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**Candelis, Inc.**

**DICOM Conformance Statement**

**ImageGrid  
Storage Server**

## **0 INTRODUCTION**

ImageGrid Storage Server is a complete hardware/software, turnkey image archiving solution, a web based system management GUI. It contains Candelis's DICOM server application software that provides services of image storage, query of image attributes, and retrieval of images to peer DICOM 3.0 compliant application entities.

ImageGrid Storage Server supports access restriction rules to limit read/write access to specified application entities. In addition, it supports secure socket layer for secure network communication, and syslog-based auditing.

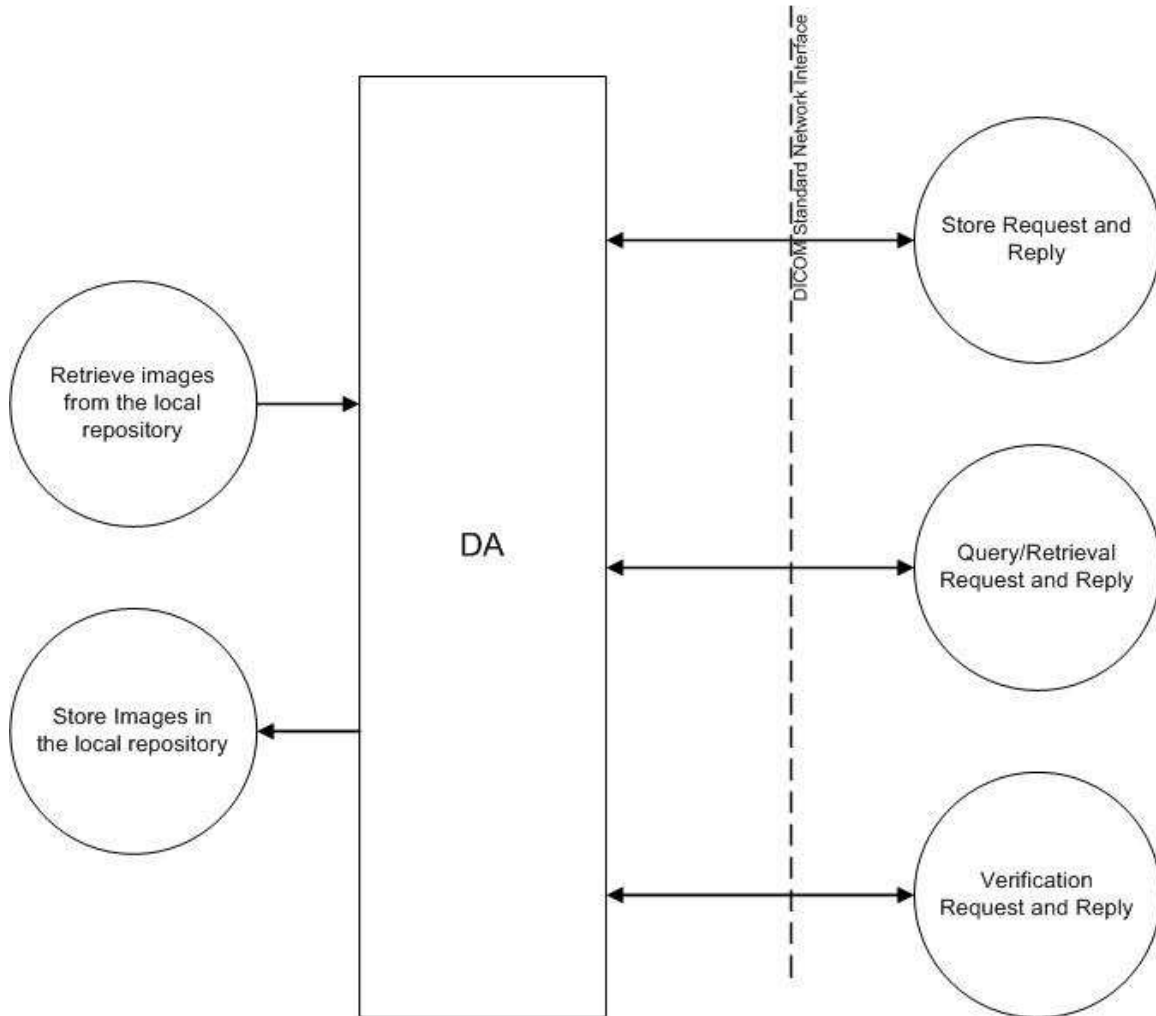
## **1 IMPLEMENTATION MODEL**

ImageGrid Storage Server runs as a daemon process, acting as multiple Application Entities that support DICOM Service Class Provider (SCP) for Storage, Query/Retrieve, Verification, and Storage Commit operations. ImageGrid waits for external requests for association from peer DICOM compliant application entity, and establishes the connection for storing, querying, and retrieving images, after verifying the peer's access privilege successfully.

Using ImageGrid's system management Web GUI, application entity titles of its peer application entities and other configurable parameters can be configured.

### **ImageGrid Application Data Flow Diagram**

Figure 1.1 shows how ImageGrid Storage Server interacts with real world activities.



**Figure 1-1: ImageGrid Implementation Model**

## 1.2 Functional Definitions of AE's

ImageGrid Storage Server waits for another application entity to connect at the presentation address configured for its Application Entity Title. ImageGrid Storage Server will accept associations with Presentation Contexts for SOP Classes of the Storage and Query/Retrieve Service Classes.

## 1.3 Sequencing of Real-World Activities

Real world activities, as depicted in figure 1-1, may take place independent of each other and there are no sequencing constraints.

## 2 AE SPECIFICATIONS

The ImageGrid daemon can be configured to act as multiple Application Entities, all configurable through the web GUI. ImageGrid will spawn a new copy of itself for each new connection. Many instances of ImageGrid may represent the same Application Entity.

### 2.1 ImageGrid Specification

ImageGrid Storage Server provides standard conformance to the following DICOM V3.0 SOP Classes in the roles specified:

**Table 2.1: SOP Class Name SOP Class UID**

SOP Class Name	SOP Class UID	Role
ComputedRadiographyImageStorage	1.2.840.10008.5.1.4.1.1.1	SCU, SCP
DigitalXRayImageStorageForPresentation	1.2.840.10008.5.1.4.1.1.1.1	SCU, SCP
DigitalXRayImageStorageForProcessing	1.2.840.10008.5.1.4.1.1.1.1.1	SCU, SCP
DigitalMammographyXRayImageStorageForPresentation	1.2.840.10008.5.1.4.1.1.1.2	SCU, SCP
DigitalMammographyXRayImageStorageForProcessing	1.2.840.10008.5.1.4.1.1.1.2.1	SCU, SCP
DigitalIntraOralXRayImageStorageForPresentation	1.2.840.10008.5.1.4.1.1.1.3	SCU, SCP
DigitalIntraOralXRayImageStorageForProcessing	1.2.840.10008.5.1.4.1.1.1.3.1	SCU, SCP
CTImageStorage	1.2.840.10008.5.1.4.1.1.2	SCU, SCP
EnhancedCTImageStorage	1.2.840.10008.5.1.4.1.1.2.1	SCU, SCP
UltrasoundMultiframeImageStorage	1.2.840.10008.5.1.4.1.1.3.1	SCU, SCP
MRImageStorage	1.2.840.10008.5.1.4.1.1.4	SCU, SCP
EnhancedMRImageStorage	1.2.840.10008.5.1.4.1.1.4.1	SCU, SCP
MRSpectroscopyStorage	1.2.840.10008.5.1.4.1.1.4.2	SCU, SCP
UltrasoundImageStorage	1.2.840.10008.5.1.4.1.1.6.1	SCU, SCP
SecondaryCaptureImageStorage	1.2.840.10008.5.1.4.1.1.7	SCU, SCP
MultiframeSingleBitSecondaryCaptureImageStorage	1.2.840.10008.5.1.4.1.1.7.1	SCU, SCP
MultiframeGrayscaleByteSecondaryCaptureImageStorage	1.2.840.10008.5.1.4.1.1.7.2	SCU, SCP
MultiframeGrayscaleWordSecondaryCaptureImageStorage	1.2.840.10008.5.1.4.1.1.7.3	SCU, SCP
MultiframeTrueColorSecondaryCaptureImageStorage	1.2.840.10008.5.1.4.1.1.7.4	SCU, SCP
TwelveLeadECGWaveformStorage	1.2.840.10008.5.1.4.1.1.9.1.1	SCU, SCP
GeneralECGWaveformStorage	1.2.840.10008.5.1.4.1.1.9.1.2	SCU, SCP
AmbulatoryECGWaveformStorage	1.2.840.10008.5.1.4.1.1.9.1.3	SCU, SCP
HemodynamicWaveformStorage	1.2.840.10008.5.1.4.1.1.9.2.1	SCU, SCP
CardiacElectrophysiologyWaveformStorage	1.2.840.10008.5.1.4.1.1.9.3.1	SCU, SCP
BasicVoiceAudioWaveformStorage	1.2.840.10008.5.1.4.1.1.9.4.1	SCU, SCP
GrayscaleSoftcopyPresentationStateStorage	1.2.840.10008.5.1.4.1.1.11.1	SCU, SCP
ColorSoftcopyPresentationStateStorage	1.2.840.10008.5.1.4.1.1.11.2	SCU, SCP
PseudoColorSoftcopyPresentationStateStorage	1.2.840.10008.5.1.4.1.1.11.3	SCU, SCP
BlendingSoftcopyPresentationStateStorage	1.2.840.10008.5.1.4.1.1.11.4	SCU, SCP
XRayAngiographicImageStorage	1.2.840.10008.5.1.4.1.1.12.1	SCU, SCP
EnhancedXAImageStorage	1.2.840.10008.5.1.4.1.1.12.1.1	SCU, SCP

XRayRadiofluoroscopyImageStorage	1.2.840.10008.5.1.4.1.1.12.2	SCU, SCP
EnhancedXRFImageStorage	1.2.840.10008.5.1.4.1.1.12.2.1	SCU, SCP
NuclearMedicineImageStorage	1.2.840.10008.5.1.4.1.1.20	SCU, SCP
RawDataStorage	1.2.840.10008.5.1.4.1.1.66	SCU, SCP
SpatialRegistrationStorage	1.2.840.10008.5.1.4.1.1.66.1	SCU, SCP
SpatialFiducialsStorage	1.2.840.10008.5.1.4.1.1.66.2	SCU, SCP
RealWorldValueMappingStorage	1.2.840.10008.5.1.4.1.1.67	SCU, SCP
RTImageStorage	1.2.840.10008.5.1.4.1.1.481.1	SCU, SCP
RTDoseStorage	1.2.840.10008.5.1.4.1.1.481.2	SCU, SCP
RTStructureSetStorage	1.2.840.10008.5.1.4.1.1.481.3	SCU, SCP
RTBeamsTreatmentRecordStorage	1.2.840.10008.5.1.4.1.1.481.4	SCU, SCP
RTPlanStorage	1.2.840.10008.5.1.4.1.1.481.5	SCU, SCP
RTBrachyTreatmentRecordStorage	1.2.840.10008.5.1.4.1.1.481.6	SCU, SCP
RTTreatmentSummaryRecordStorage	1.2.840.10008.5.1.4.1.1.481.7	SCU, SCP
RTIonPlanStorage	1.2.840.10008.5.1.4.1.1.481.8	SCU, SCP
RTIonBeamsTreatmentRecordStorage	1.2.840.10008.5.1.4.1.1.481.9	SCU, SCP
VLEndoscopicImageStorage	1.2.840.10008.5.1.4.1.1.77.1.1	SCU, SCP
VideoEndoscopicImageStorage	1.2.840.10008.5.1.4.1.1.77.1.1.1	SCU, SCP
VLMicroscopicImageStorage	1.2.840.10008.5.1.4.1.1.77.1.2	SCU, SCP
VideoMicroscopicImageStorage	1.2.840.10008.5.1.4.1.1.77.1.2.1	SCU, SCP
VLSlideCoordinatesMicroscopicImageStorage	1.2.840.10008.5.1.4.1.1.77.1.3	SCU, SCP
VLPhotographicImageStorage	1.2.840.10008.5.1.4.1.1.77.1.4	SCU, SCP
VideoPhotographicImageStorage	1.2.840.10008.5.1.4.1.1.77.1.4.1	SCU, SCP
OphthalmicPhotography8BitImageStorage	1.2.840.10008.5.1.4.1.1.77.1.5.1	SCU, SCP
OphthalmicPhotography16BitImageStorage	1.2.840.10008.5.1.4.1.1.77.1.5.2	SCU, SCP
StereometricRelationshipStorage	1.2.840.10008.5.1.4.1.1.77.1.5.3	SCU, SCP
BasicTextSR	1.2.840.10008.5.1.4.1.1.88.11	SCU, SCP
EnhancedSR	1.2.840.10008.5.1.4.1.1.88.22	SCU, SCP
ComprehensiveSR	1.2.840.10008.5.1.4.1.1.88.33	SCU, SCP
ProcedureLogStorage	1.2.840.10008.5.1.4.1.1.88.40	SCU, SCP
MammographyCADSR	1.2.840.10008.5.1.4.1.1.88.50	SCU, SCP
KeyObjectSelectionDocument	1.2.840.10008.5.1.4.1.1.88.59	SCU, SCP
ChestCADSR	1.2.840.10008.5.1.4.1.1.88.65	SCU, SCP
XRayRadiationDoseSR	1.2.840.10008.5.1.4.1.1.88.67	SCU, SCP
PositronEmissionTomographyImageStorage	1.2.840.10008.5.1.4.1.1.128	SCU, SCP
EncapsulatedPDFStorage	1.2.840.10008.5.1.4.1.1.104.1	SCU, SCP
RETIREDStoredPrintStorage	1.2.840.10008.5.1.1.27	SCU, SCP
RETIREDHardcopyGrayscaleImageStorage	1.2.840.10008.5.1.1.29	SCU, SCP
RETIREDHardcopyColorImageStorage	1.2.840.10008.5.1.1.30	SCU, SCP
RETIREDUltrasoundMultiframeImageStorage	1.2.840.10008.5.1.4.1.1.3	SCU, SCP
RETIREDNuclearMedicineImageStorage	1.2.840.10008.5.1.4.1.1.5	SCU, SCP
RETIREDUltrasoundImageStorage	1.2.840.10008.5.1.4.1.1.6	SCU, SCP

RETIREDStandaloneOverlayStorage	1.2.840.10008.5.1.4.1.1.8	SCU, SCP
RETIREDStandaloneCurveStorage	1.2.840.10008.5.1.4.1.1.9	SCU, SCP
RETIREDStandaloneModalityLUTStorage	1.2.840.10008.5.1.4.1.1.10	SCU, SCP
RETIREDStandaloneVOILUTStorage	1.2.840.10008.5.1.4.1.1.11	SCU, SCP
RETIREDXRayAngiographicBiPlaneImageStorage	1.2.840.10008.5.1.4.1.1.12.3	SCU, SCP
RETIREDVImageStorage	1.2.840.10008.5.1.4.1.1.77.1	SCU, SCP
RETIREDVLMultiFrameImageStorage	1.2.840.10008.5.1.4.1.1.77.2	SCU, SCP
RETIREDStandalonePETCurveStorage	1.2.840.10008.5.1.4.1.1.129	SCU, SCP
FINDPatientRootQueryRetrieveInformationModel	1.2.840.10008.5.1.4.1.2.1.1	SCU, SCP
MOVEPatientRootQueryRetrieveInformationModel	1.2.840.10008.5.1.4.1.2.1.2	SCU, SCP
GETPatientRootQueryRetrieveInformationModel	1.2.840.10008.5.1.4.1.2.1.3	SCU, SCP
FINDStudyRootQueryRetrieveInformationModel	1.2.840.10008.5.1.4.1.2.2.1	SCU, SCP
MOVEStudyRootQueryRetrieveInformationModel	1.2.840.10008.5.1.4.1.2.2.2	SCU, SCP
GETStudyRootQueryRetrieveInformationModel	1.2.840.10008.5.1.4.1.2.2.3	SCU, SCP
FINDPatientStudyOnlyQueryRetrieveInformationModel	1.2.840.10008.5.1.4.1.2.3.1	SCU, SCP
MOVEPatientStudy OnlyQueryRetrieveInformationModel	1.2.840.10008.5.1.4.1.2.3.2	SCU, SCP
GETPatientStudy OnlyQueryRetrieveInformationModel	1.2.840.10008.5.1.4.1.2.3.3	SCU, SCP
FINDModalityWorklistInformationModel	1.2.840.10008.5.1.4.31	SCU, SCP
FINDGeneralPurposeWorklistInformationModel	1.2.840.10008.5.1.4.32.1	SCU, SCP

ImageGrid Storage Server supports the following transfer syntaxes:

**Table 2.2: Transfer Syntax Name and UID**

Transfer Syntax Name	Transfer Syntax UID
Explicit VR Little Endian	1.2.840.10008.1.2.1
Explicit VR Big Endian	1.2.840.10008.1.2.2
Implicit VR Little Endian	1.2.840.10008.1.2
RLE Lossless	1.2.840.10008.1.2.5
Deflated Explicit VR Little Endian	1.2.840.10008.1.2.1.99
JPEG Baseline (Process 1)	1.2.840.10008.1.2.4.50
JPEG Extended (Process 2 & 4)	1.2.840.10008.1.2.4.51
JPEG Extended (Process 3 & 5)	1.2.840.10008.1.2.4.52
JPEG Spectral Selection, Non-Hierarchical (Process 6 & 8)	1.2.840.10008.1.2.4.53
JPEG Spectral Selection, Non-Hierarchical (Process 7 & 9)	1.2.840.10008.1.2.4.54
JPEG Full Progression, Non-Hierarchical (Process 10 & 12)	1.2.840.10008.1.2.4.55
JPEG Full Progression, Non-Hierarchical (Process 11 & 13)	1.2.840.10008.1.2.4.56
JPEG Lossless, Non-Hierarchical (Process 14)	1.2.840.10008.1.2.4.57
JPEG Lossless, Non-Hierarchical (Process 15)	1.2.840.10008.1.2.4.58
JPEG Extended, Hierarchical (Process 16 & 18)	1.2.840.10008.1.2.4.59
JPEG Extended, Hierarchical (Process 17 & 19)	1.2.840.10008.1.2.4.60
JPEG Spectral Selection, Hierarchical (Process 20 & 22)	1.2.840.10008.1.2.4.61
JPEG Spectral Selection, Hierarchical (Process 21 & 23)	1.2.840.10008.1.2.4.62
JPEG Full Progression, Hierarchical (Process 24 & 26)	1.2.840.10008.1.2.4.63
JPEG Full Progression, Hierarchical (Process 25 & 27)	1.2.840.10008.1.2.4.64
JPEG Lossless, Hierarchical (Process 28)	1.2.840.10008.1.2.4.65
JPEG Lossless, Hierarchical (Process 29)	1.2.840.10008.1.2.4.66
JPEG Lossless, Non-Hierarchical, (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70

## 2.1.1 Association Initiation by Real-World Activity

### 2.1.1.1 Real World Activity - ImageGrid Queries Remote Image Storage

#### 2.1.1.1.1 Associated Real-World Activity

ImageGrid Storage Server uses Administration Web Gui's query feature to initiate and manage DICOM associations with remote Application Entities that support the DICOM Query/Retrieve Service as a Service Class Provider. The Web Gui's query feature will generate DICOM transactions based upon end-user initiated activities.

#### 2.1.1.1.2 Proposed Presentation Contexts

**Table 2.3: Proposed Presentation Contexts for ImageGrid Storage Server and Real-World Activity – ImageGrid Queries Remote DICOM Device.**

<b>Presentation Context Table</b>			
<b>Abstract Syntax</b>	<b>Transfer Syntax</b>	<b>Role</b>	<b>Extended Negotiation</b>
Modality Worklist Information Model –FIND	Explicit VR Little Endian Transfer Syntax	SCU	Supported
	Explicit VR Big Endian Transfer Syntax	SCU	Supported
	Implicit VR Little Endian Transfer Syntax	SCU	Supported
Patient Root Query/Retrieve Information Model - FIND	Explicit VR Little Endian Transfer Syntax	SCU	Supported
	Explicit VR Big Endian Transfer Syntax	SCU	Supported
	Implicit VR Little Endian Transfer Syntax	SCU	Supported
Study Root Query/Retrieve Information Model - FIND	Explicit VR Little Endian Transfer Syntax	SCU	Supported
	Explicit VR Big Endian Transfer Syntax	SCU	Supported
	Implicit VR Little Endian Transfer Syntax	SCU	Supported
Patient/Study Only Query/Retrieve Information Model - FIND	Explicit VR Little Endian Transfer Syntax	SCU	Supported
	Explicit VR Big Endian Transfer Syntax	SCU	Supported
	Implicit VR Little Endian Transfer Syntax	SCU	Supported
Patient Root Query/Retrieve Information Model - MOVE	Explicit VR Little Endian Transfer Syntax	SCU	Supported
	Explicit VR Big Endian Transfer Syntax	SCU	Supported
	Implicit VR Little Endian Transfer Syntax	SCU	Supported
Study Root Query/Retrieve Information Model - MOVE	Explicit VR Little Endian Transfer Syntax	SCU	Supported
	Explicit VR Big Endian Transfer Syntax	SCU	Supported
	Implicit VR Little Endian Transfer Syntax	SCU	Supported

Patient/Study Only Query/Retrieve Information Model - MOVE	Explicit VR Little Endian Transfer Syntax	SCU	Supported
	Explicit VR Big Endian Transfer Syntax	SCU	Supported
	Implicit VR Little Endian Transfer Syntax	SCU	Supported
Patient Root Query/Retrieve Information Model - GET	Explicit VR Little Endian Transfer Syntax	SCU	Supported
	Explicit VR Big Endian Transfer Syntax	SCU	Supported
	Implicit VR Little Endian Transfer Syntax	SCU	Supported
Study Root Query/Retrieve Information Model - GET	Explicit VR Little Endian Transfer Syntax	SCU	Supported
	Explicit VR Big Endian Transfer Syntax	SCU	Supported
	Implicit VR Little Endian Transfer Syntax	SCU	Supported
Patient/Study Only Query/Retrieve Information Model - GET	Explicit VR Little Endian Transfer Syntax	SCU	Supported
	Explicit VR Big Endian Transfer Syntax	SCU	Supported
	Implicit VR Little Endian Transfer Syntax	SCU	Supported

#### 2.1.1.1.2.1 SOP Specific Conformance Statement for SOP Class ‘Patient Root Query/Retrieve Information Model – FIND’

All DICOM attributes specified as valid keys for C-FIND messages are legal for ImageGrid Storage Server query keys as well. In practice, the set actually used is defined by client-side requests so only a pertinent subset would be used. Table 2.4 lists the essential tags that ImageGrid Storage Server will expect any Query/Retrieve SCP to support for the Patient Root Information Model.

**Table 2.4: DICOM data element supported for SOP Class ‘Patient Root Query/Retrieve Information Model – FIND’**

Level	Description	Tag
Patient	Patient’s Name	(0010,0010)
Patient	Patient ID	(0010,0020)
Patient	Number Of Patient Related Studies	(0020,1200)
Study	Accession Number	(0008,0050)

#### 2.1.1.1.2.2 SOP Specific Conformance Statement for SOP Class ‘Study Root Query/Retrieve Information Model – FIND’

All DICOM attributes specified as valid keys for C-FIND messages are legal for ImageGrid Storage Server query keys as well. In practice, the set actually used is defined by client-side requests so only a pertinent subset would be used. Table 2.5 lists the essential tags that ImageGrid Storage Server will expect any Query/Retrieve SCP to support for the Study Root Information Model.

**Table 2.5: DICOM data element supported for SOP Class ‘Study Root Query/Retrieve Information Model – FIND’**

Level	Description	Tag
Patient	Patient’s Name	(0010,0010)
Patient	Patient ID	(0010,0020)
Study	Study Date	(0008,0020)
Study	Modalities In Study	(0008,0061)
Study	Referring Physician’s name	(0008,0090)
Study	Study Description	(0008,1030)
Study	Name Of Physicians Reading Study	(0008,1060)
Study	Study Instance UID	(0020,000d)
Study	Study ID	(0020,0010)
Study	Number Of Study Related Series	(0020,1206)
Study	Number Of Study Related Instances	(0020,1208)

**2.1.1.1.2.3 SOP Specific Conformance Statement for SOP Class ‘Patient/Study Only Query/Retrieve Information Model – FIND’**

All DICOM attributes specified as valid keys for C-FIND messages are legal for ImageGrid Storage Server query keys as well. In practice, the set actually used is defined by client-side requests so only a pertinent subset would be used. Table 2.6 lists the essential tags that ImageGrid Storage Server will expect any Query/Retrieve SCP to support for the Patient/Study Only Information Model.

**Table 2.6: DICOM data element supported for SOP Class ‘Patient/Study Only Query/Retrieve Information Model – FIND’**

Level	Description	Tag
Patient	Patient’s Name	(0010,0010)
Patient	Patient ID	(0010,0020)
Study	Study Date	(0008,0020)
Study	Modalities In Study	(0008,0061)
Study	Referring Physician’s name	(0008,0090)
Study	Study Description	(0008,1030)
Study	Name Of Physicians Reading Study	(0008,1060)
Study	Study Instance UID	(0020,000d)
Study	Study ID	(0020,0010)
Study	Number Of Study Related Series	(0020,1206)
Study	Number Of Study Related Instances	(0020,1208)
Study	Study Comments	(0032,4000)

**2.1.1.2 Real World Activity - ImageGrid Requests Remote Image Storage**

**2.1.1.2.1 Associated Real-World Activity**

ImageGrid Storage Server uses its push feature to initiate and manage DICOM associations with remote Application Entities that support the DICOM Storage Service as a Service Class Provider. The push feature will generate DICOM transactions based upon end-user initiated activities.

### 2.1.1.2.2 Proposed Presentation Contexts

**Table 2.7: Proposed Presentation Contexts for ImageGrid Storage Server and Real-World Activity – ImageGrid Requests Remote Image Storage.**

Presentation Context Table			
Abstract Syntax	Transfer Syntax	Role	Extended Negotiation
For Each Storage SOP Class Supported by ImageGrid in Table 2.1	Explicit VR Little Endian Transfer Syntax	SCU	None
	Explicit VR Big Endian Transfer Syntax	SCU	None
	Implicit VR Little Endian Transfer Syntax	SCU	None
	JPEG Lossless, Non-Hierarchical, (Process 14 [Selection Value 1]) Transfer Syntax	SCU	None
	JPEG Baseline (Process 1) Transfer Syntax	SCU	None
	JPEG Extended (Process 2 & 4) Transfer Syntax	SCU	None
	RLE Lossless Transfer Syntax	SCU	None
	Deflated Explicit VR Little Endian Transfer Syntax	SCU	None

### 2.1.1.2.3 Transfer Syntax Proposing Policies

ImageGrid DICOM Server associates implicit priority with the order of offered Transfer Syntaxes. The Transfer Syntax that appears first in the proposed list is considered to have the highest priority for the negotiated party.

ImageGrid DICOM Server offers the Original Transfer Syntax of a SOP Class in one Presentation Context followed by a second Presentation Context that offers standard Transfer Syntaxes. ImageGrid DICOM Server is by default configured to offer standard Transfer Syntaxes in the following order:

- Little Endian Explicit
- Big Endian Explicit
- Little Endian Implicit

### 2.1.2 Association Acceptance Policy

Upon association request, if an external DICOM AE requests an association with ImageGrid DICOM Server but uses an incorrect called AE title, ImageGrid will reject the association and provide the indication of called AE title not recognized. ImageGrid DICOM Server then checks to see if the peer application entity has the required access privilege that the calling AE title is authorized to begin negotiations. If it is not, ImageGrid DICOM Server will reject the association and provide the indication of calling AE title not recognized.

Extended Negotiation for Relational Query is supported for the Association Negotiation.

### 2.1.2.1 Real World Activity - Remote System Requests Image Storage

#### 2.1.2.1.1 Associated Real-World Activity

ImageGrid DICOM Server will accept DICOM Storage Service association request that are initiated by remote DICOM entities. ImageGrid DICOM Server will process the stored DICOM images and make them available for access by other applications.

The Real-World Activity associated with the C-STORE operation is the storage of the image on the system upon which ImageGrid DICOM Server is running. ImageGrid DICOM Server will issue a failure status if it is unable to store the image on or if the image transferred does not conform to the IOD of the SOP Class under which it was transmitted.

The Real-World Activity for C-FIND and C-MOVE is to query the ImageGrid DICOM Server. For C-FIND, the query result is returned to the requestor. For C-MOVE, the query result is used to cause the transfer of the images referred to in the query result to the destination AE title.

Relational Query is supported.

#### 2.1.2.1.2 Accepted Presentation Contexts

**Table 2.8: Accepted Presentation Contexts for ImageGrid Storage Server and Real-World Activity – Remote System Requests Image Storage.**

Presentation Context Table			
Abstract Syntax	Transfer Syntax	Role	Extended Negotiation
For Each Storage SOP Class Supported by ImageGrid in Table 2.1	Explicit VR Little Endian Transfer Syntax	SCP	Supported
	Explicit VR Big Endian Transfer Syntax	SCP	Supported
	Implicit VR Little Endian Transfer Syntax	SCP	Supported
	RLE Lossless Transfer Syntax	SCP	Supported
	Deflated Explicit VR Little Endian Transfer Syntax	SCP	Supported
	JPEG Baseline (Process 1) Transfer Syntax	SCP	Supported
	JPEG Extended (Process 2 & 4) Transfer Syntax	SCP	Supported
	JPEG Extended (Process 3 & 5) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Non-Hierarchical (Process 6 & 8) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Non-Hierarchical (Process 7 & 9) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Non-Hierarchical (Process 10 & 12) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Non-Hierarchical (Process 11 & 13) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical (Process 14) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical (Process 15) Transfer Syntax	SCP	Supported
JPEG Extended, Hierarchical	SCP	Supported	

	(Process 16 & 18) Transfer Syntax		
	JPEG Extended, Hierarchical (Process 17 & 19) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Hierarchical (Process 20 & 22) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Hierarchical (Process 21 & 23) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Hierarchical (Process 24 & 26) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Hierarchical (Process 25 & 27) Transfer Syntax	SCP	Supported
	JPEG Lossless, Hierarchical (Process 28) Transfer Syntax	SCP	Supported
	JPEG Lossless, Hierarchical (Process 29) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical, (Process 14 [Selection Value 1]) Transfer Syntax	SCP	Supported

### 2.1.2.1.3 SOP Specific Conformance Statement for Storage SOP Classes

ImageGrid DICOM Server conforms to the SOPs of the Storage Service Class at Level 2 (Full). No elements are discarded or coerced, but the following demographic elements may be modified. Modification of data elements is initiated either by ImageGrid Study Modification Tool or Order Entry system.

**Table 2.9: DICOM data elements that may be modified by ImageGrid DICOM Server**

Level	Name	(Group, Element)
Patient	Patient ID	(0x0010,0x0020)
Patient	Other Patient IDs	(0x0010,0x1000)
Patient	Issuer of Patient ID	(0x0010,0x0021)
Patient	Patient's Name	(0x0010,0x0010)
Patient	Other Patient Names	(0x0010,0x1001)
Patient	Patient's Birth Date	(0x0010,0x0030)
Patient	Patient's Birth Time	(0x0010,0x0032)
Patient	Patient's Sex	(0x0010,0x0040)
Study	Patient's Age	(0x0010,0x1010)
Study	Patient's Size	(0x0010,0x1020)
Study	Patient's Weight	(0x0010,0x1030)
Study	Occupation	(0x0010,0x2180)
Study	Accession Number	(0x0008,0x0050)
Study	Study Description	(0x0008,0x1030)
Study	Study Comments	(0x0032,0x4000)
Study	Referring Physician's Name	(0x0008,0x0090)
Study	Physicians Reading Study	(0x0008,0x1060)
Study	Requested Procedure Description	(0x0032,0x1060)
Study	Admitting Diagnoses	(0x0008,0x1080)

	Description	
Series	Series Number	(0x0020,0x0011)
Series	Modality	(0x0008,0x0060)
Series	Series Description	(0x0008,0x103E)
Series	Operator's Name	(0x0008,0x1070)
Series	Performing Physician's Name	(0x0008,0x1050)
Image	Instance Number	(0x0020,0x0013)
Image	Image Comments	(0x0020,0x4000)

In the event of a successful C-STORE operation, the Image has successfully been written to ImageGrid and a return code of 0000 will be returned. Following are the return codes for specific SOPs:

**Store Return Codes:**

Status Code	Reason	Status Category
A700	Out of Resources; indicates that there was not enough ImageGrid space to store the image.	Failure
A800	SOP Class is not Supported	Failure
A900	ImageGrid set does not match SOP Class	Failure
C000	ImageGrid set can't be parsed into its elements	Failure
B000	Coercion of ImageGrid elements	Warning
B007	ImageGrid Set does not match SOP Class	Warning
B006	Element ImageGrid carded	Warning

**Find Specific Codes:**

Status Code	Reason	Status Category
A700	Out of Resources; indicates that there was not enough ImageGrid space to store the image.	Failure
A800	SOP Class is not supported	Failure
A900	ImageGrid set does not match SOP Class	Failure
FE00	Matching terminated due to cancel request	Canceled
FF01	Unsupported optional keys	Warning

**Move Specific Codes:**

Status Code	Reason	Status Category
A701	Out of Resources; NUMBER OF MATCHES	Failure
A702	Out of Resources; SUB OPERATIONS	Failure
A800	SOP Class is not Supported	Failure
A801	Move Destination Unknown	Failure
A900	ImageGrid set does not match SOP Class	Failure
C000	Unable to Process	Failure
FE00	Matching terminated due to cancel request	Canceled
B000	Coercion of ImageGrid elements	Warning

**Get Specific Codes:**

Status Code	Reason	Status Category
A701	Out of Resources; NUMBER OF MATCHES	Failure
A702	Out of Resources; SUB OPERATIONS	Failure
A800	SOP Class is not Supported	Failure
A900	ImageGrid set does not match SOP Class	Failure
C000	Unable to Process	Failure
FE00	Matching terminated due to cancel request	Canceled
B000	Coercion of ImageGrid elements	Warning

**2.1.2.1.4 Presentation Context Acceptance Criterion**

ImageGrid DICOM Server will accept all presentation contexts that are combinations of supported SOP Classes and Transfer Syntaxes as presented in Table 2.8.

**2.1.2.1.5 Transfer Syntax Selection Policies**

ImageGrid DICOM Server has its own priority on selecting accepted Transfer Syntax for a given proposed Presentation Context in the Association Request. The Transfer Syntax with the highest priority will be accepted for each supported proposed Presentation Context for the negotiated party. The default order of preference from the highest to the lowest is indicated in Table 2.10 below.

**Table 2.10: Default Priority of Transfer Syntax Selection for ImageGrid Storage Server**

Priority	Transfer Syntax Name
1	JPEG Lossless, Non-Hierarchical, (Process 14 [Selection Value 1])
2	JPEG Lossless, Hierarchical (Process 29)
3	JPEG Lossless, Hierarchical (Process 28)
4	JPEG Full Progression, Hierarchical (Process 25 & 27)
5	JPEG Full Progression, Hierarchical (Process 24 & 26)
6	JPEG Spectral Selection, Hierarchical (Process 21 & 23)
7	JPEG Spectral Selection, Hierarchical (Process 20 & 22)
8	JPEG Extended, Hierarchical (Process 17 & 19)
9	JPEG Extended, Hierarchical (Process 16 & 18)
10	JPEG Lossless, Non-Hierarchical (Process 15)
11	JPEG Lossless, Non-Hierarchical (Process 14)
12	JPEG Full Progression, Non-Hierarchical (Process 11 & 13)
13	JPEG Full Progression, Non-Hierarchical (Process 10 & 12)
14	JPEG Spectral Selection, Non-Hierarchical (Process 7 & 9)
15	JPEG Spectral Selection, Non-Hierarchical (Process 6 & 8)
16	JPEG Extended (Process 3 & 5)
17	JPEG Extended (Process 2 & 4)
18	JPEG Baseline (Process 1)
19	Deflated Explicit VR Little Endian
20	RLE Lossless
21	Explicit VR Little Endian
22	Explicit VR Big Endian
23	Implicit VR Little Endian

## 2.1.2.2 Real World Activity - Remote System Requests Storage Commitment

### 2.1.2.2.1 Associated Real-World Activity

ImageGrid DICOM Server will accept DICOM Storage Commitment association requests that are initiated by remote DICOM entities.

### 2.1.2.2.2 Accepted Presentation Contexts

**Table 2.11: Accepted Presentation Contexts for ImageGrid Storage Server and Real-World Activity – Remote System Requests Storage Commitment.**

<b>Presentation Context Table</b>			
<b>Abstract Syntax</b>	<b>Transfer Syntax</b>	<b>Role</b>	<b>Extended Negotiation</b>
Storage Commitment Push Model	Explicit VR Little Endian Transfer Syntax	SCP	Supported
	Explicit VR Big Endian Transfer Syntax	SCP	Supported
	Implicit VR Little Endian Transfer Syntax	SCP	Supported
	RLE Lossless Transfer Syntax	SCP	Supported
	Deflated Explicit VR Little Endian Transfer Syntax	SCP	Supported
	JPEG Baseline (Process 1) Transfer Syntax	SCP	Supported
	JPEG Extended (Process 2 & 4) Transfer Syntax	SCP	Supported
	JPEG Extended (Process 3 & 5) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Non-Hierarchical (Process 6 & 8) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Non-Hierarchical (Process 7 & 9) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Non-Hierarchical (Process 10 & 12) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Non-Hierarchical (Process 11 & 13) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical (Process 14) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical (Process 15) Transfer Syntax	SCP	Supported
	JPEG Extended, Hierarchical (Process 16 & 18) Transfer Syntax	SCP	Supported
	JPEG Extended, Hierarchical (Process 17 & 19) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Hierarchical (Process 20 & 22) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Hierarchical (Process 21 & 23) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Hierarchical	SCP	Supported

	(Process 24 & 26) Transfer Syntax		
	JPEG Full Progression, Hierarchical (Process 25 & 27) Transfer Syntax	SCP	Supported
	JPEG Lossless, Hierarchical (Process 28) Transfer Syntax	SCP	Supported
	JPEG Lossless, Hierarchical (Process 29) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical, (Process 14 [Selection Value 1]) Transfer Syntax	SCP	Supported

### 2.1.2.3 Real World Activity - Remote System Requests DICOM Verification Service

#### 2.1.2.3.1 Associated Real-World Activity

ImageGrid DICOM Server will accept and process request for Verification Service that are initiated by remote DICOM entities.

#### 2.1.2.3.2 Accepted Presentation Contexts

**Table 2.12: Accepted Presentation Contexts for ImageGrid Storage Server and Real-World Activity – Remote System Requests DICOM Verification Service.**

Presentation Context Table			
Abstract Syntax	Transfer Syntax	Role	Extended Negotiation
Verification	Explicit VR Little Endian Transfer Syntax	SCP	Supported
	Explicit VR Big Endian Transfer Syntax	SCP	Supported
	Implicit VR Little Endian Transfer Syntax	SCP	Supported
	RLE Lossless Transfer Syntax	SCP	Supported
	Deflated Explicit VR Little Endian Transfer Syntax	SCP	Supported
	JPEG Baseline (Process 1) Transfer Syntax	SCP	Supported
	JPEG Extended (Process 2 & 4) Transfer Syntax	SCP	Supported
	JPEG Extended (Process 3 & 5) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Non-Hierarchical (Process 6 & 8) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Non-Hierarchical (Process 7 & 9) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Non-Hierarchical (Process 10 & 12) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Non-Hierarchical (Process 11 & 13) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical (Process 14) Transfer Syntax	SCP	Supported

	JPEG Lossless, Non-Hierarchical (Process 15) Transfer Syntax	SCP	Supported
	JPEG Extended, Hierarchical (Process 16 & 18) Transfer Syntax	SCP	Supported
	JPEG Extended, Hierarchical (Process 17 & 19) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Hierarchical (Process 20 & 22) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Hierarchical (Process 21 & 23) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Hierarchical (Process 24 & 26) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Hierarchical (Process 25 & 27) Transfer Syntax	SCP	Supported
	JPEG Lossless, Hierarchical (Process 28) Transfer Syntax	SCP	Supported
	JPEG Lossless, Hierarchical (Process 29) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical, (Process 14 [Selection Value 1]) Transfer Syntax	SCP	Supported

#### 2.1.2.4 Real World Activity - Remote System Requests Modality Worklist

##### 2.1.2.4.1 Associated Real-World Activity

ImageGrid DICOM Server will accept Modality Worklist association request that are initiated by remote DICOM entities. ImageGrid will process the request and respond with the query result.

##### 2.1.2.4.2 Accepted Presentation Contexts

**Table 2.13: Accepted Presentation Contexts for ImageGrid Storage Server and Real-World Activity – Remote System Requests Modality Worklist.**

Presentation Context Table			
Abstract Syntax	Transfer Syntax	Role	Extended Negotiation
Modality Worklist Information Model - FIND	Explicit VR Little Endian Transfer Syntax	SCP	Supported
	Explicit VR Big Endian Transfer Syntax	SCP	Supported
	Implicit VR Little Endian Transfer Syntax	SCP	Supported
	RLE Lossless Transfer Syntax	SCP	Supported
	Deflated Explicit VR Little Endian Transfer Syntax	SCP	Supported
	JPEG Baseline (Process 1) Transfer Syntax	SCP	Supported
	JPEG Extended (Process 2 & 4) Transfer Syntax	SCP	Supported
	JPEG Extended (Process 3 & 5) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Non-Hierarchical (Process 6 & 8) Transfer Syntax	SCP	Supported

	JPEG Spectral Selection, Non-Hierarchical (Process 7 & 9) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Non-Hierarchical (Process 10 & 12) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Non-Hierarchical (Process 11 & 13) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical (Process 14) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical (Process 15) Transfer Syntax	SCP	Supported
	JPEG Extended, Hierarchical (Process 16 & 18) Transfer Syntax	SCP	Supported
	JPEG Extended, Hierarchical (Process 17 & 19) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Hierarchical (Process 20 & 22) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Hierarchical (Process 21 & 23) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Hierarchical (Process 24 & 26) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Hierarchical (Process 25 & 27) Transfer Syntax	SCP	Supported
	JPEG Lossless, Hierarchical (Process 28) Transfer Syntax	SCP	Supported
	JPEG Lossless, Hierarchical (Process 29) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical, (Process 14 [Selection Value 1]) Transfer Syntax	SCP	Supported

#### 2.1.2.4.3 SOP Specific Conformance Statement for SOP Class 'Modality Worklist Information Model – FIND'

Table 2.14 lists all the tags that ImageGrid Storage Server can currently support for the Query/Retrieve of the Modality Worklist Information Model. In practice, the set actually used is defined by client-side requests so only a pertinent subset would be used.

**Table 2.14: DICOM data element supported for SOP Class 'Modality Worklist Information Model – FIND'**

<b>Name</b>	<b>(Group, Element)</b>
Scheduled Station AE Title	(0x0040,0x0001)
Scheduled Procedure Step Start Date	(0x0040,0x0002)
Scheduled Procedure Step Start Time	(0x0040,0x0003)
Scheduled Procedure Step Modification Date and Time	(0x0040,0x4010)
Scheduled Performing Physician's Name	(0x0040,0x0006)
Patient's Name	(0x0010,0x0010)
Patient ID	(0x0010,0x0020)
Accession Number	(0x0008,0x0050)

## 2.1.2.5 Real World Activity - Remote System Requests Modality Performed Procedure Step

### 2.1.2.5.1 Associated Real-World Activity

ImageGrid DICOM Server will accept and process Modality Performed Procedure Step association request that are initiated by remote DICOM entities.

### 2.1.2.5.2 Accepted Presentation Contexts

**Table 2.15: Accepted Presentation Contexts for ImageGrid Storage Server and Real-World Activity – Remote System Requests Modality Performed Procedure Step.**

<b>Presentation Context Table</b>			
<b>Abstract Syntax</b>	<b>Transfer Syntax</b>	<b>Role</b>	<b>Extended Negotiation</b>
Modality Performed Procedure Step	Explicit VR Little Endian Transfer Syntax	SCP	Supported
	Explicit VR Big Endian Transfer Syntax	SCP	Supported
	Implicit VR Little Endian Transfer Syntax	SCP	Supported
	RLE Lossless Transfer Syntax	SCP	Supported
	Deflated Explicit VR Little Endian Transfer Syntax	SCP	Supported
	JPEG Baseline (Process 1) Transfer Syntax	SCP	Supported
	JPEG Extended (Process 2 & 4) Transfer Syntax	SCP	Supported
	JPEG Extended (Process 3 & 5) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Non-Hierarchical (Process 6 & 8) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Non-Hierarchical (Process 7 & 9) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Non-Hierarchical (Process 10 & 12) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Non-Hierarchical (Process 11 & 13) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical (Process 14) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical (Process 15) Transfer Syntax	SCP	Supported
	JPEG Extended, Hierarchical (Process 16 & 18) Transfer Syntax	SCP	Supported
	JPEG Extended, Hierarchical (Process 17 & 19) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Hierarchical (Process 20 & 22) Transfer Syntax	SCP	Supported
	JPEG Spectral Selection, Hierarchical (Process 21 & 23) Transfer Syntax	SCP	Supported
	JPEG Full Progression, Hierarchical	SCP	Supported

	(Process 24 & 26) Transfer Syntax		
	JPEG Full Progression, Hierarchical (Process 25 & 27) Transfer Syntax	SCP	Supported
	JPEG Lossless, Hierarchical (Process 28) Transfer Syntax	SCP	Supported
	JPEG Lossless, Hierarchical (Process 29) Transfer Syntax	SCP	Supported
	JPEG Lossless, Non-Hierarchical, (Process 14 [Selection Value 1]) Transfer Syntax	SCP	Supported

### 2.1.2.5.3 SOP Specific Conformance Statement for SOP Class 'Modality Performed Procedure Step'

Table 2.16 lists the tag that ImageGrid Storage Server supports for Modality Performed Procedure Step.

**Table 2.16: DICOM data element supported for SOP Class 'Modality Performed Procedure Step'.**

Name	(Group, Element)
Performed Procedure Step Status	(0x0040,0x0252)

## 2.1.3 Association Establishment Policy

### 2.1.3.1 General

ImageGrid DICOM Server runs as a daemon process, listening on a configurable TCP port. Upon association request, ImageGrid checks to see if the peer application entity has the required access privilege. The maximum PDU size that ImageGrid DICOM Server will use is configurable through the Web GUI.

### 2.1.3.2 Number of Associations

The maximum number of concurrent associations for each AE is configurable through the Web GUI. If not configured, the default is an unlimited number of associations. Practically, it is limited by the network bandwidth and other physical resources like memory and CPU. For each association, ImageGrid DICOM Server starts a separate daemon to handle that association.

### 2.1.3.3 Asynchronous Nature

ImageGrid DICOM Server does not support asynchronous operation.

### 2.1.3.4 Implementation Identifying Information

The Implementation Class UID is 1.3.6.1.4.1.2820

The Implementation version name is "DA-PRCM-v1.0"

## 3 COMMUNICATION PROFILES

### 3.1 Supported Communications Stacks (parts 8,9)

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

### **3.2 TCP/IP Stack**

ImageGrid DICOM Server uses the TCP/IP implementation of Linux kernel version 2.4.

#### **3.2.1 Physical Media Support**

ImageGrid DICOM Server supports 10/100/1000 BT Ethernet. It has an option of supporting Ethernet over fiber.

## **4 EXTENSIONS/SPECIALIZATIONS/PRIVATIZATIONS**

Not Applicable.

## **5 CONFIGURATION**

There are two ways to configure the ImageGrid DICOM Server:

-Web GUI, which is the preferred method.

-LCD panel, which is used normally when network connection is not available- for example to set the IP address. LCD panel functionality is a limited subset of the Web GUI's functionality.

In addition to general system parameters (like host name and IP address), the following DICOM parameters can be configured using the Web GUI:

### **5.1 Configurable Global Parameters**

There are eight global parameters that can be easily configured using the Web GUI:

#### **5.1.1 Network TCP Port**

The default Network TCP Port is set to 104. It can be configured to any port number ranging from 1 to 65535.

#### **5.1.2 Secure TCP Port**

The default Secure TCP Port is set to 3104. It can be configured to any port number ranging from 1 to 65535.

#### **5.1.3 Max PDU Size**

The maximum PDU size can be configured to 8192, 16384, 32768, or 65536 bytes. The default is 16384.

#### **5.1.4 Max Associations**

The maximum number of concurrent association is configurable. By default, there is no limit on the maximum number of associations.

#### **5.1.5 Requests from Undefined Remote AE Titles**

This parameter defines whether or not an association from an undefined remote AE title can be accepted. By default, it is set to accept association from undefined remote AE title.

#### **5.1.6 Duplicate Image Policy**

Our definition of duplicate DICOM instances is that they have the same SOP Instance UID. Regarding to duplicate image handling, we have different policies: "Reject", "Discard", and "Overwrite". The default is "Overwrite".

### **5.1.7 Duplicate Image Response**

By adopting a duplicate image policy above, the response parameter can be configured to "Report Success" or "Warn [Duplicate SOP Instance UID]". The default is "Report Success".

### **5.1.8 Storage Optimization**

This parameter provides an option of storing uncompressed images in different transfer syntaxes, including "Original Transfer Syntax", "JPEG Lossless", "RLE Lossless", and "Deflated Explicit Little Endian". Keeping images in compressed format allows the users to optimize their storage utilization. The default is "Original Transfer Syntax".

## **5.2 Configurable Application Entity Table (AETable) Parameters**

The Application Entity Table defines the local Application Entities managed by ImageGrid DICOM Server. Each local AE is associated with a separate storage area and defines a set of peer AE's which may communicate with the local AE. There are four AETable parameters that can be configured using the Web GUI:

### **5.2.1 Application Entities (AE) Title**

A new AE title can be added to the list of AE titles as long as the name for the new AE title is different from all the others. It will be assigned a separate storage area. By default, the new AE title will have "Read and Write" access. Its maximum studies and maximum bytes per study will both be set to unlimited. System administrators can limit the access to specific peer AEs.

### **5.2.2 Access Mode**

Different combinations of "Read", "Write" and "Delete" are the access mode options to local AE titles that can be selected.

### **5.2.3 Storage Quotas**

Maximum studies and maximum bytes per study are configurable. They are set to unlimited by default.

### **5.2.4 Remote (Peer) AEs**

Each Remote AE is recognized by its own AE title, host name, and the port number used to communicate with the remote AE. A new Remote AE can be added to the list of Remote AE's as long as its three values are different from those of any existing Remote AE. The port number specified for each Remote AE must not exceed 65535. There are "Read" and "Write" permissions associated with each Remote AE, which define whether or not this Remote AE has read permission or write permission to ImageGrid local AEs. The Web GUI also allows the deletion of an existing Remote AE.

## **6 SUPPORT OF EXTENDED CHARACTER SETS**

ImageGrid DICOM Server does not support extended character sets.

## **7 REFERENCES**

DICOM Standard, NEMA PS 3.X-2006