DICOM Conformance Statement
Merge Eye Care PACS™
v. 4.0

Merge Healthcare
900 Walnut Ridge Drive
Hartland, WI 53029
USA
877.44.MERGE
Merge Eye Care PACS was formerly known as OIS Symphony Web.

Intended Use

Merge Eye Care PACS is a comprehensive software platform for the import, integration and review of patient data and clinical information in an eye care environment. Merge Eye Care PACS allows for the collection, management, enhancement and review of the patient demographics, image data, diagnostic data and clinical reports from a variety of medical devices through either a direct connection with the instruments or through computerized networks.

Caution

- Federal law restricts this device to sale by or on the order of a licensed medical practitioner.
- Installation should be performed by a trained professional
- All data presented by Merge Eye Care PACS should be correlated clinically by patient examination and other means prior to the provider defining a treatment course.
- Images which have been enhanced are noted with either a letter “E” or “Not Original Data” in the lower right corner of the image. When reviewing images, user should be mindful of whether an image enhancement has been performed.

Australian Sponsor

Emergo Asia-Pacific Pty Ltd.
Darling Park, Tower II, Level 20
Sydney, NSW 2000 Australia

Telephone numbers

Telephone: +61 (0) 2.9006.1662
Fax: +61 (0) 2.9006.1010

Doc #   Revision   Date   Description

SPY-2112   2.0   5/2/13   Update CE mark.
# Table of Contents

1. Table of Contents ........................................... 1
2. Introduction ................................................... 3
   2.1 Intended Audience ........................................... 3
   2.2 Integration .................................................. 3
   2.3 Validation .................................................. 3
   2.4 Future Evolution .......................................... 3
3. Purpose of this Document .................................. 3
4. Sources for this Document .................................. 4
5. Implementation Model ...................................... 5
6. Functional Definitions of AEs ............................. 5
   6.1 Verification SCP ............................................ 5
   6.2 Storage SCP ................................................ 6
   6.3 Query SCU .................................................. 6
   6.4 Retrieve SCU ................................................. 6
7. Sequencing of Real World Activities ..................... 7
   7.1 Verification ................................................ 7
   7.2 Storing images ............................................. 7
   7.3 Querying for Patient, Series and Study Demographic Data ........................................ 7
   7.4 Retrieving SOP Instances ................................. 7
8. AE Specifications ............................................ 8
9. Supported Services .......................................... 8
10. Association Establishment Policies ...................... 8
    10.1 General .................................................... 8
    10.2 Number of Associations .................................. 8
    10.3 Asynchronous Nature ..................................... 9
11. Implementation Identifying Information ................. 9
12. Association Initiation Policy ............................. 9
13. Proposed Presentation Contexts ......................... 9
14. Called/Calling AE-Titles .................................. 10
15. Association Initiation by SCU Real World Activity ...... 10
16. Association Acceptance by SCP Real World Activity .... 10
17. SOP Specific Conformance ................................. 11
    17.1 SOP Specific Conformance - Verification SCU and SCP ........................................ 11
    17.2 SOP Specific Conformance - Storage SCP ........................................... 11
Introduction

Intended Audience
The user of this document is involved with system integration and/or software design. We assume that the reader is familiar with the terminology and concepts that are used in the DICOM 3.0 Standards.

Integration
The integration of any device into a system of interconnected devices goes beyond the scope of the DICOM 3.0 standard and of this conformance statement, when interoperability is desired. The responsibility for analyzing the applications requirements and developing a solution that integrates the Merge Eye Care PACS application with other vendors’ systems is the user’s responsibility and should not be underestimated.

Validation
Testing the complete range of possibilities between the Merge Eye Care PACS application and non-Merge Eye Care PACS devices, before the connection is declared operational, is deemed to be a necessity. The user should ensure that any non-Merge Eye Care PACS provider accepts full responsibility for all validation required for their connection with the Merge Eye Care PACS application. The accuracy of image data once it has crossed the interface between the Merge Eye Care PACS equipment and the Merge Eye Care PACS device as well as the stability of the image data for the intended applications is the responsibility of the non-Merge Eye Care PACS provider.

Future Evolution
As the DICOM 3.0 standard evolves to meet the user’s growing requirements and to incorporate new features and technologies, Merge Healthcare reserves the right to follow the evolution of the standard or to discontinue the delivery of this application.

Purpose of this Document
This document is the DICOM Conformance Statement for the DICOM services of Merge Eye Care PACS. Its purpose is to specify compliance with the DICOM standard on the following Merge Eye Care PACS supported service classes:

- Verification Service Class as SCU and SCP.
- Storage Service Class as SCP (XC, OP, and OPT modalities).
- Study Root Query/Retrieve Information Model - FIND as an SCU.
- Study Root Query/Retrieve Information Model - MOVE as an SCU.
Sources for this Document

- ACR-NEMA Digital Imaging and Communications in Medicine (DICOM) Supplement 110: Ophthalmic Tomography Image Storage SOP Class
Implementation Model

The Merge Eye Care PACS is an image review application capable to perform on the TCP/IP DICOM network the following operations: storage of images (Information Objects - IOs), query and retrieval of IOs.

**NOTE:** The diagram below shows multiple AEs, however the actual design implements all the DICOM SOP Classes in one AE. Therefore, when configuring the Merge Eye Care PACS only one AE Title is required.

Functional Definitions of AEs

### Verification SCP

Merge Eye Station Verification is implemented for testing the availability of external DICOM devices and for answering similar testing queries from external DICOM devices. The DICOM C-Echo Service is used to provide the service.

As SCU it executes the following operations:

1. Initiates a DICOM association to send the request.
2. Issues a C-ECHO request.
3. Waits for the response.
4. If failed, repeats steps 2 and 3 several times before deciding on verification failure.
5. Closes the Association

As SCP it executes the following operations:

1. Listens for a DICOM association request.
2. Accepts a C-ECHO request.
3. Responds to the C-ECHO request.
4. Listens for DICOM association release.

**Storage SCP**

Merge Eye Care PACS Store SCP is implemented as application entity for receiving DICOM OP, XC, and OPT images. The DICOM Storage Service of OP, XC, or OPT images is used to receive demographic information and/or pixel data from an external application or an image manager/archive.

As SCP it executes the following operations:

1. Listens for a DICOM association request.
2. Accepts a STORE request.
3. Receives the DICOM conformant SOP Instance with the demographic information and pixel data.
4. If the SOP Instance is correctly received, stores it in a predefined directory.
5. Sends a final response for the operation with success or failure status.

**Query SCU**

Merge Eye Care PACS Query SCU is implemented as an application entity for querying a Query SCP about the existence, in its database, of SOP Instances corresponding to some filtering criteria. The DICOM C-FIND Service of the Query/Retrieve Service Class is used to execute the Query request. The Query SCP is usually part of a PACS managing a database of SOP Instances.

It executes the following operations:

1. Initiates a DICOM association to request the Query Operation.
2. Prepares the C-FIND request with the requested filtering criteria (the query attributes)
3. Sends the C-FIND request to the Query SCP.
4. Waits for and accepts all the responses to the C-FIND request.
5. Closes the Association.
6. Makes the received responses available to the local application and display for further use.

**Retrieve SCU**

Merge Eye Care PACS Retrieve SCU is implemented as an application entity for moving a SOP Instance that is available on a Retrieve SCP to some DICOM destination capable to store the SOP Instance to be moved (the destination may be the station that initiates the request). The DICOM C-MOVE Service of the Query/Retrieve Service Class is used to request the Retrieve operation. The Retrieve SCP is usually part of a PACS managing a database of SOP Instances.
It executes the following operations:
1. Initiates a DICOM association to request the Retrieve Operation.
2. Prepares the C-MOVE request with the requested MOVE attributes to retrieve the images.
3. Sends the C-MOVE request to the Retrieve SCP and performs Storage SCP to receive the images.
4. Waits for the acknowledgement of completion of the Retrieve Operation (may be OK or fail).
5. Closes the Association

Sequencing of Real World Activities

Verification

As SCU
The verification is periodically activated by the application to check the status of DICOM server involved.

As SCP
The verification SCP is always active and waiting for C-ECHO Service requests. Whenever such a request is accepted, a C-Echo Service response is sent to the source of the request.

Storing images

As SCP
The Storage SCP is always active and waiting for C-STORE Service requests. Whenever such a request is accepted, the transfer of the SOP Instance is attempted and at its completion, the SOP Instance is stored in a predefined directory and a C-STORE response is sent to the source of the requests. The response carries status information that may be OK or FAIL with indication of cause of the failure.

Querying for Patient, Series and Study Demographic Data

Querying is manually activated after selecting the filtering criteria. Once Query Responses are received, they are available for further operations and displayed to the user.

Retrieving SOP Instances

Either a user views the list of Studies, returned from the query response, and manually selects a Study to activate the retrieval of the images for the complete Study. Or a retrieve is performed automatically by the application before any user selection of a specific study, according to the list of studies currently reviewed by the user.
AE Specifications

Supported Services

Merge Eye Care PACS provides Standard Conformance to the DICOM V3.0 SOP Classes as listed in the tables below:

Table 1: Verification SOP classes as SCU and SCP

<table>
<thead>
<tr>
<th>SOP Class</th>
<th>SOP Class UID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification</td>
<td>1.2.840.10008.1.1</td>
</tr>
</tbody>
</table>

Table 2: Storage SOP classes as SCP

<table>
<thead>
<tr>
<th>SOP Class</th>
<th>SOP Class UID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmic Photography  8 Bit Image Storage (OP modality)</td>
<td>1.2.840.10008.5.1.4.1.1.77.1.5.1</td>
</tr>
<tr>
<td>Visual Light Photographic Image Storage (XC modality)</td>
<td>1.2.840.10008.5.1.4.1.1.77.1.4</td>
</tr>
<tr>
<td>Encapsulated PDF Storage</td>
<td>1.2.840.10008.5.1.4.1.1.104.1</td>
</tr>
<tr>
<td>Ophthalmic Tomography Image (OPT modality)</td>
<td>1.2.840.10008.5.1.4.1.1.77.1.5.4</td>
</tr>
</tbody>
</table>

Table 3: Query/Retrieve SOP classes as SCU

<table>
<thead>
<tr>
<th>SOP Class</th>
<th>SOP Class UID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Root Query/Retrieve Information Model - FIND</td>
<td>1.2.840.10008.5.1.4.1.2.2.1</td>
</tr>
<tr>
<td>Study Root Query/Retrieve Information Model - MOVE</td>
<td>1.2.840.10008.5.1.4.1.2.2.2</td>
</tr>
</tbody>
</table>

Association Establishment Policies

General

Before any DICOM information can be exchanged between the Merge Eye Care PACS (SCU or SCP) and the external, SCP or SCU AE, an association stage takes place to negotiate the capabilities of the SCU and SCP.

The maximum PDU length for an association initiated by the Merge Eye Care PACS is 65542 bytes. Only the SCU side releases an Association. Either the SCU or the SCP AE may abort the Association.

Number of Associations

The Merge Eye Care PACS is able to open one association for each DICOM Service. There is no inherent limit to the number of associations other than limits imposed by the computer operating system.
Asynchronous Nature

Merge Eye Care PACS allows a single outstanding operation on any association. The Merge Eye Care PACS as a SCU will wait for a response from the SCP AE before attempting another operation during the same association. As a SCP it will not accept a new operation on an existing association before the active one is completed.

However, the Merge Eye Care PACS Query Management Component may cancel the C-FIND service by issuing a C-CANCEL-FIND request any time during the processing of the C-FIND service by the SCP.

Implementation Identifying Information

The Merge Eye Care PACS SCU will respond with the following implementation identifying parameters:

- Organization prefix: 1.2.826.0.1.3680043.2.110 (OIS Prefix)
- Implementation Class UID: 1.2.826.0.1.3680043.2.110.101
- Implementation Version Name: WS V1.0.1
- Application Context Name: 1.2.840.10008.3.1.1.1 (DICOM Application Context)

All associations will use a single implementation Class UID.

Association Initiation Policy

Merge Eye Care PACS attempts to initiate a new association for every service.

Proposed Presentation Contexts

Merge Eye Care PACS proposes the presentation context listed in the table below:

**Table 4: Proposed Presentation Context**

<table>
<thead>
<tr>
<th>SOP Class</th>
<th>Transfer Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOP Class</td>
<td>SOP Class UID</td>
</tr>
<tr>
<td>One item from list in Supported Services</td>
<td>One item from list in Supported Services</td>
</tr>
</tbody>
</table>

Or

<table>
<thead>
<tr>
<th>SOP Class</th>
<th>Transfer Syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOP Class</td>
<td>SOP Class UID</td>
</tr>
<tr>
<td>One item from list in Supported Services</td>
<td>One item from list in Supported Services</td>
</tr>
</tbody>
</table>
Called/Calling AE-Titles

The default AE title is MV_OIS. This can be modified during configuration.
The called AE title that Merge Eye Care PACS will use is configurable.
Each instance of the application has its own AE Title that is configurable at installation.

Association Initiation by SCU Real World Activity

Initiation of associations is done by an SCU requesting a service from an SCP.

Verification
The Merge Eye Care PACS Verification AE initiates a new association for each request. Verification is performed automatically periodically by the application.

Query
The Merge Eye Care PACS Query AE initiates a new association for each query request. This can be accomplished manually via the UI or automatically by the application.
Possible query levels are study, series and patient
If the SCP AE rejects the Association, then the Merge Eye Care PACS issues a warning message.

Retrieve
The Merge Eye Care PACS Retrieve AE initiates a new association for each retrieve request. This can be accomplished manually via the UI or automatically by the application.
Possible query levels are study and series levels.
If the SCP AE rejects the Association, then the Merge Eye Care PACS issues a warning message.

Association Acceptance by SCP Real World Activity

SCPs are listening on their defined ports for association requests.

Verification
The Merge Eye Care PACS Verification SCP AE accepts a new association for each incoming Verification Service request, from any source.
Storage

The Merge Eye Care PACS Image Storage SCP AE accepts a new association for each request of image storage incoming from any calling Image Storage SCU AE. However it will accept to store only those SOP Classes as specified in Table 2.

SOP Specific Conformance

SOP Specific Conformance - Verification SCU and SCP

The Merge Eye Care PACS provides standard conformance to the DICOM Verification Service Class (1.2.840.10008.1.1) as SCU and SCP, as defined in Appendix A, DICOM Standards, PS 3.4-2004.

The Merge Eye Station Verification SCU will process the C-ECHO confirmation and response Status codes. The status codes listed below in the table are recognized by the SCU:

Table 5: Echo SCU Status Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000H</td>
<td>Success</td>
<td>The SCP is successfully running it's DICOM Application and can be accessed.</td>
</tr>
</tbody>
</table>

The Merge Eye Care PACS Verification SCP will either reject the association request or respond with code 0000H in the response message.

SOP Specific Conformance - Storage SCP

The Merge Eye Care PACS Storage SCP fulfills the mandatory requirements of the SCP behavior as specified in DICOM standards. It accepts requests of Ophthalmic Photography 8 Bit Image Storage, Visual Light Photographic Image Storage, Ophthalmic Tomography Image Storage, and encapsulated PDF.

The SCP will store all Type 1, Type 2, and Type 3 Attributes and private Attributes and supports Level 2 storage (Full Fidelity) and does not perform any coercion of the received values. It does not validate the Attributes of the SOP Instance.

The received SOP Instances are stored in predefined directories and will be accessible at any later time.

The following response statuses may be returned by this AE:

Table 6: C-STORE Status Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000H</td>
<td>Success</td>
<td>The image was stored successfully.</td>
</tr>
<tr>
<td>01122H</td>
<td>Error</td>
<td>Class not supported. The image was rejected and the association is left open.</td>
</tr>
<tr>
<td>0110H</td>
<td>Error</td>
<td>Processing Failure. The image was rejected and the association is left open.</td>
</tr>
<tr>
<td>C001</td>
<td>Error</td>
<td>Failure. The image was rejected and the association is left open.</td>
</tr>
</tbody>
</table>
SOP Specific Conformance - Query SCU

The Query SCU provided standard conformance to the Study Root Query SOP Class.

The Query SCU generates queries using Hierarchical Search and does not generate Relational Queries. They are initiated manually via the UI.

Supported Query Keys

Query requests are at the study, series or patient Level and the Attributes patient Name, patient ID and study instance UID are used by the application in the query request. The Attributes returned by the SCP are displayed to the user.

The following conventions are used for the Matching Query Types Supported column:

* - Wild Matching Supported
SV - Single Value Matching Supported
U - Universal Matching Supported

Table 7: Query SCU N-FIND Request DICOM Attributes

<table>
<thead>
<tr>
<th>Matching Study Level Key Attribute Name</th>
<th>Tag</th>
<th>Query Types Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Query\Retrieve level</td>
<td>0008,0052</td>
<td>SV</td>
</tr>
<tr>
<td>Patient's Name</td>
<td>0010,0010</td>
<td>*, SV, U</td>
</tr>
<tr>
<td>Patient ID</td>
<td>0010,0020</td>
<td>SV, U</td>
</tr>
<tr>
<td>Study Instance UID</td>
<td>0020,000D</td>
<td>U</td>
</tr>
</tbody>
</table>

Table 8: C-FIND Status Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>Success</td>
<td>Matching is completed. Status message will be logged and results presented to the user.</td>
</tr>
<tr>
<td>A700</td>
<td>Failure</td>
<td>Refused: SCP was out of resources. Status message will be logged and the association closed. A failure indication will be presented to the user.</td>
</tr>
<tr>
<td>A900</td>
<td>Failure</td>
<td>Identifier does not match SOP Class. Status message will be logged and the association closed. A failure indication will be presented to the user.</td>
</tr>
<tr>
<td>Cxxx</td>
<td>Failure</td>
<td>Unable to Process. Status message will be logged and the association closed. A failure indication will be presented to the user.</td>
</tr>
<tr>
<td>FF00</td>
<td>Pending</td>
<td>Matches are continuing - Current Match is supplied and any Optional Keys were supported in the same manner as Required Keys. Status message will be logged.</td>
</tr>
<tr>
<td>FF01</td>
<td>Pending</td>
<td>Matches are continuing - Warning that one or more Optional Keys were not supported for existence for this Identifier. Status message will be logged.</td>
</tr>
</tbody>
</table>

When there is a connection failure or failure response the Merge Eye Care PACS will present an indication to the user.
SOP Specific Conformance - Move SCU

The MOVE SCU is conformant to specifications in DICOM Standards, Annex C QUERY/RETRIEVE SERVICE CLASS PS 3.4-2004, C-MOVE SCU (study root).

Retrieve is initiated manually by the user or automatically by the application.

Supported Retrieve Keys

Move requests are at series Level. The following search keys are supported:

Table 9: Retrieve SCU N-MOVE Request DICOM Attributes

<table>
<thead>
<tr>
<th>Matching Series Level Move Key Attribute Name</th>
<th>Tag</th>
<th>Matching Key Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series Instance UID</td>
<td>0020,000E</td>
<td>U</td>
</tr>
<tr>
<td>Query/Retrieve Level</td>
<td>0008,2252</td>
<td>SERIES</td>
</tr>
</tbody>
</table>

The SCU will include all keys provided within the C-MOVE request.

The destination of the move will be set to attribute 0000,0600 of the request message.

Table 10: C-MOVE Status Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>Success</td>
<td>Operation completed with no failures</td>
</tr>
<tr>
<td>A701</td>
<td>Failure</td>
<td>Refused: SCP was out of resources and unable to calculate number of matches. Status message will be logged and the association closed.</td>
</tr>
<tr>
<td>A702</td>
<td>Failure</td>
<td>Refused: SCP was out of resources and unable to perform sub-operations. Status message will be logged and the association closed.</td>
</tr>
<tr>
<td>A801</td>
<td>Failure</td>
<td>Refused: Move Destination unknown. Status message will be logged and the association closed.</td>
</tr>
<tr>
<td>A900</td>
<td>Failure</td>
<td>Identifier does not match SOP Class. Status message will be logged and the association closed.</td>
</tr>
<tr>
<td>Cxxx</td>
<td>Failure</td>
<td>Unable to Process. Status message will be logged and the association closed.</td>
</tr>
<tr>
<td>B000</td>
<td>Warning</td>
<td>Sub-operations Complete - One or more Failures. Status message will be logged, association will stay open.</td>
</tr>
<tr>
<td>FF00</td>
<td>Pending</td>
<td>Sub-operations are continuing. Status message will be logged, association will stay open.</td>
</tr>
</tbody>
</table>

Association Acceptance Policy

Only the SCPs have an association-acceptance policy. It is as following:

- Verification association requests will be accepted from any AE.
- Storage association requests will be accepted from any AE. However the SCP will accept to store only as specified in Table 2.
Communication Profiles

Supported Communication Stacks
Merge Eye Care PACS provides DICOM V3.0 TCP/IP Network Communication Support as defined in PS 3.8 of the DICOM standard.

TCP/IP Stack
Merge Eye Care PACS (SCU) uses TCP/IP for the protocol stacks. TCP/IP Port is configurable.

Physical Medium Support
Merge Eye Care PACS supports 10/100/1000BaseT. They are automatically configured via a detection mechanism.
Extensions/Specializations/Privatizations

None.
Configuration

Configurable Parameters

Merge Eye Care PACS allows configuration of some parameters, as indicated in the attributes lists. Local AE Titles, Remote AE Titles, TCP Port Numbers, IP Addresses, are examples of configurable variables. The list is not all inclusive, but representative.
Support of Extended Character Sets

None.
## Acronyms and Abbreviations

The following acronyms and abbreviations are used in this document:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract Syntax</td>
<td>A DICOM term that is identical to a DICOM SOP Class, a combination of service class and a type of information object.</td>
</tr>
<tr>
<td>Application Entity (AE)</td>
<td>A DICOM term for defining a particular user at an IP address.</td>
</tr>
<tr>
<td>Association</td>
<td>A DICOM term for a communication context that is used by two Application Entities to “talk to” one another.</td>
</tr>
<tr>
<td>Association Negotiation</td>
<td>The handshaking that occurs between two DICOM Application Entities to set up an association.</td>
</tr>
<tr>
<td>Attributes</td>
<td>Each DICOM information object has its own set of characteristics or attributes. Each attribute may have a value (See IOD), depending on its category.</td>
</tr>
<tr>
<td>Big Endian</td>
<td>A term for encoding the most-significant byte first and remaining bytes in descending order of significance.</td>
</tr>
<tr>
<td>Calling AE Title</td>
<td>The name used by the receiver in DICOM protocol to indicate which Application Entity it received the data from. It is also the AE that is initiating the transfer.</td>
</tr>
<tr>
<td>Called AE Title</td>
<td>The name used by the sender in DICOM protocol to indicate which Application Entity it wants to transmit its data to. It is also the AE that is receiving the transfer.</td>
</tr>
<tr>
<td>Conformance Statement</td>
<td>A document whose organization and content are mandated by the DICOM Standard, which allows users to communicate how they have chosen to comply with the Standard in their implementations.</td>
</tr>
<tr>
<td>DICOM</td>
<td>Digital Imaging and Communications in Medicine</td>
</tr>
<tr>
<td>DIMSE</td>
<td>DICOM Message Service Elements: represents an abstraction of a common set of things that a user would do, in different contexts, to a data element, and would likely use over and over.</td>
</tr>
<tr>
<td>DIMSE-C</td>
<td>DIMSE Services that are performed on Composite Information</td>
</tr>
<tr>
<td>DIMSE-N</td>
<td>DIMSE Services that are performed on Normalized Information</td>
</tr>
<tr>
<td>IHE</td>
<td>Integrating the Healthcare Enterprise.</td>
</tr>
<tr>
<td>IO</td>
<td>Information Object.</td>
</tr>
<tr>
<td>IOD</td>
<td>Information Object Definition: a software representation of a real object. An information object is generally a list of characteristics (attributes) that completely describe the object as far as the software is concerned.</td>
</tr>
<tr>
<td>Little Endian</td>
<td>A term for encoding the least-significant byte first and remaining bytes in ascending order of significance.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Meta SOP Class</td>
<td>A group of SOP Classes that are used together to provide a high-level functionality.</td>
</tr>
<tr>
<td>Module</td>
<td>A logical group of the valid attributes of DICOM information objects.</td>
</tr>
<tr>
<td>NEMA</td>
<td>National Electrical Manufacturers Association</td>
</tr>
<tr>
<td>OP</td>
<td>Ophthalmic Photography</td>
</tr>
<tr>
<td>OPT</td>
<td>Ophthalmic Tomography</td>
</tr>
<tr>
<td>Presentation Context</td>
<td>The combination of Transfer Syntax and Abstract Syntax. The Presentation Context defines both what data will be sent (Abstract Syntax) and how the data are encoded (Transfer Syntax).</td>
</tr>
<tr>
<td>PDU</td>
<td>Protocol Data Unit: a data object that is exchanged by protocol machines (entities) within a given layer of the protocol stack.</td>
</tr>
<tr>
<td>Service Class</td>
<td>A DICOM method for describing a group of operations that a user might want to perform on particular information objects.</td>
</tr>
<tr>
<td>SCP</td>
<td>Service Class Provider: a device that provides the services of a DICOM Service Class.</td>
</tr>
<tr>
<td>SCU</td>
<td>Service Class User: a device that utilizes the DICOM Service Class provided by another device.</td>
</tr>
<tr>
<td>SOP</td>
<td>Service-Object Pair: the combination of a DICOM Information Object and the Service Class that operates upon that object.</td>
</tr>
<tr>
<td>TCP/IP</td>
<td>Transmission Control Protocol/Internet Protocol</td>
</tr>
<tr>
<td>Transfer Syntax</td>
<td>A part of the DICOM Presentation Context that indicates how an operation and a data object should be encoded.</td>
</tr>
<tr>
<td>UID</td>
<td>Unique Identifier: a globally unique identifier that is assigned to every DICOM information object.</td>
</tr>
<tr>
<td>VR</td>
<td>Value Representation. A VR is the defined format of a particular data element.</td>
</tr>
<tr>
<td>XC</td>
<td>External-camera Photography</td>
</tr>
</tbody>
</table>