VXvue DICOM Conformance Statement

CE 2460

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1. Document Guide

This document includes information about the DICOM service of **VXvue** as an acquisition modality.

1.1 Introduction

This document is intended for service engineers who are involved with system integration and /or software design. We assume that the reader is familiar with the terminology and concepts that are used in the DICOM 3.0 standard. Readers who are not familiar with DICOM 3.0 terminology should first read the appropriate parts of the DICOM standard itself, prior to reading this conformance statement.

Contact Department

- This manual is provided in print format upon request by the customer.
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1.1.2 Symbols

While using Vieworks' products, follow the safety instructions in this manual along with the warning or caution symbol. It is important for you to read and understand the contents with the following symbol for operating the products safely.

Information

- This symbol is used to indicate reference and complementary information related to the product. The service engineer should read the instructions of this symbol carefully.

1.1.3 Notation

Bold types

We applied bold font style to the words which indicated products terms, or the words and sentences which are needed to transmit clear meaning. This helps you to easily distinguish the words from other technical ones for explaining functions, and UI (User Interface) of the program as well as the emphasis contents.

1.2 Purpose

The purpose of DICOM service is to speicify compliance with the DICOM standard on the following **VXvue** supported service classes.

- Digital X-ray image storage for presenting a service class as SCU.
- Modality Worklist service class as SCU.
- Basic Grayscale Print Management Meta service class as SCU.
- Storage Commitment service class as SCU/SCP.
- Verification Service as SCU
- Modality Performed Procedure Step Service as SCU
- Query/Retrieve Service as SCU
- Dose Structed Report Service as SCU
- Secondary Capture Image Service as SCU

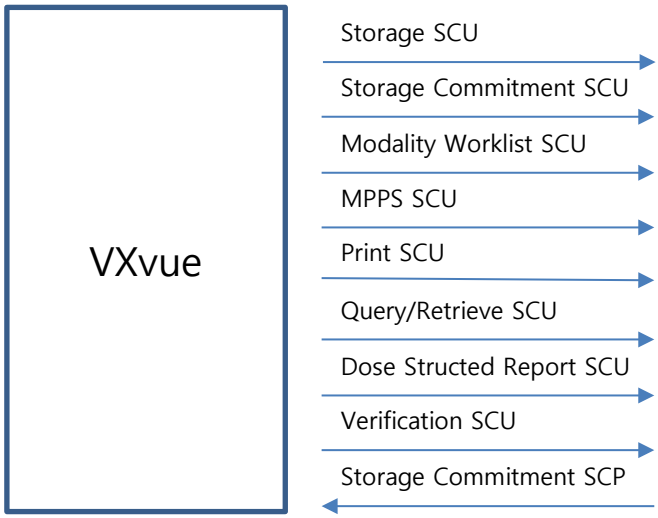
- The source of DICOM serice is ACR- NEMA Digital Imaging and Communications in Medicine (DICOM) V3.0 Current.

2. Implementation Model

VXvue is a point-to-point image acquisition device for image transmission, storage between DICOM modalities and the DICOM network.

2.1 Application Data Flow Diagram

The Basic and Specific Application models for this device are shown in the following illustration.



2.2 Functional Definitions of AE's

2.2.1 Verification Service as SCU

VXvue will automatically respond to a Verification request when the DICOM Receiver is enabled. Verification requests from VXvue to other DICOM AE are initiated manually with user dialog indicating success or failure.

- Initiate a DICOM association to request the Verification.
- Issue a C-Echo request with the requested attributes IOD.
- Close the Association.

2.2.2 Storage Service as SCU

Storage service as SCU is implemented as an application entity for transmitting DX images.
The DICOM Storage Storage Service of DX image is used to send demographic information and pixel data to an external image manager.

- Initiate a DICOM association to send the DX image IOD.
- Issue a C-STORE service.
- Send the IOD with the pixel data processed as defined in the configuration of the user.
- Access the local database to update the exam information.
- Close the Association.

2.2.3 Basic Worklist Managements Service as SCU

Basic Worklist Management service as SCU is implemented as an application entity for retrieving the **Modality Worklist** from **Department System Schedule / Order Filler**. The DICOM C-Find Service of MWL is used to request the scheduled procedure steps.

- Initiate a DICOM association to request the Modality Worklist.
- Issue a C-FIND request with the requested attributes IOD.
- Send the IOD to the Department System Scheduler/Order Filler.
- Access the local database to add or update the scheduled objects.
- Close the Association.

2.2.4 Basic Grayscale Print Management Meta Service as SCU

Basic Print Management Meta Service as SCU is implemented as an application entity for printing DX images.

The DICOM Basic Print Management Mata Service is used to print demographic information and pixel data to an external film printer.

- Initiate a DICOM association to send the DX image IOD.
- Issue N-GET request to get printer attributes.
- Issue N-CREATE request to create BASIC FILM SESSION.
- Issue N-CREATE request to create BASIC FILM BOX.
- Issue N-ACTION request to print the BASIC FILM BOX.
- Issue N-DELETE request to delete current FILM BOX.
- Access the local database to update the exam information.
- Close the Annotation.

2.2.5 Modality Performed Procedure Step Service as SCU

Modality Performed Procedure Step Service as SCU is implemented as an application entity for information of acquiring images.

- Initiate a DICOM association to request the MPPS SCP.
- Issue a C-CREATE request with the requested MPPS IOD.
- Send the IOD to the Department System Scheduler/Order Filler and Image Manager.
- Close the Association.
- Initiate a DICOM association to request the MPPS SCP.
- Issue an N-SET request with the requested MPPS IOD.
- Send the IOD to the Department System Scheduler/Order Filler and Image Manager.
- Close the Association.

2.2.6 Storage Commitment Service as SCU

Storage Commitment Service as SCU is implemented as an application entity for transferred DR images which is correctly sent.

- Initiate a DICOM association to request the Storage Commitment SCP.
- Issue N-ACTION request.
- Receive N-EVENT_REPORT.
- Close the Association.

2.2.7 Query/Retrieve Service as SCU

Query/Retrieve Service as SCU is implemented as an application entity for retrieving the StudyRootFind Result. The DICOM C-Find Service is used to request the study list.

- Initiate a DICOM association to request the Query/Retrieve SCP.
- Issue a C-FIND request with the requested attributes IOD.
- Close the Association.

2.2.8 Storage Commitment Service as SCP

Storage Commitment service as SCP is implemented as an application entity for transferred DX images which is correctly sent.

- Listen to a DICOM association from the Storage Commitment SCU.
- Receive N-EVENT_REPORT.
- Close the Association.

2.2.9 Dose Structed Report Service as SCU

Dose structed report service as SCU is implemented as an application entity for correctly transferred MG images.

- Initiate DICOM association to send the X-Ray Radition Dose SR Storage IOD.
- Issue C-STORE service.
- Send the IOD with the dose report processed as defined in the configuration of the user.
- Close the Association.

2.2.10 Secondary Capture Image Service as SCU

Secondary Capture Image service as SCU is implemented as an application entity for correctly transferred SC images.

- Initiate DICOM association to send the Secondary Capture Image IOD.
- Issue C-STORE service.
- Send the IOD with the secondary captured image
- Close the Association.

3. Support of Character Sets

This section provides information on character sets supported by **VXvue**.

VXvue supports the following character sets for the values of Data Elements:

Character Set Description	DICOM Attribute
Default	(Empty) ISO 2022 IR 6
Latin Alphabet No.1	ISO_IR 100 ISO 2022 IR 100
Latin Alphabet No.2	ISO_IR 101 ISO 2022 IR 101
Latin Alphabet No.3	ISO_IR 109 ISO 2022 IR 109
Latin Alphabet No.4	ISO_IR 110 ISO 2022 IR 110
Latin Alphabet No.5	ISO_IR 148 ISO 2022 IR 148
Cyrillic	ISO_IR 144 ISO 2022 IR 144
Arabic	ISO_IR 127 ISO 2022 IR 127
Greek	ISO_IR 126 ISO 2022 IR 126
Hebrew	ISO_IR 138 ISO 2022 IR 138
Japanese (Half-width Kana)	ISO_IR 13 ISO 2022 IR 13
Japanese(JIS Kanji)	ISO 2022 IR 13₩ISO 2022 IR 87
Japanese(SHIFT-JIS)	ISO 2022 IR 13₩ISO 2022 IR 87
Thai	ISO_IR 166 ISO 2022 IR 166
Korean	ISO 2022 IR 149
Unicode UTF-8	ISO_IR 192
Chinese	GB18030

4. AE Specification

4.1 Supported Services

VXvue Provides Standard Conformance to the DICOM V3.0 SOP classed as SCU.

SOP Class Name	SOP Class UID
Verification SOP Class	1.2.840.10008.1.1
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31
Modality Performed Procedure Step SOP class	1.2.840.10008.3.1.2.3.3
Storage Commitment Push Model	1.2.840.10008.1.20.1
Basic Grayscale Print Managemen Meta	1.2.840.10008.5.1.1.9
Standard Digital X-ray Image Storage (For Presentation)	1.2.840.10008.5.1.4.1.1.1.1
Query/Retrieve Study Root - FIND	1.2.840.10008.5.1.4.1.2.2.1
X-Ray Radiation Dose SR Storage	1.2.840.10008.5.1.4.1.1.88.67

4.1.1 Association Establishment Policies

General

Before any SOP Classes can be exchanged between the **VXvue** (SCU) and the SCP, an association stage takes place to negotiate the capabilities of the SCU and SCP. The maximum PDU length for an association initiated by the **VXvue** is 16384 bytes.

Number of Associations

VXvue opens one association for querying worklist items, but can different associations for archiving to multiple destinations simultaneously. There is no inherent limit to the number of associations other than limits imposed by the computer operating system.

Asynchronous Nature

Asynchronous mode is not supported. All operations will be performed synchronously.

Implementation Identifying Information

VXvue will respond with the following implementation identifying parameters.

Implementation Class UID	Implementation Version Name
1.3.6.1.4.1.19719	-

- All associations will be use a single implementation Class UID.

4.1.2 Association Initiation Policy

VXvue attempts to initiate a new association for every service.

Proposed Presentattion Context table

Abstract Syntax		Transfer Syntax		Role
SOP Class Name	**SOP Class UID**	**Transfer Syntax Name**	**UID**	
Verification	1.2.840.10008.1.1	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU
Modality Worklist Information model – FIND	1.2.840.10008.5.1.4.31	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU
Modality Performed Procedure Step SOP class	1.2.840.10008.3.1.2.3.3	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU
Storage Commitment Push Model	1.2.840.10008.1.20.1	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU/SCP
Basic Grayscale Print Management Meta	1.2.840.10008.5.1.1.9	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU
Standard Digital X-ray Image Storage (For presentation)	1.2.840.10008.5.1.4.1.1.1.1	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU
Study Root Query/Retrieve Information Model)	1.2.840.10008.5.1.4.1.2.2.1	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU

Called / Calling AE titles

This can be modified during configuration via a configuration setting. The calling AE title is case sensitivity.

Assocication Initiation by Real World Activity

1 Storage

VXvue initiates a new associtation for each set of images needs to transfer.

If the SCP AE rejects association, then **VXvue** issues a warning message.

2 Modality Worklist

VXvue initiates a separate association for each Worklist of items to be obtained.

If the SCP AE rejects association, then **VXvue** issues a warning message.

3 Basic Grayscale Print Management Meta

VXvue initiates a new association for each set of images it needs to print.

If the SCP AE rejects association, then **VXvue** issues a warning message.

4 Modality Performed Procedure Step

VXvue supports Modality Performed Procedure Step (MPPS) as the role of SCU. This system is capable of displaying scheduled procedure steps via the user interface for Modality Performed Procedure Step.

The Operator can notify the MPPS server that a MPPS is 'IN PROGRESS', 'DISCONTINUED' or 'COMPLETED'. The user is also allowed to append procedure steps to existing or previously completed procedure steps.

5 Storage Commitment

VXvue supports Storage Commitment Push Model SOP class to inform servers when all the store operations for a study have been completed. The Storage Commitment SCU uses the N-ACTION primitive to request safekeeping of a set of SOP instances. The Storage Commitment SCU also processes the N-EVENT-REPORT primitives that are received from the SCP indicating 'successful' or 'non-successful' commitment status. The N-EVENT-REPORT information is used to mark a study as being successfully archived to DICOM SCP.

6 Query/Retrieve

VXvue initiates a separate association for Query/Retrieve Study root find result
If the SCP AE rejects association, then **VXvue** issues a warning message.

7 Dose Structed Report

VXvue initiates a new associtation for study's dose report needs to transfer.
If the SCP AE rejects association, then **VXvue** issues a warning message.

8 Secondary Capture Image

VXvue initiates a new associtation for the secondary capture image needs to transfer.
If the SCP AE rejects association, then **VXvue** issues a warning message.

4.1.3 SOP Specific Conformance

SOP Specific Conformance – Storage SCU

1 General Study

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Study Date	(0008,0020)	2	2	
Study Time	(0008,0030)	2	2	
Accession Number	(0008,0050)	2	2	
Referring Physician Name	(0008,0090)	2	2	Last Name^First Name^^^
Study Description	(0008,1030)	3	2	
Procedure Code Sequence	(0008,1032)	3	3	
Name of Physician(s) reading study	(0008,1060)	3	3	
Referenced Study sequence	(0008,1110)	3	3	
Study Instance UID	(0020,000D)	1	1	
Study ID	(0020,0010)	2	2	
Physician(s) of Record	(0008,1048)	3	3	

2 Patient Study

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Admitting Diagnosis Description	(0008,1080)	3	3	
Patient's Age	(0010,1010)	3	3	
Patient's Size	(0010,1020)	3	3	
Patient's Weight	(0010,1030)	3	3	
Occupation	(0010,2180)	3	3	
Additional Patient History	(0010,21B0)	3	3	
Patient's Institution Residence	(0038,0400)	3	3	
[a]Patient's Sex Neutered	(0010,2203)	2C	2C	ALTERED, UNALTERED

3 General Series

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Series Date	(0008,0021)	3	3	
Series Time	(0008,0031)	3	3	
Modality	(0008,0060)	1	1	DX ,CR
Protocol Name	(0018,1030)	3	3	
Series Description	(0008,103E)	3	3	
Performing Physician's Name	(0018,1050)	3	3	Last Name^First Name^^^
Operator Name	(0008,1070)	3	3	
Body Part Examined	(0018,0015)	2	1	
Series Instance UID	(0020,000E)	1	1	
Series Number	(0020,0011)	2	2	
Laterality	(0020,0060)	2C	2C	L , R
Smallest Pixel Value in Series	(0028,0108)	3	3	
Largest Pixel Value in Series	(0028,0109)	3	3	
Performed Procedure Step Start Date	(0040,0244)	3	3	
Performed Procedure Step Start Time	(0040,0245)	3	3	
Performed Protocol Step ID	(0040,0253)	3	3	
Performed Procedure Step Description	(0040,0254)	3	3	
Performed Protocol code sequence	(0040,0260)	3	3	
Request Attributes sequence	(0040,0275)	3	3	
Requested Procedure Priority	(0040,1003)	3	3	STAT, HIGH, ROUTINE, MEDIUM, LOW

4 DX Series

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Modality	(0008,0060)	1	1	DX
Referenced Performed Procedure Step sequence	(0008,1111)	1C	3	
Presentation Intent Type	(0008,0068)	1	1	FOR PRESENTATION

5 General Equipment

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Manufacturer	(0008,0070)	2	2	Vieworks Co.,Ltd, System Manufacturer
Institution Name	(0008,0080)	3	3	
Institution Address	(0008,0081)	3	3	
Station Name	(0008,1010)	3	2	
Institutional Department Name	(0008,1040)	3	3	
Manufacture Model Name	(0008,1090)	3	1	VIVIX
Device Serial Number	(0018,1000)	3	3	
Software Versions	(0018,1020)	3	3	
Date of Last Calibration	(0018,1200)	3	3	
Time of Last Calibration	(0018,1201)	3	3	

6 General Image

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Instance Number	(0020,0013)	2	1	
Patient Orientation	(0020,0020)	2C	2C	
Content Date	(0008,0023)	2C	2C	
Content Time	(0008,0033)	2C	2C	
Image Type	(0008,0008)	3	1	DERIVED/PRIMARY
Acquisition Date	(0008,0022)	3	3	
Acquisition Time	(0008,0032)	3	3	
Derivation Description	(0008,2111)	3	3	
Image Comments	(0020,4000)	3	3	
Burned In Annotation	(0028,0301)	3	1	YES,NO
Lossy Image Compression	(0028,2110)	3	3	00

7 Image Pixel

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Samples per Pixel	(0028,0002)	1	1	1
Photometric Interpretation	(0028,0004)	1	1	MONOCHROME2
Rows	(0028,0010)	1	1	~4096

Columns	(0028,0011)	1	1	~4096
Bits Allocated	(0028,0100)	1	1	16
Bits Stored	(0028,0101)	1	1	12 , 14, 16
High Bit	(0028,0102)	1	1	11 , 13, 15
Pixel Representation	(0028,0103)	1	1	0000H
Pixel Data	(7FE0,0010)	1	1	
Pixel Aspect Ratio	(0028,0034)	1C	1C	1/1
Smallest Image Pixel Value	(0028,0106)	1	1	0
Largest Image Pixel Value	(0028,0107)	1	1	4095 , 16383, 65535

8 DX Anatomy Image

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Image Laterality	(0020,0062)	1	1	
Anatomic Region Sequence	(0028,2218)	2	2	

9 DX Image

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Image Type	(0008,0008)	1	1	DERIVED/PRIMARY
Patient Orientation	(0020,0020)	1	2C	
Samples per Pixel	(0028,0002)	1	1	1
Photometric Interpretation	(0028,0004)	1	1	MONOCHROME2
Bits Allocated	(0028,0100)	1	1	16
Bits Stored	(0028,0101)	1	1	12 , 14, 16
High Bit	(0028,0102)	1	1	11 , 13, 15
Pixel Representation	(0028,0103)	1	1	0000H
Burned In Annotation	(0028,0301)	3	1	YES, NO
Pixel Intensity Relationship	(0028,1040)	1	1	LIN ,LOG
Pixel Intensity Relationship Sign	(0028,1041)	1	1	1 , -1
Rescale Intercept	(0028,1052)	1	1	0
Rescale Slope	(0028,1053)	1	1	1
Rescale Type	(0028,1054)	1	1	US
Lossy Image Compression	(0028,2110)	1	1	00
Presentation LUT Shape	(2050,0020)	1	1	IDENTIT, INVERSE
Pixel Spacing	(0028,0030)	3	3	
Window Center	(0028,1050)	1C	1	
Window Level	(0028,1051)	1C	1	

10 DX Positioning

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
View Position	(0018,5101)	2	2	
View Code Sequence	(0054,0220)	3	3	
Patient Orientation Code Sequence	(0054,0410)	3	3	

11 DX Detector

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Detector Type	(0018,7004)	2	1	DIRECT ,SCINTILATOR
Detector Configuration	(0018,7005)	3	3	
Detector Mode	(0018,7008)	3	3	
Detector ID	(0018,700A)	3	3	
Date of Last Detector Calibration	(0018,700C)	3	3	
Time of Last Detector Calibration	(0018,700E)	3	3	
Detector Binning	(0018,701A)	3	3	1₩1
Detector Manufacturer Name	(0018,702A)	3	1	Vieworks Co.,Ltd
Detector Manufacturer's Model Name	(0018,702B)	3	1	Detector's model name
Detector Temperature	(0018,7001)	3	3	
Imager Pixel Spacing	(0018,1164)	1	1	Detector's pixel pitch

12 X-ray Acquisition Dose

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
KVP	(0018,0060)	3	3	
X-Ray Tube Current	(0018,1151)	3	3	
X-Ray Tube Current in μA	(0018,8151)	3	3	
Exposure Time	(0018,1150)	3	3	
Exposure Time in μS	(0018,8150)	3	3	
Exposure	(0018,1152)	3	3	
Exposure in μAs	(0018,1153)	3	3	
Exposure Index	(0018,1411)	3	3	
Target Exposure Index	(0018,1412)	3	3	
Deviation Index	(0018,1413)	3	3	
Image and Fluoroscopy Area Dose Product	(0018,115E)	3	3	

13 SOP Common

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
SOP Class UID	(0008,0016)	1	1	
SOP Instance UID	(0008,0018)	1	1	
Specific Character Set	(0008,0005)	1C	1C	

SOP Specific Conformance – Modality Worklist SCU

Attribute Name	Tag	Expected Matching Type	Expected KeyReturned Type	KeyAvailable Value
Scheduled Procedure Step Sequence	(0040,0100)	R	1	N/A
Scheduled Station AE Title	(0040,0001)	R	1	N/A
Study Date	(0008, 0020)	R	3	
Study Time	(0008, 0030)	R	3	
Scheduled Procedure Step Start Date	(0040,0002)	R	1	Study Date (0008,0020)
Scheduled Procedure Step Start Time	(0040,0003)	R	1	Study Time(0008,0030)
Modality	(0008,0060)	R	1	Modality (0008,0060)
Scheduled Performing Physician's Name	(0040,0006)	R	2	Performing Physician's Name (0008,1050)
Scheduled Procedure Step Description	(0040,0007)	O	1C	Study Description (0008,1030)
Scheduled Station Name	(0040,0010)	O	2	
Scheduled Procedure Step Location	(0040,0011)	O	2	
Scheduled Protocol Code Sequence	(0040,0008)	O	1C	
Pre-Medication	(0040,0012)	O	2C	
Scheduled Procedure Step ID	(0040,0009)	O	1	N/A
Requested Contrast Agent	(0032,1070)	O	2C	
Requested Procedure ID	(0040,1001)	O	1	
Requested Procedure Description	(0032,1060)	O	1C	N/A
Requested Procedure Code Sequence	(0032,1064)	O	1C	
Study Instance UID	(0020,000D)	O	1	Study Instance UID (0020,000D)
Referenced Study Sequence	(0008,1110)	O	2	
Requested Procedure Priority	(0040,1003)	O	2	
Patient Transport Arrangements	(0040,1004)	O	2	
Accession Number	(0008,0050)	R	2	
Requesting Physician	(0032,1032)	O	2	
Referring Physician Name	(0008,0090)	O	2	
Admission ID	(0038,0010)	O	2	
Current Patient Location	(0038,0300)	O	2	
Referenced Patient Sequence	(0008,1120)	O	2	
Patient's Name	(0010,0010)	R	1	
Patient ID	(0010,0020)	R	1	

Patients Birth Date	(0010,0030)	O	2
Patient's Sex	(0010,0040)	O	2
Patient's Weight	(0010,1030)	O	2
Confidentiality constraint on patient data	(0040,3001)	O	2
Patient State	(0038,0500)	O	2
Pregnancy Status	(0010,21C0)	O	2
Medical Alerts	(0010,2000)	O	2
Allergies	(0010,2110)	O	2
Special Needs	(0038,0050)	O	2

- All Tags are configurable.

SOP Specific Conformance – Print SCU

The Basic Grayscale Print Management Meta SOP Class is defined by the following set of supported SOP classes.

SOP Class Name	SOP Class UID
Basic Film Session SOP Class	1.2.840.10008.5.1.1.1
Basic Film Box SOP Class	1.2.840.10008.5.1.1.2
Basic Grayscale Image Box SOP Class	1.2.840.10008.5.1.1.4
Printer SOP Class	1.2.840.10008.5.1.1.16

Basic Film Session SOP Class

VXvue supports the following DIMSE Service Elements for Basic Film Session SOP Class.

- N-CREATE: Requests to create an instance of Basic Film Session.

Attribute	DICOM Tag	Available Values
Number of Copies	(2000,0010)	1~5
Print Priority	(2000,0020)	HIGH,MED,LOW
Medium Type	(2000,0030)	BLUE FILM,CLEAR FILM,
Film Destination	(2000,0040)	MAGAZINE,PROCESSOR,BIN_1~BIN_9
Film Session Label	(2000,0050)	-
Memory Allocation	(2000,0060)	-

14Basic Film Box SOP Class

VXvue supports the following DIMSE service elements for basic film box SOP class.

- N-CREATE: Requests to create an instance of Basic Film Session.
- N-ACTION: Requests to print the film box onto printer.
- N-DELETE: Request to delete the film box instance.

Attribute	DICOM Tag	Available Values
Image Display Format	(2010,0010)	STANDARD₩C,R - configurable
Referenced Film Session Sequence	(2010,0500)	
Film Orientation	(2010,0040)	PORTRAIT, LANDSCAPE
Film Size ID	(2010,0050)	8INX10IN 8.5INX11IN 8.5INX12IN 10INX12IN 11INX14IN 14INX14IN 14INX17IN 10INX12IN A4
Magnification Type	(2010,0060)	BILINEAR,REPLICATE,CUBIC,NONE
Min Density	(2010,0120)	40
Max Density	(2010,0130)	400
Smoothing Type	(2010,0080)	NORMAL
Border Density	(2010,0100)	BLACK,WHITE
Illumination	(2010,015E)	
Reflective Ambient Light	(2010,0160)	
Trim	(2010,0140)	NO,YES

15Basic Grayscale Image Box SOP Class

VXvue supports the following DIMSE service elements for basic grayscale image box SOP class.

- N-SET: Request to set the image box attributes.

Attribute	DICOM Tag	Available Values	Remark
Image Position	(2020,0010)		Image-dependent
Preformatted Grayscale Image Sequence	(2020,0110)		
Samples per Pixel	(0028,0002)	1	
Photometric Inter-presentation	(0028,0004)	MONOCHROME2	
Rows	(0028,0010)	~4096	
Columns	(0028,0011)	~4096	
Pixel Aspect Ratio	(0028,0034)	11	
Bits Allocated	(0028,0100)	16	

Bits Stored	(0028,0101)	12 , 14, 16
High Bit	(0028,0102)	11 , 13, 15
Pixel Representation	(0028,0103)	0000H
Pixel Data	(7FE0,0010)	
Polarity	(2020,0020)	NORMAL
Magnification Type	(2010,0060)	BILINEAR,REPLICATE,CUBIC,NONE
Smoothing Type	(2010,0080)	NORMAL
Requested Image Size	(2020,0030)	

16Printer SOP Class

VXvue issues the request to retrieve the following attributes from DICOM-compliant printer.

- C-GET: Request to retrieve printer information.

Attribute	DICOM Tag	Remark
Printer Status	(2110,0010)	
Printer Status Info	(2110,0020)	
Printer Name	(2110,0030)	
Manufacturer	(0008,0070)	
Manufacturer Model Name	(0008,1090)	
Device Serial Number	(0018,1000)	
Software Versions	(0018,1020)	
Date of Last Calibration	(0018,1200)	
Time of Last Calibration	(0018,1201)	

17Basic Grayscale Image Box SOP Class

VXvue supports the following DIMSE service elements for basic grayscale image box SOP class.

- N-SET: Requests to set the image box attributes.

Attribute	DICOM Tag	Available Values	Remark
Image Position	(2020,0010)		Image-dependent
Preformatted Grayscale Image Sequence	(2020,0110)		
Samples per Pixel	(0028,0002)	1	
Photometric Inter-presentation	(0028,0004)	MONOCHROME2	
Rows	(0028,0010)	~4096	
Columns	(0028,0011)	~4096	
Pixel Aspect Ratio	(0028,0034)	11	
Bits Allocated	(0028,0100)	16	
Bits Stored	(0028,0101)	12 , 14	
High Bit	(0028,0102)	11 , 13	
Pixel Representation	(0028,0103)	0000H	
Pixel Data	(7FE0,0010)		

Polarity	(2020,0020)	NORMAL
Magnification Type	(2010,0060)	BILINEAR,REPLICATE,CUBIC,NONE
Smoothing Type	(2010,0080)	NORMAL
Requested Image Size	(2020,0030)	

18Printer SOP Class

VXvue issues the request to retrieve the following attributes from DICOM-compliant printer.

- C-GET: Request to retrieve printer information.

Attribute	DICOM Tag	Remark
Printer Status	(2110,0010)	
Printer Status Info	(2110,0020)	
Printer Name	(2110,0030)	
Manufacturer	(0008,0070)	
Manufacturer Model Name	(0008,1090)	
Device Serial Number	(0018,1000)	
Software Versions	(0018,1020)	
Date of Last Calibration	(0018,1200)	
Time of Last Calibration	(0018,1201)	

SOP Specific Conformance – Modality Performed Procedure Step SCU in N-CREATE

1 Performed Procedure Step relationship

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Patient's Name	(0010,0010)	2	2	Last Name^First Name^^^
Patient ID	(0010,0020)	2	2	
Patient's Birth Date	(0010,0030)	2	2	
Patient Sex	(0010,0040)	2	2	M,F,O
Scheduled Step Attributes Sequence				
Accession Number	(0008,0050)	2	2	
Referenced Study Sequence	(0008,1110)	2	2	
Referenced SOP Class UID	(0008,1150)	1	1	
Referenced SOP Instance UID	(0008,1155)	1	1	
Study Instance UID	(0020,000D)	1	1	
Requested Procedure Description	(0032,1060)	2	2	
Scheduled Procedure Step Description	(0040,0007)	2	2	
Scheduled Procedure Step ID	(0040,0009)	2	2	
Requested Procedure ID	(0040,1001)	2	2	

2 Performed Procedure Step information

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Procedure Code Sequence	(0008,1032)	2	2	
Code Value	(0008,0100)	1	1	
Coding Scheme Designator	(0008,0102)	1	1	
Coding Scheme Version	(0008,0103)	3	3	
Code Meaning	(0008,0104)	3	3	
Performed Station AE Title	(0040,0241)	1	1	
Performed Station Name	(0040,0242)	2	2	
Performed Location	(0040,0243)	2	2	
Performed Procedure Step Start Date	(0040,0244)	1	1	
Performed Procedure Step Start Time	(0040,0245)	1	1	
Performed Procedure Step End Date	(0040,0250)	2	2	
Performed Procedure Step End Time	(0040,0251)	2	2	
Performed Procedure Step Status	(0040,0252)	1	1	IN PROGRESS
Performed Procedure Step ID	(0040,0253)	1	1	
Performed Procedure Step Description	(0040,0254)	2	2	
Performed Procedure Type Description	(0040,0255)	2	2	

3 Image Acquisition Result

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value	Remark
Modality	(0008,0060)	1	1	DX	
Study ID	(0020,0010)	2	2		
Performed Protocol Code Sequence	(0040,0260)	2	2		
Code Value	(0008,0100)	1	1		
Coding Scheme Designator	(0008,0102)	1	1		
Coding Scheme Version	(0008,0103)	3	3		
Code Meaning	(0008,0104)	3	3		
Performed Series Sequence	(0040,0340)	2	2		Always Empty

SOP Specific Conformance – Modality Performed Procedure Step SCU in N-SET

1 Performed Procedure Step Information

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Procedure Code Sequence	(0008,1032)	2	2	
Code Value	(0008,0100)	1	1	
Coding Scheme Designator	(0008,0102)	1	1	
Coding Scheme Version	(0008,0103)	3	3	
Code Meaning	(0008,0104)	3	3	
Performed Procedure Step End Date	(0040,0250)	2	2	
Performed Procedure Step End Time	(0040,0251)	2	2	
Performed Procedure Step Status	(0040,0252)	1	1	DISCONTINUED, COMPLETED
Performed Procedure Step Description	(0040,0254)	2	2	
Performed Procedure Type Description	(0040,0255)	2	2	

2 Image Acquisition Result

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value	Remark
Performed Protocol Code Sequence	(0040,0260)	2	2		
Code Value	(0008,0100)	1	1		
Coding Scheme Designator	(0008,0102)	1	1		
Coding Scheme Version	(0008,0103)	3	3		
Code Meaning	(0008,0104)	3	3		
Performed Series Sequence	(0040,0340)	2	2		Always Empty
Performing Physician's Name	(0008,1050)	2	2		
Protocol Name	(0018,1030)	1	1	If Performed Procedure Step Status(0040,0252) is DISCONTINUED, use Unknown	
Operators Name	(0008,1070)	2	2		
Series Instance UID	(0020,000E)	1	1		
Series Description	(0008,103E)	2	2		
Retrieve AE Title	(0008,0054)	2	2		
Referenced Image Sequence	(0008,1140)	2	2		
Referenced Non-image Composite SOP Instance Sequence	(0040,0220)	2	2		Always Empty

SOP Specific Conformance – Storage Commitment SCU

1 Storage Commitment

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
Transaction UID	(0008,1195)	1	1	-
Referenced SOP Sequence	(0008,1199)	1	1	-
Referenced SOP Class	(0008,1150)	1	1	-
Referenced SOP Instance UID	(0008,1155)	1	1	-

SOP Specific Conformance – Study Root Query/Retrieve Find SCU

1 Query/Retrive Find

Attribute Name	Tag	DICOM Type	VXvue DX Type	Available Value
QueryRetriveLevel	(0008,0052)	1	1	STUDY
StudyInstanceUid	(0008,1199)	1	1	-
Study Date	(0008,1150)	2	2	-
Study Time	(0008,1155)	2	2	-
Accession Number	(0008,0020)	2	2	
Referring Physician's Name	(0008,0030)	2	2	
Study Decription	(0008,1030)	2	2	
Modality	(0008,0060)	2	2	
Number of Study Related Series	(0020,1206)	2	2	
Number of Study Related Instances	(0020,1208)	1	1	

SOP Specific Conformance – X-Ray Radiation Dose SR Storage

2 Patient Module

Attribute Name	Tag	DICOM Type	VXvue MG Type	Available Value
Patient Name	(0010,0010)	2	2	Last Name^First Name^^^
Patient ID	(0010,0020)	2	2	
Patient's Birth Date	(0010,0030)	2	2	
Patient Sex	(0010,0040)	2	2	M,F,O
Other Patient IDs	(0010,1000)	3	3	
Other Patient Names	(0010,1001)	3	3	

3 General Study

Attribute Name	Tag	DICOM Type	VXvue MG Type	Available Value
Study Date	(0008,0020)	2	2	
Study Time	(0008,0030)	2	2	
Accession Number	(0008,0050)	2	2	

Referring Physician Name	(0008,0090)	2	2	Last Name^First Name^^^
Study Description	(0008,1030)	3	2	
Procedure Code Sequence	(0008,1032)	3	3	
Referenced Study sequence	(0008,1110)	3	3	
Study Instance UID	(0020,000D)	1	1	
Study ID	(0020,0010)	2	2	

4 Patient Study

Attribute Name	Tag	DICOM Type	VXvue MG Type	Available Value
Patient's Age	(0010,1010)	3	3	
Patient's Size	(0010,1020)	3	3	
Patient's Weight	(0010,1030)	3	3	

5 SR Document Series

Attribute Name	Tag	DICOM Type	VXvue MG Type	Available Value
Series Date	(0008,0021)	3	3	
Series Time	(0008,0031)	3	3	
Modality	(0008,0060)	1	1	SR
Series Instance UID	(0020,000E)	1	1	
Series Number	(0020,0011)	2	2	9999
Series Description	(0008,103E)	3	3	

6 General Equipment

Attribute Name	Tag	DICOM Type	VXvue MG Type	Available Value
Manufacturer	(0008,0070)	2	2	Vieworks Co.,Ltd, System Manufacturer
Institution Name	(0008,0080)	3	3	
Institution Address	(0008,0081)	3	3	
Station Name	(0008,1010)	3	2	
Institutional Department Name	(0008,1040)	3	3	
Manufacture Model Name	(0008,1090)	3	1	
Device Serial Number	(0018,1000)	3	3	
Software Versions	(0018,1020)	3	3	1
Date of Last Calibration	(0018,1200)	3	3	
Time of Last Calibration	(0018,1201)	3	3	

7 SR Document General

Attribute Name	Tag	DICOM Type	VXvue MG Type	Available Value
Instance Number	(0020,0013)	2	1	1

Content Date	(0008,0023)	2C	2C	
Content Time	(0008,0033)	2C	2C	
Completion Flag	(0040,A491)	1	1	PARTIAL
Verification Flag	(0040,A493)	1	1	UNVERIFIED

8 SR Document Content

Attribute Name	Tag	DICOM Type	VXvue MG Type	Available Value
Value Type	(0040,A040)	1	1	CONTAINER
Concept Name Code Sequence	(0040,A043)	1	1	
>Code Value	(0008,0100)	1	1	113701
>Coding Scheme Designator	(0008,0102)	1	1	DCM
>Code Meaning	(0008,0104)	3	3	X-Ray Radiation Dose Report
Continuity of Content	(0040,A050)	1	1	SEPARATE
Content Template Sequence	(0040,A504)	1	1	
>Mapping Resource	(0008,0105)	1	1	DCMR
>Template Identifier	(0040,DB00)	1	1	10001
Content Sequence	(0040,A730)	1	1	See TID 10001

9 SOP Common

Attribute Name	Tag	DICOM Type	VXvue MG Type	Available Value
SOP Class UID	(0008,0016)	1	1	
SOP Instance UID	(0008,0018)	1	1	
Specific Character Set	(0008,0005)	1C	1C	

10 PROJECTION X-RAY RADIATION DOSE (TID 10001)

NL	Rel With Parent	VT	Concept Name	VM	Value
	HAS CONCEPT MOD	CODE	(121058, DCM, "Procedure reported")	1	(113704, DCM, "Projection X-Ray")
>	HAS CONCEPT MOD	CODE	(G-C0E8, SRT, "Has Intent")	1	(R-408C3, SRT, "Diagnostic Intent")
		INCLUDE	DTID 1002 "Observer Context"	1-n	See TID 1002
	HAS CONCEPT MOD	CODE	(113705, DCM, "Scope of Accumulation")	1	(113014, DCM, "Study")
>	HAS PROPERTIES	UIDREF	(110180, DCM, "Study Instance UID")	1	Study Instance UID
	CONTAINS	CODE	(113945, DCM, "X-Ray Detector Data Available")	1	(R-0038D, SRT, "Yes")
	CONTAINS	CODE	(113943, DCM, "X-Ray Source Data Available")	1	(R-0038D, SRT, "Yes") (R-00339, SRT, "No")

	CONTAINS	CODE	(113944, DCM, "X-Ray Mechanical Data Available")	1	(R-00339, SRT, "No")
	CONTAINS	INCLUIDE	DTID (10002) Accmulated X-Ray Dose	1	See TID 10002
	CONTAINS	INCLUIDE	DTID (10003) Irradiation Event X-Ray Data	1-n	See TID 10003
	CONTAINS	CODE	(113854, DCM, "Source of Dose Information")	1-n	(113856, DCM, "Automated Data Collection")

11 ACCUMULATED X-RAY DOSE (TID 10002)

NL	Rel With Parent	VT	Concept Name	VM	Value
		CONTAINER	(113702, DCM, "Accumulated X-Ray Dose Data")	1	
>	HAS CONCEPT MOD	CODE	(113764, DCM, "Acquisition Plane")	1	(113622, DCM, "Single Plane")
>	CONTAINS	INCLUDE	DTID 10004 "Accumulated Projection X-Ray Dose")	1	See TID 10004
>	CONTAINS	INCLUDE	DTID 10007 "Accumulated Total Projection Radiography Dose")	1	See TID 10007

12 IRRADIATION EVENT X-RAY DATA (TID 10003)

NL	Rel With Parent	VT	Concept Name	VM	Value
		CONTAINER	(113706, DCM, "Irradiation Event X-Ray Data")	1	
>	HAS CONCEPT MOD	CODE	(113764, DCM, "Acquisition Plane")	1	(113622, DCM, "Single Plane")
>	CONTAINS	UIDREF	(113769, DCM, "Irradiation Event UID")	1	
>	CONTAINS	DATETIME	(111526, DCM, DateTime Started")	1	
>	CONTAINS	CODE	(113721, DCM, "Irradiation Event Type")	1	(113611, DCM, "Stationary Acquisition")
>	CONTAINS	CODE	(111031, DCM, "Image View")		Projection
>	CONTAINS	CODE	(123014, DCM, "Target Region")	1	Bodypart
>	CONTAINS	NUM	(122130, DCM, "Dose Area Product")	1	UNITS = EV (uGy.m2, UCUM, "uGy.m2")
>	CONTAINS	INCLUDE	DTID 10003A "Irradiation Event X-Ray Detector Data"	1	See TID 10003A
>	CONTAINS	INCLUDE	DTID 10003B "Irradiation Event X-Ray Source Data"	1	See TID 10003B
>	CONTAINS	INCLUDE	DTID 10003C "Irradiation Event X-Ray Mechanical Data"	1	See TID 10003C

13IRRADIAION EVENT X-RAY DETECTOR DATA (TID 10003A)

NL	Rel With Parent	VT	Concept Name	VM	Value
		NUM	(113845, DCM, "Exposure Index")	1	UNITS = EV (1, UCUM, "no units")
		NUM	(113846, DCM, "Target Exposure Index")	1	UNITS = EV (1, UCUM, "no units")
		NUM	(113847, DCM, "Deviation Index")	1	UNITS = EV (1, UCUM, "no units")
		IMAGE	(113795, DCM, "Acquired Image")	1	

14 IRRADIATION EVENT X-RAY SOURCE DATA (TID 10003B)

NL	Rel With Parent	VT	Concept Name	VM	Value
		NUM	(113738, DCM, "Dose (RP)")	1	UNITS = EV (uGy, UCUM, "uGy")
		CODE	(113780, DCM, "Reference Point Definition")	1	(113941, DCM, "In Detector Plane")
		NUM	(113733, DCM, "KVP")	1-n	UNITS = EV (kV, UCUM, "kV")
		NUM	(113734, DCM, "X-Ray Tube Current")	1-n	UNITS = EV (mA, UCUM, "mA")
		NUM	(113824, DCM, "Exposure Time")	1	UNITS = EV (ms, UCUM, "ms")
		NUM	(113736, DCM, "Exposure")	1	UNITS = EV (uA.s, UCUM, "uA.s")
		CODE	(111635, DCM, "X-Ray Grid")	1-n	(111641, DCM, "Fixed grid") (111646, DCM, "No grid")

15 DEVICE PARTICIPANT (TID 10003C)

NL	Rel With Parent	VT	Concept Name	VM	Value
		CODE	(113956, DCM, "CR/DR Mechanical Configuration")	1	(113954, DCM, "Upright Stand Mount")
		NUM	(112011, DCM, "Positioner Primary Angle")	1	UNITS = EV (deg, UCUM, "deg")
		NUM	(111633, DCM, "Compression Thickness")	1	UNITS = EV (mm, UCUM, "mm")
		NUM	(113750, DCM, " Distance Source to Detector")	1	UNITS = EV (mm, UCUM, "mm")

16 ACCUMULATED PROJECTION X-RAY DOSE (TID 10004)

NL	Rel With Parent	VT	Concept Name	VM	Value

	NUM	(113727, DCM, "Acquisition Dose Area Product Total")	1	UNITS = EV (uGy.m2, UCUM, "uGy.m2")
	NUM	(113729, DCM, "Acquisition Dose (RP) Total")	1	UNITS = EV (uGy, UCUM, "uGy")
	NUM	(113855, DCM, "Total Acquisition Time")	1	UNITS = EV (s, UCUM, "s")

17 ACCUMULATED PROJECTION X-RAY DOSE (TID 10007)

NL	Rel With Parent	VT	Concept Name	VM	Value
		NUM	(113722, DCM, "Dose Area Product Total")	1	UNITS = EV (uGy.m2, UCUM, "uGy.m2")
>		NUM	(113725, DCM, "Dose (RP) Total")	1	UNITS = EV (uGy, UCUM, "uGy")
		CODE	(113780, DCM, "Reference Point Definition")	1	(113941, DCM, "In Detector Plane")

18 OBSERVER CONTEXT (TID 1002)

NL	Rel With Parent	VT	Concept Name	VM	Value
	HAS OBS CONTEXT	CODE	(121005, DCM, "Observer Type")	1	(121007, DCM, "Device")
	HAS OBS CONTEXT	INCLUDE	DTID 1004 "Device Observer Identifying Attributes"	1	See TID 1004

19 DEVICE OBSERVER IDENTIFYING ATTRIBUTES (TID 1004)

NL	Rel With Parent	VT	Concept Name	VM	Value
		UIDREF	(121012, DCM, "Device Observer UID")	1	
		TEXT	(121013, DCM, "Device Observer Name")	1	
		TEXT	(121014, DCM, "Device Observer Manufacturer")	1	
		TEXT	(121015, DCM, "Device Observer Model Name")	1	
		TEXT	(121016, DCM, "Device Observer Serial Number")		

SOP Specific Conformance – Secondary Capture Image IOD

1 Patient

Attribute Name	Tag	DICOM Type	VXvue Type	Available Value
Patient ID	(0010,0020)	1	1	

2 General Study

Attribute Name	Tag	DICOM Type	VXvue Type	Available Value
Study Instance UID	(0020,000D)	1	1	
Study Date	(0008,0020)	2	1	
Study Time	(0008,0030)	2	1	

3 General Series

Attribute Name	Tag	DICOM Type	VXvue Type	Available Value
Modality	(0008,0060)	1	1	XC
Series Instance UID	(0020,000E)	1	1	
Series Date	(0008,0021)	3	3	
Series Time	(0008,0031)	3	3	
Series Number	(0020,0011)	2	1	

4 General Image

Attribute Name	Tag	DICOM Type	VXvue Type	Available Value
Instance Number	(0020,0013)	2	1	
Content date	(0008,0023)	2C	2C	
Content Time	(0008,0033)	2C	2C	
Image Type	(0008,0008)	3	3	DERIVED₩SECONDARY
Acquisition Date	(0008,0022)	3	3	
Acquisition Time	(0008,0032)	3	3	
Image Comments	(0020,4000)	3	3	

4 SC Equipment Module

Attribute Name	Tag	DICOM Type	VXvue Type	Available Value
Conversion Type	(0008,0064)	1	1	DV

5 Image Pixel

Attribute Name	Tag	DICOM Type	VXvue Type	Available Value
Samples per Pixel	(0028,0002)	1	1	
Photometric Interpretation	(0028,0004)	1	1	RGB
Rows	(0028,0010)	1	2	
Columns	(0028,0011)	1	2	
Bits Allocated	(0028,0100)	1	2	
Bits Stored	(0028,0101)	1	2	
High Bit	(0028,0102)	1	2	
Pixel Representation	(0028,0103)	1	2	

7 SC Image

Attribute Name	Tag	DICOM Type	VXvue Type	Available Value
Burned In Annotation	(0028,0301)	1	2	

8 SOP Common

Attribute Name	Tag	DICOM Type	VXvue Type	Available Value
SOP Class UID	(0008,0016)	1	1	
SOP Instance UID	(0008,0018)	1	1	
Specific Character Set	(0008,0005)	1C	1	

4.1.4 Association Acceptance Policy

Not applicable because **VXvue** (SCU) cannot accept an Association.

5. Communication Profiles

5.1 Supported Communication Stacks

DICOM Upper Layer (PS 3.8) is supported using TCP/IP.

5.2 TCP/IP Stack

VXvue (SCU) uses TCP/IP for the protocol stacks.

5.3 Physical Media Support

VXvue supports 10BaseT, 100BaseT and 1000BaseT.

6. Extensions/Specializations/Privatizations

6.1 Standard Extended/Specialized/Private SOPs

Not supported.

6.2 Private Transfer Syntaxes

Not supported.

6.3 Configuration

See **VXvue Operation Manual** for configuration.

6.4 AE Title/Presentation Address Mapping

The Local AE Title is configurable in the Preference setting menu.

6.5 Configuration Parameters

The following fields are configurable for this Store SCU.

- Local AE Title

The following fields are configurable for remote MWL SCP / remote MPPS SCP / remote Store SCP / remote Storage Commitment SCP.

- Remote AE Title
- Remote IP Address
- Remote TCP Port Number

The following fields are configurable for remote Print SCP.

- Remote AE Title
- Remote IP Address
- Remote TCP Port Number
- Support for the optional Trim element in the Basic Film Box SOP Class (Default: off)

7. Security

VXvue does not support any specific security measures.

It is assumed that **VXvue** is used within a secured environment. It is assumed that a secured environment includes at a minimum:

- Firewall or router protections to ensure that only approved external hosts have network access to VXvue.
- Firewall or router protections to ensure that VXvue only has network access to approved external hosts and services.
- Any communications with external hosts and services outside the locally secured environment use appropriate secure network channels (such as a Virtual Private Network (VPN))

Revision History

Ver.	Date	Descriptions
1.0	2012-02-29	Initial Release
1.1	2012-10-18	(Added) 2.2.4 Modality Performed Procedure Step SCU (Added) 2.2.5 Storage Commitment SCU
2.0	2013-07-12	(Updated) Combined contents of human and veterinary type.
2.1	2013-09-10	(Modified) 3.1.3 SOP Specific Conformance
2.2	2013-11-21	(Modified) 3.1.3.1 SOP Specific Conformances – Storage SCU
2.3	2014-03-05	(Modified) 3.1.3.2 SOP Specific Conformances – Modality Worklist SCU
2.4	2014-07-10	(Modified) 3.1.3.1 SOP Specific Conformances – Storage SCU
3.0	2014-09-29	Applied the new corporate logo (Changed) Contact address and fax number
3.1	2014-12-12	(Revised) Document format (Changed) Contact address
3.2	2018-01-02	(Added) 3.1.3 SOP Specific Conformance (Changed) European agent address (effective from January 2, 2018)
3.3	2019-01-16	(Modified) 3.1.3 SOP Specific Conformance
3.4	2020-04-13	(Added) Query/Retrieve, Dose Structed Report
3.5	2021-04-02	(Modified) 1.1 Introduction (Modified) 3.1.3 SOP Specific Confirmance (Added) Production plant address
3.6	2021-05-07	(Added) Sentence on the cover (Modified) 3.1.3 SOP Specific Confirmance
3.7	2022-03-21	(Modified) SOP Specific Conformance – Print SCU
3.8	2022-05-13	(Added) 3. Support of Character Sets, 7.Security
3.9	2023-07-25	(Modified) 3. Support of Character sets
4.0	2024-01-25	(Modified) 3. Support of Character sets
4.1	2024-06-05	(Modified) 4.1.3 SOP Specific Conformance
4.2	2024-09-30	(Modified) 1.2 Purpose (Added) 2.2.10 Secondary Capture Image Service as SCU (Modified) 4.1.2 Association Initiation Policy (Modified) 4.1.3 SOP Specific Conformance

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