DAR-3000

DICOM Storage

Conformance Statement

⊕ SHIMADZU

MEDICAL SYSTEMS DEVISION

CONTENTS

Revision History

Rev	Content	Date
Initial	Initial (This document is initially released as S517-1035)	2003/12/13
B	(1) Change the Attribute Name 2.1.2.3.1.6 Attribute Name "Referenced Performed Procedure" to "Referenced Performed Procedure Step Sequence" (2) Change the Description of 2.1.2.3.1.3 Attribute Name "Study Description" 2.1.2.3.1.6 Attribute Name "Laterality" and "Referenced Study Component Sequence" 2.1.2.3.1.9 Attribute Name "Images in Acquisition" 2.1.2.3.1.32 Attribute Name "Requesting Service" and "Study Comments"	2004/11/1

Introduction

This document is the Conformance Statement for the DAR3000(DigitexPRO) DICOM Storage class.

1. Implementation Modal

Figure 1 shows the implementation model.

1.1 Application data flow

The application name on the DAR3000 is DAR3000_Storage. The DAR3000_Storage is the application to send the image.

DICOM Interface
TCP/IP
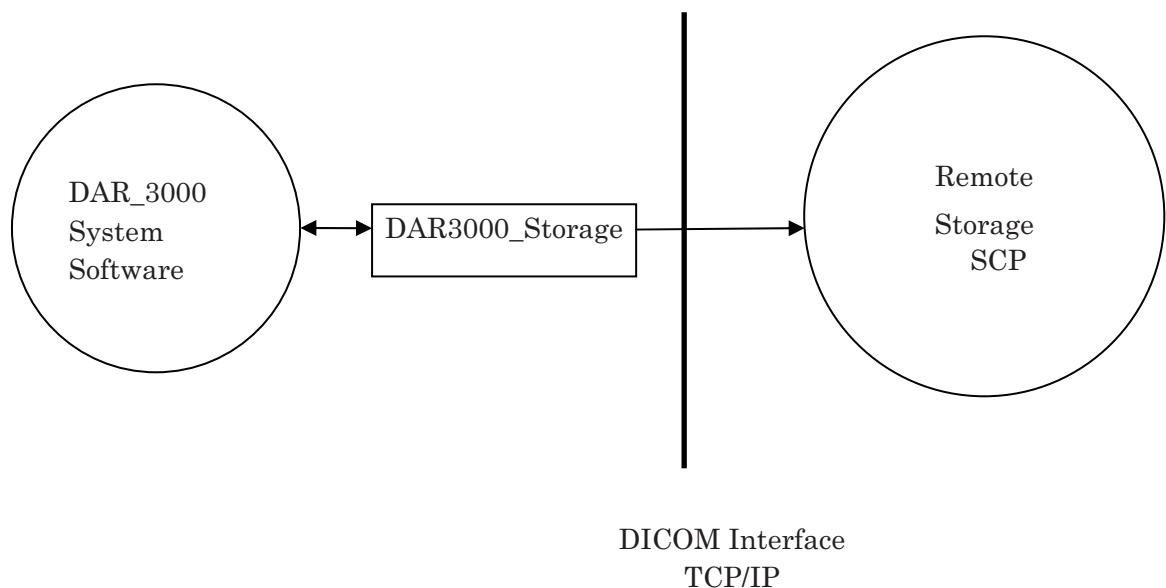
Figure 1-1 Implementation model for DAR3000_Storage

1.2 Functional definition of AE

・DAR3000_STORAGE requests the DICOM Association Establishment to the SCP.

・DAR3000_STORAGE request the C-STORE and send the image, after the SCP accept the Association request.

2. AE specification

2.1 DAR3000_Storage specification

The DAR3000_Storage supports the following DICOM SOP classes as Service Class User (SCU).

SOP Class Name	SOP Class UID
X-Ray Radiofluoscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1

2.1.1 Association Establishment Policies

2.1.1.1 Number of Associations

The number of associations which DAR3000_Storage requests simultaneously is one.

2.1.1.2 Asynchronous system

The DAR3000_Storage does not operate asynchronously.

2.1.1.3 Implementation identifying information
・ Implementation Class UID = "1.2.392.200036.9110.6711.199703″

2.1.2 Association Initiation Policy

DAR3000_Storage request the Association for every image sending request.

2.1.2.1 Associated Real-World Activity

Associates real-world activity using C-STORE is that the DAR3000_Storage send the image information object to the SCP.

2.1.2.2 Proposed Presentation Contexts

The MWLQuery propose the Presentation Contexts in Table 2.1.2.2-1.

Table 2.1.2.2-1 Proposed Presentation Contexts for DAR3000_STORAGE

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name	UID		
X-Ray Radiofluoscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1	Implicit VR Little Endian	1 2.840.10008.1.2	SCU	None

2.1.2.3 SOP Specific Conformance

2.1.2.3.1 SOP Class Specific Conformance

IE	Module	Reference		Usage（from DICOM Standard)	
		This document	DICOM PS3.3	XA	RF
Patient	Patient	2.1.2.3.1.1	C.7.1.1	M	M
	Clinical Trial Subject	2.1.2.3.1.2	C.7.1.3	U	U
Study	General Study	2.1.2.3.1.3	C.7.2.1	M	M
	Patient Study	2.1.2.3.1.4	C.7.2.2	U	U
	Clinical Trial Study	2.1.2.3.1.5	C.7.2.3	U	U
Series	General Series	2.1.2.3.1.6	C.7.3.1	M	M
	Clinical Trial Series	2.1.2.3.1.7	C.7.3.2	U	U
Equipment	General Equipment	2.1.2.3.1.8	C.7.5.1	M	M
Image	General Image	2.1.2.3.1.9	C.7.6.1	M	M
	Image Pixel	2.1.2.3.1.10	C.7.6.3	M	M
	Contrast/Bolus	2.1.2.3.1.11	C.7.6.4	C – Required if contrast media was used in this Image	C – Required if contrast media was used in this Image
	Cine	2.1.2.3.1.12	C.7.6.5	C – Required if pixel data is Multi-Frame Cine data	C – Required if pixel data is Multi-Frame Cine data
	Multi-Frame	2.1.2.3.1.13	C.7.6.6	C – Required if pixel data is Multi-Frame Cine data	C – Required if pixel data is Multi-Frame Cine data
	Frame Pointers	2.1.2.3.1.14	C.7.6.9	U	U
	Mask	2.1.2.3.1.15	C.7.6.10	C – Required if the image may be subtracted.	C – Required if the image may be subtracted.
	Display Shutter	2.1.2.3.1.16	C.7.6.11	U	
	Device	2.1.2.3.1.17	C.7.6.12	U	U
	Therapy	2.1.2.3.1.18	C.7.6.13	U	U
	X-Ray Image	2.1.2.3.1.19	C.8.7.1	M	M
	X-Ray Acquisition	2.1.2.3.1.20	C.8.7.2	M	M

	X-Ray Collimator	2.1.2.3.1.21	C.8.7.3	U	U
	X-Ray Table	2.1.2.3.1.22	C.8.7.4	C – Required if Image is created with table motion	U
	XA Positioner	2.1.2.3.1.23	C.8.7.5	M	-
	XRF Positioner	2.1.2.3.1.24	C.8.7.6	-	M
	X-Ray Tomo Acquisition	2.1.2.3.1.25	C.8.7.7	-	C – Required if Scan Option (0018,0022) is TOMO
	Overlay Plane	2.1.2.3.1.26	C.9.2	U	U
	Multi-Frame Overlay	2.1.2.3.1.27	C.9.3	C – Required if Overlay data contains multiple frames	C – Required if Overlay data contains multiple frames
	Curve	2.1.2.3.1.28	C.10.2	U	U
	Modality LUT	2.1.2.3.1.29	C.11.1	C – Required if Pixel Intensity (0028,1040) is LOG U – Optional if Pixel Intensity (0028,1040) is DISP	C – Required if Pixel Intensity (0028,1040) is LOG U – Optional if Pixel Intensity (0028,1040) is DISP
	VOI LUT	2.1.2.3.1.30	C.11.2	U	U
	SOP Common	2.1.2.3.1.31	C.12.1	M	M

2.1.2.3.1.1 Patient Module

Attribute Name	Tag	Type	Description
Patient's Name	(0010,0010)	2	It is always sent. If data is from MWM, the same data from MWM is sent.
Patient ID	(0010,0020)	2	It is always sent. If data is from MWM, the same data from MWM is sent.
Patient Birth Date	(0010,0030)	2	The data will be sent if data is input.
Patient's Sex	(0010,0040)	2	The data will be sent if data is input.

Referenced Patient Sequence	(0008,1120)	3	It is NOT sent.
> Referenced SOP Class UID	(0008,1150)	1C	
> Referenced SOP Instance UID	(0008,1155)	1C	
Patient Birth Time	(0010,0032)	3	It is NOT sent.
Other Patient IDs	(0010,1000)	3	It will be sent if data is input from MWM.
Other Patient Names	(0010,1001)	3	It is NOT sent.
Ethnic Group	(0010,2160)	3	It will be sent if data is input from MWM.
Patient Comments	(0010,4000)	3	It will be sent, if data is input.

2.1.2.3.1.2 Clinical Trial Subject

The DAR3000_Storage does not send this module.

Attribute Name	Tag	Type	Description
Clinical Trial Sponsor Name	(0012,0010)	1	
Clinical Trial Protocol ID	(0012,0020)	1	
Clinical Trial Protocol Name	(0012,0021)	2	
Clinical Trial Site ID	(0012,0030)	2	
Clinical Trial Site Name	(0012,0031)	2	
Clinical Trial Subject ID	(0012,0040)	1C	
Clinical Trial Subject Reading ID	(0012,0042)	1C	

2.1.2.3.1.3 General Study

Attribute Name	Tag	Type	Description
Study Instance UID	(0020,000D)	1	It is always sent. If the MWM-SCP send this attribute, then DAR3000_Storage send the same data as one from MWM.
Study Date	(0008,0020)	2	It is always sent.
Study Time	(0008,0030)	2	It is always sent.
Referring Physician's Name	(0008,0090)	2	It will be sent, if the data is input. If MWM-SCP send this attribute, then DAR3000_Storage send the same data as one from MWM.

Referring Physician Identification Sequence	(0008,0096)	3	It is NOT sent.
> Including 'Person Identification Macro'			
Study ID	(0020,0010)	2	It is always sent.
Accession Number	(0008,0050)	2	It is always sent. If the MWM-SCP send this attribute, then the same data is sent.
Study Description	(0008,1030)	3	If tag data (0040, 0070) is input from MWM then the data is sent.
Physician(s) of Record	(0008,1048)	3	It is NOT sent.
Physician(s) of Record Identification Sequence	(0008,1049)	3	It is NOT sent.
> Including 'Person Identification Macro'			
Name of Physician Reading Study	(0008,1060)	3	It will be sent, if data is input.
Physician Reading Study Identification Sequence	(0008,1062)	3	It is NOT sent.
> Including 'Person Identification Macro'			
Referenced Study Sequence	(0008,1110)	3	It is NOT sent.
> Referenced SOP Class UID	(0008,1150)	1C	
> Referenced SOP Instance UID	(0008,1155)	1C	
Procedure Code Sequence	(0008,1032)	3	It is NOT sent.
> Include 'Code Sequence Macro'			

2.1.2.3.1.4 Patient Study

Attribute Name	Tag	Type	Description
Admitting Diagnoses Description	(0008,1080)	3	It is NOT sent.
Admitting Diagnoses Code Sequence	(0008,1084)	3	It is NOT sent.
> Include 'Code Sequence Macro'			
Patient's Age	(0010,1010)	3	If the Patient Birth date is input, then this is automatically calculated.
Patient's Size	(0010,1020)	3	It will be sent, if data is input
Patient's Weight	(0010,1030)	3	It will be sent, if data is input
Occupation	(0010,2180)	3	It is NOT sent.
Additional Patient's History	(0010,21B0)	3	It is NOT sent.

2.1.2.3.1.5 Clinical Trial Study

The DAR3000_Storage does not send this module.

Attribute Name	Tag	Type	Description
Clinical Trial Time Point ID	(0012,0050)	2	
Clinical Trial Time Point Description	(0012,0051)	3	

2.1.2.3.1.6 General Series

Attribute Name	Tag	Type	Description
Modality	(0008,0060)	1	It is always sent. The data is data from MWM, 'RF' or 'XA'.
Series Instance UID	(0020,000E)	1	It is always sent.
Series Number	(0020,0011)	2	It is always sent.
Laterality	(0020,0060)	2C	Only tag is sent.
Series Date	(0008,0021)	3	It is always sent.
Series Time	(0008,0031)	3	It is always sent.
Performed Physician's Name	(0008,1050)	3	It will be sent, if data is input.
Performed Physician's Identification Sequence	(0008,1052)	3	It is NOT sent.
>Including 'Person Identification Macro'			
Protocol Name	(0018,1030)	3	It is always sent.
Series Description	(0008,103E)	3	It is NOT sent.
Operator's Name	(0008,1070)	3	It will be sent, if data is input.
Operator Identification Sequence	(0008,1072)	3	It is NOT sent.
>Including 'Person Identification Macro'			
Referenced Performed Procedure Step Sequence	(0008,1111)	3	If the MWM send this attribute, then the same data is sent.
Step Sequence			
>Referenced SOP Class UID	(0008,1150)	1C	
>Referenced SOP Instance UID	(0008,1155)	1C	
Body Part Examined	(0018,0015)	3	It is NOT sent.
Patient Position	(0018,5100)	2C	It is NOT sent.
Smallest Pixel Value in Series	(0028,0108)	3	It is NOT sent.
Largest Pixel Value in Series	(0028,0109)	3	It is NOT sent.
Request Attributes Sequence	(0040,0275)	3	It is NOT sent.
>Requested Procedure ID	(0040,1001)	1C	

>Scheduled Procedure Step ID	(0040,0009)	1C	
>Scheduled Procedure Step Description	(0040,0007)	3	
>Scheduled Procedure Step Code Sequence	(0040,0008)	3	
>>Include 'Code Sequence Macro'			
Performed Procedure Step ID	(0040,0253)	3	It is NOT sent.
Performed Procedure Step Start Date	(0040,0244)	3	It is NOT sent.
Performed Procedure Step Start Time	(0040,0245)	3	It is NOT sent.
Performed Procedure Step Description	(0040,0254)	3	It is NOT sent.
Performed Protocol Code Sequence	(0040,0260)	3	It is NOT sent.
>Include 'Code Sequence Macro'			
Comments on the Performed Procedure Step	(0040,0280)	3	It is NOT sent.

2.1.2.3.1.7 Clinical Trial Series

The DAR3000_Storage does not send this module.

Attribute Name	Tag	Type	Description
Clinical Trial Coordinating Center Name	(0012,0060)	2	

2.1.2.3.1.8 General Equipment

Attribute Name	Tag	Type	Description
Manufacturer	(0008,0070)	2	It is always sent. 'ShimadzuCorporation'
Institution Name	(0008,0080)	3	It will be sent, if data is input.
Institution Address	(0008,0081)	3	It will be sent, if data is input.
Station Name	(0008,1010)	3	It will be sent, if data is input.
Institution Department Name	(0008,1040)	3	It will be sent, if data is input.
Manufacturer's Model Name	(0008,1090)	3	It is always sent.

			'DAR-3000'
Device Serial Number	(0018,1000)	3	The configuration parameter is sent.
Software Versions	(0018,1020)	3	The configuration parameter is sent.
Spatial Resolution	(0018,1050)	3	It is always sent.
Date of Last Calibration	(0018,1200)	3	It is NOT sent.
Time of Last Calibration	(0018,1201)	3	It is NOT sent.
Pixel Padding Value	(0028,0120)	3	It is NOT sent.

2.1.2.3.1.9 General Image

Attribute Name	Tag	Type	Description
Instance Number	(0020,0013)	2	It is always sent.
Patient Orientation	(0020,0020)	2C	It is always sent.
Content Date	(0008,0023)	2C	It is always sent.
Content Time	(0008,0033)	2C	It is always sent.
Image Type	(0008,0008)	3	It is always sent. 'ORIGINAL¥PRIMARY'
Acquisition Number	(0020,0012)	3	It is NOT sent.
Acquisition Date	(0008,0022)	3	It is NOT sent.
Acquisition Time	(0008,0032)	3	It is NOT sent.
Acquisition Datetime	(0008,002A)	3	It is NOT sent.
Referenced Image Sequence	(0008,1140)	3	It is NOT sent.
>Referenced SOP Class UID	(0008,1150)	1C	
>Referenced SOP Instance UID	(0008,1155)	1C	
>Referenced Frame Number	(0008,1160)	3	
>Purpose of Reference Code Sequence	(0040,A170)	3	
>>Include 'Code Sequence Macro'			
Derivation Description	(0008,2111)	3	It is NOT sent.
Derivation Code Sequence	(0008,9215)	3	It is NOT sent.
>Include 'Code Sequence Macro'			
Source Image Sequence	(0008,2112)	3	It is NOT sent.
>Referenced SOP Class UID	(0008,1150)	1C	
>Referenced SOP Instance UID	(0008,1155)	1C	
>Referenced Frame Number	(0008,1160)	3	
>Purpose of Reference Code Sequence	(0040,A170)	3	
>>Include 'Code Sequence Macro'			
Referenced Waveform Sequence	(0008,113A)	3	It is NOT sent.
>Include 'SOP Instance Reference			

Macro'			
>Purpose of Reference Code Sequence	(0040,A170)		
>>Include 'Code Sequence Macro'			
Images in Acquisition	(0020,1002)	3	It is sent
Image Comments	(0020,4000)	3	It is NOT sent.
Quality Control Image	(0028,0300)	3	It is NOT sent.
Burned In Annotation	(0028,0301)	3	It is NOT sent.
Lossy Image Compression	(0028,2110)	3	It is NOT sent.
Lossy Image Compression Ratio	(0028,2112)	3	It is NOT sent.
Icon Image Sequence	(0088,0200)	3	It is NOT sent.
>Image Pixel Module			
Presentation LUT Shape	(2050,0020)	3	It is NOT sent.

2.1.2.3.1.10 Image Pixel Module

Attribute Name	Tag	Type	Description
Samples per Pixel	(0028,0002)	1	It is always sent. '1'
Photometric Interpretation	(0028,0004)	1	It is always sent. 'MONOCHROME2' 'MONOCHROME1'
Rows	(0028,0010)	1	It is always sent.
Columns	(0028,0011)	1	It is always sent.
Bits Allocated	(0028,0100)	1	It is always sent.
Bits Stored	(0028,0101)	1	It is always sent.
High Bit	(0028,0102)	1	It is always sent.
Pixel Representation	(0028,0103)	1	It is always sent. '0'
Pixel Data	(7FE0,0010)	1	It is always sent.
Planer Configuration	(0028,0006)	1C	It is NOT sent.
Pixel Aspect Ratio	(0028,0034)	1C	It is always sent. '1¥1'
Smallest Image Pixel Value	(0028,0106)	3	It is NOT sent.
Largest Image Pixel Value	(0028,0107)	3	It is NOT sent.
Red Palette Color Lookup Table Descriptor	(0028,1101)	1C	It is NOT sent.
Green Palette Color Lookup Table Descriptor	(0028,1102)	1C	It is NOT sent.
Blue Palette Color Lookup Table Descriptor	(0028,1103)	1C	It is NOT sent.
Red Palette Color Lookup Table Data	(0028,1201)	1C	It is NOT sent.
Green Palette Color Lookup Table Data	(0028,1202)	1C	It is NOT sent.

Attribute Name	Tag	Type	Description
Blue Palette Color Lookup Table Data	(0028,1203)	1C	It is NOT sent.

2.1.2.3.1.11 Contrast/Bolus

Attribute Name	Tag	Type	Description
Contrast/Bolus Agent	(0018,0010)	2	Only tag is sent.
Contrast/Bolus Agent Sequence	(0018,0012)	3	It is NOT sent.
>Include 'Code Sequence Macro'			
Contrast/Bolus Route	(0018,1040)	3	Only tag is sent.
Contrast/Bolus Administration Route Sequence	(0018,0014)	3	It is NOT sent.
>Include 'Code Sequence Macro'			
>Additional Drug Sequence	(0018,002A)	3	
>>Include 'Code Sequence Macro'			
Contrast/Bolus Volume	(0018,1041)	3	Only tag is sent.
Contrast/Bolus Start Time	(0018,1042)	3	It is NOT sent.
Contrast/Bolus Stop Time	(0018,1043)	3	It is NOT sent.
Contrast/Bolus Total Dose	(0018,1044)	3	It is NOT sent.
Contrast Flow Rate(s)	(0018,1046)	3	It is NOT sent.
Contrast Flow Duration(s)	(0018,1047)	3	It is NOT sent.
Contrast/Bolus Ingredient	(0018,1048)	3	It is NOT sent.
Contrast/Bolus Concentration	(0018,1049)	3	It is NOT sent.

2.1.2.3.1.12 Cine

Attribute Name	Tag	Type	Description
Preferred Playback Sequencing	(0018,1244)	3	It is NOT sent.
Frame Time	(0018,1063)	1C	It is sent.
Frame Time Vector	(0018,1065)	1C	It is NOT sent.
Start Trim	(0008,2142)	3	It is sent.
Stop Trim	(0008,2143)	3	It is sent.
Recommended Display Frame Rate	(0008,2144)	3	It is sent.
Cine Rate	(0018,0040)	3	It is sent.
Frame Delay	(0018,1066)	3	It is NOT sent.
Image Trigger Delay	(0018,1067)	3	It is NOT sent.
Effective Duration	(0018,0072)	3	It is NOT sent.
Actual Frame Duration	(0018,1242)	3	It is NOT sent.

2.1.2.3.1.13 Multi-Frame

Attribute Name	Tag	Type	Description
Number of Frames	(0028,0008)	1	It is sent.
Frame Increment Pointer	(0028,0009)	1	It is sent.

2.1.2.3.1.14 Frame Pointers

Attribute Name	Tag	Type	Description
Representative Frame Number	(0028,6010)	3	It is NOT sent
Frame Number Of Interest (FOI)	(0028,6020)	3	It is NOT sent
Frame Of Interest Description	(0028,6022)	3	It is NOT sent

2.1.2.3.1.15 Mask

The DAR3000_Storage does not send this module.

Attribute Name	Tag	Type	Description
Mask Subtraction Sequence	(0028,6100)	1	
>Mask Operation	(0028,6101)	1	
>Applicable Frame Range	(0028,6102)	3	
>Mask Frame Numbers	(0028,6110)	1C	
>Contrast Frame Averaging	(0028,6112)	3	
>Mask Sub-pixel Shift	(0028,6114)	3	
>TID Offset	(0028,6120)	2C	
>Mask Operation Explanation	(0028,6190)	3	
Recommended Viewing Mode	(0028,1090)	2	

2.1.2.3.1.16 Display Shutter

Attribute Name	Tag	Type	Description
Shutter Shape	(0018,1600)	1	It is sent.
Shutter Left Vertical Edge	(0018,1602)	1C	It is sent.
Shutter Right Vertical Edge	(0018,1604)	1C	It is sent.
Shutter Upper Horizontal Edge	(0018,1606)	1C	It is sent.
Shutter Lower Horizontal Edge	(0018,1608)	1C	It is sent.
Center of Circular Shutter	(0018,1610)	1C	It is sent.
Radius of Circular Shutter	(0018,1612)	1C	It is sent.
Vertices of the Polygonal Shutter	(0018,1620)	1C	It is sent.
Shutter Presentation Value	(0018,1622)	3	It is sent.

2.1.2.3.1.17 Device

Attribute Name	Tag	Type	Description
Device Sequence	(0050,0010)	3	It is NOT sent.
>Include 'Code Sequence Macro'			
>Device Length	(0050,0014)	3	
>Device Diameter	(0050,0016)	3	
>Device Diameter units	(0050,0017)	2C	
>Device Volume	(0050,0018)	3	
>Inter-Marker Distance	(0050,0019)	3	
>Device Description	(0050,0020)	3	

2.1.2.3.1.18 Therapy

Attribute Name	Tag	Type	Description
Interventional Therapy Sequence	(0018,0036)	3	It is NOT sent.
>Include 'Code Sequence Macro'			
>Interventional Status	(0018,0038)	2	
>Interventional Drug Sequence	(0018,0029)	3	
>>Include 'Code Sequence Macro'			
>Interventional Drug Start Time	(0018,0035)	3	
>Interventional Drug Stop Time	(0018,0027)	3	
>Administration Route Code Sequence	(0054,0302)	3	
>>Include 'Code Sequence Macro'			
>Therapy Description	(0018,0039)	3	

2.1.2.3.1.19 X-Ray Image

Attribute Name	Tag	Type	Description
Frame Increment Pointer	(0028.0009)	1C	It is sent.
Lossy Image Compression	(0028,2110)	1C	It is NOT sent.
Image Type	(0008,0008)	1	It is always sent. 'ORIGINAL¥PRIMARY'
Pixel Intensity Relationship	(0028,1040)	1	It is always sent. 'LIN'
Samples per Pixel	(0028,0002)	1	It is always sent. '1'
Photometric Interpretation	(0028,0004)	1	It is always sent. 'MONOCHROME2' 'MONOCHROME1'
Bits Allocated	(0028,0100)	1	It is always sent.

Bits Stored	(0028,0101)	1	It is always sent.
High Bit	(0028,0102)	1	It is always sent.
Pixel Representation	(0028,0103)	1	It is always sent. '0'
Scan Options	(0018,0022)	3	It is NOT sent.
Anatomic Region Sequence	(0008,2218)	3	It is NOT sent.
>Include 'Code Sequence Macro'			
>Anatomic Region Modifier Sequence	(0008,2220)	3	
>>Include 'Code Sequence Macro'			
Primary Anatomic Structure Sequence	(0008,2228)	3	
>Include 'Code Sequence Macro'			
>Primary Anatomic Structure Modifier Sequence	(0008,2230)	3	
>>Include 'Code Sequence Macro'			
R Wave Pointer	(0028,6040)	3	It is NOT sent.
Reference Image Sequence	(0008,1140)	1C	It is NOT sent.
>Reference SOP Class UID	(0008,1150)	1C	
>Reference SOP Instance UID	(0008,1155)	1C	
Derivation Description	(0008,2111)	3	It is NOT sent.
Acquisition Device Processing Description	(0018,1400)	3	It is NOT sent.
Calibration Image	(0050,0004)	3	It is NOT sent.

2.1.2.3.1.20 X-Ray Acquisition

Attribute Name	Tag	Type	Description
KVP	(0018,0060)	2	It is sent.
Radiation Setting	(0018,1155)	1	It is sent. 'GR', 'SC'
X-Ray Tube Current	(0018,1151)	2C	It is sent.
Exposure Time	(0018,1150)	2C	It is sent.
Exposure	(0018,1152)	2C	It is sent.
Exposure in uAs	(0018,1153)	3	It is NOT sent.
Grid	(0018,1166)	3	It is NOT sent.
Average Pulse Width	(0018,1154)	3	It is NOT sent.
Radiation Mode	(0018,115A)	3	It is NOT sent.
Type of Filters	(0018,1161)	3	It is NOT sent.
Intensifier Size	(0018,1162)	3	It is NOT sent.
Field of View Shape	(0018,1147)	3	It is sent. 'ROUND'
Field of View Dimension(s)	(0018,1149)	3	It is NOT sent.
Imager Pixel Spacing	(0018,1164)	3	It is NOT sent.
Focal Spot	(0018,1190)	3	It is NOT sent.
Image Area Dose Product	(0018,115E)	3	It is NOT sent.

2.1.2.3.1.21 X-Ray Collimator

Attribute Name	Tag	Type	Description
Collimator Shape	(0018,1700)	1	It is sent.
Collimator Left Vertical Edge	(0018,1702)	1C	It is sent.
Collimator Right Vertical Edge	(0018,1704)	1C	It is sent.
Collimator Upper Horizontal Edge	(0018,1706)	1C	It is sent.
Collimator Lower Horizontal Edge	(0018,1708)	1C	It is sent.
Center of Circular Collimator	(0018,1710)	1C	It is NOT sent.
Radius of Circular Collimator	(0018,1712)	1C	It is NOT sent.
Vertices of the Polygonal Collimator	(0018,1720)	1C	It is NOT sent.

2.1.2.3.1.22 X-Ray Table

Attribute Name	Tag	Type	Description
Table Motion	(0018,1134)	2	Only tag is sent.
Table Vertical Increment	(0018,1135)	2C	It is NOT sent.
Table Longitudinal Increment	(0018,1137)	2C	It is NOT sent.
Table Lateral Increment	(0018,1136)	2C	It is NOT sent.
Table Angle	(0018,1138)	3	It is sent.

2.1.2.3.1.23 XA Positioner

Attribute Name	Tag	Type	Description
Distance Source to Patient	(0018,1111)	3	It is sent.
Distance Source to Detector	(0018,1110)	3	It is sent.
Estimated Radiographic Magnification Factor	(0018,1114)	3	It is sent.
Positioner Motion	(0018,1500)	2C	It is sent. 'STATIC'
Positioner Primary Angle	(0018,1510)	2	Only tag is sent.
Positioner Secondary Angle	(0018,1511)	2	Only tag is sent.
Positioner Primary Angle Increment	(0018,1520)	2C	It is NOT sent.
Positioner Secondary Angle Increment	(0018,1521)	2C	It is NOT sent.
Detector Primary Angle	(0018,1530)	3	It is NOT sent.
Detector Secondary Angle	(0018,1531)	3	It is NOT sent.

2.1.2.3.1.24 XRF Positioner

Attribute Name	Tag	Type	Description
Distance Source to Detector	(0018,1110)	3	It is sent.
Distance Source to Patient	(0018,1111)	3	It is sent.
Estimated Radiographic Magnification Factor	(0018,1114)	3	It is sent.
Column Angulation	(0018,1450)	3	It is NOT sent.

2.1.2.3.1.25 X-Ray Tomography Acquisition

Attribute Name	Tag	Type	Description
Tomo Layer Height	(0018,1460)	1	It is sent.
Tomo Angle	(0018,1470)	3	It is sent.
Tomo Time	(0018,1480)	3	It is sent.
Tomo Type	(0018,1490)	3	It is NOT sent.
Tomo Class	(0018,1491)	3	It is NOT sent.
Number of Tomo Synthesis Image	(0018,1495)	3	It is NOT sent.

2.1.2.3.1.26 Overlay Plane

The DAR3000_Storage does not send this module.

Attribute Name	Tag	Type	Description
Overlay Rows	(60xx,0010)	1	
Overlay Columns	(60xx,0011)	1	
Overlay Type	(60xx,0040)	1	
Overlay Origin	(60xx,0050)	1	
Overlay Bits Allocated	(60xx,0100)	1	
Overlay Bit Position	(60xx,0102)	1	
Overlay Data	(60xx,3000)	1	
Overlay Description	(60xx,0022)	3	
Overlay Subtype	(60xx,0045)	3	
Overlay Label	(60xx,1500)	3	
ROI Area	(60xx,1301)	3	
ROI Mean	(60xx,1302)	3	
ROI Standard Deviation	(60xx,1303)	3	

2.1.2.3.1.27 Multi-Frame Overlay

The DAR3000_Storage does not send this module.

Attribute Name	Tag	Type	Description
Number of Frames in Overlay	(60xx,0015)	1	
Image Frame Origin	(60xx,0051)	3	

2.1.2.3.1.28 Curve

The DAR3000_Storage does not send this module.

Attribute Name	Tag	Type	Description
Curve Dimensions	(50xx,0005)	1	
Number of Points	(50xx,0010)	1	
Type of Data	(50xx,0020)	1	
Data Value Representation	(50xx,0103)	1	
Curve Data	(50xx,3000)	1	
Curve Description	(50xx,0022)	3	
Axis Units	(50xx,0030)	3	
Axis Labels	(50xx,0040)	3	
Minimum Coordinate Value	(50xx,0104)	3	
Maximum Coordinate Value	(50xx,0105)	3	
Curve Range	(50xx,0106)	3	
Curve Data Descriptor	(50xx,0110)	1C	
Coordinate Start Value	(50xx,0112)	1C	
Coordinate Step Value	(50xx,0114)	1C	
Curve Label	(50xx,2500)	3	
Referenced Overlay Sequence	(50xx,2600)	3	
>Referenced SOP Class UID	(0008,1150)	1C	
>Referenced SOP Instance UID	(0008,1155)	1C	
>Referenced Overlay Group	(50xx,2610)	1C	

2.1.2.3.1.29 Modality LUT

Attribute Name	Tag	Type	Description
Modality LUT Sequence	(0028,3000)	1C	It is NOT sent.
>LUT Descriptor	(0028,3002)	1C	
>LUT Explanation	(0028,3003)	3	

>Modality LUT Type	(0028,3004)	1C	
>LUT Data	(0028,0036)	1C	
Rescale Intercept	(0028,1052)	1C	It is sent.
Rescale Slope	(0028,1053)	1C	It is sent.
Rescale Type	(0028,1054)	1C	It is sent.

2.1.2.3.1.30 VOI LUT

Attribute Name	Tag	Type	Description
VOI LUT Sequence	(0028,3010)	3	It is NOT sent
>LUT Descriptor	(0028,3002)	1C	
>LUT Explanation	(0028,3003)	3	
>LUT Data	(0028,3006)	1C	
Window Center	(0028,1050)	3	It is sent.
Window Width	(0028,1051)	1C	It is sent.
Window Center & Width Explanation	(0028,1055)	3	It is NOT sent.

2.1.2.3.1.31 SOP Common

Attribute Name	Tag	Type	Description
SOP Class UID	(0008,0016)	1	It is sent.
SOP Instance UID	(0008,0018)	1	It is sent.
Specific Character Set	(0008,0005)	1C	It is sent. '¥ISO2022IR87' or data from MWM added above.
Instance Creation Date	(0008,0012)	3	It is NOT sent.
Instance Creation Time	(0008,0013)	3	It is NOT sent.
Instance Creator UID	(0008,0014)	3	It is NOT sent.
Coding Scheme Identification Sequence	(0008,0110)	3	It is NOT sent.
>Coding Scheme Designator	(0008,0102)	1	
>Coding Scheme Registry	(0008,0112)	1C	
>Coding Scheme UID	(0008,010C)	1C	
>Coding Scheme External UID	(0008,0114)	2C	
>Coding Scheme Name	(0008,0115)	3	
>Coding Scheme Version	(0008,0103)	3	
>Responsible Organization	(0008,0116)	3	
Timezone Offset From UTC	(0008,0201)	3	It is NOT sent.

Contributing Equipment Sequence	(0018,A001)	3	It is NOT sent.
>Purpose of Reference Code Sequence	(0040,A170)	1	
>>Include 'Code Sequence Macro'			
>Manufacturer	(0008,0070)	1	
>Institution Name	(0008,0080)	3	
>Institution Address	(0008,0081)	3	
>Station Name	(0008,1010)	3	
>Institution Department Name	(0008,1040)	3	
>Manufacturer's Model Name	(0008,1090)	3	
>Device Serial Name	(0018,1000)	3	
>Software Versions	(0018,1020)	3	
>Spatial Resolution	(0018,1050)	3	
>Date of Last Calibration	(0018,1200)	3	
>Time of Last Calibration	(0018,1201)	3	
>Contribution DateTime	(0018,A002)	3	
>Contribution Description	(0018,A003)	3	
Instance Number	(0020,0013)	3	It is sent.
SOP Instance Status	(0100,0410)	3	It is NOT sent.
SOP Authorization Date and Time	(0100,0420)	3	It is NOT sent.
SOP Authorization Comment	(0100,0424)	3	It is NOT sent.
Authorization Equipment Certification Number	(0100,0426)	3	It is NOT sent.
Include 'Digital Signature Macro'			It is NOT sent.
Encrypted Attributes Sequence	(0400,0500)	1C	It is NOT sent.
>Encrypted Content Transfer Syntax UID	(0400,0510)	1	
>Encrypted Content	(0400,0520)	1	

2.1.2.3.1.32 Others

The DAR3000_Storage will send follows, too.

Attribute Name	Tag	Type	Description
Image Orientation	(0020,0035)	3	It is sent. '0¥0¥0'
Image Orientation	(0020,0037)	3	It is sent.
Pixel Spacing	(0028,0030)	3	It is sent.
Requesting Service	(0032,1033)	3	It is NOT sent.
Study Comments	(0032,4000)	3	It is sent.

2.1.2.4 Proposed Presentation Contexts

The DAR3000_Storage proposes the presentation context shown in Table 2.1.2.2-1.

2.1.2.5 Transfer Syntax Selection Policies

The DAR3000_Storage supports only the Implicit VR Little endian Transfer Syntax.

3. COMMUNICATION PROFILES

3.1 Supported Communications Stacks

The DAR3000_Storage provides DICOM V3.0 TCP/IP Network Communication Support as defined in PS 3.8.

3.2 TCP/IP

3.2.1 Physical Media Support

DAR3000_Storage operates by using Ethernet(10BaseT,100BaseTX).

4. EXTENSIONS/SPECIALIZATIONS/PRIVATIZATIONS

Not Applicable.

5. CONFIGURATION

5.1 AE Title/Presentation Address Mapping

The DAR3000_Storage uses an original configuration file related to the network.

5.2 Configurable Parameters

The establishment demand of the association is done by at least using the following parameter.

- Application Entity Title
- IP Address
- Port Number
  (These parameters are configurable.)

6. SUPPORT OF EXTENDED CHARACTER SETS

The DAR3000_Storage can handle these extended character sets:

ISO-IR 87: Japanese kanji (ideographic), hiragana (phonetic),
and katakana (phonetic) characters (94 2 characters, 2-byte).
ISO-IR13, ISO-IR14