

DICOM Conformance Statement for PACS_RAYPAX

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Conformance Statement For Verification

1. Introduction

Chapter 1 Specifies DICOM Conformance Statement for Verification Service of RAYPAX. Verification Service verify that a remote DICOM device is present on the network. The Verification is initiated automatically at any other Services.

1.1. Implementation Model

The DICOM Service application of RAYPAX supports the Verification Service and acts as the SCU and the SCP.

Verification Service uses the C_ECHO Service of DICOM Standard.

1.1.1. Application Data Flow Diagram

In this chapter, The AE of Verification Service User is named VERIFICATION_SCU.

The AE of Verification Service Provider is named VERIFICATION_SCP.

VERIFICATION AE is used to identify VERIFICATION_SCU and VERIFICATION_SCP.

Figure 1 shows the relationship of the VERIFICATION AE to external applications.

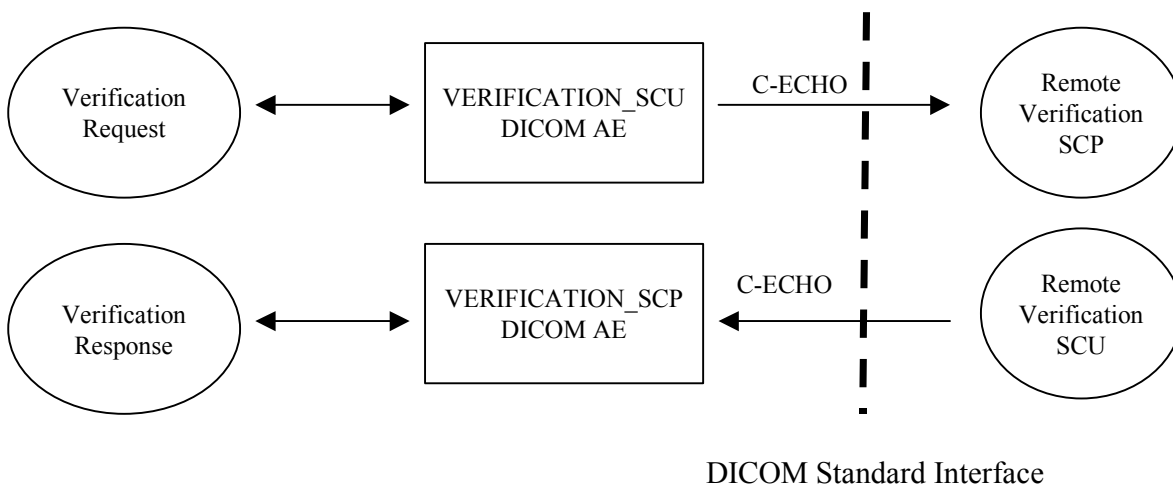


Figure 1. VERIFICATION AE Implementation Model

1.1.2. Functional Definition of Application Entities

VERIFICATION_SCU AE is used to verify that Remote DICOM Devices or applications are active on the network.

VERIFICATION_SCP AE allows Remote DICOM devices to verify that Network AE of the system is active on the network.

VERIFICATION_SCU performs the following tasks.

- Establish DICOM association with the remote DICOM device.
- Performs Verification of the presence of the Remote DICOM device on the network.

VERIFICATION_SCP performs the following tasks.

- Accepts establishment of DICOM association from the Remote DICOM device.
- Accepts Verification on the network from the Remote DICOM device.

1.1.3. Sequencing Of Real-World Activities

Not Applicable.

1.2. AE Specifications

1.2.1. VERIFICATION AE - Specification

1.2.1.1. Association Establishment Policies

VERIFICATION AE initiates an association when in response to each C_ECHO command it receives from an external node. VERIFICATION AE attempts a single type of association request.

1.2.1.1.1. General

VERIFICATION AE will attempt to initiate associations in response to C_ECHO requests from other Application Entities. VERIFICATION AE will only initiate associations in response to valid C-ECHO requests.

1.2.1.1.2. Number of Associations

VERIFICATION AE will accept the number of simultaneous associations and will spawn a new process for each association request that it receives.

1.2.1.1.3. Asynchronous Nature

Not Supported.

1.2.1.1.4. Implementation Identifying Information

VERIFICATION AE will specify the following Implementation Identifying Information:

| Implementation Class UID | Implementation Version Name |
|--------------------------|-----------------------------|
| 1.2.410.100011.2.0 | RAYPAX20 |

1.2.1.2. Association Initiation Policy

Verify that a remote DICOM device is present on the network.

1.2.1.2.1. Real-World Activity – VERIFICATION_SCU

1.2.1.2.1.1. Associated Real-World Activity

The associated Real World Activity is a C-ECHO request initiated by VERIFICATION_SCU AE. If the process successfully establishes an association with a remote DICOM device, it will send the C-ECHO request via the open association to verify that the remote DICOM device is responding to DICOM messages.

1.2.1.2.1.2. Proposed Presentation Contexts

VERIFICATION_SCU supports the Presentation Contexts , which are shown in following table:

| Presentation Context Table | | | | | |
|----------------------------|-------------------|------------------------------|-------------------|------|----------------------|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Verification | 1.2.840.10008.1.1 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCU | None |

1.2.1.2.2. SOP Specific Conformance Statement

VERIFICATION_SCU AE conforms to the definition of a Verification SCU in accordance with the DICOM Standard.

DIMSE is described in following Table.

- DIMSE Service Group

| SOP Class | DIMSE Service Element | Usage SCU | Usage |
|--------------|-----------------------|-----------|-------|
| Verification | C-ECHO | Mandatory | Used |

1.2.1.3. Association Acceptance policy

1.2.1.3.1. Real-World Activity – VERIFICATION_SCP

1.2.1.3.1.1. Associated Real-World Activity

The associated real world activity is a C_ECHO request initiated by a remote DICOM device. If the process successfully establishes an association with a VERIFICATION_SCP, it will send the C-ECHO request via the open association to verify that VERIFICATION_SCP is responding to DICOM messages.

1.2.1.3.1.2. Presentation Context Table

VERIFICATION_SCP supports the Presentation Contexts , which are shown in following table:

| Presentation Context Table | | | | | |
|----------------------------|-------------------|------------------------------|-------------------|------|----------------------|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Verification | 1.2.840.10008.1.1 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCP | None |

1.2.1.3.1.2.1. SOP Specific Conformance for SOP Class

VERIFICATION_SCP AE conforms to the definition of a Verification SCP in accordance with the DICOM Standard.

DIMSE is described in following Table.

- DIMSE Service Group

| SOP Class | DIMSE Service Element | Usage SCP | Usage |
|--------------|-----------------------|-----------|-------|
| Verification | C-ECHO | Mandatory | Used |

1.2.1.3.1.3. Presentation Context Acceptance Criterion

VERIFICATION_SCP accepts any Presentation Context from the table in section 1.2.1.3.1.2

1.2.1.3.1.4. Transfer Syntax Selection Policies

VERIFICATION_SCP only supports the Implicit VR Little Endian transfer syntax.

1.3. Communication Profiles

1.3.1. TCP/IP Stack

VERIFICATION AE provides DICOM V3.0 TCP/IP Network Communication Support as defined in Part 8 of the DICOM Standard. The TCP/IP Communication Stack is inherited from the Windows operating system.

1.3.1.1. Physical Media Support

The physical media supported by the TCP/IP Stack are 10BaseT and 100BaseT.

1.4. Extensions/Specializations/Privatizations

None.

1.5. Configuration

1.5.1. AE Title/presentation Address Mapping

VERIFICATION AE allows for the configuration of the mapping of remote AE titles to IP addresses and ports. The IP address of a remote AE may be in a different subnet(using routing).

1.5.2. Configurable Parameters

The following fields are configurable for the VERIFICATION AE:

- Local AE Title
- Local IP Address
- Local Port

1.6. Support of Extended Character Sets

No extended character sets are supported.

Conformance Statement For Storage

2. Introduction

Chapter 2 Specifies DICOM Conformance Statement for Storage Service of RAYPAX. Storage Service User sends DICOM Images to Storage Service Provider. Storage Service Provider receives DICOM Images and GSPS(Grayscale Softcopy Presentation State) and update database.

2.1. Implementation Model

The DICOM Service application of RAYPAX supports the Storage Service and acts as the SCU and the SCP.

Storage Service uses the C_STORE Service of DICOM Standard.

2.1.1. Application Data Flow Diagram

In this chapter, The AE of Storage Service User is named STORAGE_SCU.

The AE of Storage Service Provider is named STORAGE_SCP.

STORAGE AE is used to identify STORAGE_SCU and STORAGE_SCP.

Figure 2 shows the relationship of the STORAGE AE to external applications.

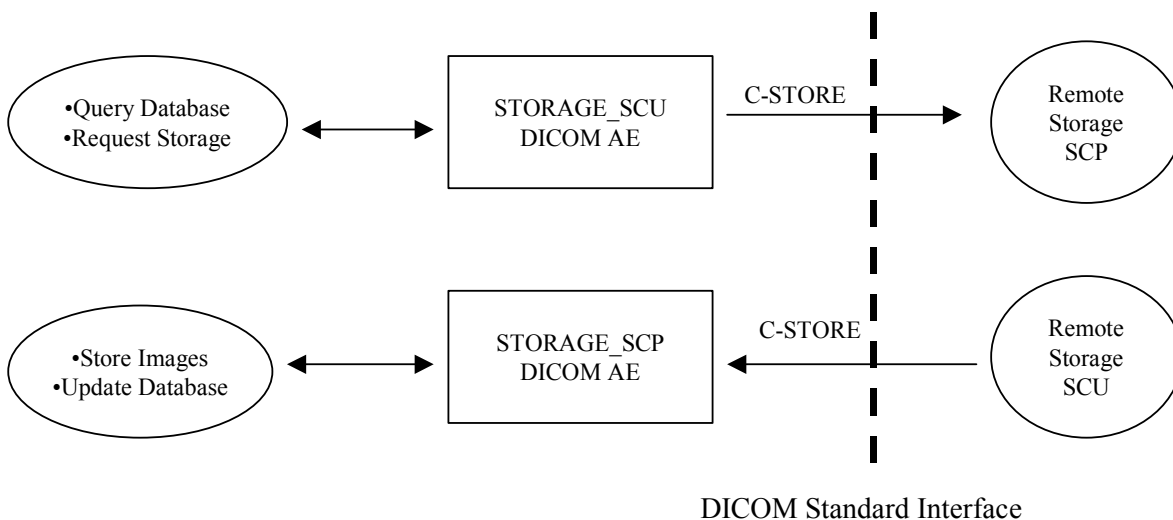


Figure 2. STORAGE AE Implementation Model

2.1.2. Functional Definition of Application Entities

STORAGE_SCU performs the following tasks:

- Establish DICOM association with the remote DICOM device.
- Send DICOM Information Objects to a remote DICOM device.

STORAGE_SCP performs the following tasks:

- Accepts establishment of DICOM association from the remote DICOM device.
- Accepts storage of DICOM Information Objects from the remote DICOM device.

2.1.3. Sequencing Of Real-World Activities

Not Applicable.

2.2. AE Specifications

2.2.1. STORAGE AE - Specification

2.2.1.1. Association Establishment Policies

2.2.1.1.1. General

STORAGE AE will attempt to initiate associations in response to C_STORE requests from other Application Entities. STORAGE AE will only initiate associations in response to valid C-STORE requests.

2.2.1.1.2. Number of Associations

STORAGE AE will accept the number of simultaneous associations and will spawn a new process for each association request that it receives.

2.2.1.1.3. Asynchronous Nature

Not Supported.

2.2.1.1.4. Implementation Identifying Information

STORAGE AE will specify the following Implementation Identifying Information:

| Implementation Class UID | Implementation Version Name |
|--------------------------|-----------------------------|
| 1.2.410.100011.2.0 | RAYPAX20 |

2.2.1.2. Association Initiation Policy

Send images to a remote DICOM device has STORAGE SCP.

2.2.1.2.1. Real-World Activity –STORAGE_SCU

2.2.1.2.1.1. Associated Real-World Activity

The associated Real World Activity is a C-STORE request that has been initiated. If the C-STORE response the remote application contains an error status, the association is aborted.

2.2.1.2.1.2. Proposed Presentation Contexts

STORAGE_SCU supports the Presentation Contexts, which are shown in following table:

| Presentation Context Table | | | | | |
|------------------------------------|--------------------------|---------------------------|---------------------|------|----------------------|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Computed Radiography Image Storage | 1.2.840.1008.5.1.4.1.1.1 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |

| | | | | | |
|--|-----------------------------|--------------------------------|------------------------|-----|------|
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG Lossless Compression | 1.2.840.10008.1.2.4.70 | SCU | None |
| CT Image Storage | 1.2.840.10008.5.1.4.1.1.2 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Ultrasound Multi-frame Image Storage(Retired) | 1.2.840.10008.5.1.4.1.1.3 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Ultrasound Multi-frame Image Storage | 1.2.840.10008.5.1.4.1.1.3.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG Lossless Compression | 1.2.840.10008.1.2.4.70 | SCU | None |
| MR Image Storage | 1.2.840.10008.5.1.4.1.1.4 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG Lossless Compression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Nuclear Medicine Image Storage | 1.2.840.10008.5.1.4.1.1.5 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Ultrasound Image Storage(Retired) | 1.2.840.10008.5.1.4.1.1.6 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Ultrasound Image Storage | 1.2.840.10008.5.1.4.1.1.6.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |

| | | | | | |
|--|---------------------------------------|--------------------------------|------------------------|-----|------|
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Nuclear Medicine Image Storage | 1.2.840.10 008.5.1.4. 1.1.20 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| PET Image Storage | 1.2.840.10 008.5.1.4. 1.1.128 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| RT Image Storage | 1.2.840.10 008.5.1.4. 1.1.481.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| X-Ray Angiographic Image Storage | 1.2.840.10 008.5.1.4. 1.1.12.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| X-Ray Radiofluorosc opic Image Storage | 1.2.840.10 008.5.1.4. 1.1.12.2 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Digital X-Ray Image Storage – For Presentation | 1.2.840.10 008.5.1.4. 1.1.1.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Digital X-Ray Image Storage – For Processing | 1.2.840.10 008.5.1.4. 1.1.1.1.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Digital Mammography Image Storage – For Presentation | 1.2.840.10 008.5.1.4. 1.1.1.2 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Digital | 1.2.840.10 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |

| | | | | | |
|---|--------------------------------|--------------------------------|------------------------|-----|------|
| Mammography Image Storage – For Processing | 008.5.1.4.1.1.1.2.1 | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |
| Digital Intra-oral X-Ray Image Storage – For Presentation | 1.2.840.10008.5.1.4.1.1.1.3 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| Digital Intra-oral X-Ray Image Storage – For Processing | 1.2.840.10008.5.1.4.1.1.1.3.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| VL Endoscopic Image Storage | 1.2.840.10008.5.1.4.1.1.77.1.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| VL Microscopic Image Storage | 1.2.840.10008.5.1.4.1.1.77.1.2 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| VL Slide-Coordinates Microscopic Image Storage | 1.2.840.10008.5.1.4.1.1.77.1.3 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| VL Photographic Image Storage | 1.2.840.10008.5.1.4.1.1.77.1.4 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCU | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCU | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCU | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCU | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCU | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCU | None |

2.2.1.2.2. SOP Specific Conformance Statement

STORAGE_SCU conforms to the definition of a Storage SCU in accordance with the DICOM Standard.

2.2.1.3. Association Acceptance policy

2.2.1.3.1. Real-World Activity – STORAGE_SCP

2.2.1.3.1.1. Associated Real-World Activity

STORAGE_SCP will issue a storage SCP when a remote real world activity wishes to send studies/images.

2.2.1.3.1.2. Presentation Context Table

STORAGE_SCP supports the Presentation Contexts , which are shown in following table:

| Presentation Context Table | | | | | |
|--|----------------------------|--------------------------------|------------------------|------|----------------------|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Computed Radiography Image Storage | 1.2.840.1008.5.1.4.1.1.1 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG Lossless Compression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| CT Image Storage | 1.2.840.1008.5.1.4.1.1.2 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Ultrasound Multi-frame Image Storage(Retired) | 1.2.840.1008.5.1.4.1.1.3 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Ultrasound Multi-frame Image Storage | 1.2.840.1008.5.1.4.1.1.3.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG Lossless Compression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| MR Image Storage | 1.2.840.1008.5.1.4.1.1.4 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG Lossless Compression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Nuclear Medicine Image Storage | 1.2.840.1008.5.1.4.1.1.5 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |

| | | | | | |
|------------------------------------|-------------------------------|--------------------------------|------------------------|-----|------|
| Ultrasound Image Storage(Retired) | 1.2.840.10008.5.1.4.1.1.6 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Ultrasound Image Storage | 1.2.840.10008.5.1.4.1.1.6.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Secondary Capture Image Storage | 1.2.840.10008.5.1.4.1.1.7 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Nuclear Medicine Image Storage | 1.2.840.10008.5.1.4.1.1.20 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| PET Image Storage | 1.2.840.10008.5.1.4.1.1.128 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| RT Image Storage | 1.2.840.10008.5.1.4.1.1.481.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| X-Ray Angiographic Image Storage | 1.2.840.10008.5.1.4.1.1.12.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| X-Ray | 1.2.840.10 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |

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|---|-------------------------------|--------------------------------|------------------------|-----|------|
| Radiofluoroscopic Image Storage | 008.5.1.4.1.1.12.2 | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Digital X-Ray Image Storage – For Presentation | 1.2.840.10008.5.1.4.1.1.1.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Digital X-Ray Image Storage – For Processing | 1.2.840.10008.5.1.4.1.1.1.1.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Digital Mammography Image Storage – For Presentation | 1.2.840.10008.5.1.4.1.1.1.2 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Digital Mammography Image Storage – For Processing | 1.2.840.10008.5.1.4.1.1.1.2.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Digital Intra-oral X-Ray Image Storage – For Presentation | 1.2.840.10008.5.1.4.1.1.1.3 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Digital Intra-oral X-Ray Image Storage – For Processing | 1.2.840.10008.5.1.4.1.1.1.3.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| VL Endoscopic Image Storage | 1.2.840.10008.5.1.4. | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |

| | | | | | |
|--|--|--------------------------------|------------------------|-----|------|
| | 1.1.77.1.1 | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| VL Microscopic Image Storage | 1.2.840.10 008.5.1.4. 1.1.77.1.2 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| VL Slide- Coordinates Microscopic Image Storage | 1.2.840.10 008.5.1.4. 1.1.77.1.3 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| VL Photographic Image Storage | 1.2.840.10 008.5.1.4. 1.1.77.1.4 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |
| | | JPEG Lossy,8bit Compression | 1.2.840.10008.1.2.4.50 | SCP | None |
| | | JPEG Lossy ,12bit Compression | 1.2.840.10008.1.2.4.51 | SCP | None |
| | | JPEG LosslessCompression | 1.2.840.10008.1.2.4.70 | SCP | None |
| | | RLE Lossless | 1.2.840.10008.1.2.5 | SCP | None |
| Grayscale Softcopy Presentation State Storage | 1.2.840.10 008.5.1.4. 1.1.11.1 | DICOM Implicit VR Little ndian | 1.2.840.10008.1.2 | SCP | None |
| | | Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |
| | | Explicit VR Big Endian | 1.2.840.10008.1.2.2 | SCP | None |

2.2.1.3.1.2.1. SOP Specific Conformance for SOP Class

STORAGE_SCP conforms to the definition of a Storage SCP in accordance with the DICOM Standard.

Required Attributes are described in following Table.

- Required attributes to store image to RAYPAX using STORAGE_SCP

| Attribute Name | Tag | Req. Type |
|--------------------------|-------------|-----------|
| SOP Class UID | (0008,0016) | Mandatory |
| SOP Instance UID | (0008,0018) | Mandatory |
| Study Date | (0008,0020) | Mandatory |
| Study Time | (0008,0030) | Mandatory |
| Accession Number | (0008,0050) | Mandatory |
| Modality | (0008,0060) | Mandatory |
| Referring Physician Name | (0008,0090) | Optional |
| Patient ID | (0010,0010) | Mandatory |
| Patient Name | (0010,0020) | Mandatory |
| Patient Birthdate | (0010,0030) | Optional |
| Patient Sex | (0010,0040) | Optional |

| | | |
|----------------------------|-------------|-----------|
| Study Instance UID | (0020,000D) | Mandatory |
| Series Instance UID | (0020,000E) | Mandatory |
| Study ID | (0020,0010) | Optional |
| Series Number | (0020,0011) | Optional |
| Image Number | (0020,0013) | Optional |
| Samples Per Pixel | (0028,0002) | Optional |
| Photometric Interpretation | (0028,0004) | Mandatory |
| Rows | (0028,0010) | Mandatory |
| Columns | (0028,0011) | Mandatory |
| Bits Allocated | (0028,0100) | Mandatory |
| Bits Stored | (0028,0101) | Mandatory |
| Pixel Representation | (0028,0103) | Optional |

2.2.1.3.1.3. Presentation Context Acceptance Criterion

STORAGE_SCP accepts any Presentation Context from the table in section 2.2.1.3.1.2

2.2.1.3.1.4. Transfer Syntax Selection Policies

STORAGE_SCP only supports the Implicit VR Little Endian transfer syntax.

2.3. Communication Profiles

2.3.1. TCP/IP Stack

STORAGE AE provides DICOM V3.0 TCP/IP Network Communication Support as defined in Part 8 of the DICOM Standard. The TCP/IP Communication Stack is inherited from the Windows operating system.

2.3.1.1. Physical Media Support

The physical media supported by the TCP/IP Stack are 10BaseT and 100BaseT.

2.4. Extensions/Specializations/Privatizations

None.

2.5. Configuration

2.5.1. AE Title/presentation Address Mapping

STORAGE AE allows for the configuration of the mapping of remote AE titles to IP addresses and ports. The IP address of a remote AE may be in a different subnet(using routing).

2.5.2. Configurable Parameters

The following fields are configurable for the STORAGE AE:

- Local AE Title
- Local IP Address
- Local Port

2.6. Support of Extended Character Sets

No extended character sets are supported.

Conformance Statement For Query/Retrieve

3. Introduction

Chapter 3 Specifies DICOM Conformance Statement for Query/Retrieve Service of RAYPAX. Query/Retrieve Service User requests to query study information and retrieve images. Query/Retrieve Service Provider accepts query request and returns query result to requestor. And Query/Retrieve Service Provider accepts retrieve request and send requested images to destination application entity specified by requestor

3.1. Implementation Model

The DICOM Service application of RAYPAX supports the Query/Retrieve Service and acts as the SCU and the SCP.

Query/Retrieve Service uses the C_FIND , C_MOVE Service of DICOM Standard.

3.1.1. Application Data Flow Diagram

In this chapter, The AE of Query/Retrieve Service User is named QR_SCU.

The AE of Query/Retrieve Service Provider is named QR_SCP.

QR AE is used to identify QR_SCU and QR_SCP.

Figure 3 shows the relationship of the QR AE to external applications.

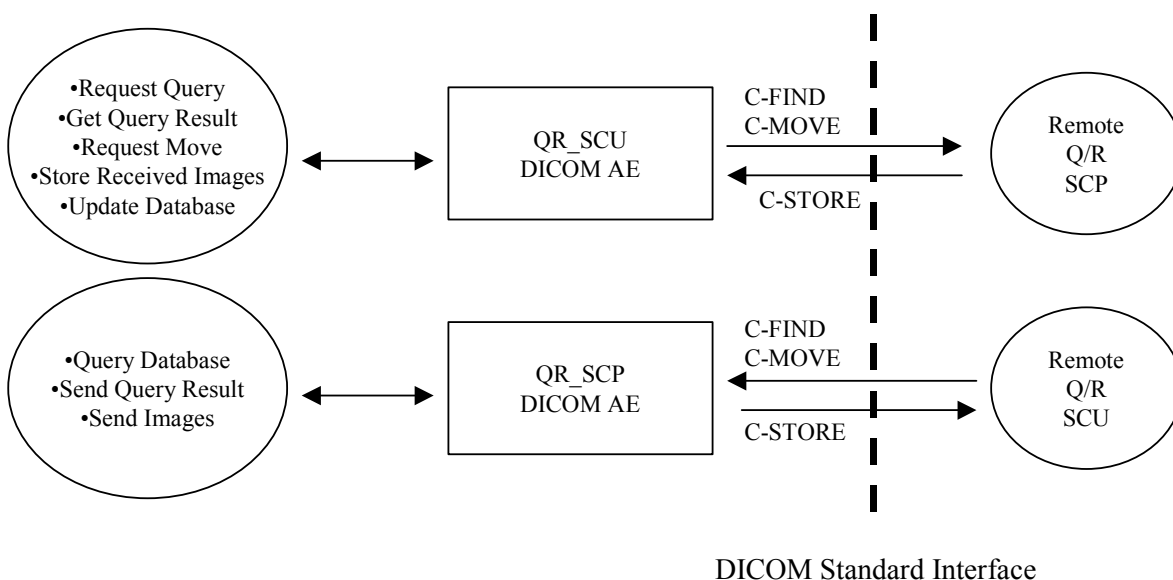


Figure 3. QR AE Implementation Model

3.1.2. Functional Definition of Application Entities

QR_SCU requests study information and retrieval images from a remote DICOM device.

It performs the following tasks:

- Establish DICOM association with the remote DICOM device.
- Request to query of study information object from the remote DICOM device.
- Request to retrieve images from the remote DICOM device.

QR_SCP query database and send requested images to a remote DICOM device.

It performs the following tasks:

- Accepts request to query study information from a remote DICOM device
- Query database according to condition.
- Send images to a remote DICOM device.

3.1.3. Sequencing Of Real-World Activities

Not Applicable.

3.2. AE Specifications

3.2.1. QR AE - Specification

3.2.1.1. Association Establishment Policies

3.2.1.1.1. General

MPPS AE will attempt to initiate associations in response to N_ACTION requests from other Application Entities.

MPPS AE will only initiate associations in response to valid N_ACTION requests

3.2.1.1.2. Number of Associations

QR AE will accepts the number of simultaneous associations and will spawn a new process for each association request that it receives.

3.2.1.1.3. Asynchronous Nature

Not Supported.

3.2.1.1.4. Implementation Identifying Information

QR AE will specify the following Implementation Identifying Information:

| Implementation Class UID | Implementation Version Name |
|--------------------------|-----------------------------|
| 1.2.410.100011.2.0 | RAYPAX20 |

3.2.1.2. Association Initiation Policy

Query information to a remote DICOM device. Retrieve images from a remote DICOM device.

3.2.1.2.1. Real-World Activity – QR_SCU

3.2.1.2.1.1. Associated Real-World Activity

QR_SCU will issue a query request when a user of a QR_SCU wishes to query and retrieve information from a

remote DICOM device.

3.2.1.2.1.2. Proposed Presentation Contexts

QR_SCU supports the Presentation Contexts , which are shown in following table:

| Presentation Context Table | | | | | |
|----------------------------------|-----------------------------|---------------------------|-------------------|------|----------------------|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Study Root Query/Retrieve - FIND | 1.2.840.10008.5.1.4.1.2.2.1 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCU | None |
| Study Root Query/Retrieve - MOVE | 1.2.840.10008.5.1.4.1.2.2.2 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCU | None |

3.2.1.2.2. SOP Specific Conformance Statement

QR_SCU conforms to the definition of a Query/Retreive SCU in accordance with the DICOM Standard.

DIMSE and attributes are described in following Table.

- DIMSE Service Group

| SOP Class | DIMSE Service Element | Usage SCU | Usage |
|---------------------------------|-----------------------|-----------|-------|
| Study Root Query/Retrieve –FIND | C-FIND | Mandatory | Used |
| Study Root Query/Retrieve –MOVE | C-MOVE | Mandatory | Used |

- Study Root Query/Retrieve SCU Information Model – C-FIND

| Attribute Name | Tag | Query Keys Matching | Query keys Return |
|------------------------------------|-------------|---------------------|-------------------|
| Study Level | | | |
| Study Date | (0008,0020) | O | O |
| Study Time | (0008,0030) | O | O |
| Accession number | (0008,0050) | O | O |
| Patient Name | (0010,0010) | O | O |
| Patient ID | (0010,0020) | O | O |
| Study ID | (0020,0010) | O | O |
| Study Instance UID | (0020,000D) | O | O |
| Modalities in Study | (0008,0061) | O | O |
| Referring Physician's Name | (0008,0090) | O | O |
| Patient's Birth Date | (0010,0030) | - | O |
| Patient's Sex | (0010,0040) | O | O |
| Number of Study Related Series | (0020,1206) | - | O |
| Number of Stidy Related Instances | (0020,1208) | - | O |
| Series Level | | | |
| Modality | (0008.0060) | O | O |
| Series Number | (0020,0011) | O | O |
| Series Instance UID | (0020,000E) | O | O |
| Number of Series Related Instances | (0020,1209) | - | O |
| Request Attribute Sequence | (0040,0275) | O | O |

| | | | |
|-------------------------------------|-------------|---|---|
| >Requested Procedure ID | (0040,1001) | O | O |
| >Scheduled Procedure Step ID | (0040,0009) | O | O |
| Performed Procedure Step Start Date | (0040,0244) | O | O |
| Performed Procedure Step Start Time | (0040,0245) | O | O |
| Composite Object Instance Level | | | |
| Instance Number | (0020,0013) | O | O |
| SOP Instance UID | (0008,0018) | O | O |
| SOP Class UID | (0008,0016) | O | O |
| Image Specific Level | | | |
| Rows | (0028,0010) | - | O |
| Columns | (0028,0011) | - | O |
| Bits Allowed | (0028,0100) | - | O |
| Number of Frames | (0028,0008) | - | O |

- Study Root Query/Retrieve SCU Information Model – C-MOVE

| Level | Attribute Name | Tag | Query Key Matching |
|---------------------------|---------------------|-------------|--------------------|
| Study | Study Instance UID | (0020,000D) | O |
| | Patient ID | (0010,0020) | O |
| Series | Series Instance UID | (0020,000E) | O |
| Composite Object Instance | SOP Instance UID | (0008,0018) | O |

3.2.1.3. Association Acceptance policy

3.2.1.3.1. Real-World Activity – QR_SCP

3.2.1.3.1.1. Associated Real-World Activity

QR_SCP will issue a Query/Retrieve SCP when a remote real world activity wishes to query or retrieve studies/images.

3.2.1.3.1.2. Presentation Context Table

QR_SCP supports the Presentation Contexts , which are shown in following table:

| Presentation Context Table | | | | | |
|--|-----------------------------|---------------------------|-------------------|------|----------------------|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Patient Root Query/Retrieve - FIND | 1.2.840.10008.5.1.4.1.2.1.1 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCP | None |
| Patient Root Query/Retrieve - MOVE | 1.2.840.10008.5.1.4.1.2.1.2 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCP | None |
| Study Root Query/Retrieve - FIND | 1.2.840.10008.5.1.4.1.2.2.1 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCP | None |
| Study Root Query/Retrieve - MOVE | 1.2.840.10008.5.1.4.1.2.2.2 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCP | None |
| Patient/Study Only Query/Retrieve - FIND | 1.2.840.10008.5.1.4.1.2.3.1 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCP | None |
| Patient/Study Only Query/Retrieve - | 1.2.840.10008.5.1.4.1.2.3.2 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCP | None |

| | | | | |
|------|--------|---------------|--|--|
| MOVE | .2.3.2 | Little Endian | | |
|------|--------|---------------|--|--|

3.2.1.3.1.2.1. SOP Specific Conformance for SOP Class

QR_SCP conforms to the definition of a Query/Retrieve SCP in accordance with the DICOM Standard.

DIMSE and attributes are described in following Table.

- DIMSE Service Group

| SOP Class | DIMSE Service Element | Usage SCP | Usage |
|---------------------------------|-----------------------|-----------|-------|
| Study Root Query/Retrieve –FIND | C-FIND | Mandatory | Used |
| Study Root Query/Retrieve –MOVE | C-MOVE | Mandatory | Used |

- Study Root Query/Retrieve SCP Information Model – C-FIND

| Attribute Name | Tag | Query Keys Matching | Query keys Return |
|-------------------------------------|-------------|---------------------|-------------------|
| Study Level | | | |
| Study Date | (0008,0020) | O | O |
| Study Time | (0008,0030) | O | O |
| Accession number | (0008,0050) | O | O |
| Patient Name | (0010,0010) | O | O |
| Patient ID | (0010,0020) | O | O |
| Study ID | (0020,0010) | O | O |
| Study Instance UID | (0020,000D) | O | O |
| Modalities in Study | (0008,0061) | O | O |
| Referring Physician's Name | (0008,0090) | O | O |
| Patient's Birth Date | (0010,0030) | - | O |
| Patient's Sex | (0010,0040) | - | O |
| Patient's Age | (0010,1010) | - | O |
| Number of Study Related Series | (0020,1206) | - | O |
| Number of Study Related Instances | (0020,1208) | - | O |
| Series Level | | | |
| Modality | (0008,0060) | O | O |
| Series Number | (0020,0011) | O | O |
| Series Instance UID | (0020,000E) | O | O |
| Number of Series Related Instances | (0020,1209) | - | O |
| Request Attribute Sequence | (0040,0275) | O | O |
| >Requested Procedure ID | (0040,1001) | O | O |
| >Scheduled Procedure Step ID | (0040,0009) | O | O |
| Performed Procedure Step Start Date | (0040,0244) | O | O |
| Performed Procedure Step Start Time | (0040,0245) | O | O |
| Composite Object Instance Level | | | |
| Instance Number | (0020,0013) | O | O |
| SOP Instance UID | (0008,0018) | O | O |
| SOP Class UID | (0008,0016) | O | O |
| Image Specific Level | | | |
| Rows | (0028,0010) | - | O |

| | | | |
|------------------|-------------|---|---|
| Columns | (0028,0011) | - | O |
| Bits Allowed | (0028,0100) | - | O |
| Number of Frames | (0028,0008) | - | O |

- Study Root Query/Retrieve SCP Information Model – C-MOVE

| Level | Attribute Name | Tag | Query Key Matching |
|---------------------------|---------------------|-------------|--------------------|
| Study | Study Instance UID | (0020,000D) | O |
| | Patient ID | (0010,0020) | O |
| Series | Series Instance UID | (0020,000E) | O |
| Composite Object Instance | SOP Instance UID | (0008,0018) | O |

3.2.1.3.1.3. Presentation Context Acceptance Criterion

QR_SCP accepts any Presentation Context from the table in section 3.2.1.3.1.2

3.2.1.3.1.4. Transfer Syntax Selection Policies

QR_SCP only supports the Implicit VR Little Endian transfer syntax.

3.3. Communication Profiles

3.3.1. TCP/IP Stack

QR AE provides DICOM V3.0 TCP/IP Network Communication Support as defined in Part 8 of the DICOM Standard. The TCP/IP Communication Stack is inherited from the Windows operating system.

3.3.1.1. Physical Media Support

The physical media supported by the TCP/IP Stack are 10BaseT and 100BaseT.

3.4. Extensions/Specializations/Privatizations

None.

3.5. Configuration

3.5.1. AE Title/presentation Address Mapping

QR AE allows for the configuration of the mapping of remote AE titles to IP addresses and ports. The IP address of a remote AE may be in a different subnet(using routing).

3.5.2. Configurable Parameters

The following fields are configurable for the QR AE:

- Local AE Title
- Local IP Address
- Local Port

3.6. Support of Extended Character Sets

No extended character sets are supported.

Conformance Statement For Storage Commitment

4. Introduction

Chapter 4 Specifies DICOM Conformance Statement for Storage Commitment Service of RAYPAX. Storage Commitment Service of RAYPAX supports only Service Class Provider. Storage Commitment Service Provider accepts request for storage commitment from Requestor and send status of storage to Requestor.

4.1. Implementation Model

The DICOM Service application of RAYPAX supports the Storage Commitment Service and acts as the SCP.

Storage Commitment SCP uses the N-EVENT_REPORT Service of DICOM Standard.

4.1.1. Application Data Flow Diagram

The AE of Storage Commitment Service Provider is named STORAGE_COMMIT_SCP.

STORAGE COMMITMENT AE is used to identify STORAGE_COMMIT_SCP.

Figure 4 shows the relationship of the STORAGE COMMITMENT AE to external applications.

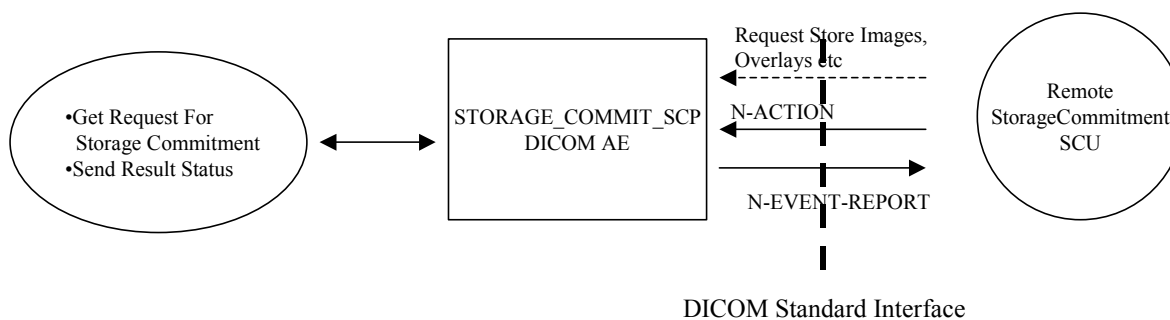


Figure 4. STORAGE COMMITMENT AE Implementation Model

4.1.2. Functional Definition of Application Entities

STORAGE_COMMIT_SCP report status of storage DICOM images to aremote DICOM device.

4.1.3. Sequencing Of Real-World Activities

Not Applicable.

4.2. AE Specifications

4.2.1. STORAGE COMMITMENT AE - Specification

4.2.1.1. Association Establishment Policies

4.2.1.1.1. General

STORAGE COMMITMENT AE will attempt to initiate associations in response to N_ACTION requests from other Application Entities. STORAGE COMMITMENT AE will only initiate associations in response to valid N_ACTION requests.

4.2.1.1.2. Number of Associations

STORAGE COMMITMENT AE will accept the number of simultaneous associations and will spawn a new process for each association request that it receives.

4.2.1.1.3. Asynchronous Nature

Not Supported.

4.2.1.1.4. Implementation Identifying Information

STORAGE COMMITMENT AE will specify the following Implementation Identifying Information:

| Implementation Class UID | Implementation Version Name |
|--------------------------|-----------------------------|
| 1.2.410.100011.2.0 | RAYPAX20 |

4.2.1.2. Association Initiation Policy

Not Applicable.

4.2.1.2.1. Real-World Activity

Not Applicable.

4.2.1.2.1.1. Associated Real-World Activity

Not Applicable.

4.2.1.2.1.2. Proposed Presentation Contexts

Not Applicable.

4.2.1.2.2. SOP Specific Conformance Statement

Not Applicable.

4.2.1.3. Association Acceptance policy

4.2.1.3.1. Real-World Activity – STORAGE_COMMIT_SCP

STORAGE_COMMIT_SCP will issue a Storage Commitment SCP when a remote real world activity requests N_ACTION service.

4.2.1.3.1.1. Associated Real-World Activity

STORAGE_COMMIT_SCP initiates association and send the successfully stored SOP instances list to reply to the Storage Commitment request using N-EVENT-REPORT service.

4.2.1.3.1.2. Presentation Context Table

STORAGE_COMMIT_SCU supports the Presentation Contexts , which are shown in following table:

| Presentation Context Table | | | |
|----------------------------|-----------------|------|----------|
| Abstract Syntax | Transfer Syntax | Role | Extended |

| Name | UID | Name | UID | | Negotiation |
|-------------------------------|----------------------|---------------------------|-------------------|-----|-------------|
| Storage Commitment Push Model | 1.2.840.10008.1.20.1 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCP | None |

4.2.1.3.1.2.1. SOP Specific Conformance for SOP Class

STORAGE_COMMIT_SCP conforms to the definition of a Storage Commitment Push Model SCP in accordance with the DICOM Standard.

DIMSE and attributes are described in following Tables.

- DIMSE Service Group

| SOP Class | DIMSE Service Element | Usage SCP | Usage |
|-------------------------------|-----------------------|-----------|-------|
| Storage Commitment Push Model | N-ACTION | Mandatory | Used |
| | N-ENENT-REPORT | Mandatory | Used |

- Storage Commitment Push Model SCP Implementation Model – N-ACTION

| Action Type Name | Action Type ID | Attribute | Tag | Req. Type* |
|----------------------------|----------------|------------------------------|-------------|------------|
| Request Storage Commitment | 1 | Transaction UID | (0008,1195) | 1 |
| | | Referenced SOP Sequence | (0008,1199) | 1 |
| | | >Referenced SOP Class UID | (0008,1150) | 1 |
| | | >Referenced SOP Instance UID | (0008,1155) | 1 |

- Storage Commitment Push Model SCP Implementation Model – N-EVENT-REPORT

| Event Type Name | Event Type ID | Attribute | Tag | Req. Type |
|--|---------------|------------------------------|-------------|-----------|
| Storage Commitment Request Successful | 1 | Transaction UID | (0008,1195) | 1 |
| | | Referenced SOP Sequence | (0008,1199) | 1 |
| | | >Referenced SOP Class UID | (0008,1150) | 1 |
| | | >Referenced SOP Instance UID | (0008,1155) | 1 |
| Storage Commitment Request Complete – Failures Exist | 2 | Transaction UID | (0008,1195) | 1 |
| | | Referenced SOP Sequence | (0008,1199) | 1C |
| | | >Referenced SOP Class UID | (0008,1150) | 1 |
| | | >Referenced SOP Instance UID | (0008,1155) | 1 |
| | | Failed SOP Sequence | (0008,1198) | 1 |
| | | >Referenced SOP Class UID | (0008,1150) | 1 |
| | | >Referenced SOP Instance UID | (0008,1155) | 1 |
| >Failure Reason | (0008,1197) | 1 | | |

(Req. Type* : 1 : Attribute required tag and value , 2: Attribute required tag, 3:optional , C: Conditional)

4.2.1.3.1.3. Presentation Context Acceptance Criterion

STORAGE_COMMIT_SCP accepts any Presentation Context from the table in section 4.2.1.3.1.2

4.2.1.3.1.4. Transfer Syntax Selection Policies

STORAGE_COMMIT_SCP only supports the Implicit VR Little Endian transfer syntax.

4.3. Communication Profiles

4.3.1. TCP/IP Stack

STORAGE COMMITMENT AE provides DICOM V3.0 TCP/IP Network Communication Support as defined in Part 8 of the DICOM Standard. The TCP/IP Communication Stack is inherited from the Windows operating system.

4.3.1.1. Physical Media Support

The physical media supported by the TCP/IP Stack are 10BaseT and 100BaseT.

4.4. Extensions/Specializations/Privatizations

None.

4.5. Configuration

4.5.1. AE Title/presentation Address Mapping

STORAGE COMMITMENT AE allows for the configuration of the mapping of remote AE titles to IP addresses and ports. The IP address of a remote AE may be in a different subnet(using routing).

4.5.2. Configurable Parameters

The following fields are configurable for the STORAGE COMMITMENT AE:

- Local AE Title
- Local IP Address
- Local Port

4.6. Support of Extended Character Sets

No extended character sets are supported.

Conformance Statement For MPPS

5. Introduction

Chapter 5 Specifies DICOM Conformance Statement for Modality Performed Procedure Step (MPPS) Service of RAYPAX. MPPS Service User transmit events such as the start of the study and the end of the study to provider. MPPS Service Provider receives events specified above and update database.

5.1. Implementation Model

The DICOM Service application of RAYPAX supports the MPPS Service and acts as the SCP.

MPPS Service uses the N-CREATE,N_SET Service of DICOM Standard.

5.1.1. Application Data Flow Diagram

In this chapter, The AE of MPPS Service User is named MPPS_SCU.

The AE of MPPS Service Provider is named MPPS_SCP.

MPPS AE is used to identify MPPS_SCU and MPPS_SCP.

Figure 5 shows the relationship of the MPPS AE to external applications.

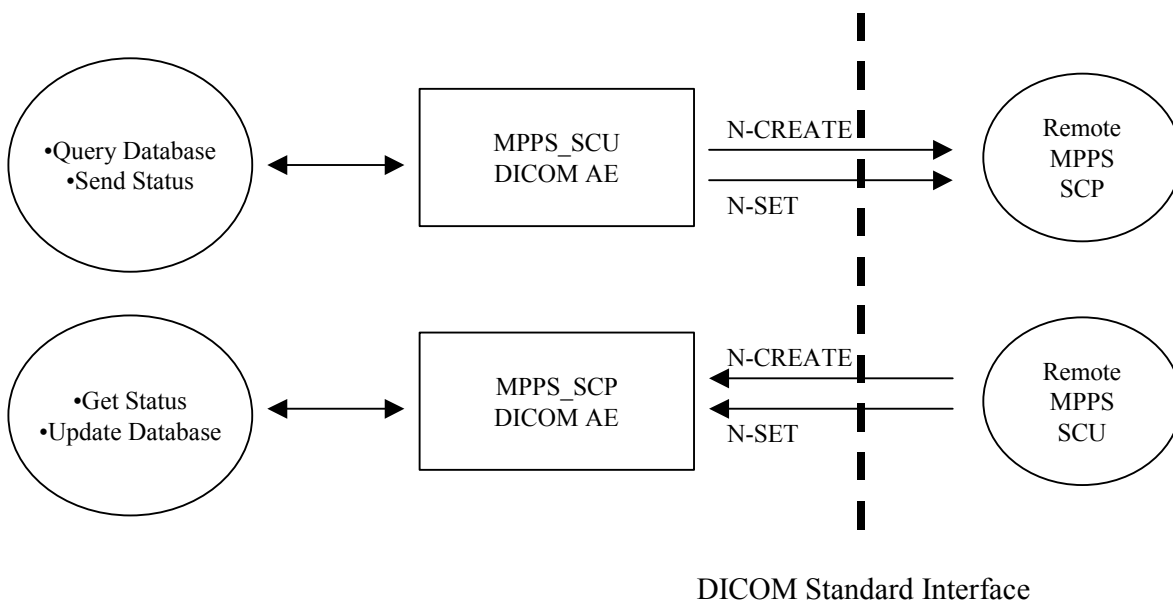


Figure 5. MPPS AE Implementation Model

5.1.2. Functional Definition of Application Entities

MPPS_SCU is used to transmit events such as the start of the study and the end of the study to a remote DICOM device. MPPS_SCU performs the following tasks:

- Establishes DICOM association with the remote DICOM device

- Informs the remote DICOM device of DICOM MPPS Information

MPPS_SCP performs the following tasks:

- Accepts establishment of DICOM association from the remote DICOM device.
- Accepts status information of the study from a remote DICOM device.

5.1.3. Sequencing Of Real-World Activities

Not Applicable.

5.2. AE Specifications

5.2.1. MPPS AE - Specification

5.2.1.1. Association Establishment Policies

5.2.1.1.1. General

MPPS AE will attempt to initiate associations in response to N_CREATE, N_SET requests from other Application Entities. MPPS AE will only initiate associations in response to valid N_CREATE , N_SET requests.

5.2.1.1.2. Number of Associations

MPPS AE will accept the number of simultaneous associations and will spawn a new process for each association request that it receives.

5.2.1.1.3. Asynchronous Nature

Not Supported.

5.2.1.1.4. Implementation Identifying Information

MPPS AE will specify the following Implementation Identifying Information:

| Implementation Class UID | Implementation Version Name |
|--------------------------|-----------------------------|
| 1.2.410.100011.2.0 | RAYPAX20 |

5.2.1.2. Association Initiation Policy

Send MPPS information to a remote DICOM device.

5.2.1.2.1. Real-World Activity – MPPS_SCU

5.2.1.2.1.1. Associated Real-World Activity

MPPS_SCU issues MPPS when the study starts and ends.

5.2.1.2.1.2. Proposed Presentation Contexts

MPPS_SCU supports the Presentation Contexts , which are shown in following table:

| Presentation Context Table | | | | | |
|----------------------------|-----------------------|-----------------|-------------------|------|----------------------|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Modality Performed | 1.2.840.10008.3.1.2.3 | Implicit VR | 1.2.840.10008.1.2 | SCU | None |

| | | | | | |
|----------------|----|---------------|--|--|--|
| Procedure Step | .3 | Little Endian | | | |
|----------------|----|---------------|--|--|--|

5.2.1.2.2. SOP Specific Conformance Statement

MPPS_SCU conforms to the definition of a MPPS SCU in accordance with the DICOM Standard.

DIMSE and attributes are described in following Tables.

- DIMSE Service Group

| SOP Class | DIMSE Service Element | Usage SCU | Usage |
|--|-----------------------|-----------|-------|
| Modality Performed Procedure Step (MPPS) | N-CREATE | Mandatory | Used |
| | N-SET | Mandatory | Used |

- MPPS SCU Implementation Model – N-CREATE, N-SET

| Attribute Name | Tag | Req. Type N-CREATE | Req. Type N_SET |
|--|-------------|-----------------------|--------------------|
| Performed Procedure Step Relationship | | | |
| Scheduled Step Attribute Sequence | (0040,0270) | 1 | N/A |
| >Study Instance UID | (0020,000D) | 1 | N/A |
| >Accession number | (0008,0050) | 2 | N/A |
| >Requested Procedure ID | (0040,1001) | 2 | N/A |
| >Requested Procedure Description | (0032,1060) | 2 | N/A |
| >Scheduled Procedure ID | (0040,0009) | 2 | N/A |
| >Scheduled Procedure Step Description | (0040,0007) | 2 | N/A |
| Performed Procedure Step Information | | | |
| Performed procedure Step ID | (0040,0253) | 1 | N/A |
| Performed Station AE Title | (0040,0241) | 1 | N/A |
| Performed Station Name | (0040,0242) | 2 | N/A |
| Performed Location | (0040,0243) | 2 | N/A |
| Performed procedure Step Start Date | (0040,0244) | 1 | N/A |
| Performed procedure Step Start Time | (0040,0245) | 1 | N/A |
| Performed procedure Step Status | (0040,0252) | 1 | 3 |
| Performed procedure Step Description | (0040,0254) | 2 | 3 |
| Performed procedure Type Description | (0040,0255) | 2 | 3 |
| Performed procedure Step End Date | (0040,0250) | 2 | 3 |
| Performed procedure Step End Time | (0040,0251) | 2 | 3 |
| Comments on the Performed procedure Step | (0040,0280) | 3 | 3 |
| Image Acquisition Results | | | |
| Modality | (0008,0060) | 1 | N/A |
| Study ID | (0020,0010) | 2 | N/A |
| Performed Series Sequence | (0040,0340) | 2 | 3 |
| >Performing Physician's Name | (0008,1050) | 2C | 2C |
| >Protocol Name | (0008,1030) | 1C | 1C |
| >Operator's Name | (0008,1070) | 2C | 2C |
| >Series Instance UID | (0020,000E) | 1C | 1C |
| >Series Description | (0008,103E) | 2C | 2C |
| >Retrieve AE Title | (0008,0054) | 2C | 2C |
| >Referenced Image Sequence | (0008,1140) | 2C | 2C |
| >>Referenced SOP Class UID | (0008,1150) | 1C | 1C |
| >>Referenced SOP Instance UID | (0008,1155) | 1C | 1C |

| | | | |
|--|-------------|----|----|
| >Referenced Non-Image Composite SOP Instance | (0040,0220) | 2C | 2C |
| Sequence | | | |
| >>Referenced SOP Class UID | (0008,1150) | 1C | 1C |
| >>Referenced SOP Instance UID | (0008,1155) | 1C | 1C |

(Req. Type* - 1 : Attribute required tag and value , 2: Attribute required tag, 3:optional , C: Conditional, N/A : Not Allowed)

5.2.1.3. Association Acceptance policy

5.2.1.3.1. Real-World Activity – MPPS_SCP

5.2.1.3.1.1. Associated Real-World Activity

MPPS_SCP will issue a MPPS SCP when a remote real world activity requests N-CREATE service.

5.2.1.3.1.2. Presentation Context Table

MPPS_SCP supports the Presentation Contexts , which are shown in following table:

| Presentation Context Table | | | | | |
|-----------------------------------|-------------------------|---------------------------|-------------------|------|----------------------|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Modality Performed Procedure Step | 1.2.840.10008.3.1.2.3.3 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCP | None |

5.2.1.3.1.2.1. SOP Specific Conformance for SOP Class

MPPS_SCP conforms to the definition of a MPPS SCP in accordance with the DICOM Standard.

DIMSE and attributes are described in following Tables.

- DIMSE Service Group

| SOP Class | DIMSE Service Element | Usage SCP | Usage |
|--|-----------------------|-----------|-------|
| Modality Performed Procedure Step (MPPS) | N-CREATE | Mandatory | Used |
| | N-SET | Mandatory | Used |

- MPPS SCP Implementation Model – N-CREATE, N-SET

| Attribute Name | Tag | Req. Type N-CREATE | Req. Type N_SET |
|---------------------------------------|-------------|-----------------------|--------------------|
| Performed Procedure Step Relationship | | | |
| Scheduled Step Attribute Sequence | (0040,0270) | 1 | N/A |
| >Study Instance UID | (0020,000D) | 1 | N/A |
| >Accession number | (0008,0050) | 2 | N/A |
| >Requested Procedure ID | (0040,1001) | 2 | N/A |
| >Requested Procedure Description | (0032,1060) | 2 | N/A |
| >Scheduled Procedure ID | (0040,0009) | 2 | N/A |
| >Scheduled Procedure Step Description | (0040,0007) | 2 | N/A |
| Performed Procedure Step Information | | | |
| Performed procedure Step ID | (0040,0253) | 1 | N/A |
| Performed Station AE Title | (0040,0241) | 1 | N/A |
| Performed Station Name | (0040,0242) | 2 | N/A |

| | | | |
|--|-------------|---|-----|
| Performed Location | (0040,0243) | 2 | N/A |
| Performed procedure Step Start Date | (0040,0244) | 1 | N/A |
| Performed procedure Step Start Time | (0040,0245) | 1 | N/A |
| Performed procedure Step Status | (0040,0252) | 1 | 1 |
| Performed procedure Step Description | (0040,0254) | 2 | 2 |
| Performed procedure Type Description | (0040,0255) | 2 | 2 |
| Performed procedure Step End Date | (0040,0250) | 2 | 1 |
| Performed procedure Step End Time | (0040,0251) | 2 | 1 |
| Comments on the Performed procedure Step | (0040,0280) | 3 | 3 |
| Image Acquisition Results | | | |
| Modality | (0008,0060) | 1 | N/A |
| Study ID | (0020,0010) | 2 | N/A |
| Performed Series Sequence | (0040,0340) | 2 | 1 |
| >Performing Physician's Name | (0008,1050) | 2 | 2 |
| >Protocol Name | (0008,1030) | 1 | 1 |
| >Operator's 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 SOP Class UID | (0008,1150) | 1 | 1 |
| >>Referenced SOP Instance UID | (0008,1155) | 1 | 1 |
| >Referenced Non-Image Composite SOP Instance | (0040,0220) | 2 | 2 |
| Sequence | | | |
| >>Referenced SOP Class UID | (0008,1150) | 1 | 1 |
| >>Referenced SOP Instance UID | (0008,1155) | 1 | 1 |

(Req. Type* - 1 : Attribute required tag and value , 2: Attribute required tag, 3:optional , C: Conditional, N/A : Not Allowed)

5.2.1.3.1.3. Presentation Context Acceptance Criterion

MPPS_SCP accepts any Presentation Context from the table in section 5.2.1.3.1.2

5.2.1.3.1.4. Transfer Syntax Selection Policies

MPPS_SCP only supports the Implicit VR Little Endian transfer syntax.

5.3. Communication Profiles

5.3.1. TCP/IP Stack

MPPS AE provides DICOM V3.0 TCP/IP Network Communication Support as defined in Part 8 of the DICOM Standard. The TCP/IP Communication Stack is inherited from the Windows operating system.

5.3.1.1. Physical Media Support

The physical media supported by the TCP/IP Stack are 10BaseT and 100BaseT.

5.4. Extensions/Specializations/Privatizations

None.

5.5. Configuration

5.5.1. AE Title/presentation Address Mapping

MPPS AE allows for the configuration of the mapping of remote AE titles to IP addresses and ports. The IP address of a remote AE may be in a different subnet(using routing).

5.5.2. Configurable Parameters

The following fields are configurable for the MPPS AE:

- Local AE Title
- Local IP Address
- Local Port

5.6. Support of Extended Character Sets

No extended character sets are supported.