

Tele Medikal Yazılım

Bilişim Teknoloji Ürünleri

Tmypacs

DICOM Conformance Statement

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1. CONFORMANCE STATEMENT OVERVIEW

The TmypacsServer is a DICOM server. The ImageServer software is composed of a web based interface used for administration and viewing of images and a Windows service. The ImageServer has a scalable design that allows it to run on a single server or a cluster of servers.

Note that the Server is released as four different editions:

➤ Tmypacs SERVER

The ImageServer supports long term storage of images, waveforms, reports, and measurements. It also supports querying of its contents by remote systems, and retrieval of the stored objects. It also contains a rules engine for defining retention times of studies, compression of online studies, and auto-routing of studies to other DICOM devices.

In addition to listing the DICOM network services supported by the ImageServer, the following table also tells which types of images can be viewed in the ImageServer Web GUI.

**Table 1-1
NETWORK SERVICES**

SOP Classes	User of Service (SCU)	Provider of Service (SCP)	Viewing
Image Transfer			
Breast Tomosynthesis Image Storage	Yes	Yes	Yes
Computed Radiography Image Storage	Yes	Yes	Yes
CT Image Storage	Yes	Yes	Yes
Digital Intra-oral X-Ray Image Storage – For Presentation	Yes	Yes	Yes
Digital Intra-oral X-Ray Image Storage – For Processing	Yes	Yes	Yes
Digital Mammography X-Ray Image Storage – For Presentation	Yes	Yes	Yes
Digital Mammography X-Ray Image Storage – For Processing	Yes	Yes	Yes
Digital X-Ray Image Storage – For Presentation	Yes	Yes	Yes
Digital X-Ray Image Storage – For Processing	Yes	Yes	Yes
Enhanced CT Image Storage	Yes	Yes	Yes
Enhanced MR Image Storage	Yes	Yes	Yes
Enhanced PET Image Storage	Yes	Yes	Yes

Enhanced US Volume Storage	Yes	Yes	Yes
Enhanced XA Image Storage	Yes	Yes	Yes
Enhanced XRF Image Storage	Yes	Yes	Yes
Hardcopy Grayscale Image Storage SOP Class (Retired)	Yes	Yes	No
Hardcopy Color Image Storage SOP Class (Retired)	Yes	Yes	No
MR Image Storage	Yes	Yes	Yes
Multi-frame 1 Color Secondary Capture Image Storage	Yes	Yes	Yes
Multi-frame Grayscale Byte Secondary Capture Image Storage	Yes	Yes	Yes
Multi-frame Grayscale Word Secondary Capture Image Storage	Yes	Yes	Yes
Multi-frame Single Bit Secondary Capture Image Storage	Yes	Yes	Yes
Nuclear Medicine Image Storage (Retired)	Yes	Yes	Yes
Nuclear Medicine Image Storage	Yes	Yes	Yes
Ophthalmic Photography 16 Bit Image Storage	Yes	Yes	Yes
Ophthalmic Photography 8 Bit Image Storage	Yes	Yes	Yes
Ophthalmic Tomography Image Storage	Yes	Yes	Yes
Positron Emission Tomography Image Storage	Yes	Yes	Yes
RT Image Storage	Yes	Yes	Yes
Secondary Capture Image Storage	Yes	Yes	Yes
Ultrasound Image Storage	Yes	Yes	Yes
Ultrasound Image Storage (Retired)	Yes	Yes	Yes
Ultrasound Multi-frame Image Storage	Yes	Yes	Yes
Ultrasound Multi-frame Image Storage (Retired)	Yes	Yes	Yes
Video Endoscopic Image Storage	Yes	Yes	Limited
Video Microscopic Image Storage	Yes	Yes	Limited
Video Photographic Image Storage	Yes	Yes	Limited
VL Endoscopic Image Storage	Yes	Yes	Yes
VL Microscopic Image Storage	Yes	Yes	Yes
VL Photographic Image Storage	Yes	Yes	Yes
VL Slide-Coordinates Microscopic Image Storage	Yes	Yes	Yes

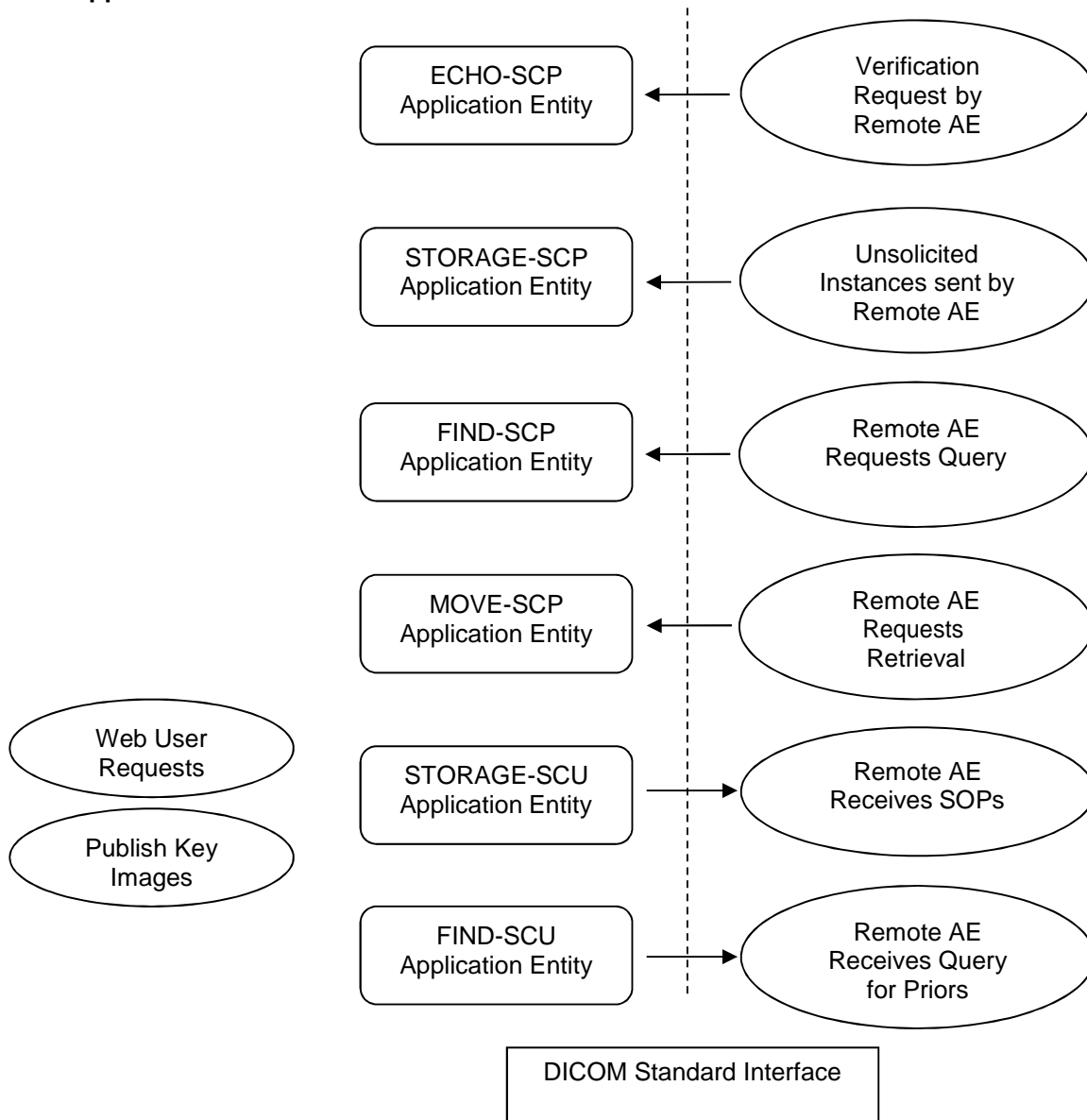
X-Ray 3D Angiographic Image Storage	Yes	Yes	Yes
X-Ray 3D Craniofacial Image Storage	Yes	Yes	Yes
X-Ray Angiographic Bi-Plane Image Storage (Retired)	Yes	Yes	Yes
X-Ray Angiographic Image Storage	Yes	Yes	Yes
X-Ray Radiofluoroscopic Image Storage	Yes	Yes	Yes
Query/Retrieve			
Study Root Information Model FIND	No	Yes	
Study Root Information Model MOVE	No	Yes	
Patient Root Information Model FIND	No	Yes	
Patient Root Information Model MOVE	No	Yes	
Waveforms, Notes, Reports, Measurements Transfer			
12-lead ECG Waveform Storage	Yes	Yes	No
Ambulatory ECG Waveform Storage	Yes	Yes	No
Basic Text SR	Yes	Yes	No
Basic Voice Audio Waveform Storage	Yes	Yes	No
Blending Softcopy Presentation State Storage SOP Class	Yes	Yes	No
Cardiac Electrophysiology Waveform Storage	Yes	Yes	No
Chest CAD SR	Yes	Yes	No
Color Softcopy Presentation State Storage SOP Class	Yes	Yes	No
Comprehensive SR	Yes	Yes	No
Deformable Spatial Registration Storage	Yes	Yes	No
Encapsulated CDA Storage	Yes	Yes	No
Encapsulated PDF Storage	Yes	Yes	No
Enhanced SR	Yes	Yes	No
General ECG Waveform Storage	Yes	Yes	No
Grayscale Softcopy Presentation State Storage SOP Class	Yes	Yes	Yes, Key Object Selections Only
Hemodynamic Waveform Storage	Yes	Yes	No
Key Object Selection Document	Yes	Yes	Yes, Images Only
Mammography CAD SR	Yes	Yes	No
MR Spectroscopy Storage	Yes	Yes	No
Procedure Log Storage	Yes	Yes	No
Pseudo-Color Softcopy Presentation State Storage SOP Class	Yes	Yes	No
Raw Data Storage	Yes	Yes	No

Real World Value Mapping Storage	Yes	Yes	No
RT Beams Treatment Record Storage	Yes	Yes	No
RT Brachy Treatment Record Storage	Yes	Yes	No
RT Dose Storage	Yes	Yes	No
RT Ion Beams Treatment Record Storage	Yes	Yes	No
RT Ion Plan Storage	Yes	Yes	No
RT Plan Storage	Yes	Yes	No
RT Structure Set Storage	Yes	Yes	No
RT Treatment Summary Record Storage	Yes	Yes	No
Segmentation Storage	Yes	Yes	No
Spatial Fiducials Storage	Yes	Yes	No
Spatial Registration Storage	Yes	Yes	No
Standalone Curve Storage (Retired)	Yes	Yes	No
Standalone Modality LUT Storage (Retired)	Yes	Yes	No
Standalone Overlay Storage (Retired)	Yes	Yes	No
Standalone PET Curve Storage (Retired)	Yes	Yes	No
Standalone VOI LUT Storage (Retired)	Yes	Yes	No
Stereometric Relationship Storage	Yes	Yes	No
Stored Print Storage SOP Class (Retired)	Yes	Yes	No
X-Ray Radiation Dose SR	Yes	Yes	No

4. NETWORKING

4.1 IMPLEMENTATION MODEL

4.1.1 Application Data Flow



**Figure 4.1-1
IMPLEMENTATION MODEL**

The application is a .NET application that provides a Web based user interface, internal database and network listener that spawns additional threads as necessary to handle incoming connections.

Conceptually, the network services may be modeled as the following separate AEs, though in fact all the Aes share a single (configurable) AE Title:

- ECHO-SCP, which responds to verification requests
- STORAGE-SCP, which receives incoming composite instances
- FIND-SCP, which receives incoming queries for lists of studies
- MOVE-SCP, which responds to requests for studies
- STORAGE-SCU, which sends outbound composite instances
- FIND-SCU, which queries for prior studies