

ACUSON

A Siemens Company

KinetDx WS3000 Ultrasound Workstation

DICOM Conformance Statement

Revision: 2.5

Revision History

| Revision | Date | Author | Reason for Change |
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| 1.0 | 01/25/00 | Dave Hall | First version. |
| 2.5 | 05/01/01 | Brian Ferguson | Update for Print Manager conformance and Media Interchange Support. |

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1. INTRODUCTION

1.0 Purpose of this Document

This document is a DICOM Conformance Statement for the KinetDx WS3000 Ultrasound Workstation.

The KinetDx WS3000 Workstation is an ultrasound review station that displays DICOM Images conforming to the Ultrasound Image Storage and Ultrasound Multi-frame Image Storage SOP Classes. The WS3000 Workstation is part of the Acuson KinetDx product line and is designed to operate in conjunction with the KinetDx Server. The WS3000 Workstation and the KinetDx Server use DICOM as an external interface standard. Other non-DICOM internal communication mechanisms between the WS3000 Workstation and the KinetDx Server are used for the display of images.

The WS3000 Workstation displays ultrasound images from the KinetDx Server or from supported DICOM media. Table 3.2.1.2.2-1 describes the image formats supported when the image source is DICOM Media Storage.

The WS3000 Workstation has the following explicit DICOM capabilities:

- Prints images to DICOM Printers, acts as a Service Class User of the Print Management Services
- Reads Studies from DICOM Media Storage, a File-set Reader
- Writes Studies to DICOM Media Storage, a File-set Updater
- Deletes Studies from DICOM Media Storage, a File-set Updater
- Creates a DICOMDIR on DICOM Media Storage, a File-set Creator

1.1 Sources for this Document

- ACR-NEMA Digital Imaging and Communications in Medicine (DICOM) Version 3.0.

1.2 Acronyms and Abbreviations

The following Acronyms and abbreviations are used in this document:

- | | |
|----------|---|
| • ACR | American College of Radiology |
| • AE | Application Entity |
| • DICOM | Digital Imaging and Communications in Medicine |
| • FSC | File-set Creator |
| • FSR | File-set Reader |
| • FSU | File-set Updater |
| • NEMA | National Electrical Manufacturers Association |
| • PDU | Protocol Data Unit |
| • SCP | Service Class Provider |
| • SCU | Service Class User |
| • SOP | Service Object Pair |
| • TCP/IP | Transmission Control Protocol/Internet Protocol |
| • UID | Unique Identifier |

2. NETWORK CONFORMANCE STATEMENT

2.0 Introduction

This section of the DICOM conformance statement specifies the compliance to the DICOM conformance requirements for the relevant **Networking** features of the KinetDx WS3000 Workstation. Note that the format of this section strictly follows the format described in DICOM Standard PS 3.2 (Conformance). Please refer to that part of the standard while reading this section.

The KinetDx WS3000 Workstation is a medical imaging workstation designed to review ultrasound images. It operates in conjunction with the KinetDx Server for retrieval and display of ultrasound images. Refer to the KinetDx Server DICOM Conformance Statement for a description of the KinetDx Server's DICOM capabilities.

This station uses DICOM services to print images to DICOM Printers.

2.1 Implementation Model

The KinetDx WS3000 Workstation DICOM Service is implemented as a separate process that can initiate associations with remote Application Entities. The Service is started automatically during system start-up and will remain active until shut down.

2.1.1 Application Data Flow Diagram

The Implementation Model for the KinetDx WS3000 Workstation DICOM services is shown in Figure 2.1.1-1.

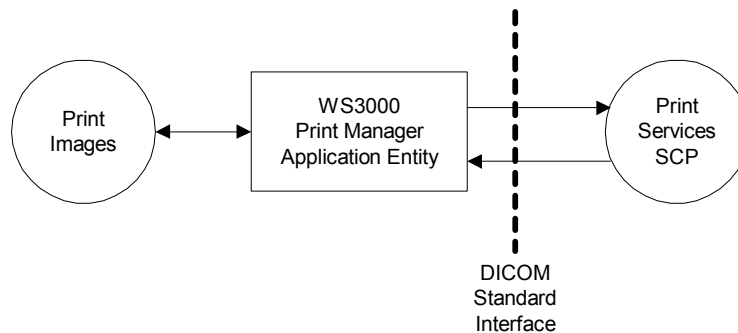


Figure 2.1.1-1

2.1.2 Functional Definition of Application Entities

The Application Entity of the KinetDx WS3000 Print Manager acts as an SCU for the basic grayscale and color print management meta SOP classes. The user can print selected images or all images in a series to a DICOM printer.

The KinetDx WS3000 Print Manager Application Entity operates in conjunction with two files for each printer.

The Printer Template file describes the capabilities of a particular printer. The Printer Template file resides on the KinetDx Server and is identical for all KinetDx WS3000 Workstations that connect to the KinetDx Server.

The Printer Descriptor file describes the default settings for the specific printer. A graphical user interface is available to allow configuration of the default settings.

2.1.3 Sequencing of Real World Activities

Not Applicable

2.2 Application Entity Specifications

2.2.1 Print Manager Application Entity Specification

The WS3000 Print Manager Application provides standard conformance to the following DICOM V3.0 SOP Classes as an SCU.

| SOP Class | SOP Class UID |
|---------------------------------------|------------------------|
| Basic Grayscale Print Management Meta | 1.2.840.10008.5.1.1.9 |
| Basic Color Print Management Meta | 1.2.840.10008.5.1.1.18 |

2.2.1.1 Association Establishment Policies

The WS3000 Print Manager Application will initiate an association with the configured DICOM Print SCP. The WS3000 Print Manager Application does not accept associations.

2.2.1.1.1 General

The Print Manager Application offers a maximum PDU size of 32 KB (32,768 bytes) upon association initiation.

2.2.1.1.2 Number of Associations

The WS3000 Print Manager Application will queue multiple print jobs such that it only establishes one association as an SCU at a time when it manages multiple DICOM printer destinations.

2.2.1.1.3 Asynchronous Nature

The WS3000 Print Manager Application does not support asynchronous operations.

2.2.1.1.4 Implementation Identifying Information

The WS3000 Print Manager Application uses the following implementation identifying parameters:

| | |
|-----------------------------|---------------------|
| Implementation Class UID | 1.2.840.113680.19.1 |
| Implementation Version Name | DS19.1_ |

2.2.1.2 Association Initiation by Real-World Activity

The WS3000 Print Manager Application initiates associations for the following activities:

- The user wants to print grayscale images to a DICOM printer.
- The user wants to print color images to a DICOM Printer

2.2.1.2.1 Real-World Activity – Print

2.2.1.2.1.1 Associated Real World Activities

An association is established when the user initiates a print operation from the graphical user interface. Individual images, a range of images, or the entire study can be sent to the configured DICOM Print device. The association is opened when the first image is transferred and closed when the last image transfer is complete. The user can choose several parameters such as the layout of the film and number of copies to be printed.

2.2.1.2.1.2 Proposed Presentation Context to a Grayscale Printer

| Presentation Context Table | | | | | |
|---------------------------------------|-----------------------|---------------------------|-------------------|------|----------------------|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Basic Grayscale Print Management Meta | 1.2.840.10008.5.1.1.9 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCU | None |

2.2.1.2.1.2.1 SOP Specific Conformance to Basic Grayscale Print Management Meta SOP Class

The WS3000 Print Management Application provides standard conformance to the Grayscale Meta SOP classes as an SCU. Specifically, with respect to the Basic Grayscale Print Management Meta SOP class this means conformance to the underlying SOP classes:

| Supported SOP classes as Basic Grayscale Print Management Meta SOP Class | |
|--|------------------------|
| 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 |

All mandatory elements of these classes are supported.

2.2.1.2.1.2.1.1 SOP Specific Conformance to Basic Film Session SOP Class**Table 2.2.1.2.1.2.1.1-1 Supported DIMSE Services for Basic Film Session SOP Class**

| Name | Usage | Description |
|----------|-------|---------------------------|
| N-Create | M | Creates the Film Session. |
| N-Set | U | Not used. |
| N-Delete | U | Deletes the Film Session. |
| N-Action | U | Not used. |

DICOM specified usage – M = Mandatory; U = User Option

Table 2.2.1.2.1.2.1.1-2 Supported Basic Film Session SOP Class Elements

| Attribute Name | Attribute Tag | Usage | Valid Range |
|--------------------|---------------|-------|---|
| Number of Copies | (2000,0010) | U | 1 - 99 |
| Print Priority | (2000,0020) | U | HIGH MED LOW |
| Medium Type | (2000,0030) | U | BLUE FILM CLEAR FILM PAPER CURRENT |
| Film Destination | (2000,0040) | U | PROCESSOR MAGAZINE |
| Film Session Label | (2000,0050) | U | Incrementing Integer created by Print Manager Application |

DICOM specified usage – M = Mandatory; U = User Option

2.2.1.2.1.2.1.2 SOP Specific Conformance to Basic Film Box SOP Class**Table 2.2.1.2.1.2.1.2-1 Supported DIMSE Services for Basic Film Box SOP Class**

| Name | Usage | Description |
|----------|-------|---|
| N-Create | M | Creates the Film Box. |
| N-Set | U | Not used. |
| N-Delete | U | Deletes the Film Box. Issued after film is printed. |
| N-Action | M | PRINT. Sent after each Film Box is filled and to print a partially filled Film Box. |

DICOM specified usage – M = Mandatory; U = User Option

Table 2.2.1.2.1.2.1.2-2 Optional Attributes set for the Basic Film Box SOP Class

| Attribute Name | Attribute Tag | Usage | Valid Range |
|---------------------|---------------|-------|---|
| Film Orientation | (2010,0040) | U | PORTRAIT LANDSCAPE |
| Film Size ID | (2010,0050) | U | 8INX10IN 14INX17IN 10INX12IN 10INX14IN 11INX14IN 14INX14IN 24CMX24CM 24CMX30CM |
| Magnification Type | (2010,0060) | U | REPLICATE BILINEAR CUBIC NONE |
| Border Density | (2010,0100) | U | BLACK WHITE |
| Empty Image Density | (2010,0110) | U | BLACK WHITE |
| Min Density | (2010,0120) | U | 0 - 1000 |
| Max Density | (2010,0130) | U | 0 - 1000 |
| Trim | (2010,0140) | U | YES NO |

DICOM specified usage – M = Mandatory; U = User Option

2.2.1.2.1.2.1.3 SOP Specific Conformance to Grayscale Image Box SOP Class

Table 2.2.1.2.1.2.1.3-1 Supported DIMSE Services for Basic Grayscale Image Box SOP Class

| Name | Usage | Description |
|-------|-------|---|
| N-Set | M | The SCP for each potential image of the film box creates an image box instance. Only those instances that actually contain images will be updated with the N-SET message. |

DICOM specified usage – M = Mandatory; U = User Option

No optional attributes are supported for the Basic Grayscale Image Box SOP Class.

2.2.1.2.1.2.1.4 SOP Specific Conformance for Printer SOP Class

Table 2.2.1.2.1.2.1.4-1 Supported DIMSE Services for Printer SOP Class

| Name | Usage | Description |
|----------------|-------|---|
| N-Event-Report | M | Ignored and not handled. |
| N-Get | U | Issued prior to creating the Print Session to get printer status. |

DICOM specified usage – M = Mandatory; U = User Option

Table 2.2.1.2.1.4-2 Supported Printer SOP Class Elements

| Attribute Name | Attribute Tag | Usage | Valid Range |
|----------------------|---------------|-------|------------------------------|
| Manufacturer | (0008,0070) | U | Vendor Specific |
| Manufacturer's Model | (0008,1090) | U | Vendor Specific |
| Software Version(s) | (0018,1020) | U | Vendor Specific |
| Printer Status | (2110,0010) | U | NORMAL WARNING FAILURE |
| Printer Name | (2110,0030) | U | Vendor Specific |

DICOM specified usage – M = Mandatory; U = User Option

2.2.1.2.1.3 Proposed Presentation Context to a Color Printer

| Presentation Context Table | | | | | |
|-----------------------------------|------------------------|------------------------------|-------------------|------|----------------------|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Basic Color Print Management Meta | 1.2.840.10008.5.1.1.18 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCU | None |

2.2.1.2.1.3.1 SOP Specific Conformance to Basic Color Print Management Meta SOP Class

The WS3000 Print Management Application provides standard conformance to the color printing Meta SOP classes as an SCU. Specifically, with respect to the Basic Color Print Management Meta SOP class this means conformance to the underlying SOP classes:

| Supported SOP classes as Basic Color Print Management Meta SOP Class | |
|--|-------------------------|
| 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 Color Image Box | 1.2.840.10008.5.1.1.4.1 |
| Printer | 1.2.840.10008.5.1.1.16 |

All mandatory elements of these classes are supported.

2.2.1.2.1.3.1.1 SOP Specific Conformance to Basic Color Image Box SOP Class

The Basic Color Image Box SOP Class makes identical use of the *Basic Film Session SOP Class*, *Basic Film Box SOP Class* and *Printer SOP Class* elements that have been previously described for grayscale image printing. Therefore these will not be described again in this section on color printing. However, it should be noted that certain attributes defined in the Basic Film Session SOP Class (i.e. Medium Type) are likely to require printer/print server specific media.

Table 2.2.1.2.1.3.1.1-1 Supported DIMSE Services for the Basic Color Image Box SOP Class

| Name | Usage | Description |
|-------------|--------------|---|
| N-Set | M | The SCP for each potential image of the film box creates an image box instance. Only those instances that actually contain images will be updated with the N-SET message. |

DICOM specified usage – M = Mandatory; U = User Option

No optional attributes are supported for the Basic Color Image Box SOP Class.

The Printer SOP Class behavior is identical to that used for grayscale printing.

2.2.1.3 Association Acceptance Policy

The WS3000 Print Manager Application does not accept associations.

2.3 Communication Profiles

2.3.1 Supported Communications Stacks

The WS3000 Print Manager Application provides DICOM V3.0 TCP/IP Network Communication Support as defined in Part 8 of the DICOM standard.

2.3.2 TCP/IP Stack

The WS3000 Print Manager uses the TCP/IP stack from the Microsoft Windows NT operating system upon which it executes.

2.3.2.1 Physical Media Support

The WS3000 Print Manager is not dependent on the physical medium over which the TCP/IP executes.

2.4 Extensions/Specializations/Privatizations

The KinetDx WS3000 Workstation has no extensions, specializations or privatizations of SOP Classes and Transfer Syntaxes.

2.5 Configuration

The configuration of the WS3000 Print Manager Application is stored in the Windows NT Registry. Support personnel typically perform configuration changes.

2.5.1 AE Title/Presentation Address Mapping

The AE Title for the WS3000 Print Manager is the NetBIOS Name of the computer. This parameter can be configured via the graphical user interface of the host and is limited to 15 characters.

For systems with which the WS3000 Print Manager acts as an SCU, the following information is needed:

- The AE Title
- The IP address
- The listening port number

This information is used to create the Printer Descriptor file that is stored on the KinetDx Server.

2.5.2 Configurable Parameters

Not Applicable

2.6 Support of Extended Character Sets

The KinetDx WS3000 Workstation supports the following character sets:

- ISO-IR 6 (default) Basic G0 Set
- ISO-IR 100 Latin Alphabet No. 1

3. MEDIA STORAGE CONFORMANCE STATEMENT

3.0 Introduction

This section specifies the KinetDx WS3000 compliance to the DICOM Media Interchange. It details the DICOM Media Storage Application Profiles and roles that are supported.

This station provides DICOM interchange capabilities on CD-Rs (Compact Disk – Recordable) on CDROMs (Compact Disk Read Only Memory) and on MODs (Magneto Optical Disc) with different application profiles supported for each media.

Note that the format of this section strictly follows the format described in DICOM Standard PS 3.2 (Conformance). Please refer to that part of the standard while reading this section.

3.1 Implementation Model

3.1.1 Application Data Flow Diagram

The Basic and Specific Application models for the CD-R device, the CDROM device and the MOD device are shown in the following illustrations:

- Description of the Data Flow Diagram for the CD-R device.

The Display/Edit Application Entity (AE) handles the Directory Display, Image Viewing, Study Updating, Study Copying and CD-R Creation functionality for the CD-R device. The Display/Edit Application Entity (AE) is commanded by the user to perform DICOM Services operating on the DICOM media through the use of buttons and menu selections on the graphical user interface of the station.

The Application models for the CD-R device are shown in Figure 3.1.1-1.

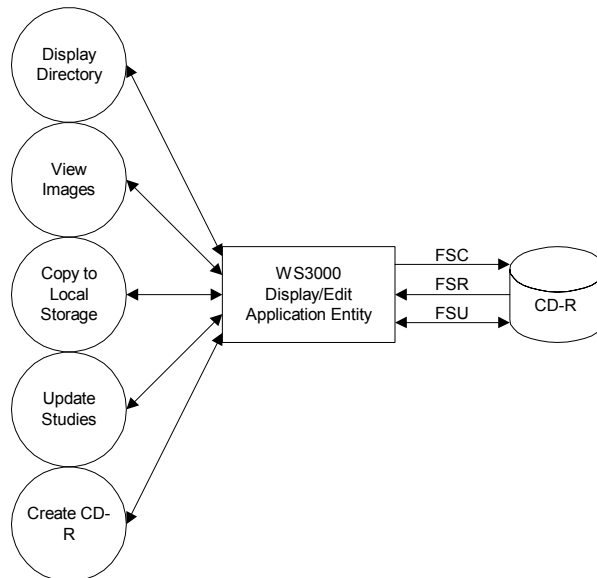


Figure 3.1.1-1

- Description of the Data Flow Diagram for the CDROM device.

The Display/Edit Application Entity (AE) handles the Directory Display, Image Viewing, and Study Copying functionality for the CDROM device. The Display/Edit Application Entity (AE) is commanded by the user to perform DICOM Services operating on the DICOM media through the use of buttons and menu selections on the graphical user interface of the station.

The Application models for the CDROM device are shown in Figure 3.1.1-2.

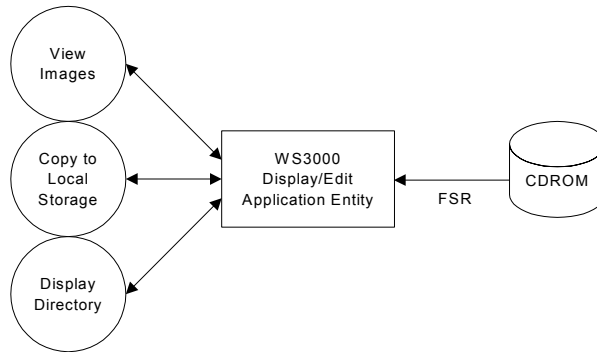


Figure 3.1.1-2

- Description of the Data Flow Diagram for the MOD device.

The Display/Edit Application Entity (AE) handles the Directory Display, Image Viewing, Study Updating, Study Copying and MOD Creation functionality for the MOD device. The Display/Edit Application Entity (AE) is commanded by the user to perform DICOM Services operating on the DICOM media through the use of buttons and menu selections on the graphical user interface of the station.

The Application models for the MOD device are shown in Figure 3.1.1-3.

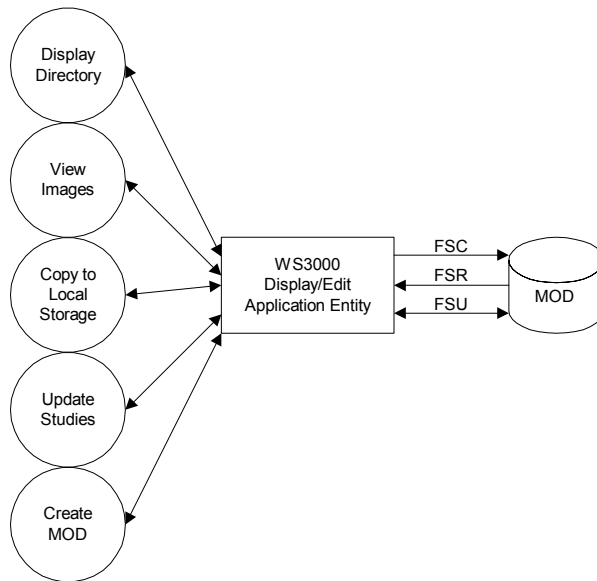


Figure 3.1.1-3

3.1.2 Functional Definition of Application Entities

The KinetDx WS3000 has only one Application Entity: the Display/Edit Application.

The Display/Edit Application supports the following functions:

- Display a directory listing of the DICOM File Set (FSR)
- Display images from a DICOM File Set (FSR)
- Copy images from a DICOM File Set (FSR)
- Update or Delete DICOM File Sets (FSU)
- Create DICOM File Set on a CDROM or MOD (FSC)

3.1.3 Sequencing of Real World Activities

For writing on new MODs, it is necessary to format the MOD before the user can write a DICOM File Set.

A DICOM File Set must exist on the media for a DICOM File Set to be updated.

3.1.4 File Meta Information for Implementation Class and Version

| | |
|--------------------------------------|----------------------|
| File Meta Information Version | 1 |
| Implementation Class UID | 1.2.840.113680.3.105 |
| Implementation Version Name | KinetDx 2.5 |

3.2 Application Entity Specifications

3.2.1 Display/Edit Application Entity Specification

The Display/Edit Application Entity provides standard conformance to the DICOM Interchange Option of the Media Storage Service Class. The Application Profiles and roles are listed in Table 3.3.1-1.

Table 3.2.1-1 Display/Edit Application Entity Profiles, Real-World Activities, and Roles

| Supported AP's | Real-World Activity | Roles | SC Option |
|--|----------------------------|--------------|------------------|
| STD-US-ID-MF-MOD230 STD-US-SC-MF-MOD230 STD-US-SC-MF-CDR | Display Directory | FSR | Interchange |
| STD-US-ID-MF-MOD230 STD-US-SC-MF-MOD230 STD-US-SC-MF-CDR | View Images* | FSR | Interchange |
| STD-US-ID-MF-MOD230 STD-US-SC-MF-MOD230 STD-US-SC-MF-CDR | Copy to Local Storage | FSR | Interchange |
| STD-US-ID-MF-MOD230 STD-US-SC-MF-MOD230 STD-US-SC-MF-CDR | Update Studies | FSU | Interchange |
| STD-US-ID-MF-MOD230 STD-US-SC-MF-MOD230 | Create MOD | FSC | Interchange |
| STD-US-SC-MF-CDR | Create CD-R | FSC | Interchange |

* Partial Conformance – See 3.2.1.2.2 Real World Activity: View Images

The Display/Edit Application Entity provides support for SOP Classes shown in Table 3.2.1-2.

Table 3.2.1-2 Supported SOP Classes

| Information Object Definition | SOP Class UID | Transfer Syntax | Transfer Syntax UID |
|--------------------------------------|-----------------------------|--|------------------------|
| DICOM Media Storage Directory | 1.2.840.10008.1.3.10 | Explicit VR Little Endian Uncompressed | 1.2.840.10008.1.2.1 |
| Ultrasound Image Storage | 1.2.840.10008.5.1.4.1.1.6.1 | Explicit VR Little Endian Uncompressed | 1.2.840.10008.1.2.1 |
| | | RLE Lossless Image Compression | 1.2.840.10008.1.2.5 |
| | | JPEG Lossy | 1.2.840.10008.1.2.4.50 |
| Ultrasound Multi-frame Image Storage | 1.2.840.10008.5.1.4.1.1.3.1 | Explicit VR Little Endian Uncompressed | 1.2.840.10008.1.2.1 |
| | | RLE Lossless Image Compression | 1.2.840.10008.1.2.5 |
| | | JPEG Lossy | 1.2.840.10008.1.2.4.50 |

3.2.1.1 File Meta Information for Display/Edit Application Entity

| | |
|--|--|
| Source Application Entity Title | Uses the AE Title assigned to the KinetDx WS3000 Workstation |
|--|--|

3.2.1.2 Real World Activities for the Display/Edit Application Entity

The KinetDx WS3000 Display/Edit Application Entity is used for the following real world activities:

- Display Directory Listing. In this activity the Display/Edit Application Entity acts as a File-Set Reader.
- Viewing of Images. In this activity the Display/Edit Application Entity acts as a File-Set Reader.
- Copy to Local Storage. In this activity the Display/Edit Application Entity acts as a File-Set Reader.
- Updating Images. In this activity the Display/Edit Application Entity acts as a File-Set Updater.
- Creating a MOD or CDR. In this activity the Display/Edit Application Entity acts as a File-Set Creator.

3.2.1.2.1 Real World Activity: Display Directory

The KinetDx WS3000 Display/Edit Application is an FSR when reading the directory of the medium. This will result in an overview of the patients, studies and images in the WS3000 Study List.

3.2.1.2.1.1 Media Storage Application Profile for the RWA: Display Directory

For the list of Application Profiles that invoke this AE for the Display Directory RWA, see Table 3.2.1-1.

3.2.1.2.1.1 Options:

The following SOP Class is supported by the RWA: Display Directory Listing

| Information Object Definition | SOP Class UID | Transfer Syntax | Transfer Syntax UID |
|-------------------------------|----------------------|--|---------------------|
| DICOM Media Storage Directory | 1.2.840.10008.1.3.10 | Explicit VR Little Endian Uncompressed | 1.2.840.10008.1.2.1 |

3.2.1.2.2 Real World Activity: View Images

The KinetDx WS3000 Display/Edit Application is an FSR when viewing images from the medium.

The WS3000 partially supports the multi-frame ultrasound “image display” Application Profile for 230 MB MOD and the multi-frame ultrasound “spatial calibration” Application Profile for 230 MB MOD and CD-R. The following table shows the defined Photometric Interpretation and Transfer Syntax Pairs specified by the Application Profiles STD-US-ID-MF-MOD230, STD-US-SC-MF-MOD230, and STD-US-SC-MF-CDR. The last column indicates if the combination is supported.

Table 3.2.1.2.2-1 Supported Photometric Interpretation – Transfer Syntax Pairs

| Photometric Interpretation Value | Transfer Syntax | Transfer Syntax UID | Supported |
|----------------------------------|--------------------------|------------------------|-----------|
| MONOCHROME2 | Uncompressed | 1.2.840.10008.1.2.1 | Yes |
| MONOCHROME2 | RLE Lossless Compression | 1.2.840.10008.1.2.5 | Yes |
| RGB | Uncompressed | 1.2.840.10008.1.2.1 | Yes |
| RGB | RLE Lossless Compression | 1.2.840.10008.1.2.5 | No |
| Palette Color | Uncompressed | 1.2.840.10008.1.2.1 | Yes |
| Palette Color | RLE Lossless Compression | 1.2.840.10008.1.2.5 | Yes |
| YBR_FULL | RLE Lossless Compression | 1.2.840.10008.1.2.5 | Yes |
| YBR_FULL_422 | Uncompressed | 1.2.840.10008.1.2.1 | No |
| YBR_FULL_422 | JPEG Lossy | 1.2.840.10008.1.2.4.50 | Yes |
| YBR_PARTIAL_422 | Uncompressed | 1.2.840.10008.1.2.1 | No |
| YBR_PARTIAL_422 | JPEG Lossy | 1.2.840.10008.1.2.4.50 | No |

3.2.1.2.2.1 Media Storage Application Profile for the RWA: View Images

For the list of Application Profiles that invoke this AE for the View Images RWA, see Table 3.2.1-1.

3.2.1.2.2.1.1 Options:

See Table 3.2.1-2 for the SOP Classes supported by the RWA: View Images.

3.2.1.2.3 Real World Activity: Copy to Local Storage

The KinetDx WS3000 Display/Edit Application is an FSR when copying studies from the medium to local storage. The Display/Edit Application will copy any SOP Instance from the medium directory list to local storage.

3.2.1.2.3.1 Media Storage Application Profile for the RWA: Copy to Local Storage

For the list of Application Profiles that invoke this AE for the Copy to Local Storage RWA, see Table 3.2.1-1.

3.2.1.2.3.1.1 Options:

See Table 3.2.1-2 for the SOP Classes supported by the RWA: Copy to Local Storage.

3.2.1.2.4 Real World Activity: Update Studies

The KinetDx WS3000 Display/Edit Application is an FSU using the Interchange option when adding or deleting studies to the medium. The Display/Edit Application will copy any SOP Instance from Local Storage to the medium. The KinetDx WS3000 Display/Edit Application will delete any study displayed in the directory of the medium.

- The Display/Edit Application cannot delete studies from a CD-R.
- The Display/Edit Application cannot add or delete studies to MOD media that has been write protected.

3.2.1.2.4.1 Media Storage Application Profile for the RWA: Update Studies

For the list of Application Profiles that invoke this AE for the Copy to Local Storage RWA, see Table 3.2.1-1.

3.2.1.2.4.1.1 Options:

See Table 3.2.1-2 for the SOP Classes supported by the RWA: Update Studies.

3.2.1.2.5 Real World Activity: Create MOD

The KinetDx WS3000 Display/Edit Application will act as an FSC when creating an MOD. A DICOMDIR is created and studies can be exported to the MOD (See RWA: Update Studies.)

3.2.1.2.5.1 Media Storage Application Profile for the RWA: Create MOD

For the list of Application Profiles that invoke this AE for the Create MOD RWA, see Table 3.2.1-1.

3.2.1.2.5.1.1 Options:

The following SOP Class is supported by the RWA: Create MOD

| Information Object Definition | SOP Class UID | Transfer Syntax | Transfer Syntax UID |
|--------------------------------------|----------------------|--|----------------------------|
| DICOM Media Storage Directory | 1.2.840.10008.1.3.10 | Explicit VR Little Endian Uncompressed | 1.2.840.10008.1.2.1 |

3.2.1.2.6 Real World Activity: Create CD-R

The KinetDx WS3000 Display/Edit Application is an FSC when creating a CD-R. A DICOMDIR is created and studies can be exported to the CD-R (See RWA: Update Studies.)

3.2.1.2.6.1 Media Storage Application Profile for the RWA: Create MOD

For the list of Application Profiles that invoke this AE for the Create CD-R RWA, see Table 3.2.1-1.

3.2.1.2.6.1.1 Options:

The following SOP Class is supported by the RWA: Create CD-R

| Information Object Definition | SOP Class UID | Transfer Syntax | Transfer Syntax UID |
|--------------------------------------|----------------------|--|----------------------------|
| DICOM Media Storage Directory | 1.2.840.10008.1.3.10 | Explicit VR Little Endian Uncompressed | 1.2.840.10008.1.2.1 |

3.3 Augmented and Private Application Profiles

The KinetDx WS3000 Workstation has no augmented or private Application Profiles.

3.4 Extensions/Specializations/Privatizations

The KinetDx WS3000 Workstation has no extensions, specializations or privatizations of SOP Classes and Transfer Syntaxes.

3.5 Configuration

The Source AE Title encoded in the File Meta Information is derived from the AE Title of the workstation.

3.6 Support of Extended Character Sets

The KinetDx WS3000 Workstation supports the following character sets:

- ISO-IR 6 (default) Basic G0 Set
- ISO-IR 100 Latin Alphabet No. 1