Kodak DirectView CR System
Software Version 4.6

DICOM Conformance Statement

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Revision History

Ver	Date	Author	Description
1.0	2/17/2006	Trac Tran	Initial for CR version 4.6

Contents

1   Introduction

1.1   Executive Overview

This document covers the following *Kodak DirectView* CR Systems:

Kodak DirectView CR 500 System

Kodak DirectView CR 800 System

Kodak DirectView CR 825 System

Kodak DirectView CR 850 System

Kodak DirectView CR 900 System

Kodak DirectView CR 950 System

Kodak DirectView CR 975 System

This document applies to all *Kodak DirectView* CR products utilizing the version 4.6 software.

The following DICOM SOP Classes are supported:

SOP Class Name	SOP Class UID	Service Class Role
Verification SOP Class	1.2.840.10008.1.1	SCU, SCP
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9	SCU
Modality Worklist Information Model – FIND	1.2.840.10008.5.1.4.31	SCU
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	SCU
Basic Annotation Box SOP Class	1.2.840.10008.5.1.1.15	SCU
Modality Performed Procedure Step Notification SOP Class	1.2.840.10008.3.1.2.3.5	SCU
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1	SCU

1.2   Scope and Field of Application

This document describes the DICOM functionality of *Kodak DirectView* CR Systems. The CR System covered by this document is a family of laser scanners capable of reading the latent image formed on a storage phosphor imaging plate and producing a digital image. While the various products making up this family of scanners may vary in performance or other specific user features, the information in this document applies to all unless otherwise stated. Throughout the rest of this document the term *DirectView* CR System applies to all members of the CR product family. The *DirectView* CR System acts as a DICOM Service Class User (SCU). The *DirectView* CR System performs transactions over a TCP/IP network via the DICOM messages exchange

protocol. The *DirectView* CR System uses *Kodak* PACS Link Medical Image Manager V6.2 software as the application software to capture and distribute images and data.

1.3   Important Considerations for the Reader

This DICOM Conformance Statement by itself is not sufficient to guarantee successful connectivity between the *DirectView* CR System and equipment from other vendors. The following considerations should be made:

- The integration of equipment from different vendors (including Kodak) goes beyond the scope of the DICOM 3.0 standard and the DICOM Conformance Statements from Kodak and other vendors. It is the responsibility of the user (or user's agent) to assess the application requirements and to design a solution that integrates *Kodak* equipment with equipment from other vendors.

- When the comparison of this DICOM Conformance Statement with a DICOM Conformance Statement from another vendor indicates that connectivity should be possible, it is the responsibility of the user (or user's agent) to verify this by carrying out validation tests and to check whether all required functionality (such as cut lines) is met.

- With regard to the future evolution of the DICOM 3.0 standard Eastman Kodak Company reserves the right to make changes to the *DirectView* CR System architecture described in this document. The user (or user's agent) should ensure that any equipment connected via DICOM to *Kodak* equipment also follows the future evolution of the DICOM 3.0 standard. Failure to do so may result in (partial) loss of connectivity.

1.4   Accessing this Conformance Statement on the World Wide Web

As the *DirectView* CR System product changes, changes to this DICOM Conformance Statement are inevitable. To obtain the most recent revision of this DICOM Conformance Statement, access the following URL:

http://www.kodak.com/global/en/health/serviceAndSupport/dicom.jhtml

1.5 Definitions, Acronyms, Abbreviations

The following symbols and abbreviations are used in this document.

ASCII	American Standard Code for Information Interchange
AE	Application Entity
CR	Computed Radiography
DICOM	Digital Imaging and Communications in Medicine
DIMSE	DICOM Message Service Element
DMI	Distributed Medical Imaging
HIS/RIS	Hospital Information System / Radiology Information System.
ISO	International Standards Organization
LUT	Look-up Table
MPPS	Modality Performed Procedure Step Notification SOP Class
PDU	Protocol Data Unit
PLUT	Presentation Look-up Table
SCU	Service Class User
SCP	Service Class Provider
SOP	Service-Object Pair
SC	Storage Commitment Push Model SOP Class
TCP/IP	Transmission Control Protocol/Internet Protocol
UID	Unique Identifier

2   Implementation Model

This implementation model uses the DICOM Basic Print Management Meta SOP Class to deliver studies to remote printers. The CR Image Storage SOP Class is used to deliver studies to archives. Basic Worklist Management service is used for the acquisition of patient demographics.
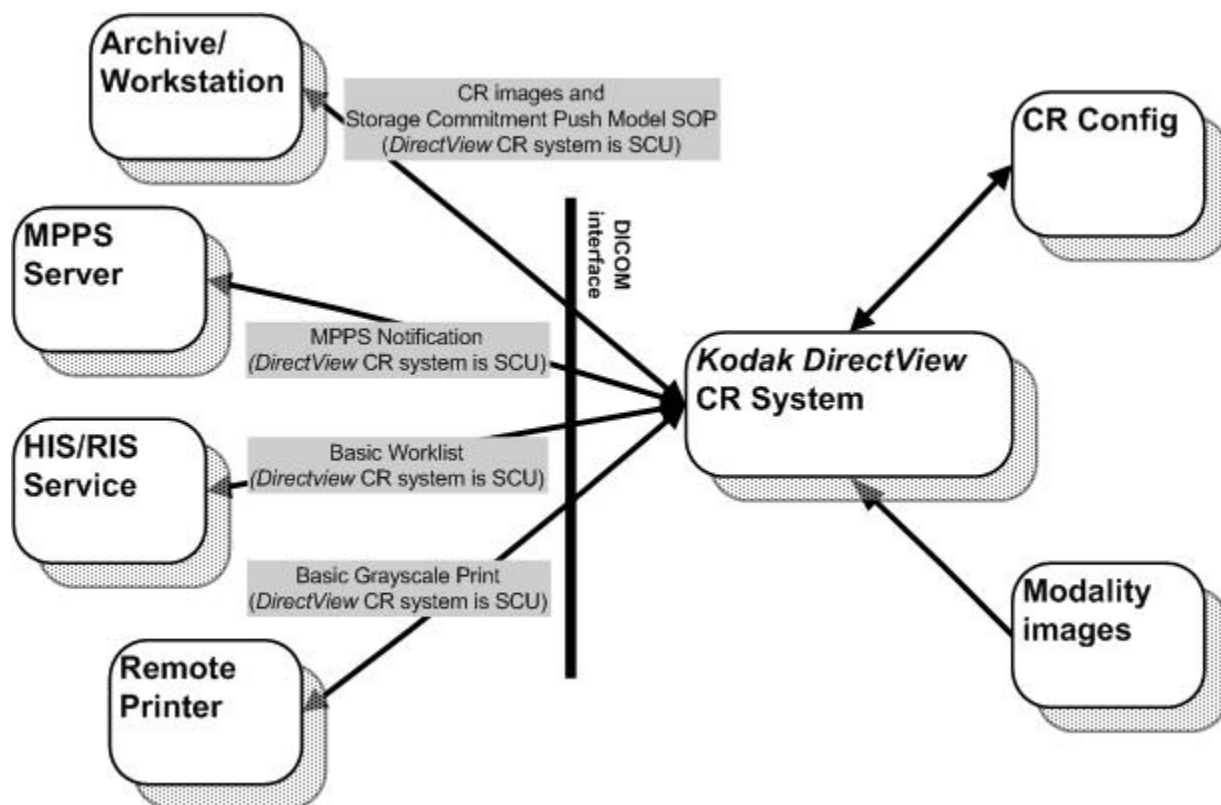
2.1   Functional Definitions

The *DirectView* CR System is a projection radiographic image acquisition product utilizing storage phosphor technology. The system is capable of obtaining patient demographic information manually from the user interface or the *Kodak DirectView* Remote Operations Panel. An optional connection to the site's information system allows patient demographic information to be transferred automatically. The system temporarily stores acquired images on an internal hard drive until they are forwarded to the desired destinations.

2.2   Sequencing of Real-World Activities

If a HIS/RIS service is present, the *DirectView* CR System establishes an association when the *DirectView* CR System application is started to obtain a modality worklist. The worklist is used as a source of patient demographics. The *DirectView* CR System establishes an association with a selected SCP when *DirectView* CR System has collected sufficient information to begin sending images.

3 Application Entity Specifications

The *DirectView* CR System provides Standard Conformance to the following SOP Classes as an SCU.

SOP Class Name	SOP Class UID
Verification SOP Class	1.2.840.10008.1.1
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9
Modality Worklist Information Model – FIND	1.2.840.10008.5.1.4.31
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1
Basic Annotation Box SOP Class	1.2.840.10008.5.1.1.15
Modality Performed Procedure Step Notification SOP Class	1.2.840.10008.3.1.2.3.5
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1

3.1 Association Establishment Policies

3.1.1 General

3.1.1.1 Delivery

An Association may be attempted whenever a valid destination is selected and at least one image has been acquired.

The maximum PDU size which the *DirectView* CR System will negotiate is 64Kbytes.

3.1.1.2 HIS/RIS

An Association for Basic Worklist will be attempted when the *DirectView* CR System application is started and then periodically thereafter.

3.1.2 Number of Associations

3.1.2.1 Delivery

Associations are initiated with the limitation that no more than three total SCU delivery associations may be open at any given time. If more destinations are desired, the requests are queued. The *DirectView* CR System will not create two associations to the same device, even if there are multiple jobs queued for delivery.

3.1.2.2 HIS/RIS

Only one association will be initiated at a time. The *DirectView* CR System will close the association after receiving a C-FIND response.

3.1.3   Asynchronous Nature

The *DirectView* CR System allows up to 1 invoked and 1 performed operation on an Association (it is synchronous).

3.1.4   Implementation Identifying Information

The *DirectView* CR System provides the Implementation Class UID of "1.2.840.113564.3.2".

The implementation version name attribute is optional and is not used by the *DirectView* CR System.

The *DirectView* CR System establishes an Association using its network node name for the calling DICOM Application Entity title. The network node name is configurable through the *DirectView* CR System Service Application.

The *DirectView* CR System stores a called DICOM Application Entity Title and socket number for each DICOM compatible network destination it knows about.

3.2   Association Initiation Policy

3.2.1   Associated Real-World Activity

3.2.1.1 Delivery

The *DirectView* CR System initiates Associations for the purpose of sending images and associated information for printing to a Basic Grayscale Print Management SCP and archiving to an SC Image Storage SCP.

The default and well-known socket 5040 will be used for making the Association unless a different one is configured by a product service provider.

Association attempts will be retried if the SCP rejects the request with the RESULT = 2 (rejected transient) and the REASON = 1 (temporary congestion). If all Association attempts fail, then the user will be notified and the Film Session or Study is saved for resending or deletion. No undelivered image files are deleted without manual user direction.

3.2.1.2 HIS/RIS

The *DirectView* CR System initiates Associations for the purpose of obtaining the current Modality Worklist IOD.

The *DirectView* CR System may be configured to poll the HIS/RIS broker at periodic intervals and/or asynchronously on demand from the user.

3.2.2 Presentation Context Table

The *DirectView* CR System proposes the Presentation Contexts shown below.

Presentation Context Table					
Abstract Syntax		Transfer Syntax			Ext.
Name	UID	Name List	UID	Role	Negot
Verification	1.2.840.10008.1.1	DICOM Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
Basic Grayscale Print Management	1.2.840.10008.5.1.1.9	DICOM Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
Modality Worklist	1.2.840.10008.5.1.4.31	DICOM Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	DICOM Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
Basic Annotation Box	1.2.840.10008.5.1.1.15	DICOM Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
Modality Performed Procedure Step Notification SOP Class	1.2.840.10008.3.1.2.3.5	DICOM Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1	DICOM Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

3.3   Association Acceptance Policy

Upon receipt from an SCU of a verification of communication request, the CR will issue confirmation.

4   SOP Specific Conformance

4.1   Verification

The *DirectView* CR System provides standard conformance to the DICOM Verification Service Class:

- When prompted by a user, the *DirectView* CR System will request verification of communication to a remote DICOM AE using the C-ECHO primitive.

- Upon receipt from an SCU of a verification of communication request, the CR will issue confirmation.

4.2   Basic Print Management Meta SOP Class

The Meta SOP Class is defined by the following set of supported SOP Classes:

SOP Class	UID Value
Basic Film Session SOP Class	1.2.840.10008.5.1.1.1
Basic Film Box SOP Class	1.2.840.10008.5.1.1.2
Basic Grayscale Image Box SOP Class	1.2.840.10008.5.1.1.4
Printer SOP Class	1.2.840.10008.5.1.1.16

4.2.1   Basic Film Session SOP Class

4.2.1.1 DIMSE Service N-CREATE

Attribute	SCU Usage	Tag	Possible Values
Number of Copies	U	(2000,0010)	1 –> 99
Print Priority	U	(2000,0020)	HIGH, MED, LOW
Medium Type	U	(2000,0030)	PAPER, CLEAR FILM, BLUE FILM, NONE
Film Destination	U	(2000,0040)	MAGAZINE, PROCESSOR, BIN_n (where n=1 to 9)
Film Session Label	U	(2000,0050)	Up to 64 characters may be provided
Memory Allocation	U	(2000,0060)	Not used

4.2.1.2 DIMSE Service N-Action

The *DirectView* CR System uses the N-ACTION to instruct the SCP to print all films in the session. The *DirectView* CR System is configurable (when the destination is installed) to issue the N-ACTION at the Film Session for destinations known to support this optional service. If the destination is not known to support collation, the *DirectView* CR System will only issue the N-ACTION on the Film Box. For Print SCPs that conform to the N-ACTION specification in Part 4 section H.4.1.2.4 of the DICOM standard, the *DirectView* CR System expects that all film boxes will be collated when printed.

4.2.1.3 DIMSE Service N-SET

All attributes supported in the N-CREATE are used with this command.

4.2.1.4 DIMSE Service N-DELETE

Once a Film Session is deleted, another will not be created on the same association. The Association will be released.

4.2.2   Basic Film Box SOP Class

4.2.2.1 DIMSE Service N-CREATE

Attribute	SCU Usage	Tag	Possible Values
Image Display Format	M	(2010,0010)	With no annotation being present, these formats may be used: STANDARD\C,R For LANDSCAPE Film Orientation, (C,R) may = (1,1), (1,2), (2,1), (2,2) For PORTRAIT Film Orientation, (C,R) may = (1,1), (1,2), (2,1), (2,2) With annotation, the ROW Symmetric format is being used as following: With Image annotations alone: ROW\n,m,.., (n,m..) may = (1,1), (1,1,1,1), (2,2), (2,2,2,2) With Page annotations alone: ROW\n,m,.., (n,m..) may = (1,1), (1,1,1,1), (2,2), (2,2,2,2) With Image and Page annotation combined: ROW\n,m,.., (n,m..) may = (1,1,1), (1,1,1,1,1), (2,2,1), (2,2,2,2,1)
Referenced Film Session Sequence	M	(2010,0500)	
>Referenced SOP Class UID	M	(0008,1150)	
>Referenced SOP Instance UID	M	(0008,1155)	
Referenced Basic Image Box Sequence	-	(2010,0510)	Not used.
Referenced Basic Annotation Box Sequence	-	(2010,0520)	Not used.

Attribute	SCU Usage	Tag	Possible Values
Film Orientation	U	(2010,0040)	PORTRAIT, LANDSCAPE
Film Size ID	U	(2010,0050)	8INX10IN 11INX14IN 14INX14IN 14INX17IN
Magnification Type	U	(2010,0060)	REPLICATE, BILINEAR, CUBIC, NONE Will be constant for the entire Film Box.
Max Density	U	(2010,0130)	0-399
Configuration Information	U	(2010,0150)	Curve Shape (CS): 000 to 999 Contrast Values (CN): -1 to -5 Lower contrast 0 Normal +1 to +5 Higher contrast Pivot Density (PD): 0 to 2.4 in increments of 0.2 Perception LUT Selection (LUT): LUT = m, n (m=string, n = 0 to 15) Text Macros (TM): %PRNTDAT%, %TIM%, %FOF%, %$TIME$%, %SES% Perception LUT cannot be used with Curve Shape, Contrast or Pivot Density. See Annex A for description
Annotation Display Format ID	U	(2010,0030)	Not used
Smoothing Type	U	(2010,0080)	NORMAL (minimum cubic convolution error) ENHANCED ENHANCED1 Valid only for Magnification Type CUBIC. 0-15
Border Density	U	(2010,0100)	BLACK
Empty Image Density	U	(2010,0110)	Not used
Min Density	U	(2010,0120)	0-399 (Value must be less than Max Density (2010,0130))
Illumination	MC	(2010,015E)	Positive integer in units of cd/m^2
Reflective Ambient Light	MC	(2010,0160)	Positive integer in units of cd/m^2
Trim	U	(2010,0140)	YES and NO

4.2.2.2 DIMSE Service N-ACTION

The *DirectView* CR System uses the N-ACTION to instruct the SCP to print the current film in the session.

4.2.2.3 DIMSE Service N-SET

This service is not used.

4.2.2.4 DIMSE Service N-DELETE

This service is not used.

4.2.3　Basic Image Box SOP Class

4.2.3.1 DIMSE Service N-SET

Attribute & Usage	SCU Usage	Tag	Supported Values
Image Position	M	(2020,0010)	All values within the range of Image Display Format
Preformatted Grayscale Image Sequence	M	(2020,0110)	
>Samples Per Pixel	M	(0028,0002)	1
>Photometric Interpretation	M	(0028,0004)	MONOCHROME1, MONOCHROME2
>Rows	M	(0028,0010)	Minimum Value 64 Maximum Values: 　Known for all *Kodak* printers, configurable for others. The aspect ratio is used with the printer's page extents, display format, etc. to calculate this value.
>Columns	M	(0028,0011)	Minimum Value 64 Maximum Values: 　Known for all *Kodak* printers, configurable for others. The aspect ratio is used with the printer's page extents, display format, etc. to calculate this value.
>Pixel Aspect Ratio	MC	(0028,0034)	R\C R, C = 1 to 9999 (Integer) **Note**: This attribute is always included, even if it is 1\1. It's value will always be 1\1 if Magnification Type is NONE
>Bits Allocated	M		16
>Bits Stored	M	(0028,0101)	12
>High Bit	M	(0028,0102)	Bits Stored -1
>Pixel Representation	M	(0028,0103)	0000H (unsigned integer)
>Pixel Data	M	(7FE0,0010)	All values consistent with Bits Stored
Polarity	U	(2020,0020)	NORMAL, REVERSE
Magnification Type	U	(2010,0060)	REPLICATE, BILINEAR, CUBIC,NONE **Note**: Is always the same as the Magnification Type specified for the Film Box.

Attribute & Usage	SCU Usage	Tag	Supported Values
Smoothing Type	U	(2010,0080)	NORMAL, ENHANCED, ENHANCED1 Valid only for Magnification Type CUBIC. 0-15 Must be the same as the Smoothing Type specified for the Film Box.
Configuration Information	U	(2010,0150)	Setting these values will override film box settings for this image position. Curve Shape (CS): 000 to 999 Perception LUT Selection (LUT): LUT = m, n (m=string, n = 0 to 15) Curve Shape and Perception LUT are mutually exclusive. See Annex A for description
Requested Image Size	U	(2020,0030)	Row length in mm up to the size of the printable image, which is a function of Image Display Format and Film Size ID.

4.2.4 Printer SOP Class

4.2.4.1 DIMSE Service N-EVENT-REPORT

The *DirectView* CR System will process the indication of the N-EVENT-REPORT operation. Any string sent by the SCP is accepted and displayed on the *DirectView* CR System user interface. In this translation, all characters that are not space characters or in the ASCII range "A" - "Z" are stripped.

The *DirectView* CR System translates Attributes as described in the following table. Other strings are not translated but may be displayed on a *DirectView* CR System user interface.

Attribute	SCU Usage	Tag	Expected Values
Printer Status	U	(2110,0010)	NORMAL WARNING FAILURE
Printer Status Info	U	(2110,0020)	for NORMAL conditions: "NORMAL" for WARNING conditions: "RECEIVER FULL", "FILM JAM", "PRINTER NOT RDY", "PROCESSOR DOWN", "CHECK PROCESSOR", "PROC NOT READY", "NO RECEIVE MGZ", "NO SUPPLY MGZ", "NO TONER", "NO STATE", "CHECK RIBBON", "PRINTER BUSY", "OFFLINE", "PRINTER STOPPED", "CHECK SUPPLY MAG", "COVER OPEN", "PRINTER OFFLINE", "EXPOSURE FAILURE", "CHECK R MAG", "PROC NOT RDY", "STATE UNKNOWN", "CHECK INK CART", "INK OUT", "QUEUED", "SUPPLY EMPTY", "SUPPLY LOW", "BAD RECEIVE MGZ", "BAD SUPPLY MGZ", "FILM TRANSP ERR", "CHECK CHEMISTRY", "CHECK SORTER", "CHEMICALS LOW", "CHEMICALS EMPTY",

Attribute	SCU Usage	Tag	Expected Values
Printer Status Info (continued from previous page)			"FINISHER EMPTY", "FINISHER ERROR", "FINISHER LOW", "CHECK PROC", "PRINTER BUSY", "PROC DOWN", "PROC INIT", "PROC OVERFLOW FL", "PROC OVERFLOW HI", "PRINTER DOWN", "PRINTER INIT", "CALIBRATING", "CALIBRATION ERR", "ELEC CONFIG ERR", "ELEC DOWN", "ELEC SW ERROR", "EXPOSURE FAILURE", "REQ MED NOT INST", "REQ MED NOT AVAI", "RIBBON ERROR", "NO RIBBON", "UNKNOWN" for FAILURE conditions: "FATAL", "INVALID PAGE DES", "INSUFFIC MEMORY", "FATAL ERROR", "CHECK PRINTER", "PRINTER DOWN", "NO RESPONSE", "RIBBON MISMATCH", "TIME OUT", "UNKNOWN STATUS
Printer Name	U	(2110,0030)	Any valid string
Printer Manufacturer	U	(0008,0070)	Any valid string
Printer Manufacturer Model Name	U	(0008,1090)	Any valid string
Printer Device Serial Number	U	(0018,1000)	Any valid string
Software Version	U	(0018,1020)	Any valid string
Date of Last Calibration	U	(0018,1200)	Ignored
Time of Last Calibration	U	(0018,1201)	Ignored

4.3 Basic Annotation Box SOP Class

4.3.1 DIMSE Service N-SET

The Basic Annotation Box SOP Instance is created at the time of the Basic Film Box SOP Instance is created, based on the value of the Annotation Display Format ID attribute (2010,0030) of the Basic Film Box.

A single box is sent with text at position 0.

Attribute & Usage	SCU Usage	Tag	Supported Values
Annotation Position	M	(2030,0010)	0
Text String	M	(2030,0020)	Up to 64 characters

4.4 Store Service Class

Computed Radiography Images are sent to the CR Storage SCP.

4.4.1 Computed Radiography IOD

The IOD sent from the *DirectView* CR System minimally contains the following attributes:

Attribute Name	Tag	DICOM Type	*DirectView* CR System Type	Supported Values
Patient Module				
Patient Name	(0010,0010)	2	2	Refer to Annex B
Patient ID	(0010,0020)	2	2	Refer to Annex B
Patient Birth Date	(0010,0030)	2	2	Refer to Annex B
Patient Sex	(0010,0040)	2	2	Refer to Annex B
Patient Birth Time	(0010,0032)	3	3	
Other Patient IDs	(0010,1000)	3	3	Accept only one value with a maximum length of 64 characters
Other Patient Names	(0010,1001)	3	3	
Ethnic Group	(0010,2160)	3	3	
Patient Comments	(0010,4000)	3	3	
General Study				
Study Instance UID	(0020,000D)	1	1	
Study Date	(0008,0020)	2	2	Refer to Annex B
Study Time	(0008,0030)	2	2	Refer to Annex B
Referring Physician Name	(0008,0090)	2	2	Refer to Annex B

Attribute Name	Tag	DICOM Type	*DirectView* CR System Type	Supported Values
Study ID	(0020,0010)	2	2	
Accession Number	(0008,0050)	2	2	Refer to Annex B
Study Description	(0008,1030)	3	2	Refer to Annex B
Referenced Study Sequence	(0008,1110)	3	3	
>Referenced SOP Class UID	(0008,1150)	1C	1C	
>Referenced SOP Instance UID	(0008,1155)	1C	1C	
Procedure Code Sequence	(0008,1032)	3	3	
> Code Value	(0008,0100)	1C	1C	Refer to Annex B
> Coding Scheme Designator	(0008,0102)	1C	1C	
> Coding Scheme Version	(0008,0103)	1C	1C	
> Code Meaning	(0008,0104)	1C	1C	
Patient Study				
Admitting Diagnoses Description	(0008,1080)	3	3	
Patient's Age	(0010,1010)	3	3	
Patient's Size	(0010,1020)	3	3	
Patient's Weight	(0010,1030)	3	3	
Occupation	(0010,2180)	3	3	
Additional Patient's History	(0010,21B0)	3	3	
General Series				
Modality	(0008,0060)	1	1	CR
Series Instance UID	(0020,000E)	1	1	
Series Number	(0020,0011)	2	2	
Laterality	(0020,0060)	2C	2C	L R
Series Date	(0008,0021)	3	3	
Protocol Name	(0008,1030)	3	3	
Series Time	(0008,0031)	3	3	
Series Description	(0008,103E)	3	3	
Operator Name	(0008,1070)	3	3	Refer to Annex B
Patient Position	(0018,5100)	2C	2C	Refer to Annex B
Referenced Performed Procedure Step Sequence	(0008,1111)	3	3	
>Referenced SOP Class UID	(0008,1150)	1C	1C	
>Referenced SOP Instance UID	(0008,1155)	1C	1C	

Attribute Name	Tag	DICOM Type	*DirectView* CR System Type	Supported Values
Performed Procedure Step Start Date	(0040,0244)	3	3	
Performed Procedure Step Start Time	(0040,0245)	3	3	
Performed Procedure Step ID	(0040,0253)	3	3	
Performed Procedure Step Description	(0040,0254)	3	3	Refer to Annex B
Performed Protocol Code Sequence	(0040,0260)	3	3	
> Code Value	(0008,0100)	1C	1C	
> Coding Scheme Designator	(0008,0102)	1C	1C	
> Coding Scheme Version	(0008,0103)	1C	1C	
> Code Meaning	(0008,0104)	1C	1C	
Request Attributes Sequence	(0040,0275)	3	3	
>Requested Procedure Description	(0032,1060)	3	3	Refer to Annex B
>Scheduled Procedure Step Description	(0040,0007)	3	3	Refer to Annex B
>Scheduled Protocol Code Sequence	(0040,0008)	3	3	
>> Code Value	(0008,0100)	1C	1C	Refer to Annex B
>> Coding Scheme Designator	(0008,0102)	1C	1C	
>> Coding Scheme Version	(0008,0103)	1C	1C	
>> Code Meaning	(0008,0104)	1C	1C	Refer to Annex B
>Scheduled Procedure Step ID	(0040,0009)	1C	1C	
>Requested Procedure ID	(0040,1001)	1C	1C	Refer to Annex B
CR Series				
Body Part Examined	(0018,0015)	2	1	Defined by user
View Position	(0018,5101)	2	2	Defined by user
General Equipment				
Manufacturer	(0008,0070)	2	2	Kodak
Institution Name	(0008,0080)	3	3	Defined by user
Institution Address	(0008,0081)	3	3	Defined by user
Station Name	(0008,1010)	3	3	Defined by user
Institutional Department Name	(0008,1040)	3	3	Refer to Annex B
Manufacturer Model Name	(0008,1090)	3	1	CR XXX – where x is equal to the model number of the device. i.e. CR 500

Attribute Name	Tag	DICOM Type	*DirectView* CR System Type	Supported Values
Device Serial Number	(0018,1000)	3	3	
Software Versions	(0018,1020)	3	3	
General Image				
Instance Number	(0020,0013)	2	1	
Patient Orientation	(0020,0020)	2C	2	
Image Type	(0008,0008)	3	1	
Content Date	(0008,0023)	2C	2C	
Content Time	(0008,0033)	2C	2C	
Acquisition Date	(0008,0022)	3	3	
Acquisition Time	(0008,0032)	3	3	
Derivation Description	(0008,2111)	3	3	
Acquisition Number	(0020,0012)	3	3	
Images In Acquisition	(0020,1002)	3	1	
Image Comments	(0020,4000)	3	3	Refer to Annex B
Lossy Image Compression	(0028,2110)	3	1	*This specifies whether an image has undergone lossy compression. Enumerated values: 00 = Image has NOT been subjected to lossy compression. 01 = Image has been subjected to lossy compression. CR will use 00.*
Image Plane *				
Pixel Spacing *	(0028,0030)	3	3	"0.168\0.168" (35CMX43CM and 35CMX35CM) 0.171\0.171 (35CMX43CM & 35CMX35CM) "0.115\0.115" (24CMX30CM) "0.097\0.097" (18CMX24CM)
Image Pixel				
Samples per Pixel	(0028,0002)	1	1	1
Photometric Interpretation	(0028,0004)	1	1	MONOCHOME1 MONOCHROME2
Rows	(0028,0010)	1	1	1250 1792 2048 2200 2392 2400 2500

Attribute Name	Tag	DICOM Type	*DirectView* CR System Type	Supported Values
Columns	(0028,0011)	1	1	1250 1792 2048 2200 2392 2400 2500
Bits Allocated	(0028,0100)	1	1	16
Bits Stored	(0028,0101)	1	1	12
High Bit	(0028,0102)	1	1	11
Pixel Representation	(0028,0103)	1	1	0
Smallest Image Pixel Value	(0028,0106)	1	1	0
Largest Image Pixel Value	(0028,0107)	1	1	4095
Pixel Data	(7FE0,0010)	1	1	
CR Image				
KVP	(0018,0060)	3	3	Refer to Annex B
Plate ID	(0018,1004)	3	3	
Distance Source to Detector	(0018,1110)	3	1C - If the image is part of a long length image exposure then this value will be sent.	Refer to Annex B
Distance Source to Patient	(0018,1111)	3	3	Refer to Annex B
Exposure	(0018,1152)	3	3	Refer to Annex B
Imager Pixel Spacing	(0018,1164)	3	1	0.168\0.168 (35CMX43CM and 35CMX35CM) 0.171\0.171 171 (35CMX43CM & 35CMX35CM) 0.115\0.115 (24CMX30CM) 0.097\0.097 (18CMX24CM)
Cassette Orientation	(0018,1402)	3	3	LANDSCAPE PORTRAIT
Cassette Size	(0018,1403)	3	1	15CMX30CM 18CMX24CM 24CMX30CM 35CMX35CM 35CMX43CM *The term "COMPOSITE" will be used for the cassette size of a combined image.*
Relative X-Ray Exposure	(0018,1405)	3	3	0 to 4095

Attribute Name	Tag	DICOM Type	*DirectView* CR System Type	Supported Values
Contrast/Bolus				
Contrast/Bolus Agent	(0018,0010)	2	2	Refer to Annex B
Modality LUT				
Modality LUT Sequence	(0028,3000)	3	3	
>LUT Descriptor	(0028,3002)	1C	1C	
>Modality LUT Type	(0028,3004)	1C	1C	
>LUT Data	(0028,3006)	1C	1C	
VOI LUT				
Window Center	(0028,1050)	3	3	2048
Window Width	(0028,1051)	1C	1C	4096
SOP Common				
SOP Class UID	(0008,0016)	1	1	
SOP Instance UID	(0008,0018)	1	1	
Specific Character Set	(0008,0005)	1C	1C	

* Please see note on Section 4: Extensions/Specializations/Privatizations.

4.5   Basic Worklist Service

The C-FIND request for a Modality Worklist sends an Identifier object that contains all the attributes of the Modality Worklist Information Model. The Matching Key attributes that may optionally contain a non-NULL value in the request are:

Attribute name	Tag
Accession Number	(0008,0050)
Modality	(0008,0060)
Patient's Name	(0010,0010)
Patient ID	(0010,0020)
Scheduled Station AE Title	(0040,0001)
Scheduled Procedure Step Start Date	(0040,0002)
Scheduled Procedure Step Start Time	(0040,0003)
Requested Procedure ID	(0040,0101)
Scheduled Station Name	(0040,0010)

This is intended to produce a series of responses from the Worklist SCP for all matching Scheduled Procedures on the said Station.

The system can be configured to send this request periodically at an interval of 1 to 720 minutes. The user may also issue a non-periodic C-FIND request to obtain information for a patient recently added by the site's information system.

4.5.1   Modality Worklist IOD

For additional information on the Modality Worklist Information Model, refer to the DICOM specification, Part 4, Table K.6-1. The CR will only accept the ISO registration number ISO-IR 6 or ISO-IR 100 character sets for the Specific Character Set attribute (0008,0005).

ATTRIBUTES FOR THE MODALITY WORKLIST INFORMATION MODEL

Attribute	Tag
Accession Number	(0008,0050)
Referring Physicians Name	(0008,0090)
Referenced Study Sequence	(0008,1110)
>Referenced SOP Class UID	(0008,1150)
>Referenced SOP Instance UID	(0008,1155)
Patient's Name	(0010,0010)
Patient ID	(0010,0020)
Patient's Birth Date	(0010,0030)
Patient's Birth Time	(0010,0032)
Patient's Sex	(0010,0040)
Other Patient Ids*	(0010,1000)
Other Patient Names	(0010,1001)
Patient's Age	(0010,1010)
Patient's Size	(0010,1020)
Patient's Weight	(0010,1030)
Ethnic Group	(0010,2160)
Occupation	(0010,2180)
Additional Patient's History	(0010,21B0)
Study Instance UID	(0020,000D)
Requesting Service	(0032,1033)
Requested Procedure Description	(0032,1060)
Requested Procedure Code Sequence	(0032,0164)
>Code Value	(0008,0100)
>Coding Scheme Designator	(0008,0102)
>Code Meaning	(0008,0104)
Requested Contrast Agent	(0032,1070)
Visit Status ID	(0038,0008)
Patient's Institution Residence	(0038,0400)
Scheduled Procedure Step Sequence	(0040,0100)
>Scheduled Station AE Title	(0040,0001)
>Scheduled Procedure Step Start Date	(0040,0002)
>Scheduled Procedure Step Start Time	(0040,0003)

Attribute	Tag
>Modality	(0008,0060)
>Scheduled Procedure Step D	(0040,0006)
>Scheduled Protocol Code Sequence	(0040,0010)
>>Code Value	(0008,0100)
>>Code Value	(0008,0100)
>>Coding Scheme Designator	(0008,0102)
>>Code Meaning	(0008,0104)
>Scheduled Procedure Step Description	(0040,0007)
>Scheduled Station Name	(0040,0010)
Requested Procedure ID	(0040,1001)
Requested Procedure Priority	(0040,1003)
Requested Procedure Location	(0040,1005)

* Accept only one value (the first value) from the Modality Worklist with a maximum length of 64 characters

4.5.2 Procedure Mapping

The procedure mapping feature of the CR products automatically builds the image icons and pre-populates fields such as body/part and projections from information supplied by the key operator. This eliminates the need for the technologists to supply this information for every image created.

For the procedure mapping to function properly the CR must receive the correct code in the code value (0008,0100) element of the requested procedure code sequence (0032,1064).

4.6 Modality Performed Procedure Step Notification SOP Class

The Modality Performed Procedure Step (MPPS) will be sent twice by the *DirectView* CR system operator to signal the start and to signal the completion of a study.

4.6.1 Modality Performed Procedure Step Notification IOD

Attribute	Tag	Dicom Type	*DirectView* CR System Type	Value Yes – will have a value No – will be blank
Performed Procedure Step Relationship				
Scheduled Step Attribute Sequence	(0040,0270)	1	1	Yes
Study Instance UID	(0020,000D)	1	1	Yes
Referenced Study Sequence	(0008,1110)	2	2	No
Accession Number	(0008,0050)	2	2	Yes
Request Procedure ID	(0040,1001)	2	2	Yes
Requested Procedure Description	(0032,1060)	2	2	Yes
Scheduled Procedure Step ID	(0040,0009)	2	2	No
Scheduled Procedure Step Description	(0040,0007)	2	2	No
Scheduled Protocol Code Sequence	(0040,0008)	2	2	No
Patient's Name	(0010,0010)	2	2	Yes
Patient ID	(0010,0020)	2	2	Yes
Patient's Birth Date	(0010,0030)	2	2	Yes
Patient's Sex	(0010,0040)	2	2	Yes
Referenced Patient Sequence	(0008,1120)	2	2	No
Performed Procedure Step Information				
Performed Procedure Step ID	(0040,0253)	1	1	Yes
Performed Station AE Title	(0040,0241)	1	1	Yes
Performed Station Name	(0040,0242)	2	2	Yes
Performed Location	(0040,0243)	2	2	No
Performed Procedure Step Start Date	(0040,0244)	1	1	Yes, configurable by the user
Performed Procedure Step Start Time	(0040,0245)	1	1	Yes, configurable by the user
Performed Procedure Step Status	(0040,0252)	1	1	Yes
Performed Procedure Step Description	(0040,0254)	2	2	Yes
Performed Procedure Type Description	(0040,0255)	2	2	No
Procedure Code Sequence	(0008,1032)	2	2	No
Performed Procedure Step End Date	(0040,0250)	2	2	Yes, configurable by the user

Attribute	Tag	Dicom Type	*DirectView* CR System Type	Value Yes – will have a value No – will be blank
Performed Procedure Step End Time	(0040,0251)	2	2	Yes, configurable by the user
Image Acquisition Results				
Modality	(0080,0060)	1	1	Yes
Study ID	(0020,0010)	2	2	Yes
Performed Protocol Code Sequence	(0040,0260)	2	2	No
Performed Series Sequence	(0040,0340)	2	2	No

4.7 Storage Commitment Push Model SOP Class

The Storage Commitment N-Action command is sent by the *DirectView* CR System at the end of a storage session. The Storage Commitment N-Event-Report is received and processed anytime providing the Port Number is configured correctly between the *DirectView* CR System and the Storage SCP.

4.7.1 DIMSE Service N-ACTION

The *DirectView* CR System uses the N-ACTION to instruct the Storage SCP to commit the images of the study.

4.7.1.1 Storage Commitment N-Action IOD

Attribute	Tag
Transaction UID	(0008,1195)
Referenced SOP Sequence	(0008,1199)
>Referenced SOP Class UID	(0008,1150)
> Referenced SOP Instance UID	(0008,1155)

4.7.2 DIMSE Service N-EVENT-REPORT

The *DirectView* CR System will process the indication of the N-EVENT-REPORT from the Storage Commitment operation. These attributes are processed:

4.7.2.1 Storage Commitment N-EVENT-REPORT IOD

Attribute	Tag
Transaction UID	(0008,1195)
Failed SOP Sequence*	(0008,1198)
> Referenced SOP Class UID	(0008,1150)
> Referenced SOP Instance UID	(0008,1155)
> Failure Reason	(0008, 1197)
Referenced SOP Sequence	(0008,1199)
> Referenced SOP Class UID	(0008,1150)
> Referenced SOP Instance UID	(0008,1155)

* For Event Type ID 2 only.

5 Communication Profiles

5.1 Supported Communications Stacks

The *DirectView* CR System provides TCP/IP Network Communication Support as defined in Part 8 of the DICOM standard.

The *DirectView* CR System normally issues a network ping prior to delivering a job to a qualified DICOM Print or DICOM Store destination to ensure that the device is active. The *DirectView* CR System does not issue a network ping to destinations for which this capability has not been previously verified by the Kodak's DICOM Verification and Validation group.

If a destination does not support a network ping, or if the customer has disabled this service on the network, the *DirectView* CR System configuration must be changed for each destination as appropriate to disable the issuing of the network ping.

5.2 Physical Media

The *DirectView* CR System supports Ethernet with the following physical connectors:

- Unshielded Twisted pair (10BaseT ,100BaseT and 1000BaseT).

6   Extensions/Specializations/Privatizations

The following extensions to DICOM Store Service Class are supported by *DirectView* CR System. The extensions are all optional attributes.

6.1 Computed Radiography IOD:

6.1.1 Specialization of Pixel Spacing:

The *DirectView* CR System optionally allows the Pixel Spacing (0028,0030) attribute to be used from the Image Plane Module. This is done to support workstations that incorrectly use this field rather than Imager Pixel Spacing (0018,1164), as defined in the DICOM standard. If this field is used, the actual size of any objects displayed on the workstation (scales, etc.) may be in error.

6.1.2 Private Tags:

These Private Tags are used to enhance the General Image Module. The *DirectView* CR System only sends these tags if the Storage SCP has been configured to support Private Tag.

Attribute	Tag	VR	VM
privateDirectviewGroup	(0029, 0010)	LO	1
privatePtoneWindowCenter	(0029, 1002)	IS	1
privatePtoneWindowWidth	(0029, 1003)	IS	1
privateBodyPartExamined	(0029, 1004)	LO	1
privateViewPosition	(0029, 1005)	LO	1
privateReprocessedImage	(0029, 1006)	LO	1
privateSensitivityLabel	(0029, 1007)	LO	1
privateImagingData1	(0029, 1008)	UN	1
privateImagingData2	(0029, 1009)	UN	1
privateImagingData3	(0029, 1010)	UN	1

6.1.3 Extension for P-Value Encoding:

When the Storage SCP has been configured to support P-Value Encoding, the *DirectView* CR System renders VOI LUT and Modality LUT into the image and converts all pixels into P-Values. The Photometric Interpretation will be always MONOCHROME2 and an additional tag of Presentation LUT Shape as IDENTITY will be sent.

Attribute Name	Tag	DICOM Type	*DirectView* CR System Type	Supported Values
Photometric Interpretation	(0028,0004)	1	1	MONOCHROME2 Only MONOCHROME2 is sent when P-Value Encoding flag is

Attribute Name	Tag	DICOM Type	*DirectView* CR System Type	Supported Values
				turned on
Presentation LUT Shape	(2050,0020)	N/A	1C	IDENTITY Sent only when P-Value Encoding flag is turned on
Modality LUT				Modality LUT will not be sent when P-Value Encoding flag is turned on
VOI LUT				VOI LUT will not be send when P-Value Encoding flag is turned on

7   Configuration

The following network attributes are configurable by a qualified service provider:

IP address
Subnet Mask
Local Network Host Name (*DirectView* CR System AE Title)
SCP DICOM Called Application Entity Title
Socket number
Router Address (Gateway)
DICOM Service(s) available
Film Sizes available
Private Tag Support
P-Value Encoding Support
Other destination properties

8   Support of Extended Character Sets

The *DirectView* CR System supports the ISO-IR 100 Latin 1 character set as well as the ISO-IR 6 default character set.

The *DirectView* CR System also supports the ISO-IR 87 character set. This is part of the JIS X 0208 code table for 2-byte Japanese character sets that supports Kanji (ideograph), Hiragana (phonetic), and Katakana (phonetic).

The *DirectView* CR System also supports the ISO-IR 13 character set. This is part of the JIS X 0201 code table for single-byte Japanese Katakana (phonetic) characters.

The value set in the tag Specific Character Set (0008,0005) will be either:

    a)   "ISO_IR 100" (Latin 1),

    b)   "ISO_1R 13" (Katakana),

    c)   "ISO 2022 IR 13\ISO 2022 IR 87" (Katakana, Hiragana, Kanji),

    d)   or blank (ISO-IR 6 is the default character set).

Note: The Extended Character Sets mentioned above does not apply to the WORKLIST.

9   Error Handling

The response of the *DirectView* CR System to communication errors will depend on the specific nature of the error. Errors that do not prevent the completion of the communication will be logged only while all other errors will result in an aborted session (A-ABORT sent).

If a communication error occurs during the transmission of an image the system will flag the event as failed delivery.   The user may then resend the image to the same or alternate destination.

The *DirectView* CR System has limited recovery from communication errors. Some specific warnings will be logged locally and communication will continue. All other DICOM status codes (warning or error) will result in an aborted session (A-ABORT sent).

Codes that will NOT cause A-ABORT:

0x0000	SUCCESS
0xb602	Film session does not contain Image
0xb603	Film Box does not contain Image
0x0210	Duplicate Invocation
0x0107	Attribute List Error. Interpreted as Value out of range, default used
0x0116	Attribute value is out of range, default used.

Annex A - Configuration Information

The Configuration Information attribute contains the list of Kodak-specific values. These attributes are not DICOM standard attributes.

The Configuration Information value is an ordered list. The attribute is specified using the ASCII two-character key prefix in the following sequence:

1) Curve Shape, Contrast, Pivot Density

   or Perception LUT

2) Text Macros.

The Film Box Curve Shape value applies to all images in the Film Box except when Curve Shape or Perception LUT is specified for the image in the Image Box.

ATTRIBUTE	USAGE	DESCRIPTION	DEFAULT
Curve Shape designated by the ASCII two-character prefix: CS	U/M	000 to 999 **Note:** 000 = linear, 999 = highest curvature Curve Shape is a tone scale adjustment used to optimize the image on film compared to the image on the operator console monitor. Curve shape is not valid when a Perception LUT is specified.	Film Box: Value set in the Printer by the user Image Box: Basic Film Box Curve Shape
Contrast designated by the ASCII two-character prefix: CN	U/M	-5 to 5 **Note:** Integer values only. Negative Contrast settings are lower contrast where the amount of data that is represented by medium film densities is increased. Positive settings are higher contrast where the amount of data that is represented by high and low densities is increased.	Value set in the Printer by the user
Pivot Density designated by the ASCII two-character prefix: PD	U/M	0.0 to 2.4 **Note:** Value must be specified in increments of 0.2. Densities above and below the pivot density will be adjusted up and down by an amount that is a function of the difference between the code value and the pivot density code value.	Value set in the Printer by the user

ATTRIBUTE	USAGE	DESCRIPTION	DEFAULT
Perception LUT Selection designated by the ASCII three-character prefix: LUT	U/M	LUT = m, n Allows selection of the LUT that best suits the user's images. M is the name of the TFT set and N specifies a contrast setting within the group. Curve shape will be ignored if the LUT parameter is used. m=string (0=default group) n=0 to 15 (0=use default value)	m=0, n=0
Text Macros designated by the ASCII two-character key prefix: TM	M/M	%PRNTDAT% Date of Printing DD-MMM-YY %TIM% Time of Printing HH:MM (HH=0-23) %FOF% Film of Film Count NN/MM %$TIME$% Time of Printing HH:MM:SS %SES% Film Session Label AAAAAA (1-64 chars from the Film Session SOP Class) **Note:** The text macros will be printed on the bottom of the film and will be truncated if necessary	None

Examples

"CS333"
The curve shape is set to 1/3 of the printers tone scale range and defaults are applied to contrast and pivot density.

"CS500\CN3\PD2.2"
The curve shape is set to 1/2 the printers tone scale range, Contrast is set to 3, and pivot density is set to 2.2.

"PD2.0"
The pivot density is set to 2.0., and defaults are applied to curve shape and contrast.

"CS333\CN3\PD2.2\TM%PRNTDAT%%TIM%%FOF%"
The curve shape is set to 1/3 of the range, Contrast is set to 3, and pivot density is set to 2.2.
The following text macros will be printed on the bottom of the page:
        Date of Printing, Time of Printing, and Film of Film count.

"LUT=Ver693c0.w87,3"
The Perception LUT TFT set is "Ver693c0.w87" and the Contrast Setting is 3.

"LUT=0,3\ TM%PRNTDAT%%TIM%%FOF%"
The Perception LUT TFT set is 0 (default) and the Contrast Setting is 3.
The following text macros will be printed on the bottom of the page:
        Date of Printing, Time of Printing, and Film of Film count.

"TM%PRNTDAT%%TIM%%FOF%"
The following text macros will be printed at the bottom of the page:
        Date of Printing, Time of Printing, and Film of Film count.

"PD2.0\CN4\CS333"
This is **invalid** because the attributes are out of order, curve shape must precede pivot density and contrast, and contrast must precede pivot density. It should be "CS333\CN4\PD2.0".

"CS333\PD1.2\LUT=0,3"
This is **invalid** because Curve Shape and Pivot Density cannot be mixed with Perception LUT. In this case, the Perception LUT setting will be used

Annex B - CR Patient/Exam Input Field/DICOM Tag Cross Reference

The following table describes the patient/exam information flow through the product. The first two columns describe the patient/exam information fields supported by the product's user interface and the maximum number of characters that may be input via the interface. The third column indicates the worklist element that the system will use to populate the field if a DICOM WORKLIST SCP is present. The fourth column identifies the DICOM element containing the data in the system's output.

User Interface Input field Label	Maximum number of input characters from user interface	Associated DICOM Worklist IOD Element	Associated DICOM CR IOD Element
Patient First Name	30	Patient's Name (0010,0010)	Patient's Name (0010,0010)
Patient Last Name	30		
M.I. (middle initial)	1		
Exam Date & Time	N/A	Initial Value: Scheduled Procedure Step Start Date (0040,0002) Scheduled Procedure Step Start Time (0040,0003) These values will be updated to the the time/date that the technologist began the first procedure step for a study.	Study Date (0008,0020) Study Time (0008,0030)
Priority	N/A	Requested Procedure Priority (0040,1003)	N/A
Contrast/Bolus	32	Requested Contrast Agent (0032,1070)	Contrast/Bolus Agent (0018,0010)
Accession Number	16	Accession Number (0008,0050)	Accession Number (0008,0050)
Tech ID	16	NA	Operator's Name (0008,1070)
Gender	N/A	Patient Sex (0010,0040)	Patient Sex (0010,0040)
Description	32	Requested Procedure Description (0032,1060) If scheduled workflow is used:	Study Description (0008,1030) If scheduled workflow is used:

User Interface Input field Label	Maximum number of input characters from user interface	Associated DICOM Worklist IOD Element	Associated DICOM CR IOD Element
		Scheduled Protocol Code Sequence (0040,0008) > Code Meaning (0008,0104)	Scheduled Protocol Code Sequence (0040,0008) > Code Meaning (0008,0104)
Patient ID	16	Patient ID (0010,0020)	Patient ID (0010,0020)
Referring Physician	32	Referring Physician's Name (0008,0090)	Referring Physician's Name (0008,0090)
Department	32	Requesting Service (0032,1033)	Institutional Department Name(0008,1040)
Patient Location	32	Patient's Institution Residence (0038,0400)	N/A
Cassette ID	10	NA	Plate ID (0018,1004)
Body Part	NA	NA	Body Part Examined (0018,0015)
Projection	NA	NA	View Position (0018,5101) Series Description (0008,103E)
Position	NA	NA	Patient Position (0018,5100)
Orientation	N/A	NA	Cassette Orientation (0018,1402)
Comments	256	NA	Image Comments (0020,4000)
KVP	4	NA	KVP (0018,0060)
MAS	4	NA	Exposure (0018,1152)
Source to Patient Distance	4	NA	Source to Patient Distance (0018,1111)
Source to Image Distance	4	NA	Source to Image Distance (SID) (0018,1110)

User Interface Input field Label	Maximum number of input characters from user interface	Associated DICOM Worklist IOD Element	Associated DICOM CR IOD Element
Patient Comments	256	NA	Patient Comments (0010,4000)
Code	16	Requested Procedure Code Sequence (0032,1064) > code value (0008,0100) Or Requested Procedure ID (0040,1001) Or If Scheduled work flow is used: Scheduled Protocol Code Sequence(0040,0008) > code Value (0008,0100)	Procedure Code Sequence (0008,1032) > Code value (0008,0100) Or Requested Procedure ID (0040,1001) Or If Scheduled work flow is used: Scheduled Protocol Code Sequence(0040,0008) > Code Value (0008,0100)
Procedure Step Description	64	Scheduled Procedure Step Description (0040,0007)	Scheduled Procedure Step Description (0040,0007) If the Procedure Step Description field is modified by the user the changes will be stored in: Performed Procedure Step Description (0040,0254)
Requested Procedure ID	16	Requested Procedure ID (0040,1001)	Requested Procedure ID (0040,1001)
Requested Procedure Description	64	Requested Procedure Description (0032,1060)	Request Attributes Sequence (0040,0275) > Requested Procedure Description (0032,1060)