



PACS Scan
DICOM Conformance Statement
ENG-PS-DCS-REVI

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Revision History

Date	Revision	Authors	Description
23-SEP-2002	A	Brian Cavanaugh	Created.
25-SEP-2002	B	Chris Barnett	Updated.
01-SEP-2007	C	Chris Barnett	Updated for version 3.x.
08-SEP-2008	D	Chris Barnett	Added multi-frame support.
01-NOV-2012	E	Brian Cavanaugh	General updates reflecting version 5.0. Corrected part number, changing <i>DCMCS</i> to <i>DCS</i> .
15-MAY-2016	F	Lev Weisfeiler	Merged PACS Scan and PACS Scan Film into single document for all versions of PAC Scan. Rebranded from PACSGear to Lexmark.
03-OCT-2018	G	Andrew Robinson	Rebranded with new corporate identity, Lexmark > PACSGear by Hyland LLC.
18-10-2023	H	Tammy Matthews	Rebranded for Hyland. Minor formatting changes.
09-APR-2025	I	Tammy Matthews	Rebranded for Hyland 2025 initiative.

Table of Contents

Documentation Notice	2
Revision History.....	3
List of Figures	5
Introduction	6
Implementation Model	7
Application Data Flow Diagram	7
Functional Definitions of Application Entity (AE)	7
Sequencing of Real-World Activities	7
AE Specifications.....	8
Gear View Basic AE Specifications	8
Functional Definition of Application Entity.....	Error! Bookmark not defined.
<i>Sequencing of Real-World Activities – Read Images from Media</i>	<i>8</i>
Communication Profiles	10
Supported Communication Stacks	10
TCP/IP Stack.....	10
Physical Media Support	10
Extension/Specialization/Privatization	10
Configuration	10
Extended Character Sets.....	10

List of Figures

Figure 1.	Gear View Basic Implementation Model.....	7
Figure 2.	Gear View Basic Application Profiles	8
Figure 3.	Gear View Basic Supported SOP Classes	9

Introduction

Implementation Model

Application Data Flow Diagram

Figure 1. PACS Scan Implementation Model

Functional Definitions of Application Entity (AE)

Sequencing of Real-World Activities

AE Specifications

Functional Definition of AE

Sequencing of Real-World Activities – Read Images from Media

Application Profiles	Real World Activity	Role	SC Option

Figure 2. PACS Scan Application Profiles

Supported SOP Classes

[illegible]

Communication Profiles

Supported Communication Stacks

TCP/IP Stack

Physical Media Support

Extension/Specialization/Privatization

Configuration

Extended Character Sets

Appendix A. Attribute List for DICOM Storage SCU

This list contains the DICOM attributes that are used by the PACS Scan AE when issuing a DICOM Storage request as an SCU for both Secondary Capture, and Multiframe Secondary Capture datasets.

DICOM Attribute	Comment
(0008,0008) Image Type	ORIGINAL\SECONDARY
(0008,0016) SOP Class UID	1.2.840.10008.5.1.4.1.1.7 (Secondary Capture)
(0008,0018) SOP Instance UID	
(0008,0020) Study Date	
(0008,0022) Acquisition Date	
(0008,0030) Study Time	
(0008,0032) Acquisition Time	
(0008,0050) Accession Number	
(0008,0060) Modality	Selected by the user or set with Modality Worklist value
(0008,0064) Conversion Type	WSD
(0008,0070) Manufacturer	Configurable
(0008,0080) Institution	Configurable
(0008,0090) Referring Physician	Set when received via worklist or cfind query
(0008,1010) Station Name	Configurable
(0008,1030) Study Description	Entered/Selected by the PACS Scan user
(0008,103e) Series Description	Entered/Selected by the PACS Scan user
(0008,1040) Institutional Department Name	Configurable
(0008,1070) Operators Name	
(0008,1090) Manufacturer Model Name	Configurable
(0010,0010) Patient Name	
(0010,0020) Patient ID	Image may not be sent without this value
(0010,0030) Patient Birthdate	
(0010,0040) Patient Sex	
(0018,0015) Body Part Examined	
(0018,1000) Acq. Device Serial Number	Configurable

(0018,1012) Date of Secondary Capture	
(0018,1014) Time of Secondary Capture	
(0018,1016) Secondary Capture Device Manufacturer	PACSGEAR
(0018,1018) Secondary Capture Device Model Name	PACSSCAN
(0018,1019) Secondary Capture Device Software Version	5.2.1
(0018,1020) Acq. Software Version	Configurable
(0018,1023) Digital Image Format Acquired	
(0020,000D) Study Instance UID	
(0020,000E) Series Instance UID	
(0020,0010) Study ID	
(0020,0011) Series Number	Configurable
(0020,0013) Image Number	
(0020,0020) Patient Orientation	
(0028,0002) Samples Per Pixel	1
(0028,0004) Photometric Interpretation	MONOCHROME2
(0028,0006) Planar Configuration	0
(0028,0010) Rows	
(0028,0011) Columns	
(0028,0100) Bits Allocated	8
(0028,0101) Bits Stored	8
(0028,0102) High Bit	7
(0028,0103) Pixel Representation	0
(7FE0,0010) Pixel Data	

Figure 11. DICOM Storage SCU Attribute List (Secondary Capture & Multi-frame)

Appendix B. Attribute List for DICOM Storage SCU for Encapsulated images

This list contains the DICOM attributes that are used by the PACS Scan AE when issuing a DICOM Storage request as an SCU for Encapsulated PDF images.

DICOM Attribute	Comment
(0008,0008) Image Type	ORIGINAL\SECONDARY
(0008,0016) SOP Class UID	1.2.840.10008.5.1.4.1.1.7 (Secondary Capture)
(0008,0018) SOP Instance UID	
(0008,0020) Study Date	
(0008,0022) Acquisition Date	
(0008,002A) Acquisition Datetime	
(0008,0030) Study Time	
(0008,0032) Acquisition Time	
(0008,0033) Content Time	
(0008,0050) Accession Number	
(0008,0060) Modality	Selected by the user or set with Modality Worklist value
(0008,0064) Conversion Type	WSD
(0008,0070) Manufacturer	Configurable
(0008,0080) Institution	Configurable
(0008,0090) Referring Physician	Set when received via worklist or cfind query
(0008,1010) Station Name	Configurable
(0008,1030) Study Description	Entered/Selected by the PACS Scan user
(0008,103e) Series Description	Entered/Selected by the PACS Scan user
(0008,1040) Institutional Department Name	Configurable
(0008,1070) Operators Name	
(0008,1090) Manufacturer Model Name	Configurable
(0010,0010) Patient Name	
(0010,0020) Patient ID	Image may not be sent without this value
(0010,0030) Patient Birthdate	
(0010,0040) Patient Sex	

DICOM Attribute	Comment
(0018,0015) Body Part Examined	
(0018,1000) Acq. Device Serial Number	Configurable
(0018,1012) Date of Secondary Capture	
(0018,1014) Time of Secondary Capture	
(0018,1016) Secondary Capture Device Manufacturer	PACSGEAR
(0018,1018) Secondary Capture Device Model Name	PACSSCAN
(0018,1019) Secondary Capture Device Software Version	5.2.1
(0018,1020) Acq. Software Version	Configurable
(0018,1023) Digital Image Format Acquired	
(0020,000D) Study Instance UID	
(0020,000E) Series Instance UID	
(0020,0010) Study ID	
(0020,0011) Series Number	Configurable
(0020,0013) Image Number	
(0020,0020) Patient Orientation	
(0042,0010) Document Title	
(0042, 001) Encapsulated Document	
(0042,0012) MIME Type of Encapsulated Document	application/pdf

Figure 12. DICOM Storage SCU Attribute List (Encapsulated PDF)

Appendix C. Attribute List for DICOM SC Image Storage SCU for Encapsulated PDF Images

This list contains the DICOM attributes that are used by the PACS Scan AE when issuing a DICOM Storage request as an SCU for Encapsulated PDF images.

DICOM Attribute	Comment
(0008,0008) Image Type	ORIGINAL\SECONDARY
(0008,0016) SOP Class UID	1.2.840.10008.5.1.4.1.1.7 (Secondary Capture)
(0008,0018) SOP Instance UID	
(0008,0020) Study Date	
(0008,0022) Acquisition Date	
(0008,002A) Acquisition Datetime	
(0008,0030) Study Time	
(0008,0032) Acquisition Time	
(0008,0033) Content Time	
(0008,0050) Accession Number	
(0008,0060) Modality	Selected by the user or set with Modality Worklist value
(0008,0064) Conversion Type	WSD
(0008,0070) Manufacturer	Configurable
(0008,0080) Institution	Configurable
(0008,0090) Referring Physician	Set when received via worklist or cfind query
(0008,1010) Station Name	Configurable
(0008,1030) Study Description	Entered/Selected by the PacsSCAN user
(0008,103e) Series Description	Entered/Selected by the PacsSCAN user
(0008,1040) Institutional Department Name	Configurable
(0008,1070) Operators Name	
(0008,1090) Manufacturer Model Name	Configurable
(0010,0010) Patient Name	
(0010,0020) Patient ID	Image may not be sent without this value
(0010,0030) Patient Birthdate	
(0010,0040) Patient Sex	
(0018,0015) Body Part Examined	
(0018,1000) Acq. Device Serial Number	Configurable
(0018,1012) Date of Secondary Capture	
(0018,1014) Time of Secondary Capture	

DICOM Attribute	Comment
(0018,1016) Secondary Capture Device Manufacturer	PACSGEAR
(0018,1018) Secondary Capture Device Model Name	PACSSCAN
(0018,1019) Secondary Capture Device Software Version	5.2.1
(0018,1020) Acq. Software Version	Configurable
(0018,1023) Digital Image Format Acquired	
(0020,000D) Study Instance UID	
(0020,000E) Series Instance UID	
(0020,0010) Study ID	
(0020,0011) Series Number	Configurable
(0020,0013) Image Number	
(0020,0020) Patient Orientation	
(0042,0010) Document Title	
(0042, 001) Encapsulated Document	
(0042,0012) MIME Type of Encapsulated Document	application/pdf

Figure 13. *DICOM Encapsulated PDF Image Storage SCU Attribute List*

Appendix D. Attribute List for DICOM Digital Mammography X-Ray Image Storage – for Presentation

This list contains the DICOM attributes that are used by the PACS Scan AE when issuing a DICOM Digital Mammography X-Ray Image Storage request as an SCU.

DICOM Attribute	Comment
(0008,0008) Image Type	ORIGINAL/SECONDARY
(0008,0016) SOP Class UID	1.2.840.10008.5.1.4.1.1.7 (Secondary Capture)
(0008,0018) SOP Instance UID	
(0008,0020) Study Date	
(0008,0022) Acquisition Date	
(0008,0030) Study Time	
(0008,0032) Acquisition Time	
(0008,0050) Accession Number	
(0008,0060) Modality MG	
(0008,0064) Conversion Type	WSD
(0008,0068) Presentation Intent Type	FOR PRESENTATION
(0008,0070) Manufacturer	PACSGEAR
(0008,1090) Operators Name	
(0008,0080) Institution Name	
(0008,0090) Referring Physician's Name	
(0008,1010) Station Name	
(0008,1030) Study Description	
(0008,103E) Series Description	
(0008,1040) Institutional Department Name	
(0008,1090) Manufacturer Model Name	
(0008,2218) Anatomic Region of Interest Sequence	
> (0008,0100) Code Value	
> (0008,0102) Coding Scheme Designator	
> (0008,0104) Code Meaning	
(0010,0010) Patient Name	
(0010,0020) Patient ID	Image may not be sent without this value
(0010,0030) Patient Birthdate	
(0010,0040) Patient Sex	
(0018,1012) Date of Secondary Capture	
(0018,1014) Time of Secondary Capture	

DICOM Attribute	Comment
(0018,1016) Secondary Capture Device Manufacturer	PACSGEAR
(0018,1018) Secondary Capture Device Model Name	PACSSCAN
(0018,1019) Secondary Capture Device Software Version	5.2.1
(0018,1020) Software Version	
(0018,1023) Digital Image Format Acquired	
(0018,1164) Image Pixel Spacing	
(0018,1508) Positioner Type	MAMMOGRAPHIC
(0018,7004) Detector Type	FILM
(0020,000D) Study Instance UID	
(0020,000E) Series Instance UID	
(0020,0010) Study ID	
(0020,0011) Series Number	
(0020,0013) Image Number	
(0020,0020) Patient Orientation	
(0020,0062) Laterality	
(0020,1040) Position Reference Indicator	
(0028,0002) Samples Per Pixel	1
(0028,0004) Photometric Interpretation	MONOCHROME2
(0028,0006) Planar Configuration	
(0028,0010) Rows	
(0028,0011) Columns	
(0028,0030) Pixel Spacing	Configurable for FILM only
(0028,0100) Bits Allocated	8 or 16
(0028,0101) Bits Stored	8 or 12
(0028,0102) High Bit	7 or 11
(0028,0103) Pixel Representation	0
(0028,0301) Burned In Annotation	
(0028,1040) Pixel Intensity Relationship	
(0028,1041) Pixel Intensity Relationship Sign	
(0028,1050) Window Center	
(0028,1051) Window Width	
(0028,1052) Rescale Intercept	
(0028,1053) Rescale Slope	
(0028,1054) Rescale Type	
(0028,2110) Lossy Image Compression	00

(0040,0318) Organ Exposed	BREAST
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DICOM Attribute	Comment
(0040,0555) Acquisition Context Sequence	
(0054,0220) View Code Sequence	
> (0008,0100) Code Value	
> (0008,0102) Coding Scheme Designator	
> (0008,0104) Code Meaning	
(2050,0020) Presentation LUT Shape	IDENTITY
(7FE0,0010) Pixel Data	

Figure 14. *DICOM Digital Mammography X-Ray Image Storage – for Presentation SCU Attribute List*

Appendix E. Attributes for DICOM Modality Worklist Management Requests

This table contains the DICOM attributes that are utilized by the PACS Scan AE when issuing a DICOM Modality Worklist request.

DICOM Attribute	Comment
(0008,0050) Accession Number	User may attempt an exact match
(0008,0090) Referring Physician's Name	
(0010,0010) Patient Name	User may narrow the search
(0010,0020) Patient ID	User may attempt an exact match
(0010,0030) Patient Birthdate	
(0010,0040) Patient Sex	
(0020,000D) Study Instance UID	
(0032,1064) Requested Procedure Code Sequence	
(0040,0100) Scheduled Procedure Step Sequence	
>(0008,0100) Code Value	
>(0008,0060) Modality	User may search for a specific modality
>(0040,0002) Scheduled Procedure Step Start Date	The product can be configured to always perform a date range query
>(0040,0003) Scheduled Procedure Step Start Time	
>(0040,0007) Scheduled Procedure Step Description	

Figure 15. DICOM Modality Worklist Attributes

Appendix F. Attributes for DICOM Q/R C-FIND Requests

This table contains the DICOM keys that are utilized by the PACS Scan AE when issuing a DICOM Q/R C-FIND request. The C-FIND request will always use the Study Root Information model.

DICOM Attribute	Comment
(0008,0020) Study Date	The product can be configured to always perform a date range query
(0008,0030) Study Time	
(0008,0050) Accession Number	User may attempt an exact match
(0008,0052) Query/Retrieve Level	The value is always "STUDY"
(0008,0060) Modality	User may search for a specific modality (Not sent unless specifically configured)
(0008,0061) Modalities in Study	User may search for a specific modality
(0008,0090) Referring Physician's Name	
(0008,1030) Study Description	
(0010,0010) Patient Name	User may narrow the search
(0010,0020) Patient ID	User may attempt an exact match
(0010,0030) Patient Birth Date	
(0010,0040) Patient Sex	
(0020,000D) Study Instance UID	

Figure 16. DICOM Q/R C-FIND Attributes