0020,0013	IS		VNAP	AUTO	-

Table 303: 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	-
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/OB		ALWAYS	AUTO	-

Table 304: US Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS	Value 1: DERIVED, Value 2: SECONDARY	ALWAYS	AUTO	-
Stage Name	0008,2120	SH		ANAP	AUTO	-
Stage Number	0008,2122	IS		ANAP	AUTO	-
Samples per Pixel	0028,0002	US	3	ALWAYS	AUTO	-
Photometric Interpretation	0028,0004	CS	YBR_FULL_422	ALWAYS	AUTO	-
Planar Configuration	0028,0006	US	0x0000	ALWAYS	AUTO	-
Bits Allocated	0028,0100	US	8	ALWAYS	AUTO	-
Bits Stored	0028,0101	US	8	ALWAYS	AUTO	-
High Bit	0028,0102	US	7	ALWAYS	AUTO	-
Pixel Representation	0028,0103	US	0	ALWAYS	AUTO	-
Lossy Image Compression	0028,2110	CS	01	ANAP	AUTO	Required if Lossy Compression has been performed on the image.

Table 305: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.6.1	ALWAYS	AUTO	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-
Instance Number	0020,0013	IS		ANAP	AUTO	-

10.1.1.4. Ultrasound Multi-frame Image Storage SOP Class

Table 306: IOD of Created Ultrasound Multi-frame Image Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
	Patient Study Module	USER OPTION
Series	General Series Module	ALWAYS
Equipment	General Equipment Module	ALWAYS
Image	General Image Module	ALWAYS
	Image Pixel Module	ALWAYS
	Cine Module	ALWAYS
	Multi-Frame Module	ALWAYS
	US Region Calibration Module	ALWAYS
	US Image Module	ALWAYS
	SOP Common Module	ALWAYS

	Extended Dicom and Private attributes	CONDITIONAL

Table 307: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	AUTO	-
Patient ID	0010,0020	LO		VNAP	AUTO	-
Patient's Birth Date	0010,0030	DA		VNAP	AUTO	-
Patient's Sex	0010,0040	CS	F, M, O	VNAP	AUTO	-
Other Patient IDs	0010,1000	LO		ANAP	AUTO	-
Patient Comments	0010,4000	LT		ANAP	AUTO	-

Table 308: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	AUTO	-
Study Time	0008,0030	TM		VNAP	AUTO	-
Accession Number	0008,0050	SH		VNAP	AUTO	-
Referring Physician's Name	0008,0090	PN		VNAP	AUTO	-
Study Description	0008,1030	LO		ANAP	AUTO	-
Study Instance UID	0020,000D	UI		ALWAYS	AUTO	-
Study ID	0020,0010	SH		VNAP	AUTO	-

Table 309: 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	US	ALWAYS	AUTO	-
Operator’s Name	0008,1070	PN		ANAP	AUTO	-
Referenced Performed Procedure Step Sequence	0008,1111	SQ		ANAP	AUTO	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	AUTO	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	AUTO	-
Protocol Name	0018,1030	LO		ANAP	AUTO	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		ALWAYS	AUTO	-
Performed Procedure Step Start Date	0040,0244	DA		ANAP	AUTO	-
Performed Procedure Step Start Time	0040,0245	TM		ANAP	AUTO	-
Performed Procedure Step ID	0040,0253	SH		ANAP	AUTO	-
Performed Procedure Step Description	0040,0254	LO		ANAP	AUTO	-
Comments on the Performed Procedure Step	0040,0280	ST		ANAP	AUTO	-

Table 310: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips	ALWAYS	AUTO	-
Institution Name	0008,0080	LO		ANAP	AUTO	-
Station Name	0008,1010	SH		ANAP	AUTO	-
Manufacturer's Model Name	0008,1090	LO	QLAB	ANAP	AUTO	-
Device Serial Number	0018,1000	LO		ANAP	AUTO	-
Software Version(s)	0018,1020	LO		ANAP	AUTO	-

Table 311: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS		ANAP	AUTO	-
Content Date	0008,0023	DA		VNAP	AUTO	-
Acquisition DateTime	0008,002A	DT		ANAP	AUTO	-
Content Time	0008,0033	TM		VNAP	AUTO	-
Derivation Description	0008,2111	ST	QLAB Clip	ANAP	AUTO	-
Instance Number	0020,0013	IS		VNAP	AUTO	-
Burned In Annotation	0028,0301	CS	NO	ALWAYS	AUTO	-
Lossy Image Compression	0028,2110	CS		ANAP	AUTO	-
Lossy Image Compression Ratio	0028,2112	DS		ANAP	AUTO	-
Lossy Image Compression Method	0028,2114	CS		ANAP	AUTO	-
Presentation LUT Shape	2050,0020	CS		ANAP	AUTO	-

Table 312: 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	-
Bits Allocated	0028,0100	US	8	ALWAYS	AUTO	-
Bits Stored	0028,0101	US	8	ALWAYS	AUTO	-
High Bit	0028,0102	US	7	ALWAYS	AUTO	-
Pixel Representation	0028,0103	US		ALWAYS	AUTO	-
Pixel Data	7FE0,0010	OW/ OB		ALWAYS	AUTO	-

Table 313: Cine Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Frame Time	0018,1063	DS		ALWAYS	AUTO	-

Table 314: Multi-Frame Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Number of Frames	0028,0008	IS		ALWAYS	AUTO	-
Frame Increment Pointer	0028,0009	AT	Value 1: 00181065	ALWAYS	AUTO	-

Table 315: US Region Calibration Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Sequence of Ultrasound Regions	0018,6011	SQ		ALWAYS	AUTO	-
> Region Spatial Format	0018,6012	US		ALWAYS	AUTO	-
> Region Data Type	0018,6014	US		ALWAYS	AUTO	-
>Region Flags	0018,6016	UL		ALWAYS	AUTO	-
> Region Location Min x0	0018,6018	UL		ALWAYS	AUTO	-
> Region Location Min y0	0018,601A	UL		ALWAYS	AUTO	-
> Region Location Max x1	0018,601C	UL		ALWAYS	AUTO	-
> Region Location Max y1	0018,601E	UL		ALWAYS	AUTO	-
> Physical Units X Direction	0018,6024	UL		ALWAYS	AUTO	-
>Physical Units Y Direction	0018,6026	UL		ALWAYS	AUTO	-
>Physical Delta X	0018,602C	UL		ALWAYS	AUTO	-
>Physical Delta Y	0018,602E	UL		ALWAYS	AUTO	-

Table 316: US Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS	Value 1: DERIVED, Value 2: SECONDARY	VNAP	AUTO	-
Acquisition DateTime	0008,002A	DT		ALWAYS	AUTO	-
Stage Name	0008,2120	SH		ANAP	AUTO	-
Stage Number	0008,2122	IS		ANAP	AUTO	-
Number of Stages	0008,2124	IS		VNAP	AUTO	-
View Name	0008,2127	SH		ANAP	AUTO	-
View Number	0008,2128	IS		ANAP	AUTO	-
Number of Event Timers	0008,2129	IS		ANAP	AUTO	-
Number of Views in Stage	0008,212A	IS		VNAP	AUTO	-
Event Elapsed Time(s)	0008,2130	DS		ANAP	AUTO	-
Event Timer Name(s)	0008,2132	LO		ANAP	AUTO	-
Heart Rate	0018,1088	IS		ANAP	AUTO	-
Transducer Data	0018,5010	LO		ANAP	AUTO	-
Processing Function	0018,5020	LO		ANAP	AUTO	-
Samples Per Pixel	0028,0002	US		ALWAYS	AUTO	-
Photometric Interpretation	0028,0004	CS		ALWAYS	AUTO	-
Planar Configuration	0028,0006	US		ALWAYS	AUTO	-
Frame Increment Pointer	0028,0009	AT	0x00181065	ALWAYS	AUTO	-
Ultrasound Color Data Present	0028,0014	US		ANAP	AUTO	-
Bits Allocated	0028,0100	US	8	ALWAYS	AUTO	-
Bits Stored	0028,0101	US	8	ALWAYS	AUTO	-
High Bit	0028,0102	US	7	ALWAYS	AUTO	-
Pixel Representation	0028,0103	US	0x0000	ALWAYS	AUTO	-
Lossy Image Compression	0028,2110	CS	01	ALWAYS	AUTO	-
Stage Code Sequence	0 040,000A	SQ		ANAP	AUTO	-
>Code Value	0008,0100	SH		ALWAYS	AUTO	-

>Coding Scheme Designator	0008,0102	SH		ALWAYS	AUTO	-
>Code Meaning	0008,0104	LO		ALWAYS	AUTO	-
View Code Sequence	0054,0220	SQ		ANAP	AUTO	-
>Code Value	0008,0100	SH		ALWAYS	AUTO	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	AUTO	-
>Code Meaning	0008,0104	LO		ALWAYS	AUTO	-

Table 317: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Instance Creation Date	0008,0012	DA		ANAP	AUTO	
Instance Creation Time	0008,0013	TM		ANAP	AUTO	-
Instance Number	0020,0013	IS		ANAP	AUTO	
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.3.1	ALWAYS	AUTO	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-

10.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

Table 318: Functionalities

Functionality	Type1	Optional	Private
QLab	X		

10.1.2.1. Usage of the Functionality QLab

The following table lists the supported SOP Classes which can be used by this application.

Table 319: Supported SOP Classes for functionality QLab

SOP Class name	SOP Class UID
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
Philips Private iE33 3D NEO Presentation State Subpage Storage	1.3.46.670589.2.5.1.1
Ultrasound Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.6
Ultrasound Multi-frame Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.3
Philips Private SONOS 7500 Live 3D Frustrum Storage	1.2.840.113543.6.6.1.3.1001
Philips Private SONOS 7500 Live 3D Cartesian Storage	1.2.840.113543.6.6.1.3.1002

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

Adult Echocardiography Structured Report is based on the Template ID 5200.

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.

Table 320: List of created SOP Classes

SOP Class Name	SOP Class UID
Comprehensive SR SOP Class	1.2.840.10008.5.1.4.1.1.88.33
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
Philips Private SONOS 7500 Live 3D Cartesian Storage	1.2.840.113543.6.6.1.3.1002

10.5.1. Standard Extended/Specialized/Private SOP Instance

10.5.1.1. Comprehensive SR SOP Class

Table 321: Extended DICOM and private attributes for Comprehensive SR SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Series Date	0008,0021	DA		ALWAYS	AUTO	-
Series Time	0008,0031	TM		ALWAYS	AUTO	-
Study Description	0008,1030	LO		ANAP	AUTO	-
Series Description	0008,103E	LO		EMPTY	AUTO	-
Protocol Name	0018,1030	LO		EMPTY	AUTO	-

10.5.1.2. Ultrasound Image Storage SOP Class

Table 322: Extended DICOM and private attributes for Ultrasound Image Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Conversion Type	0008,0064	CS	WSD	ANAP	AUTO	-

Performed Station AE Title	0040,0241	AE		ANAP	AUTO	-
Performed Procedure Step End Date	0040,0250	DA		ANAP	AUTO	-
Performed Procedure Step End Time	0040,0251	TM		ANAP	AUTO	-

10.5.1.3. Ultrasound Multi-frame Image Storage SOP Class

Table 323: Extended DICOM and private attributes for Ultrasound Multi-frame Image Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Presentation Intent Type	0008,0068	CS	“FOR PRESENTATION”	ANAP	AUTO	-

10.6. Private Transfer Syntaxes

Not applicable.

11. Annexes of application "Ultrasound Viewer"

11.1. IOD Contents

11.1.1. Created SOP Instance

Not Applicable. Ultrasound Viewer does not create SOP Instances.

11.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

Table 324: Functionalities

Functionality	Type1	Optional	Private
Ultrasound Viewer	X	X	

11.1.2.1. Usage of the Functionality Ultrasound Viewer

The following table lists the supported SOP Classes which can be used by this application.

Table 325: 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”.

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.

11.6. Private Transfer Syntaxes

Not applicable.

12. Annexes of application "PDF_REPORT"

12.1. IOD Contents

12.1.1. 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

12.1.1.1. List of created SOP Classes

Table 326: 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

12.1.1.2. Encapsulated PDF Storage SOP Class

Table 327: 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 328: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	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	F, M, O	VNAP	COPY	-
Other Patient Names	0010,1001	PN		ANAP	COPY	-
Ethnic Group	0010,2160	SH		ANAP	COPY	-
Patient Comments	0010,4000	LT		ANAP		

Table 329: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	AUTO	-
Study Time	0008,0030	TM		VNAP	AUTO	-
Accession Number	0008,0050	SH		VNAP	AUTO	EMPTY
Referring Physician's Name	0008,0090	PN		VNAP	COPY	
Study Instance UID	0020,000D	UI		ALWAYS	COPY	-
Study ID	0020,0010	SH		VNAP	COPY	-

Table 330: Patient Study Module

	Tag	VR	Value	Presence of Value	Source	Comment
Admitting Diagnoses Description	0008,1080	LO		ANAP	COPY	-

Table 331: Encapsulated Document Series Module

	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 332: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips	VNAP	AUTO	-

Table 333: 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 334: 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	NO	ALWAYS	AUTO	-
Concept Name Code Sequence	0040,A043	SQ		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 335: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Specific Character Set	0008,0005	CS	ISO_IR 100	ANAP	COPY	
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.104.1	ALWAYS	AUTO	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-
Instance Number	0020,0013	IS		ANAP	AUTO	

12.1.2. Usage of Attributes from Received IOD

Not applicable.

12.1.3. Attribute Mapping

Not applicable.

12.1.4. Coerced/Modified fields

Not applicable.

12.2. Data Dictionary of Private Attributes

Not applicable.

12.3. Coded Terminology and Templates

Not applicable.

12.3.1. Context Groups

Not applicable.

12.3.2. Template Specifications

Not applicable.

12.3.3. Private code definitions

Not applicable.

12.4. Grayscale Image consistency

Not applicable.

12.5. Standard Extended/Specialized/Private SOPs

12.5.1.1. Encapsulated PDF Storage SOP Class

Table 336: Extended DICOM and private attributes for Encapsulated PDF Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Performing Physician Name	0008,1050	PN		ANAP	AUTO	-
Referenced SOP Class UID	0008,1150	UI		ANAP	AUTO	-
Referenced SOP Instance UID	0008,1155	UI		ANAP	AUTO	-
Protocol Name	0018,1030	LO		ANAP	AUTO	-

12.6. Private Transfer Syntaxes

Not applicable.

13. Annexes of application "Echo Report Applet"

13.1. Supported IOD's

This section specifies each IOD accepted and / or created by Echo Report Applet.

ACCEPTED	The applicable IOD is accepted for storage in the repository of the hosting platform and supported for import in Echo Report Applet for viewing and analysis.
CREATED	The Echo Report 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 337: 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

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 338: 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

13.1.1.2. Encapsulated PDF Storage SOP Class

Table 339: IOD of Created Encapsualted PDF Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient	ALWAYS
Study	General Study	ALWAYS
Series	Encapsulated Document Series	ALWAYS
Equipment	General Equipment	ALWAYS
	SC Equipment	ALWAYS
Image	Encapsulated Document	ALWAYS
	SOP Common	ALWAYS

Table 340: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	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	F, M, O	VNAP	COPY	-

Table 341: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	AUTO	-
Study Time	0008,0030	TM		VNAP	AUTO	-
Accession Number	0008,0050	SH		VNAP	AUTO	-
Referring Physician's Name	0008,0090	PN		VNAP	COPY	-
Study Instance UID	0020,000D	UI		ALWAYS	COPY	-
Study ID	0020,0010	SH		VNAP	COPY	-

Table 342: Encapsulated Document Series Module

	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 343: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips	VNAP	AUTO	-

Table 344: 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 345: 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	YES	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	-
MIME Type of Encapsulated Document	0042,0012	LO	application/pdf	ALWAYS	AUTO	-

Table 346: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Specific Character Set	0008,0005	CS	ISO_IR 100	ANAP	COPY	
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.104.1	ALWAYS	AUTO	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-
Instance Number	0020,0013	IS		ANAP	AUTO	

13.1.1.3. Secondary Capture Image Storage SOP Class

Table 347: 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
Image	General Image Module	ALWAYS
	Image Pixel Module	ALWAYS
	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	

Table 348: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	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	F, M, O	VNAP	COPY	-

Table 349: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	COPY	-
Study Time	0008,0030	TM		VNAP	COPY	-
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	AUTO	-

Table 350: Patient Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Admitting Diagnoses Description	0008,1080	LO		ANAP	COPY	-

Table 351: 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	-

Table 352: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	PHILIPS	VNAP	COPY, AUTO	-
Institution Name	0008,0080	LO		ANAP	COPY, AUTO	-
Station Name	0008,1010	SH		ANAP	COPY, AUTO	-
Software Version(s)	0018,1020	LO		ANAP	AUTO, COPY	-

Table 353: 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	AUTO	-

Table 354: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS	Value 1: DERIVED, 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		VNAP	AUTO	-
Lossy Image Compression	0028,2110	CS		VNAP	AUTO	-

Table 355: Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Samples per Pixel	0028,0002	US	3	ALWAYS	AUTO	-
Photometric Interpretation	0028,0004	CS	RGB	ALWAYS	AUTO	-
Planar Configuration	0028,0006	US	0x0000	ALWAYS	AUTO	-
Rows	0028,0010	US		ALWAYS	AUTO	-
Columns	0028,0011	US		ALWAYS	AUTO	-
Bits Allocated	0028,0100	US	8	ALWAYS	AUTO	-
Bits Stored	0028,0101	US	8	ALWAYS	AUTO	-
High Bit	0028,0102	US	7	ALWAYS	AUTO	-
Pixel Representation	0028,0103	US	0x0000	ALWAYS	AUTO	-
Pixel Data	7FE0,0010	OW/OB		ALWAYS	AUTO	-

Table 356: 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 357: 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	-

13.1.1.4. Key Object Selection Document Storage SOP Class

The supported Module and their tags are mentioned below.

Table 358: 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 359: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	
Patient ID	0010,0020	LO		VNAP	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		VNAP	COPY	

Table 360: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0010,0010	PN		VNAP	COPY	
Study Time	0008,0030	TM		VNAP	COPY	
Accession Number	0008,0050	SH		VNAP	COPY	
Referring Physician’s Name	0008,0090	PN		VNAP	COPY	
Study Instance UID	0020,000D	UI		ALWAYS	AUTO	
Study ID	0020,0010	SH		VNAP	COPY	

Table 361: Key Object Document Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Referenced Performed Procedure Step Sequence	0008,1111	SQ		EMPTY		
Modality	0008,0060	CS	KO	ALWAYS	FIXED	
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	
Series Number	0020,0011	IS	1	ALWAYS	FIXED	

Table 362: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips	VNAP	FIXED	

Table 363: 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	
>>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	

Table 364: 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	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 365: 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 366: Private/ Additional Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Telephone Numbers	0010,2154	SH		ANAP	COPY	

13.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

Table 367: 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 368: 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 369: 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	

13.6. Private Transfer Syntaxes

Not applicable.

14. Annexes of application "ECG Viewer Applet"

14.1. Supported IOD's

This section specifies each IOD accepted and / or created by ECG Viewer Applet.

Table 370: 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

15. Annexes of application “Image Viewer Applet”

15.1. Supported IOD’s

This section specifies each IOD accepted and / or created by Image Viewer Applet.

Table 371: 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

15.1.1. 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

15.1.1.1. List of created SOP Classes

Table 372: 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

15.1.1.2. Secondary Capture Image Storage SOP Class

Table 373: 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
Image	General Image Module	ALWAYS
	Image Pixel Module	ALWAYS
	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	

Table 374: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	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	F, M, O	VNAP	COPY	-

Table 375: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	COPY	-
Study Time	0008,0030	TM		VNAP	COPY	-
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	AUTO	-

Table 376: Patient Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Admitting Diagnoses Description	0008,1080	LO		ANAP	COPY	-

Table 377: 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	-

Table 378: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	PHILIPS	VNAP	COPY, AUTO	-
Institution Name	0008,0080	LO		ANAP	COPY, AUTO	-
Station Name	0008,1010	SH		ANAP	COPY, AUTO	-
Software Version(s)	0018,1020	LO		ANAP	AUTO, COPY	-

Table 379: 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	AUTO	-

Table 380: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS	Value 1: DERIVED, 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		VNAP	AUTO	-
Lossy Image Compression	0028,2110	CS		VNAP	AUTO	-

Table 381: Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Samples per Pixel	0028,0002	US	3	ALWAYS	AUTO	-
Photometric Interpretation	0028,0004	CS	RGB	ALWAYS	AUTO	-
Planar Configuration	0028,0006	US	0x0000	ALWAYS	AUTO	-
Rows	0028,0010	US		ALWAYS	AUTO	-
Columns	0028,0011	US		ALWAYS	AUTO	-
Bits Allocated	0028,0100	US	8	ALWAYS	AUTO	-
Bits Stored	0028,0101	US	8	ALWAYS	AUTO	-
High Bit	0028,0102	US	7	ALWAYS	AUTO	-
Pixel Representation	0028,0103	US	0x0000	ALWAYS	AUTO	-
Pixel Data	7FE0,0010	OW/OB		ALWAYS	AUTO	-

Table 382: 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 383: 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	-

15.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

Table 384: Functionalities

Functionality	Type1	Optional	Private
Viewer	X		

15.1.3. Attribute Mapping

Not applicable.

15.1.4. Coerced/Modified fields

Not applicable.

15.2. Data Dictionary of Private Attributes

Not applicable.

15.3. Coded Terminology and Templates

Not applicable.

15.3.1. Context Groups

Not applicable.

15.3.2. Template Specifications

Not applicable.

15.3.3. Private code definitions

Not applicable.

15.4. Grayscale Image consistency

Not applicable.

15.5. Standard Extended/Specialized/Private SOPs

Not applicable.

Table 385: 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

15.5.1. Standard Extended/Specialized/Private SOP Instance

15.5.1.1. Secondary Capture Image Storage SOP Class

Table 386: 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	

15.6. Private Transfer Syntaxes

Not applicable.

16. Annexes of application "Study Management Tool”

16.1. 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 387: 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
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

16.1.1. 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

16.1.1.1. List of created SOP Classes

Table 388: 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

16.1.1.2. Key Object Selection Document Storage SOP Class

The supported Module and their tags are mentioned below.

Table 389: 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 390: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	
Patient ID	0010,0020	LO		VNAP	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		VNAP	COPY	

Table 391: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0010,0010	PN		VNAP	COPY	
Study Time	0008,0030	TM		VNAP	COPY	
Accession Number	0008,0050	SH		VNAP	COPY	
Referring Physician’s Name	0008,0090	PN		VNAP	COPY	
Study Instance UID	0020,000D	UI		ALWAYS	AUTO	
Study ID	0020,0010	SH		VNAP	COPY	

Table 392: Key Object Document Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Referenced Performed Procedure Step Sequence	0008,1111	SQ		EMPTY		
Modality	0008,0060	CS	KO	ALWAYS	FIXED	
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	
Series Number	0020,0011	IS	1	ALWAYS	FIXED	

Table 393: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips	VNAP	FIXED	

Table 394: 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	
>>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	

Table 395: 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	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 396: 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 397: Private/ Additional Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Telephone Numbers	0010,2154	SH		ANAP	COPY	

16.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

Table 398: Functionalities

Functionality	Type1	Optional	Private
Viewer	X		

16.1.3. Attribute Mapping

Not applicable.

16.1.4. Coerced/Modified fields

Not applicable.

16.2. Data Dictionary of Private Attributes

Not applicable.

16.3. Coded Terminology and Templates

Not applicable.

16.3.1. Context Groups

Not applicable.

16.3.2. Template Specifications

Not applicable.

16.3.3. Private code definitions

Not applicable.

16.4. Grayscale Image consistency

Not applicable.

16.5. Standard Extended/Specialized/Private SOPs

Not applicable.

16.6. Private Transfer Syntaxes

Not applicable.

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