

QCT PRO

DICOM

Conformance Statement

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Introduction

1.1 Purpose of this Document

This document is the DICOM Conformance Statement for the Mindways Software QCT PRO line of quantitative computed tomography software.

1.2 Related Documents

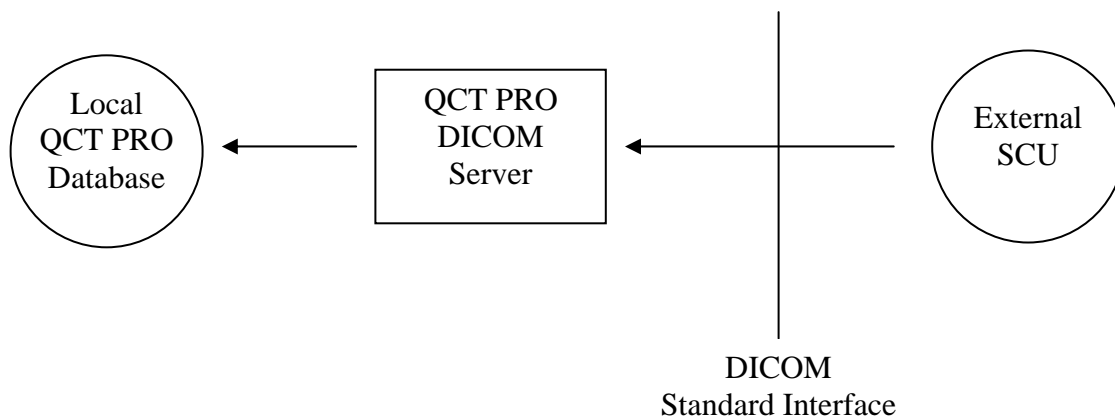
NEMA PS3.1-8(1994), the DICOM Standard.

1.3 Definitions

1.4 Acronyms and Abbreviations

2. Implementation Model

The QCT PRO DICOM Server is implemented as a single Application Entity which receives associations from Remote Application Entities for the purpose of storing Information Objects in the Local Application Entity database.



2.1 Application Data Flow

The QCT PRO DICOM server is expected to be running on the local QCT PRO workstation. A Remote Application Entity initiates an association for Storage Services. Upon acceptance of the association parameters, the Remote Application Entity sends Information Objects to the QCT

PRO DICOM server which stores them in a local QCT PRO database for future use by the QCT PRO software.

2.2 Functional Definitions of Application Entities

The QCT PRO DICOM server Application Entity operates as a system service. It is started as part of the startup sequence of the QCT PRO workstation software and is left running until explicitly terminated. The QCT PRO DICOM server can be run as either a single thread or a multithreaded process.

The Remote Application Entity sends an Information Object Instance. The QCT PRO DICOM server stores the received Information Object Instance in the local QCT PRO database. The data remains in the database until removed by some action external to this Application Entity.

2.3 Sequencing of Real-World Activities

Not applicable.

3. Application Entity Specifications

The QCT PRO DICOM server Application Entity provides Standard Conformance to the following DICOM V3.0 SOP Classes as a SCP:

SOP Class Name	SOP Class UID
CT Image Storage	1.2.840.10008.5.1.4.1.1.2

3.1. Association Establishment Policies

Not applicable since this Application Entity does not initiate associations.

3.2. Association Acceptance Policy

The QCT PRO DICOM server Application Entity will accept all associations. When running in a single thread mode the QCT PRO DICOM server will not accept simultaneous associations; in a multithreaded mode the number of simultaneous associations is limited by the host operating system.

3.2.1. Storage Association Request

3.2.1.1. Associated Real-World Activity

The QCT PRO DICOM server will store image Information Object Instances received on the accepted association into its attached database.

3.2.1.2. Presentation Context Table

The following table lists the possible Presentation Contexts.

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended
Name	UID	Name	UID		
Verification	1.2.840.10008.1.1	Implicit VR, Little Endian	1.2.840.10008.1.2	SCP	None
CT Image Storage	1.2.840.10008.5.1.4.1.1.2	Implicit VR, Little Endian	1.2.840.10008.1.2	SCP	None

3.2.1.2.1. SOP Specific Conformance for SOP Class Verification

The QCT PRO DICOM server Application Entity conforms to the DICOM Verification Service Class as an SCP.

3.2.1.2.2. SOP Specific Conformance for SOP Class Storage

The QCT PRO DICOM server Application Entity conforms to the DICOM Storage Service Class as an SCP for the Abstract Syntaxes listed in the table in section 3.2.1.2 at conformance Level 2. Storage Conformance level 2 requires the Application Entity to retain all Type 1, Type 2 and Type 3 attributes.

The received Information Object Instance is stored in a local database until some external application causes the data to be deleted. The stored data is accessed using the QCT PRO analysis software.

No special status codes are returned to the Storage SCU.

3.2.1.3. Presentation Context Acceptance Criterion

The QCT PRO DICOM server Application Entity always accepts the Verification SOP Class.

The QCT PRO DICOM server Application Entity always accepts the Presentation Contexts listed in section 3.2.1.2.

3.2.1.4. Transfer Syntax Selection Policies

Not applicable since the QCT PRO DICOM server Application Entity supports only the default DICOM Little-endian Transfer Syntax.

4. Communication Profiles

4.1. Supported Communication Stacks (Parts 8,9)

The TCP/IP Network Communication Support as defined in PS3.8 (1994) is supported.

4.1.1. OSI Stack

Not applicable.

4.1.2. TCP/IP Stack

4.1.2.1. API

Not applicable.

4.1.2.2. Physical Media Support

The QCT PRO DICOM server Application Entity is not dependent on the physical medium used for the TCP/IP network other than as it affects performance.

4.1.3. Point-to-Point Stack

Not applicable.

5. Extensions/Specializations/Privatizations

5.1. Standard/Extended/Specialized/Private SOPs

Not applicable.

5.2. Private Transfer Syntaxes

No Private Transfer Syntaxes are used by the QCT PRO DICOM server.

6. Configuration

6.1. AE Title/Presentation Address Mapping

The QCT PRO DICOM server Application Entity does not initiate associations, therefore this section is not applicable.

6.2. Configurable Parameters

The port to which the QCT PRO DICOM server Application Entity is bound is configurable.

Association related logging output to be created for troubleshooting.

7. Support of Extended Character Sets

Extended character sets are not supported by the QCT PRO DICOM server.