PHILIPS

DICOM Conformance Statement

Application Annex:
EmboGuide R1.4 on Interventional Workspot R1.8

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1. DICOM Conformance Statement Overview

For information about this section, Refer to HSDP-1068450 DICOM Conformance Statement Interventional Workspot R1.8.

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2. Contents

3. Introduction

This DICOM Conformance Statement annex is applicable to EmboGuide R1.4 Application, later referred to as EmboGuide Application. In general, the EmboGuide Application is the user environment for viewing and analyzing XA and CT images. EmboGuide creates a 3D reconstruction of the coronary vessel tree based on a pre-acquired CT dataset. The 3D model provides a clear visualization of the coronary vessel tree that may help prevent the misrepresentations of vessel length and position that occur with 2D images. This 3D cardiac imaging tool can be used to select the optimal viewing angle without using additional radiation.

3.1. Revision History

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

Table 1: Revision History

Document Version	Date of Issue	Description of change
01	09-Feb-2023	First Release for EmboGuide R1.4 on Interventional Workspot R1.8

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.

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- **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 2: Definitions, Terms and Abbreviations

Abbreviation/Term	Explanation
DICOM	Digital Imaging and Communications in Medicine
IOD	Information Object Definition
IW	Interventional Workspot
NEMA	National Electrical Manufacturers Association
UID	Unique Identifier
VR	Value Representation
XA	X-Ray Angiography

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

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4. Networking

For information about this section, Refer to HSDP-1068450 DICOM Conformance Statement Interventional Workspot R1.8.

5. Media Interchange

For information about this section, Refer to HSDP-1068450 DICOM Conformance Statement Interventional Workspot R1.8.

6. Support of Character Set

For information about this section, Refer to HSDP-1068450 DICOM Conformance Statement Interventional Workspot R1.8.

7. Security

For information about this section, Refer to HSDP-1068450 DICOM Conformance Statement Interventional Workspot R1.8.

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8. Annexes of "EmboGuide R1.4 Application"

8.1. IOD Contents

This section specifies each IOD accepted and / or created by EmboGuide R1.4 Application

ACCEPTED   The applicable IOD is accepted for storage in the repository of the hosting platform and supported for import in EmboGuide Application for viewing and analysis.

CREATED   EmboGuide Application 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 3: List of Created SOP Classes

IOD		Supported	
Name	UID	Accepted	Created
X-Ray Angiographic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.1	Yes	Yes
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7	No	Yes
Multiframe True Color Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.4	No	Yes
Raw Data Storage SOP Class	1.2.840.10008.5.1.4.1.1.66	Yes	Yes
CT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.2	Yes	No

8.1.1. Acceptance Criteria

This section specifies the acceptance criteria applied by EmboGuide Application to which a dataset should adhere before it can be imported into the application. This can be criteria on the highest level (e.g. data from a certain manufacturer or system model) or certain DICOM attributes mandatory to be present into the dataset holding a specific value. In case one or more Philips private attributes are required, then a list of supported Philips system models will be mentioned.

Table 4: Accepted System Models

Manufacturer	Modality	System Model Name(s)
Philips	XA	Allura Azurion

Table 5: Accepted Transfer Syntax per IOD

For information about this Table, Refer to HSDP-1068450 DICOM Conformance Statement Interventional Workspot R1.8.

Table 6: : Accepted Attribute Values

Attribute Name	Attribute Number	Values/Comments
Not Applicable	Not Applicable	Not Applicable

8.1.2. Created SOP Instance

This section specifies each IOD created by this application.
This section specifies each IOD created. 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.

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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

8.1.2.1. List of Created SOP Classes

Table 7: List of Created SOP Classes

SOP Class Name	SOP Class UID
X-Ray Angiographic Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.12.1
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7
Multiframe True Color Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.4
Raw Data Storage SOP Class	1.2.840.10008.5.1.4.1.1.66

8.1.2.1.1 X-Ray Angiographic Image Storage SOP Class

Table 8: IOD of Created X-Ray Angiographic 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
Acquisition	General Acquisition Module	ALWAYS
Image	General Image Module	ALWAYS
	Image Pixel Module	ALWAYS
	Cine Module	ALWAYS
	Multi-Frame Module	ALWAYS
	Display Shutter Module	ALWAYS
	X-Ray Image Module	ALWAYS
	X-Ray Acquisition Module	ALWAYS
	X-Ray Table Module	ALWAYS

Information Entity	Module	Presence Of Module
	XA Positioner Module	ALWAYS
	DX Detector Module	ALWAYS
	VOI LUT Module	ALWAYS
	SOP Common Module	ALWAYS

Table 9: Patient Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
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		VNAP	COPY	

Table 10: General Study Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
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		VNAP	COPY	

Table 11: General Series Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Series Date	0008,0021	DA		ALWAYS	AUTO	
Series Time	0008,0031	TM		ALWAYS	AUTO	
Modality	0008,0060	CS	XA	ALWAYS	FIXED	
Series Description	0008,103E	LO		ALWAYS	COPY	
Performing Physician's Name	0008,1050	PN		ANAP	COPY	
Related Series Sequence	0008,1250	SQ		VNAP	AUTO	
>Study Instance UID	0020,000D	UI		ALWAYS	AUTO	
>Series Instance UID	0020,000E	UI		ALWAYS	AUTO	
>Purpose of Reference Code Sequence	0040,A170	SQ		VNAP	AUTO	
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	

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Table 12: General Equipment Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Manufacturer	0008,0070	LO	Philips	ALWAYS	FIXED	
Institution Name	0008,0080	LO		VNAP	CONFIG	Configured Hospital Name
Manufacturer's Model Name	0008,1090	LO	Interventional Workspot	ALWAYS	FIXED	
Device Serial Number	0018,1000	LO		ALWAYS	AUTO	Mac address of Hospital NIC
Software Versions	0018,1020	LO	1.8.x.y	ALWAYS	AUTO	Where "x.y" is the detailed application SW version.

Table 13: General Acquisition Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Acquisition Date	0008,0022	DA		ALWAYS	COPY	
Acquisition Time	0008,0032	TM		ALWAYS	COPY	

Table 14: General Image Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Image Type	0008,0008	CS		ALWAYS	COPY	
Content Date	0008,0023	DA		ALWAYS	COPY	
Content Time	0008,0033	TM		ALWAYS	COPY	
Instance Number	0020,0013	IS		ALWAYS	AUTO	
Patient Orientation	0020,0020	CS		ANAP	COPY	
Lossy Image Compression	0028,2110	CS		ANAP	COPY	
Icon Image Sequence	0088,0200	SQ		ALWAYS	AUTO	
>Samples per Pixel	0028,0002	US		ALWAYS	AUTO	
>Photometric Interpretation	0028,0004	CS		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 15: Image Pixel Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Samples per Pixel	0028,0002	US		ALWAYS	COPY	

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Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Photometric Interpretation	0028,0004	CS		ALWAYS	COPY	
Rows	0028,0010	US		ALWAYS	COPY	
Columns	0028,0011	US		ALWAYS	COPY	
Bits Allocated	0028,0100	US		ALWAYS	COPY	
Bits Stored	0028,0101	US		ALWAYS	COPY	
High Bit	0028,0102	US		ALWAYS	COPY	
Pixel Representation	0028,0103	US		ALWAYS	COPY	
Pixel Data	7FE0,0010	OB/OW		ALWAYS	COPY	

Table 16: Cine Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Cine Rate	0018,0040	IS		ALWAYS	AUTO	
Frame Time	0018,1063	DS		ALWAYS	AUTO	

Table 17: Multi-Frame Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Number of Frames	0028,0008	IS		ALWAYS	AUTO	
Frame Increment Pointer	0028,0009	AT		ALWAYS	AUTO	

Table 18: Display Shutter Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Shutter Shape	0018,1600	CS		ALWAYS	COPY	
Shutter Left Vertical Edge	0018,1602	IS		ALWAYS	COPY	
Shutter Right Vertical Edge	0018,1604	IS		ALWAYS	COPY	
Shutter Upper Horizontal Edge	0018,1606	IS		ALWAYS	COPY	
Shutter Lower Horizontal Edge	0018,1608	IS		ALWAYS	COPY	

Table 19: X-Ray Image Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Image Type	0008,0008	CS		ALWAYS	COPY	
Samples per Pixel	0028,0002	US		ALWAYS	COPY	
Photometric Interpretation	0028,0004	CS		ALWAYS	COPY	
Frame Increment Pointer	0028,0009	AT		ALWAYS	COPY	
Bits Allocated	0028,0100	US		ALWAYS	COPY	
Bits Stored	0028,0101	US		ALWAYS	COPY	
High Bit	0028,0102	US		ALWAYS	COPY	
Pixel Representation	0028,0103	US		ALWAYS	COPY	

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Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Pixel Intensity Relationship	0028,1040	CS		ALWAYS	COPY	
Lossy Image Compression	0028,2110	CS		ALWAYS	COPY	

Table 20: X-Ray Acquisition Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
KVP	0018,0060	DS		VNAP	COPY	
Exposure Time	0018,1150	IS		VNAP	COPY	
Radiation Setting	0018,1155	CS		ALWAYS	COPY	
Imager Pixel Spacing	0018,1164	DS		ANAP	COPY	
Pixel Spacing	0028,0030	DS		ALWAYS	COPY	

Table 21: X-Ray Table Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Table Motion	0018,1134	CS		VNAP	COPY	
Table Angle	0018,1138	DS		ANAP	COPY	

Table 22: XA Positioner Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Distance Source to Detector	0018,1110	DS		ALWAYS	COPY	
Distance Source to Patient	0018,1111	DS		ALWAYS	COPY	
Positioner Motion	0018,1500	CS		ANAP	COPY	
Positioner Primary Angle	0018,1510	DS		ALWAYS	AUTO	AUTO: Derived from modality supplied information.
Positioner Secondary Angle	0018,1511	DS		ALWAYS	AUTO	AUTO: Derived from modality supplied information.
Positioner Primary Angle Increment	0018,1520	DS		ANAP	AUTO	AUTO: Derived from modality supplied information.
Positioner Secondary Angle Increment	0018,1521	DS		ANAP	AUTO	AUTO: Derived from modality supplied information.

Table 23: DX Detector Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Imager Pixel Spacing	0018,1164	DS		ALWAYS	COPY	
Pixel Spacing	0028,0030	DS		ALWAYS	COPY	

Table 24: VOI LUT Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Window Center	0028,1050	DS		ALWAYS	COPY	
Window Width	0028,1051	DS		ALWAYS	COPY	

Table 25: SOP Common Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Specific Character Set	0008,0005	CS		ANAP	AUTO	As supported by hosting platform
Instance Creation Date	0008,0012	DA		ALWAYS	AUTO	
Instance Creation Time	0008,0013	TM		ALWAYS	AUTO	
SOP Class UID	0008,0016	UI	1.2.840.10008 .5.1.4.1.1.12.1	ALWAYS	FIXED	
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	
Instance Number	0020,0013	IS		ALWAYS	AUTO	

8.1.2.1.2 Secondary Capture Image Storage SOP Class

Table 26: 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	ALWAYS
Series	General Series Module	ALWAYS
Equipment	General Equipment Module	ALWAYS
	SC Equipment Module	ALWAYS
Image	General Image Module	ALWAYS
	Image Pixel Module	ALWAYS
	SOP Common Module	ALWAYS

Table 27: Patient Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
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		VNAP	COPY	

Table 28: General Study Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
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	

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Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Study ID	0020,0010	SH		VNAP	COPY	

Table 29: Patient Study Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Patient's Weight	0010,1030	DS		ALWAYS	COPY	

Table 30: General Series Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Series Date	0008,0021	DA		ALWAYS	AUTO	
Series Time	0008,0031	TM		ALWAYS	AUTO	
Modality	0008,0060	CS	XA	ALWAYS	FIXED	
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	
Series Number	0020,0011	IS		VNAP	AUTO	
Related Series Sequence	0008,1250	SQ		VNAP	AUTO	
>Study Instance UID	0020,000D	UI		ALWAYS	AUTO	
>Series Instance UID	0020,000E	UI		ALWAYS	AUTO	
>Purpose of Reference Code Sequence	0040,A170	SQ		VNAP	AUTO	
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	

Table 31: General Equipment Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Manufacturer	0008,0070	LO	Philips	ALWAYS	FIXED	
Institution Name	0008,0080	LO		VNAP	CONFIG	Configured Hospital name
Manufacturer's Model Name	0008,1090	LO	Interventional Workspot	ALWAYS	FIXED	
Station Name	0008,1010	SH		ALWAYS	AUTO	Hostname IW PC
Software Versions	0018,1020	LO	1.8.0	ALWAYS	AUTO	

Table 32: SC Equipment Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Modality	0008,0060	CS	XA	ALWAYS	FIXED	
Conversion Type	0008,0064	CS	WSD	ALWAYS	FIXED	

Table 33: General Image Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Instance Number	0020,0013	IS		ALWAYS	AUTO	
Patient Orientation	0020,0020	CS		VNAP	AUTO	

Table 34: Image Pixel Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
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	0	ALWAYS	AUTO	
Pixel Data	7FE0,0010	OW/OB		ALWAYS	AUTO	

Table 35: SOP Common Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Specific Character Set	0008,0005	CS		ANAP	AUTO	As supported by hosting platform
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.7	ALWAYS	FIXED	
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	
Instance Creation Date	0008,0012	DA		ALWAYS	AUTO	
Instance Creation Time	0008,0013	TM		ALWAYS	AUTO	
Instance Number	0020,0013	IS		ALWAYS	AUTO	

8.1.2.1.3 Multi-frame True Color Secondary Capture Image Storage SOP Class

Table 36: IOD of Created Multi-frame True Color 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	ALWAYS
Series	General Series Module	ALWAYS
Equipment	General Equipment Module	ALWAYS
	SC Equipment Module	ALWAYS
Image	General Image Module	ALWAYS

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Information Entity	Module	Presence Of Module
	Image Pixel Module	ALWAYS
	Cine Module	ALWAYS
	Multi-Frame Module	ALWAYS
	Multi-Frame Functional Groups Module	ALWAYS
	SC Multi-frame Image Module	ALWAYS
	SOP Common Module	ALWAYS

Table 37: Patient Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
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		VNAP	COPY	

Table 38: General Study Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
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		VNAP	COPY	

Table 39: Patient Study Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Patient's Weight	0010,1030	DS		ALWAYS	COPY	

Table 40: General Series Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Series Date	0008,0021	DA		ALWAYS	AUTO	
Series Time	0008,0031	TM		ALWAYS	AUTO	
Modality	0008,0060	CS	XA	ALWAYS	FIXED	
Related Series Sequence	0008,1250	SQ		VNAP	AUTO	
>Study Instance UID	0020,000D	UI		ALWAYS	AUTO	
>Series Instance UID	0020,000E	UI		ALWAYS	AUTO	
>Purpose of Reference Code Sequence	0040,A170	SQ		VNAP	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	COPY	

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Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Performed Procedure Step Start Time	0040,0245	TM		ANAP	COPY	
Performed Procedure Step ID	0040,0253	SH		ANAP	COPY	

Table 41: General Equipment Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Manufacturer	0008,0070	LO	Philips	ALWAYS	FIXED	
Institution Name	0008,0080	LO		VNAP	CONFIG	Configured Hospital Name
Station Name	0008,1010	SH		ALWAYS	AUTO	Windows Host Name
Manufacturer's Model Name	0008,1090	LO	Interventional Workspot	ALWAYS	FIXED	
Software Versions	0018,1020	LO	1.8.0	ALWAYS	AUTO	

Table 42: SC Equipment Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Modality	0008,0060	CS	XA	ALWAYS	FIXED	
Conversion Type	0008,0064	CS	WSD	ALWAYS	FIXED	

Table 43: General Image Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Instance Number	0020,0013	IS		ALWAYS	AUTO	
Patient Orientation	0020,0020	CS		VNAP	COPY	
Burned in Annotation	0028,0301	CS		ANAP	AUTO	

Table 44: Image Pixel Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
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	0	ALWAYS	AUTO	
Pixel Data	7FE0,0010	OW/OB		ALWAYS	AUTO	

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Table 45: Cine Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Frame Time	0018,1063	DS		ALWAYS	AUTO	

Table 46: Multi-Frame Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Number of Frames	0028,0008	IS		ALWAYS	AUTO	
Frame Increment Pointer	0028,0009	AT		ALWAYS	AUTO	

Table 47: Multi-Frame Functional Groups Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Instance Number	0020,0013	IS		ALWAYS	AUTO	
Number of Frames	0028,0008	IS		ALWAYS	AUTO	

Table 48: SC Multi-Frame Image Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Frame Increment Pointer	0028,0009	AT		ALWAYS	AUTO	
Burned In Annotation	0028,0301	CS		ALWAYS	AUTO	

Table 49: SOP Common Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Specific Character Set	0008,0005	CS		ANAP	AUTO	As supported by hosting platform
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.7.4	ALWAYS	FIXED	
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	
Instance Creation Date	0008,0012	DA		ALWAYS	AUTO	
Instance Creation Time	0008,0013	TM		ALWAYS	AUTO	
Instance Number	0020,0013	IS		ALWAYS	AUTO	

8.1.2.1.4 Raw Data Storage SOP Class

Table 50: IOD of Created Raw Data Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
	Patient Study Module	ALWAYS
Series	General Series Module	ALWAYS
Frame of reference	Frame of reference Module	ALWAYS
Equipment	General Equipment Module	ALWAYS

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Information Entity	Module	Presence Of Module
Image	Acquisition Context Module	ALWAYS
	Raw Data Module	ALWAYS
	SOP Common Module	ALWAYS

Table 51: Patient Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
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		VNAP	COPY	

Table 52: General Study Module

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

Table 53: Patient Study Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Patient's Weight	0010,1030	DS		ALWAYS	COPY	

Table 54: General Series Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Series Date	0008,0021	DA		ALWAYS	AUTO	
Series Time	0008,0031	TM		ALWAYS	AUTO	
Modality	0008,0060	CS	XA	ALWAYS	FIXED	
Series Description	0008,103E	LO		ALWAYS	COPY	
Performing Physician Name	0008,1050	PN		ANAP	COPY	
Related Series Sequence	0008,1250	SQ		VNAP	AUTO	
>Study Instance UID	0020,000D	UI		ALWAYS	AUTO	
>Series Instance UID	0020,000E	UI		ALWAYS	AUTO	
>Purpose of Reference Code Sequence	0040,A170	SQ		VNAP	AUTO	
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	
Series Number	0020,0011	IS		VNAP	AUTO	
Laterality	0020,0060	CS		ANAP	AUTO	

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
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	

Table 55: Frame of Reference Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Frame of Reference UID	0020,0052	UI		ALWAYS	COPY	
Position Reference Indicator	0020,1040	LO		VNAP	COPY	

Table 56: General Equipment Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Manufacturer	0008,0070	LO	Philips	ALWAYS	FIXED	
Institution Name	0008,0080	LO		VNAP	CONFIG	Configured Hospital Name
Manufacturer's Model Name	0008,1090	LO	Interventional Workspot	ALWAYS	FIXED	
Device Serial Number	0018,1000	LO		ALWAYS	AUTO	MAC Address Hospital NIC
Software Versions	0018,1020	LO	1.8.x.y	ALWAYS	AUTO	Where "x.y" is the detailed application SW version.

Table 57: Acquisition Context Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Acquisition Context Sequence	0040,0555	SQ		VNAP	COPY	

Table 58: Raw Data Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Content Date	0008,0023	DA		ALWAYS	AUTO	
Content Time	0008,0033	TM		ALWAYS	AUTO	
Instance Number	0020,0013	IS		ALWAYS	AUTO	
Creator Version UID	0008,9123	UI		ALWAYS	AUTO	

Table 59: SOP Common Module

Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
Specific Character Set	0008,0005	CS		ANAP	AUTO	As supported by hosting platform

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Attribute Name	TAG	VR	Value	Presence of Value	Source	Comments
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.66	ALWAYS	FIXED	
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	
Instance Creation Date	0008,0012	DA		ALWAYS	AUTO	
Instance Creation Time	0008,0013	TM		ALWAYS	AUTO	
Instance Number	0020,0013	IS		ALWAYS	AUTO	
Original Specialized SOP Class UID	0008,001B	UI		VNAP	AUTO	

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