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SHOWCASE® Image Center
DICOM Conformance Statement

Revision 1.0
August, 2016

Image Center version 2.0.0 and higher

Revision History

Revision	Date	Author	Reason for Change
1.0	8/23/16	PJM	Initial version for marketed release of Image Center 2.0

1 Introduction

1.1 Purpose of this Document

This document is the DICOM Conformance Statement for the ShowCase Image Center software developed by Trillium Technology, Inc, Ann Arbor, Michigan, USA. Image Center software running on a personal computer or laptop, provides the ability to store DICOM images and other DICOM objects and access these objects through the ShowCase Premier Viewer or ShowCase Viewer for iPad.

Part 2 of this conformance statement contains a detailed description of the **network** interactions between ShowCase and other imaging devices that conform to the DICOM 3.0 standard. ShowCase implements DICOM messaging using the Merge Technologies MergeCOM3 toolkit. Their conformance information is available to the public on their web site.

1.2 References and Definitions

Digital Imaging and Communications in Medicine (DICOM) standard, parts 1 through 17 (NEMA PS 3.1-3.17).

1.3 Acronyms and Abbreviations

Symbols and abbreviations used in this conformance statement are defined in Digital Imaging and Communications in Medicine (DICOM) standard, parts 1 through 17 (NEMA PS 3.1- 3.17).

2 Network Conformance Statement

2.1 Introduction

This section describes the DICOM network interactions of the ShowCase Image Center SCP running on a computer.

2.2 Implementation Model

The ShowCase Image Center software, specifically the ShowCase Image Center SCP Windows Service, functions as a storage SCP.

2.2.1 Application Data Flow Diagram

The following diagram shows the implementation model of ShowCase.

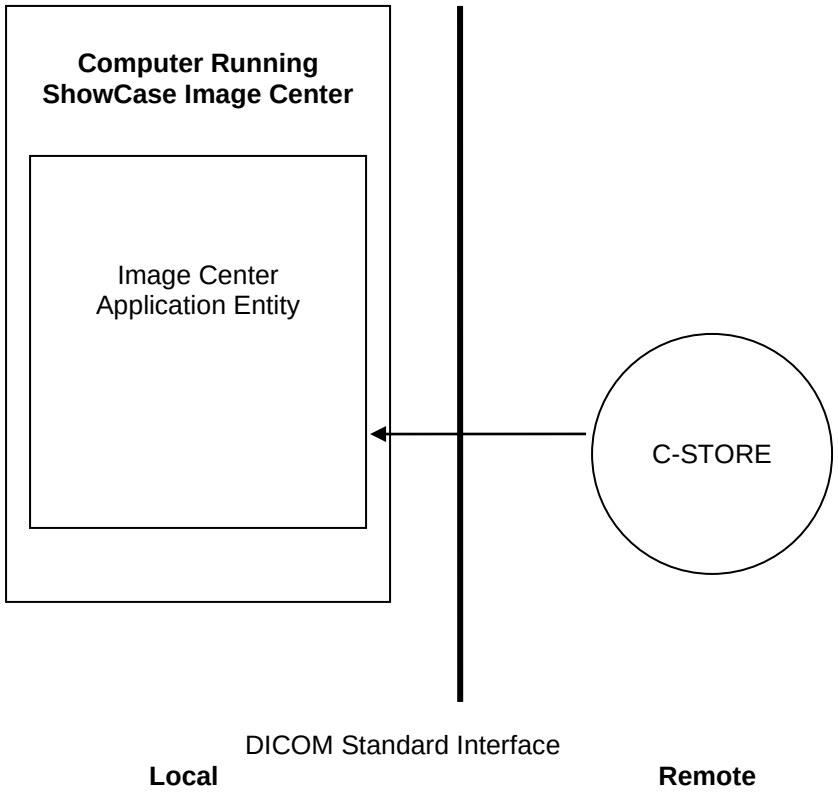

Figure 2.2-1 Image Center Implementation Model

2.2.2 Functional Definition of Application Entity

All communications with remote DICOM applications is accomplished using the DICOM protocol over a network using the TCP/IP protocol stack.

Image Center supports the following functions.

SCU	SCP
	Echo
	Storage

Image Center:
- Responds to a DICOM Echo
- Accepts a DICOM association to store images

2.2.3 Sequencing of Real World Activities

Typically, a user might send a study to the Image Center (Store SCP) and view these studies using ShowCase Premier or ShowCase Viewer for iPad.

2.3 Application Entity Specifications

2.3.1 ShowCase Image Center acting as a STORE SCP

The ShowCase Image Center SCP service provides standard conformance to the following DICOM V3.0 SOP Classes as a Store SCP.

ShowCase Image Center Supported SOP Classes for Image Store		
Function	**SOP Class UID**	**SOP Class Name**
Storage	1.2.840.10008.5.1.4.1.1.7	Secondary Capture Image Storage
Storage	1.2.840.10008.5.1.4.1.1.7.2	Multi-frame Grayscale Byte Secondary Capture Image Storage
Storage	1.2.840.10008.5.1.4.1.1.7.3	Multi-frame Grayscale Word Secondary Capture Image Storage
Storage	1.2.840.10008.5.1.4.1.1.7.4	Multi-Frame True Color Secondary Capture Image Storage
Storage	1.2.840.10008.5.1.4.1.1.14.1	IVOCT Image Storage - For Presentation
Storage	1.2.840.10008.5.1.4.1.1.14.2	IVOCT Image Storage - For Processing
Storage	1.2.840.10008.5.1.4.1.1.6.1	Ultrasound Image Storage
Storage	1.2.840.10008.5.1.4.1.1.3.1	Ultrasound Multi-Frame Image Storage
Storage	1.2.840.10008.5.1.4.1.1.20	Nuclear Medicine Image Storage
Storage	1.2.840.10008.5.1.4.1.1.12.1	X-Ray Angiographic Image Storage
Storage	1.2.840.10008.5.1.4.1.1.12.2	X-Ray Radiofluoroscopic Image Storage
Storage	1.2.840.10008.5.1.4.1.1.1.1	Digital X-Ray Image Storage - For Presentation
Storage	1.2.840.10008.5.1.4.1.1.1.1.1	Digital X-Ray Image Storage - For Processing
Storage	1.2.840.10008.5.1.4.1.1.1.2	Digital Mammography Image Storage - For Presentation
Storage	1.2.840.10008.5.1.4.1.1.1.2.1	Digital Mammography Image Storage - For Processing
Storage	1.2.840.10008.5.1.4.1.1.4	MR Image Storage
Storage	1.2.840.10008.5.1.4.1.1.1	Computed Radiography Image Storage
Storage	1.2.840.10008.5.1.4.1.1.2	CT Image Storage

Storage	1.2.840.10008.5.1.4.1.1.66	Raw Data
Storage	1.2.840.10008.5.1.4.1.1.128	Positron Emission Tomography Image Storage
Storage	1.2.840.10008.5.1.4.1.1.88.11	Basic Text Structured Report
Storage	1.2.840.10008.5.1.4.1.1.88.33	Comprehensive Structured Report
Storage	1.2.840.10008.5.1.4.1.1.88.22	Enhanced Structured Report
Echo	1.2.840.10008.1.1	Verification SOP Class for CECHO

2.3.1.1 Association Establishment Policies

ShowCase Image Center does not initiate associations when acting as a Store SCP. It accepts associations from any DICOM node for storage.

2.3.1.2 Association Initiation by Real-World Activity

ShowCase Image Center does not initiate associations in its role as an image Store SCP.

2.3.1.3 Association Acceptance Policies

ShowCase Image Center accepts associations from any DICOM node for storing images.

2.3.1.3.1 Image Storage

2.3.1.3.1.1 Associated Real World Activity

ShowCase Image Center accepts images from remote DICOM nodes and stores the IODs.

2.4 Communication Profiles

2.4.1 Supported Communications Stacks

ShowCase Image Center provides DICOM V3.0 TCP/IP Network Communication Support as defined in Part 8 of the DICOM Standard.

2.4.2 OSI Stack

Not supported.

2.4.3 TCP/IP Stack

ShowCase Image Center uses the TCP/IP stack from the Microsoft Windows operating system.

2.4.3.1 Physical Media Support

ShowCase Image Center is not dependent on the physical medium over which the TCP/IP executes.

2.4.4 Point-to-Point Stack

Not Supported.

2.5 Extensions/Specializations/Privatizations

ShowCase Image Center has no extensions, specializations or privatizations of SOP Classes and Transfer Syntaxes.

2.6 Configuration

The configuration of the ShowCase Image Center software is stored in local files. Configuration information can be entered via the graphical user interface provided in setup screens.

2.6.1 AE Title/Presentation Address Mapping

The AE Title for each computer running ShowCase Image Center is configurable through the graphical user interface. The default value is SCP_SHOWCASE.

The following configuration information is required for each DICOM node that acts as a Query SCP for ShowCase Image Center:

The AE Title
The IP address
The listening port number

This information is stored in a DICOM node information file.

2.6.2 Configurable Parameters

Not Applicable

2.7 Support of Extended Character Sets

ShowCase Image Center supports the following character sets:

- ISO-IR 6 (default) Default repertoire
- ISO-IR 100 Latin Alphabet No. 1

ShowCase Image Center does not support multi-byte characters.