# eFilm Workstation

## DICOM Conformance Statement

**August 25/03**
Revision 8

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# 1. INTRODUCTION

## 1.1. Scope and Field of Application

This document is the DICOM Conformance Statement for the eFilm Workstation medical imaging software application developed by Merge eFilm. Contained in this statement are detailed descriptions of how eFilm Workstation collaborates with other Medical Imaging devices and applications that conform to the DICOM 3.0 standard.

The intended user of this document is involved with software design and system integration. It is understood that this individual is familiar with the concepts and terms used throughout this document. Readers unfamiliar with the DICOM 3.0 standard should consult the actual documentation prior to examining this conformance statement.

## 1.2. References and Definitions

All necessary references and definitions have been taken from the Digital Imaging and Communications in Medicine (DICOM) standard, parts 1 through 13 (NEMA PS 3.1-13).

## 1.3. Symbols and Abbreviations

All symbols and abbreviations used herein are described in the Digital Imaging and Communications in Medicine (DICOM) standard, parts 1 through 13 (NEMA PS 3.1-13).

## 1.4. Revision Number

| Version | Date | Description |
|---|---|---|
| Rev 0 | May 17, 2001 | • First Release |
| Rev 1 | July 3, 2001 | • Implementation Version String is now eFilm |
| Rev 2 | Nov 07/2001 | • Included support of Verification Class as SCU<br>• Included the following transfer syntaxes:<br>  • Explicit VR, JPEG Baseline (Process 1)<br>  • Explicit VR, JPEG Baseline (Process 4)<br>  • Explicit VR, JPEG Lossless, NH, FOP (Process 14) |
| Rev 3 | Dec 18/2001 | • 3.1.2.1. Included Verification as a Association Initiation Policy |
| Rev 4 | May 09/2002 | • 3.1. Included support of PET Storage SOP classes as SCU & SCP |
| Rev 5 | May 17, 2002 | • 3.1. Included support for Modality Worklist Management as SCU<br>• 3.1.2.6. Included Retrieve a Modality Worklist from a Remote System as an association initiation policy. |
| Rev 6 | June 14/2002 | • 3.1.3.2.3 Included C-STORE response codes |
| Rev 7 | Nov 01/2002 | • Changed corporate name to Merge eFilm and included part number. |
| Rev 8 | Aug 25/2003 | • Minor revisions for eFilm Workstation 1.9<br>  • Added FSC role for DICOMDIR creation<br>  • Other minor clarifications and additions |

## 1.5. Considerations

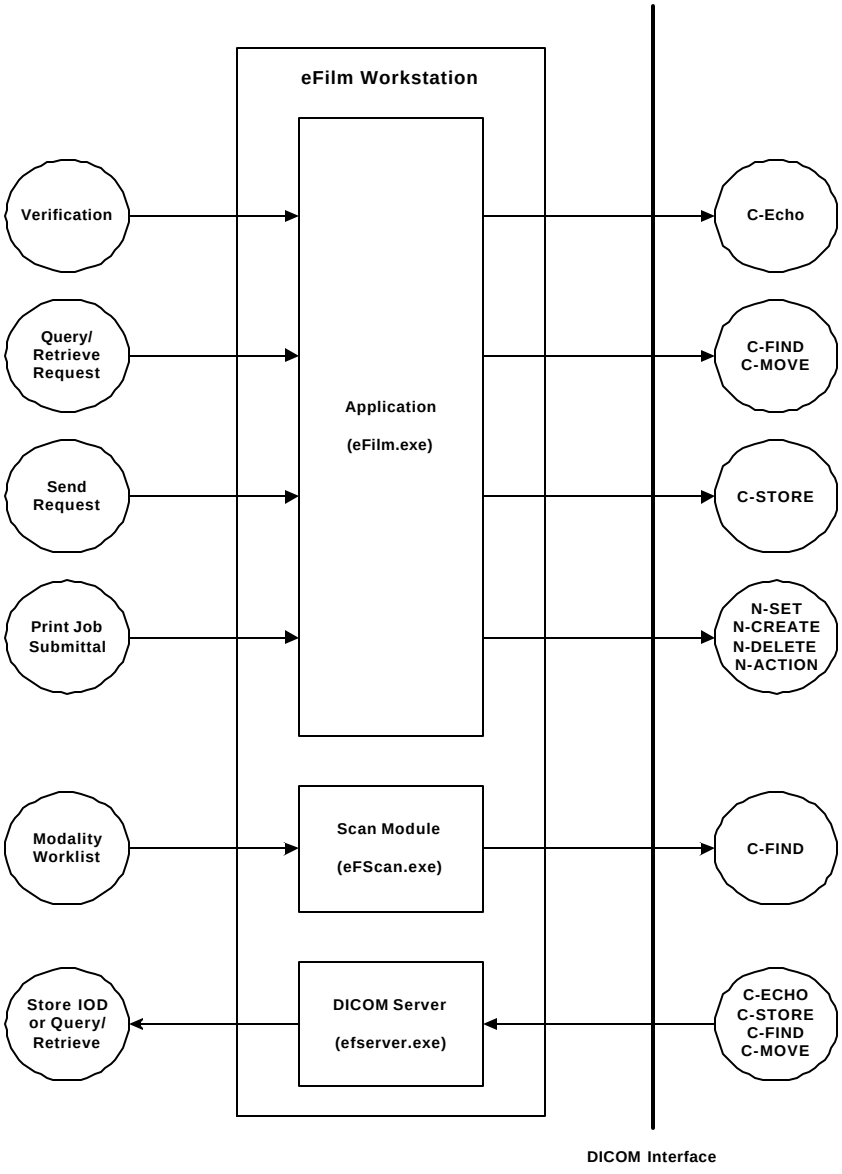
Readers should note the following points:

- This document on its own should not be interpreted as a guarantee of connectivity between eFilm Workstation and any equipment and/or applications offered by other vendors.
- Integration of eFilm Workstation with the equipment and/or applications of different vendors, including Merge eFilm, are outside the scope of the DICOM 3.0 standard and product conformance statements. Integration and interoperability of different equipment/applications are the sole responsibility of the user.
- In the case of any possible connectivity inferred by a user to exist between eFilm Workstation and another product, the user is responsible for testing and verifying the inferred connectivity.
- Future changes to the DICOM 3.0 standard may require alterations to be made to eFilm Workstation. Merge eFilm reserves the right to modify the eFilm Workstation architecture as needed, in order to meet changing standards.
- The user should ensure that any existing DICOM equipment also changes with the future developments of the DICOM standards. Failure to keep pace with any alterations in the DICOM standards may result in decreased or lost connectivity.
- All trade names mentioned in this document are recognized.

# 2. IMPLEMENTATION MODEL

## 2.1. Application Data Flow Diagram

The Implementation Model for the eFilm Workstation DICOM services is depicted below:




A number of eFilm Workstation's DICOM services are provided by the eFilm DICOM Server, which runs as a service (Windows NT/2000/XP Professional) or pseudo-service (Windows 95/98/Me) process. The eFilm DICOM Server starts when the system is started, and shuts down when the system is turned off. In addition, basic query/retrieve requests and print job submittals can be made by eFilm Workstation directly between SCU and SCP devices without being routed

through the DICOM Server process. This structure means that data requests can be accepted at all times when the system is running, regardless of whether or not the Workstation application is open. In addition, if the DICOM Server should be interrupted or manually shut down for some reason, queries and print submittals can still be made.

eFilm Workstation will retrieve a Modality Worklist from a Remote System only when the eFilm™ Scan™ module is activated. If the eFilm Scan module is not active, it cannot retrieve a Modality Worklist from a remote system.

The eFilm DICOM Server supports image reception and transmission as well as the processing of query/retrieve requests.

## 2.2. Functional Definitions of Application Entities

All communications and image transfer with the remote application is accomplished utilizing the DICOM protocol over a network using the TCP/IP protocol stack.

Below is a table of the functions supported by eFilm Workstation application entities:

| SCU | SCP |
|---|---|
| • Verification<br>• Storage<br>• Query/Retrieve<br>• Basic Grayscale Print Management.<br>• Modality Worklist Management | • Verification<br>• Storage<br>• Query/Retrieve |

## 2.3. Sequencing of Real World Activities

Not applicable.

# 3. APPLICATION ENTITY SPECIFICATIONS

## 3.1. AE Specifications for eFilm Workstation DICOM Services

The eFilm Workstation DICOM services provide support for the following DICOM V3.0 SOP Classes as an SCU:

| SOP Classes as SCU | |
|---|---|
| **SOP Class UID** | **SOP Class Name** |
| **Verification** | |
| 1.2.840.10008.1.1 | Verification |
| **Storage** | |
| 1.2.840.10008.5.1.4.1.1.1 | CR Image Storage |
| 1.2.840.10008.5.1.4.1.1.2 | CT Image Storage |
| 1.2.840.10008.5.1.4.1.1.1.1 | DX Image Storage (Presentation) |
| 1.2.840.10008.5.1.4.1.1.1.1.1 | DX Image Storage (Raw) |
| 1.2.840.10008.5.1.4.1.1.4 | MR Image Storage |
| 1.2.840.10008.5.1.4.1.1.6 | US Image Storage (Retired) |
| 1.2.840.10008.5.1.4.1.1.6.1 | US Image Storage |
| 1.2.840.10008.5.1.4.1.1.3 | US Multi-Frame Image Storage (Retired) |
| 1.2.840.10008.5.1.4.1.1.3.1 | US Multi-Frame Image Storage |
| 1.2.840.10008.5.1.4.1.1.7 | SC Image Storage |
| 1.2.840.10008.5.1.4.1.1.1.2 | MG Storage (Presentation) |
| 1.2.840.10008.5.1.4.1.1.1.2.1 | MG Storage (Raw) |
| 1.2.840.10008.5.1.4.1.1.5 | NM Image Storage (Retired) |
| 1.2.840.10008.5.1.4.1.1.20 | NM Image Storage |
| 1.2.840.10008.5.1.4.1.1.12.1 | XA Image Storage |
| 1.2.840.10008.5.1.4.1.1.12.2 | RF Image Storage |
| 1.2.840.10008.5.1.4.1.1.12.3 | XA Biplane Image Storage (Retired) |
| 1.2.840.10008.5.1.4.1.1.128 | Standard PET Image Storage |
| **Query/Retrieve** | |
| 1.2.840.10008.5.1.4.1.2.2.1 | Study Root Query/Retrieve Model – FIND |
| 1.2.840.10008.5.1.4.1.2.2.2 | Study Root Query/Retrieve Model – MOVE |
| **Print Management** | |
| 1.2.840.10008.5.1.1.9 | Basic Grayscale Print Management Meta |
| **Modality Worklist Management** | |
| 1.2.840.10008.5.1.4.31 | Modality Worklist Information Model-FIND[1] |

[1] Proposed only if the eFilm™ Scan™ module is activated.

The eFilm Workstation DICOM services provide support for the following DICOM 3.0 SOP Classes as an SCP:

| SOP Classes as SCP | |
|---|---|
| **SOP Class UID** | **SOP Class Name** |
| **Verification** | |
| 1.2.840.10008.1.1 | Verification |
| **Storage** | |
| 1.2.840.10008.5.1.4.1.1.1 | CR Image Storage |
| 1.2.840.10008.5.1.4.1.1.2 | CT Image Storage |
| 1.2.840.10008.5.1.4.1.1.1.1 | DX Image Storage (Presentation) |
| 1.2.840.10008.5.1.4.1.1.1.1.1 | DX Image Storage (Raw) |
| 1.2.840.10008.5.1.4.1.1.4 | MR Image Storage |
| 1.2.840.10008.5.1.4.1.1.6 | US Image Storage (Retired) |
| 1.2.840.10008.5.1.4.1.1.6.1 | US Image Storage |
| 1.2.840.10008.5.1.4.1.1.3 | US Multi-Frame Image Storage (Retired) |
| 1.2.840.10008.5.1.4.1.1.3.1 | US Multi-Frame Image Storage |
| 1.2.840.10008.5.1.4.1.1.7 | SC Image Storage |
| 1.2.840.10008.5.1.4.1.1.1.2 | MG Storage (Presentation) |
| 1.2.840.10008.5.1.4.1.1.1.2.1 | MG Storage (Raw) |
| 1.2.840.10008.5.1.4.1.1.5 | NM Image Storage (Retired) |
| 1.2.840.10008.5.1.4.1.1.20 | NM Image Storage |
| 1.2.840.10008.5.1.4.1.1.12.1 | XA Image Storage |
| 1.2.840.10008.5.1.4.1.1.12.2 | RF Image Storage |
| 1.2.840.10008.5.1.4.1.1.12.3 | XA Biplane Image Storage (Retired) |
| 1.2.840.10008.5.1.4.1.1.128 | Standard PET Image Storage |
| **Query/Retrieve** | |
| 1.2.840.10008.5.1.4.1.2.1.1 | Patient Root Query/Retrieve Model - FIND |
| 1.2.840.10008.5.1.4.1.2.1.2 | Patient Root Query/Retrieve Model - MOVE |
| 1.2.840.10008.5.1.4.1.2.2.1 | Study Root Query/Retrieve Model - FIND |
| 1.2.840.10008.5.1.4.1.2.2.2 | Study Root Query/Retrieve Model - MOVE |

### 3.1.1. Association Establishment Policies

#### 3.1.1.1. General

The DICOM Application Context Name (ACN) that is always proposed by the eFilm Workstation DICOM services is 1.2.840.10008.3.1.1. The services shall offer a maximum PDU size of 16kB (16384 bytes) upon association initiation, and accept maximum PDU sizes up to 16kB (16384 bytes) on associations initiated by remote applications. There is no limit on the number of Presentation Context Items that will be proposed.

#### 3.1.1.2. Number of Associations

eFilm Workstation can support multiple associations simultaneously, both as an SCP and as an SCU. As an SCP, the DICOM Server will listen for incoming associations and spawn a new process (a server "child") to manage each request. This ability means it is possible for eFilm Workstation to receive both images and query/retrieve requests from multiple SCUs simultaneously. By default, the maximum number of simultaneous associations is limited to 10. Users may increase this value as needed; however, one should expect performance to degrade if the maximum number of simultaneous associations is increased significantly beyond 10.

As an SCU, eFilm Workstation can send images to multiple SCPs simultaneously, spawning a new thread for each destination. For DICOM print jobs, eFilm Workstation establishes associations sequentially.

#### 3.1.1.3. Asynchronous Nature

eFilm Workstation does not support asynchronous operations. All operations will be performed synchronously.

#### 3.1.1.4. Implementation Identifying Information

The Implementation Class UID is: 1.2.804.114118.3.
The Implementation Version String is: eFilm.

### 3.1.2. Association Initiation Policy

eFilm Workstation initiates associations for the following activities:

- DICOM communication verification between eFilm Workstation and a remote system.
- Sending images from the local eFilm Workstation database to a remote system.
- Queries of remote database contents.
- Retrieval of images from a remote database to the local eFilm Workstation database.
- Print images.
- Retrieve a Modality Worklist from a Remote System.

#### 3.1.2.1. Verify Communication with a Remote System

##### 3.1.2.1.1. Associated Real World Activity

The user selects a server from the list of Remote Devices in the Edit->Properties page, and clicks "Verify".

##### 3.1.2.1.2. Proposed Presentation Contexts

| Presentation Context Table | | | | | |
|---|---|---|---|---|---|
| **Abstract Syntax** | | **Transfer Syntax** | | **Role** | **Extended Negotiation** |
| **Name** | **UID** | **Name** | **UID** | | |
| Verification | 1.2.840.10008.1.1 | Implicit VR, Little Endian | 1.2.840.10008.1.2 | SCU | None |

##### 3.1.2.1.3. SOP Specific Conformance Statement for SOP Verification Class

eFilm Workstation provides standard conformance for DICOM communication verification.

#### 3.1.2.2. Send Images to a Remote System

##### 3.1.2.2.1. Associated Real World Activity

The user selects one or more studies from the search dialog and clicks the Send button. A list of AEs appears, from which the user selects one.

### 3.1.2.2.2. Proposed Presentation Contexts

| Presentation Context Table for Send to Remote System | | | | |
|---|---|---|---|---|
| Abstract Syntax | | Transfer Syntax | Role | Extended Negotiation |
| Name | UID | | | |
| CR Image Storage | 1.2.840.10008.5.1.4.1.1.1 | See Below | SCU | None |
| CT Image Storage | 1.2.840.10008.5.1.4.1.1.2 | See Below | SCU | None |
| DX Image Storage (Presentation) | 1.2.840.10008.5.1.4.1.1.1.1 | See Below | SCU | None |
| DX Image Storage (Raw) | 1.2.840.10008.5.1.4.1.1.1.1.1 | See Below | SCU | None |
| MR Image Storage | 1.2.840.10008.5.1.4.1.1.4 | See Below | SCU | None |
| US Image Storage (retired) | 1.2.840.10008.5.1.4.1.1.6 | See Below | SCU | None |
| US Image Storage | 1.2.840.10008.5.1.4.1.1.6.1 | See Below | SCU | None |
| US Multi-Frame Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.3 | See Below | SCU | None |
| US Multi-Frame Image Storage | 1.2.840.10008.5.1.4.1.1.3.1 | See Below | SCU | None |
| SC Image Storage | 1.2.840.10008.5.1.4.1.1.7 | See Below | SCU | None |
| MG Storage (Presentation) | 1.2.840.10008.5.1.4.1.1.1.2 | See Below | SCU | None |
| MG Storage (Raw) | 1.2.840.10008.5.1.4.1.1.1.2.1 | See Below | SCU | None |
| NM Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.5 | See Below | SCU | None |
| NM Image Storage | 1.2.840.10008.5.1.4.1.1.20 | See Below | SCU | None |
| XA Image Storage | 1.2.840.10008.5.1.4.1.1.12.1 | See Below | SCU | None |
| XA Biplane Image Storage(Retired) | 1.2.840.10008.5.1.4.1.1.12.3 | See Below | SCU | None |
| RF Image Storage | 1.2.840.10008.5.1.4.1.1.12.2 | See Below | SCU | None |
| Standard PET Image Storage | 1.2.840.10008.5.1.4.1.1.128 | See Below | SCU | None |

| Transfer Syntaxes for Send To Remote System | |
|---|---|
| Name | UID |
| Implicit VR, Little Endian | 1.2.840.10008.1.2 |
| Explicit VR, JPEG Baseline (Process 1) | 1.2.840.10008.1.2.4.50[2] |
| Explicit VR, JPEG Baseline (Process 4) | 1.2.840.10008.1.2.4.51[2] |
| Explicit VR, JPEG Lossless, NH,FOP (Process 14) | 1.2.840.10008.1.2.4.70[2] |
| RLE Lossless | 1.2.840.10008.1.2.5[2] |

### 3.1.2.2.3. SOP Specific Conformance Statement for SOP Image Storage Class

Images stored in the eFilm Workstation database that are to be sent to remote systems are converted to instances of the corresponding SOP Storage class(es). Images are then sent sequentially to the remote system(s). When sending multiple images to one remote system, a new association is negotiated for each series. eFilm Workstation will only propose the transfer syntax of the stored SOP instance. eFilm Workstation cannot reformat the stored SOP into alternate syntaxes.

[2] Proposed if the image is stored using the specified compressed transfer syntax, in lieu of Implicit VR, Little Endian.

### 3.1.2.3. Query a Remote Database

#### 3.1.2.3.1. Associated Real World Activity

The user clicks on the Remote exams list in the Search dialogue, selects an AE from the list of destinations, enters the search criteria, and then clicks Search. "Begins with" searching is used, allowing partial search criteria to be entered. As some SCPs do not accept wildcard searching in the Patient ID field and/or do not support the query of the modality key at the Study level, such options can be enabled/disabled as needed through eFilm Workstation's Edit Properties page.

#### 3.1.2.3.2. Proposed Presentation Contexts

| Presentation Context Table for Remote Database Query | | | | | |
|---|---|---|---|---|---|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Study Root Query Retrieve Information Model - FIND | 1.2.840.10008.5.1.4.1.2.2.1 | Implicit VR, Little Endian | 1.2.840.10008.1.2 | SCU | None |

#### 3.1.2.3.3. SOP Specific Conformance Statement for SOP Query Class

eFilm Workstation supports C-Find response values as defined in DICOM v.3.0 Part 4. All Required (R) and Unique (U) Study, Series, and Image level keys are supported for Patient Root, Study Root, and Patient/Study Only Query/Retrieve information models. In addition, certain Optional (O) keys are supported. For a Study Root Query/Retrieve the following keys are supported:

| Study Root Query/Retrieve: Supported Keys | | | |
|---|---|---|---|
| Data Level | Description | Tag | Type |
| Study | Study Date | (0008,0020) | R |
| Study | Study Time | (0008,0030) | R |
| Study | Study Accession Number | (0008,0050) | R |
| Study | Patient Name | (0010,0010) | R |
| Study | Patient ID | (0010,0020) | R |
| Study | Study ID | (0020,0010) | R |
| Study | Study Instance UID | (0020,000D) | U |
| Study | Study Referring MD's Name | (0008,0090) | O |
| Study | Study Description | (0008,1030) | O |
| Study | Patient Date of Birth | (0010,0030) | O |
| Study | Patient Sex | (0010,0040) | O |
| Study | Institutional Department Name | (0008,1040) | O |
| Series | Series Description | (0008,103E) | O |
| Series | Series Modality | (0008,0060) | R |
| Series | Series Number | (0020,0011) | R |
| Series | Series Instance UID | (0020,000E) | U |
| Image | Image Number | (0020,0013) | R |
| Image | Image SOP Instance UID | (0008,0018) | U |

### 3.1.2.4. Retrieve from a Remote System

#### 3.1.2.4.1. Associated Real World Activity

The user selects one or more studies from the Remote Exams list in the Search dialogue, then clicks either View or Retrieve.

#### 3.1.2.4.2. Proposed Presentation Contexts

| Presentation Context Table for Remote Database Retrieve | | | | | |
|---|---|---|---|---|---|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Study Root Query Retrieve Information Model – MOVE | 1.2.840.10008.5.1.4.1.2.2.2 | Implicit VR, Little Endian | 1.2.840.10008.1.2 | SCU | None |

#### 3.1.2.4.3. SOP Specific Conformance Statement for SOP Retrieve Class

eFilm Workstation provides standard conformance.

### 3.1.2.5. Print to a Remote Laser Imager

#### 3.1.2.5.1. Associated Real World Activity

The user selects the desired image(s) by clicking on the lower right-hand square of each image and then selects DICOM Print from the File menu. He or she selects the appropriate printer, makes any necessary changes to the printer settings, and then clicks Print.

#### 3.1.2.5.2. Proposed Presentation Contexts

| Presentation Context Table | | | | | |
|---|---|---|---|---|---|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Basic Grayscale Print Management Meta | 1.2.840.1000.8.5.1.1.9 | Implicit VR, Little Endian | 1.2.840.10008.1.2 | SCU | None |

### 3.1.2.5.3. SOP Specific Conformance Statement for SOP Classes Basic Grayscale Print Management Meta Classes

Below (following page) are the mandatory print SOP classes supported by eFilm Workstation for the Basic Grayscale Management Meta class.

| Basic Grayscale Print Management Meta Class: Supported SOP Classes | |
|---|---|
| **SOP Class Name** | **SOP Class UID** |
| Basic Film Session | 1.2.840.10008.5.1.1.1 |
| Basic Film Box | 1.2.840.10008.5.1.1.2 |
| Basic Grayscale Image Box | 1.2.840.10008.5.1.1.4 |
| Printer | 1.2.840.10008.5.1.1.16 |

#### 3.1.2.5.3.1. Conformance for SOP Class Basic Film Session

eFilm Workstation includes the following N-Create attributes for the Basic Film Session SOP class:

| Basic Film Session SOP class N-CREATE: Attributes | |
|---|---|
| **Description** | **Tag** |
| Number of Copies | (2000,0010) |
| Print Priority | (2000,0020) |
| Medium Type | (2000,0030) |
| Film Destination | (2000,0040) |
| Film Session Label | (2000,0050) |
| Memory Allocation | (2000,0060) |

N-Set and N-Action are not used; however, N-Delete is used to delete the complete Basic Film Session SOP instance hierarchy.

#### 3.1.2.5.3.2. Conformance for SOP Class Basic Film Box

The table below lists the N-Create attributes for the Basic Film Box SOP class, where A means the attribute is always sent and C means the attribute is only sent when not empty.

| Basic Film Box SOP class N-CREATE: Attributes | | |
|---|---|---|
| **Description** | **Tag** | **Usage** |
| Print Priority | (2000,0020) | C |
| Image Display Format | (2010,0010) | C |
| Referenced Film Session Sequence | (2010,0500) | A |
| > Referenced SOP Class UID | (0008,1150) | A |
| > Referenced SOP Instance UID | (0008,1155) | A |
| Film Orientation | (2010,0040) | C |
| Film Size ID | (2010,0050) | C |
| Magnification Type | (2010,0060) | A |
| Maximum Density | (2010,0130) | C |
| Configuration Information | (2010,0150) | A |
| Smoothing Type | (2010,0080) | C |
| Border Density | (2010,0100) | C |
| Empty Image Density | (2010,0110) | C |
| Minimum Density | (2010,0120) | C |

| | | |
|---|---|---|
| Trim | (2010,0140) | C |

The N-Set is currently unused; however, the N-Action is used to print a complete Basic Film Box SOP instance and N-Delete is used to delete it after printing.

### 3.1.2.5.3.3. Conformance for SOP Class Basic Grayscale Image Box

The following attributes are included in eFilm Workstation's N-Set for the Basic Grayscale Image SOP class. Again, "A" stands for attributes which are always sent to the printer, while "C" stands for attributes that are only sent when they contain data.

| **Basic Grayscale Image SOP Box: N-Set Attributes** | | |
|---|---|---|
| **Description** | **Tag** | **Usage** |
| Image Position | (2020,0010) | A |
| Preformatted Grayscale Image Sequence | (2020,0110) | A |
| > Samples Per Pixel | (0028,0002) | A |
| > Photometric Interpretation | (0028,0004) | A |
| > Rows | (0028,0010) | A |
| > Columns | (0028,0011) | A |
| > Pixel Aspect Ratio | (0028,0034) | A |
| > Bits Allocated | (0028,0100) | A |
| > Bits Stored | (0028,0101) | A |
| > High Bit | (0028,0102) | A |
| > Pixel Representation | (0028,0103) | A |
| > Pixel Data | (7FE0,0010) | A |
| Magnification Type | (2010,0060) | A |
| Smoothing Type | (2010,0080) | A |
| Polarity | (2020,0020) | A |

Please note that eFilm Workstation only supports 8-bit printing.

### 3.1.2.5.3.4. Conformance for SOP Class Printer

eFilm Workstation uses N-GET for the Printer SOP class to get information from the SCP.

### 3.1.2.5.4. Optional SOP Classes for Basic Grayscale Print Management Meta

These SOP classes are not yet supported by eFilm Workstation.

### 3.1.2.6. Retrieve a Modality Worklist from a Remote System

#### 3.1.2.6.1. Associated Real World Activity

eFilm Workstation can query for a Modality Worklist to aid in merging patient demographics into DICOM images. This prevents the need to enter patient demographics manually. This feature is available only when the eFilm™ Scan™ module is activated.

#### 3.1.2.6.2. Proposed Presentation Context

| Presentation Context Table for Modality Worklist Management | | | | | |
|---|---|---|---|---|---|
| **Abstract Syntax** | | **Transfer Syntax** | | **Role** | **Extended Negotiation** |
| **Name** | **UID** | **Name** | **UID** | | |
| Modality Worklist Information Model-FIND | 1.2.840.10008.5.1.4.31 | Implicit VR Little Endian | 1.2.840.1008.1.2 | SCU | None |

#### 3.1.2.6.3. SOP Specific Conformance Statement for the Modality Worklist Management Class

eFilm Workstation provides standard conformance, a list of supported keys is given in the table below:

| Modality Worklist Management: Supported Keys | | | |
|---|---|---|---|
| **Module** | **Description** | **Tag** | **Type** |
| **Scheduled Procedure Step** | Schedule Procedure Step Sequence | (0040,0100) | R |
| | > Scheduled Station AE Title | (0040,0001) | R |
| | > Scheduled Procedure Step Start Date | (0040,0002) | R |
| | > Scheduled Procedure Step Start Time | (0040,0003) | R |
| | > Modality | (0008,0060) | R |
| | > Scheduled Performing Physician | (0040,0006) | R |
| | > Scheduled Procedure Step Description | (0040,0007) | O |
| | > Scheduled Station Name | (0040,0010) | O |
| | > Scheduled Procedure Step Location | (0040,0011) | O |
| | > Pre-Medication | (0040,0012) | O |
| | > Scheduled Procedure Step ID | (0040,0009) | O |
| | > Requested Contrast Agent | (0032,1070) | O |
| **Requested Procedure** | Requested Procedure ID | (0040,1001) | O |
| | Requested Procedure Description | (0032,1060) | O |
| | Study Instance UID | (0020,000D) | O |
| | Requested Procedure Priority | (0040,1003) | O |
| | Patient Transport Arrangements | (0040,1004) | O |
| **Imaging Service Request** | Accession Number | (0008,0050) | O |
| | Requesting Physician | (0032,1032) | O |

| Modality Worklist Management: Supported Keys | | | |
|---|---|---|---|
| **Module** | **Description** | **Tag** | **Type** |
| | Referring Physician's Name | (0008,0090) | O |
| | Study ID Status | (0032,000A) | O |
| | Study Priority ID | (0032,000C) | O |
| **Visit Identification** | Admission ID | (0038,0010) | O |
| **Visit Status** | Current Patient Location | (0038,0300) | O |
| **Patient Identification** | Patient's Name | (0010,0010) | R |
| | Patient ID | (0010,0020) | R |
| | Issuer of Patient ID | (0010,0021) | O |
| | Other Patient ID's | (0010,1000) | O |
| | Other Patient Names | (0010,1001) | O |
| | Patient's Birth Name | (0010,1005) | O |
| | Patient's Mother's Birth Name | (0010,1060) | O |
| | Medical Record Locator | (0010,1090) | O |
| **Patient Demographic** | Patient's Birth Date | (0010,0030) | O |
| | Patient's Birth Time | (0010,0032) | O |
| | Patient's Sex | (0010,0040) | O |
| | Patient's Size | (0010,1020) | O |
| | Patient's Weight | (0010,1030 | O |
| | Patient's Address | (0010,1040) | O |
| | Military Rank | (0010,1080) | O |
| | Branch of Service | (0010,1081) | O |
| | Country of Residence | (0010,2150) | O |
| | Region of Residence | (0010,2152) | O |
| | Patient's Telephone Numbers | (0010,2154) | O |
| | Ethnic Group | (0010,2160) | O |
| | Patients Religious Preference | (0010,21F0) | O |
| | Patient Comments | (0010,4000) | O |
| **Patient Medical** | Medical Alerts | (0010,2000) | O |
| | Contrast Allergies | (0010,2110) | O |
| | Pregnancy Status | (0010,21C0) | O |
| | Special Needs | (0038,0050) | O |
| | Patient State | (0038,0500) | O |

eFilm Workstation may fill, none, one or multiple attributes in the query request with a non-empty value. eFilm Workstation may thus request matching on Optional Matching Key Attributes.

All fields listed above are always included in the query request to ask the SCP to return them for each response. eFilm Workstation expects the SCP to return values for all 'R' attributes whereas the attributes marked with 'O' may be optionally filled. Therefore eFilm Workstation treats these attributes as Type 3 Return Key Attributes.

### 3.1.2.7. Verify the Committed Storage of Images on a Remote System

eFilm Workstation does not yet support this function.

### 3.1.3. Association Acceptance Policy

eFilm Workstation accepts associations for the activities listed below:

- DICOM communication verification between eFilm Workstation and a remote system.
- Image transfer from a remote system to eFilm Workstation.
- Processing remote system queries.
- Initiation of image transfer to a remote system in response to a request for retrieval.

eFilm Workstation will reject association requests from unknown AEs that request an image transfer. Similarly, most remote systems will reject eFilm Workstation's association requests if the eFilm Workstation AE title is not correctly configured.

#### 3.1.3.1. Verify Communication with a Remote System

##### 3.1.3.1.1. Associated Real World Activity

eFilm Workstation will send an echo response to verification requests made by remote systems.

##### 3.1.3.1.2. Accepted Presentation Contexts

| Presentation Context Table | | | | | |
|---|---|---|---|---|---|
| **Abstract Syntax** | | **Transfer Syntax** | | **Role** | **Extended Negotiation** |
| **Name** | **UID** | **Name** | **UID** | | |
| Verification | 1.2.840.10008.1.1 | Implicit VR, Little Endian | 1.2.840.10008.1.2 | SCP | None |

##### 3.1.3.1.3. SOP Specific Conformance Statement for SOP Verification Class

eFilm Workstation provides standard conformance for DICOM communication verification.

##### 3.1.3.1.4. Presentation Context Acceptance Criterion

eFilm Workstation will accept all presentation contexts which match those of the preceding table (above). No specific acceptance and/or prioritization rules are required.

#### 3.1.3.2. Receive Images from a Remote System

##### 3.1.3.2.1. Associated Real World Activity

A remote system pushes (i.e., sends) images to eFilm Workstation. Upon completion of the transfer, the images are available locally and can be selected for display.

### 3.1.3.2.2. Accepted Presentation Contexts

| Presentation Context Table for Receive from a Remote System | | | | |
|---|---|---|---|---|
| **Abstract Syntax** | | **Transfer Syntax** | **Role** | **Extended Negotiation** |
| **Name** | **UID** | | | |
| CR Image Storage | 1.2.840.10008.5.1.4.1.1.1 | See Below | SCP | None |
| CT Image Storage | 1.2.840.10008.5.1.4.1.1.2 | See Below | SCP | None |
| DX Image Storage (Presentation) | 1.2.840.10008.5.1.4.1.1.1.1 | See Below | SCP | None |
| DX Image Storage (Raw) | 1.2.840.10008.5.1.4.1.1.1.1.1 | See Below | SCP | None |
| MR Image Storage | 1.2.840.10008.5.1.4.1.1.4 | See Below | SCP | None |
| US Image Storage (retired) | 1.2.840.10008.5.1.4.1.1.6 | See Below | SCP | None |
| US Image Storage | 1.2.840.10008.5.1.4.1.1.6.1 | See Below | SCP | None |
| US Multi-Frame Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.3 | See Below | SCP | None |
| US Multi-Frame Image Storage | 1.2.840.10008.5.1.4.1.1.3.1 | See Below | SCP | None |
| SC Image Storage | 1.2.840.10008.5.1.4.1.1.7 | See Below | SCP | None |
| MG Storage (Presentation) | 1.2.840.10008.5.1.4.1.1.1.2 | See Below | SCP | None |
| MG Storage (Raw) | 1.2.840.10008.5.1.4.1.1.1.2.1 | See Below | SCP | None |
| NM Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.5 | See Below | SCP | None |
| NM Image Storage | 1.2.840.10008.5.1.4.1.1.20 | See Below | SCP | None |
| XA Image Storage | 1.2.840.10008.5.1.4.1.1.12.1 | See Below | SCP | None |
| XA Biplane Image Storage(Retired) | 1.2.840.10008.5.1.4.1.1.12.3 | See Below | SCP | None |
| RF Image Storage | 1.2.840.10008.5.1.4.1.1.12.2 | See Below | SCP | None |
| Standard PET Image Storage | 1.2.840.10008.5.1.4.1.1.128 | See Below | SCP | None |

| Transfer Syntaxes for Receive from Remote System | |
|---|---|
| **Name** | **UID** |
| Implicit VR, Little Endian | 1.2.840.10008.1.2 |
| Explicit VR, JPEG Baseline (Process 1) | 1.2.840.10008.1.2.4.50 |
| Explicit VR, JPEG Baseline (Process 4) | 1.2.840.10008.1.2.4.51 |
| Explicit VR, JPEG Lossless, NH,FOP (Process 14) | 1.2.840.10008.1.2.4.70 |
| RLE Lossless | 1.2.840.10008.1.2.5 |

### 3.1.3.2.3. SOP Specific Conformance Statement for SOP Storage Class

The eFilm Workstation AE conforms to the SOP's of the Storage SOP Class at Level 2 (full). No elements are discarded or coerced by the eFilm Workstation AE. In the case of a successful C-STORE operation the object has successfully been written to disk in the eFilm Workstation database. If an image is sent with the same SOP Instance UID (0008, 0018) as one that already exists on the eFilm Workstation AE, the new image will replace the old image and the database will be updated accordingly.

Lossy JPEG images will be stored in compressed form when received by eFilm Workstation and will only be uncompressed for viewing.

The eFilm Workstation AE responds to a C-STORE request with one of the response codes listed in below:

| C-STORE RESPONSE CODES | | | |
|---|---|---|---|
| **Service Status** | **Status Description** | **Status Code (0000,0900)** | **Related Fields** |
| Error | Cannot understand: The message was not properly DICOM encoded, or the SOP class unrecognized. The request was not processed. | C010 | None |
| Success | Success | 0000 | None |

### 3.1.3.2.4. Presentation Context Acceptance Criterion

No criterion.

### 3.1.3.3. Query the eFilm Workstation Database

### 3.1.3.3.1. Associated Real World Activity

A remote system queries the eFilm Workstation database to determine what studies are present on the system.

### 3.1.3.3.2. Accepted Presentation Contexts

| Presentation Context Table for Remote Query of the Local eFilm Workstation Database | | | | | |
|---|---|---|---|---|---|
| **Abstract Syntax** | | **Transfer Syntax** | | **Role** | **Extended Negotiation** |
| **Name** | **UID** | **Name** | **UID** | | |
| Patient Root Query Retrieve Information Model - FIND | 1.2.840.10008.5.1.4.1.2.1.1 | Implicit VR, Little Endian | 1.2.840.10008.1.2 | SCP | None |
| Study Root Query Retrieve Information Model - FIND | 1.2.840.10008.5.1.4.1.2.2.1 | Implicit VR, Little Endian | 1.2.840.10008.1.2 | SCP | None |

### 3.1.3.3.3. SOP Specific Conformance Statement for SOP Query Class

eFilm Workstation supports C-Find response values as defined in DICOM v.3.0 Part 4. All Required (R) and Unique (U) Study, Series, and Image level keys are supported for Patient Root, Study Root, and Patient/Study Only Query/Retrieve information models. In addition, certain Optional (O) keys are supported. The following tables outline the supported keys. Please note that eFilm Workstation does not support relational queries.

| Patient Root Query/Retrieve: Supported Keys | | | |
|---|---|---|---|
| **Level** | **Description** | **Tag** | **Type** |
| Patient | SOP Class UID | (0008,0016) | O |
| Patient | Patient Name | (0010,0010) | R |
| Patient | Patient ID | (0010,0020) | U |

| | | | |
|---|---|---|---|
| Patient | Patient Date of Birth | (0010,0030) | O |
| Patient | Patient Sex | (0010,0040) | O |
| Study | SOP Class UID | (0008,0016) | O |
| Study | Study Date | (0008,0020) | R |
| Study | Study Time | (0008,0030) | R |
| Study | Study Accession Number | (0008,0050) | R |
| Study | Study ID | (0020,0010) | R |
| Study | Study Instance UID | (0020,000D) | U |
| Study | Study Referring MD's Name | (0008,0090) | O |
| Study | Study Description | (0008,1030) | O |
| Study | Series Modality | (0008,0060) | R |
| Series | SOP Class UID | (0008,0016) | O |
| Series | Series Number | (0020,0011) | R |
| Series | Series Instance UID | (0020,000E) | U |
| Image | SOP Class UID | (0008,0016) | O |
| Image | Image Number | (0020,0013) | R |
| Image | Image SOP Instance UID | (0008,0018) | U |

The preceding table only lists the levels supported for the Patient/Study Query/Retrieve. For a Study Root Query/Retrieve, eFilm Workstation supports the following keys:

| **Study Root Query/Retrieve: Supported Keys** | | | |
|---|---|---|---|
| **Data Level** | **Description** | **Tag** | **Type** |
| Study | SOP Class UID | (0008,0016) | O |
| Study | Study Date | (0008,0020) | R |
| Study | Study Time | (0008,0030) | R |
| Study | Study Accession Number | (0008,0050) | R |
| Study | Patient Name | (0010,0010) | R |
| Study | Patient ID | (0010,0020) | R |
| Study | Study ID | (0020,0010) | R |
| Study | Study Instance UID | (0020,000D) | U |
| Study | Study Referring MD's Name | (0008,0090) | O |
| Study | Study Description | (0008,1030) | O |
| Study | Institutional Department Name | (0008,1040) | O |
| Study | Patient Date of Birth | (0010,0030) | O |
| Study | Patient Sex | (0010,0040) | O |
| Study | Series Modality | (0008,0060) | R |
| Series | SOP Class UID | (0008,0016) | O |
| Series | Series Modality | (0008,0060) | R |
| Series | Series Number | (0020,0011) | R |
| Series | Series Instance UID | (0020,000E) | U |
| Series | Series Description | (0008,103E) | O |
| Image | SOP Class UID | (0008,0016) | O |
| Image | Image Number | (0020,0013) | R |
| Image | Image SOP Instance UID | (0008,0018) | U |

In addition, eFilm Workstation also supports the following types of attribute matching:

- Single Value Matching
- Universal Matching
- Wild Card Matching
- Range Matching

### 3.1.3.3.4. Presentation Context Acceptance Criterion

eFilm Workstation will accept all presentation contexts which match those of the preceding table (above, preceding page). No specific acceptance and/or prioritization rules are required.

### 3.1.3.4. Retrieve from eFilm Workstation

#### 3.1.3.4.1. Associated Real World Activity

A remote system retrieves one or more studies from the eFilm Workstation system.

#### 3.1.3.4.2. Accepted Presentation Contexts

| Presentation Context Table for Remote Retrieve from the Local eFilm Workstation Database | | | | | |
|---|---|---|---|---|---|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Patient Root Query Retrieve Information Model - MOVE | 1.2.840.10008.5.1.4.1.2.1.2 | Implicit VR, Little Endian | 1.2.840.10008.1.2 | SCP | None |
| Study Root Query Retrieve Information Model - MOVE | 1.2.840.10008.5.1.4.1.2.2.2 | Implicit VR, Little Endian | 1.2.840.10008.1.2 | SCP | None |

#### 3.1.3.4.3. SOP Specific Conformance Statement for SOP Retrieve Class

eFilm Workstation provides standard conformance.

In addition, eFilm Workstation offers relational retrieve. In other words, all studies from a single patient can be retrieved by entering a single patient ID for the Patient Root Query/Retrieve Model. Similarly, all images of a study or series may be retrieved by entering a single study or series UID for the Patient Root Query/Retrieve Model and the Study Root Query/Retrieve Model.

#### 3.1.3.4.4. Presentation Context Acceptance Criterion

eFilm Workstation will only accept requests for retrieval from those systems to which the application has been properly configured, with respect to Application Entity title, IP address or hostname, and DICOM port number.

### 3.1.4. eFilm Workstation DICOM Media Services

eFilm Workstation conforms to DICOM Media Storage Service and File Format (PS 3.10) and the Media Storage Application Profiles (PS 3.11) for reading images on CD-Recordable media.

The following application profile is supported by eFilm Workstation:

| Supported Application Profile | |
|---|---|
| **Description** | **Identifier** |
| General Purpose CD-R Image Interchange Profile | STD-GEN-CD |

eFilm Workstation, through its supported application profile (above), supports the real world activities listed below. Please note that some additional flexibility is also available.

| Real World Activities | | |
|---|---|---|
| **Real World Activity** | **Role** | **SC Option** |
| Display Directory of CD-R disk | FSR | Interchange |
| Read Image(s) from CD-R disk | FSR | Interchange |
| Create CD-R disk of images | FSC | Interchange |

#### 3.1.4.1. Real World Activity: Display Directory of CD-R Disk

eFilm Workstation assumes the role of FSR when reading the CD-R disk directory. Reading this directory will display an overview of the patients, studies, and images, organized in one of these ways:

| Type of Query | |
|---|---|
| **Type of Query** | **Levels** |
| Study Root Query | Study |

The user must supply at minimum the data for the Patient Name and Patient ID fields in order to display correctly the directory information. Reading the DICOMDIR contents is a standard feature in eFilm Workstation. The following DICOMDIR keys are used for distinguishing between the objects.

| DICOMDIR Keys Displayed by eFilm Workstation | | | |
|---|---|---|---|
| **Query Type** | **Level** | **Field** | **Tag** |
| Study Root | Study | Patient Name | (0010,0010) |
| Study Root | Study | Patient ID | (0010,0020) |
| Study Root | Study | Modality | (0008,0060) |
| Study Root | Study | Study ID | (0020,0010) |
| Study Root | Study | Study Instance UID | (0020,000D) |
| Study Root | Study | Study Description | (0008,1030) |

#### 3.1.4.2. Real World Activity: Read Images from CD-R Disk

When reading images from a CD-R, eFilm Workstation will assume the role of FSR. DICOM Part 10 Volume image import is standard.

In order for eFilm Workstation to store the images contained on a CD-R correctly, the following mandatory DICOM image attributes (DICOM Part 10) are required:

| Mandatory Keys: DICOM Part 10 File Import | | |
|---|---|---|
| **IOD** | **Field** | **Tag** |
| Patient | Patient Name | (0010,0010) |
| Patient | Patient ID | (0010,0020) |
| Study | Study ID | (0020,0010) |
| Study | Study UID | (0020,000D) |
| Series | Modality | (0008,0060) |
| Series | Series Number | (0020,0011) |
| Image | Referenced SOP Class UID in File | (0004,1510) |
| Image | Referenced SOP Instance UID in File | (0004,1511) |
| Image | Referenced Transfer Syntax UID in File | (0004,1512) |
| Image | Referenced File ID | (0004,1500) |
| Image | Image Number | (0020,0013) |

eFilm Workstation can only import and read images from the following SOP classes:

| Supported SOP Classes: DICOM Part 10 Import | |
|---|---|
| **Name** | **UID** |
| CR Image Storage | 1.2.840.10008.5.1.4.1.1.1 |
| CT Image Storage | 1.2.840.10008.5.1.4.1.1.2 |
| DX Image Storage (Presentation) | 1.2.840.10008.5.1.4.1.1.1.1 |
| DX Image Storage (Raw) | 1.2.840.10008.5.1.4.1.1.1.1.1 |
| MR Image Storage | 1.2.840.10008.5.1.4.1.1.4 |
| US Image Storage (retired) | 1.2.840.10008.5.1.4.1.1.6 |
| US Image Storage | 1.2.840.10008.5.1.4.1.1.6.1 |
| US Multi-Frame Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.3 |
| US Multi-Frame Image Storage | 1.2.840.10008.5.1.4.1.1.3.1 |
| SC Image Storage | 1.2.840.10008.5.1.4.1.1.7 |
| MG Storage (Presentation) | 1.2.840.10008.5.1.4.1.1.1.2 |
| MG Storage (Raw) | 1.2.840.10008.5.1.4.1.1.1.2.1 |
| NM Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.5 |
| NM Image Storage | 1.2.840.10008.5.1.4.1.1.20 |
| XA Image Storage | 1.2.840.10008.5.1.4.1.1.12.1 |
| XA Biplane Image Storage(Retired) | 1.2.840.10008.5.1.4.1.1.12.3 |
| RF Image Storage | 1.2.840.10008.5.1.4.1.1.12.2 |
| Standard PET Image Storage | 1.2.840.10008.5.1.4.1.1.128 |

The following transfer syntaxes are supported by eFilm Workstation when importing and reading CD-R images:

| Supported Transfer Syntaxes: DICOM Part 10 Import | |
|---|---|
| **Name** | **UID** |
| Implicit VR, Little Endian | 1.2.840.10008.1.2 |
| Explicit VR, JPEG Baseline (Process 1) | 1.2.840.10008.1.2.4.50 |
| Explicit VR, JPEG Baseline (Process 4) | 1.2.840.10008.1.2.4.51 |

| | |
|---|---|
| Explicit VR, JPEG Lossless, NH,FOP (Process 14) | 1.2.840.10008.1.2.4.70 |
| RLE Lossless | 1.2.840.10008.1.2.5 |

### 3.1.4.3. Real World Activity: Write Images

The user selects a study from the Study Manager, and selects “Burn CD”.

eFilm Workstation can only create DICOMDIR files for DICOM compliant CD-R creation for the following SOP classes:

| **Supported SOP Classes: DICOM Part 10 Export** | |
|---|---|
| **Name** | **UID** |
| CR Image Storage | 1.2.840.10008.5.1.4.1.1.1 |
| CT Image Storage | 1.2.840.10008.5.1.4.1.1.2 |
| DX Image Storage (Presentation) | 1.2.840.10008.5.1.4.1.1.1.1 |
| DX Image Storage (Raw) | 1.2.840.10008.5.1.4.1.1.1.1.1 |
| MR Image Storage | 1.2.840.10008.5.1.4.1.1.4 |
| US Image Storage (retired) | 1.2.840.10008.5.1.4.1.1.6 |
| US Image Storage | 1.2.840.10008.5.1.4.1.1.6.1 |
| US Multi-Frame Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.3 |
| US Multi-Frame Image Storage | 1.2.840.10008.5.1.4.1.1.3.1 |
| SC Image Storage | 1.2.840.10008.5.1.4.1.1.7 |
| MG Storage (Presentation) | 1.2.840.10008.5.1.4.1.1.1.2 |
| MG Storage (Raw) | 1.2.840.10008.5.1.4.1.1.1.2.1 |
| NM Image Storage (Retired) | 1.2.840.10008.5.1.4.1.1.5 |
| NM Image Storage | 1.2.840.10008.5.1.4.1.1.20 |
| XA Image Storage | 1.2.840.10008.5.1.4.1.1.12.1 |
| XA Biplane Image Storage(Retired) | 1.2.840.10008.5.1.4.1.1.12.3 |
| RF Image Storage | 1.2.840.10008.5.1.4.1.1.12.2 |
| Standard PET Image Storage | 1.2.840.10008.5.1.4.1.1.128 |

The following transfer syntaxes are supported by eFilm Workstation when creating DICOMDIR files.

| **Supported Transfer Syntaxes: DICOM Part 10 Export** | |
|---|---|
| **Name** | **UID** |
| Implicit VR, Little Endian | 1.2.840.10008.1.2 |
| Explicit VR, JPEG Baseline (Process 1) | 1.2.840.10008.1.2.4.50 |
| Explicit VR, JPEG Baseline (Process 4) | 1.2.840.10008.1.2.4.51 |
| Explicit VR, JPEG Lossless, NH,FOP (Process 14) | 1.2.840.10008.1.2.4.70 |
| RLE Lossless | 1.2.840.10008.1.2.5 |

# 4. COMMUNICATION PROFILE

## 4.1. Supported Communication Stacks

DICOM Part 8 is supported by eFilm Workstation through TCP/IP.

## 4.2. OSI Stack

OSI stack is not supported by eFilm Workstation.

## 4.3. TCP/IP Stack

The TCP/IP stack supported by eFilm Workstation is inherited from the host operating system (Windows 95/98/NT/2000/XP Professional).

### 4.3.1. Physical Media Support

Any Windows 95/98/NT/2000/XP Professional supported physical media.

## 4.4. Point-to-Point Stack

eFilm Workstation does not support 50-pin ACR-NEMA connection.

# 5. EXTENSIONS/SPECIALIZATIONS/PRIVATIZATIONS

## 5.1. Standard Extended/Specialized/Private SOPs

Not applicable.

## 5.2. Private Transfer Syntaxes

Not applicable.

# 6. CONFIGURATION

Local AE titles are configurable.

## 6.1. AE Title/Presentation Address Mapping

The local AE title can be configured by authorized personnel. Such personnel may change configurations through the settings of the Process Manager.

## 6.2. Configuration Parameters

The following fields are configurable for the local AE:

- Local AE Title
- Listening TCP/IP Port (default port is 4006)
- Number of simultaneous connections
- Priority of child processes

The following fields are configurable for any remote AE:

- Remote AE
- Remote TCP/IP Port
- Remote IP Address

# 7. SUPPORT OF EXTENDED CHARACTER SETS

eFilm Workstation supports the use of the Japanese Character Repertoire in the applicable Value Representations, such as Patient's Name, Study Description and Series Description.