DICOM Conformance Statement
for
NW500

Ver.1

Jun. 7, 2022

TOPCON Corporation

1. CONFORMANCE STATEMENT OVERVIEW

This document declares conformance to DICOM V3.0 for NW500. NW500 works as an Acquisition Modality and allows acquisition and storage of acquisition data. The following table indicates DICOM SOP Classes which NW500 supports.

SOP Classes	User of Service (SCU)	Provider of Service (SCP)
VERIFICATION		
Verification	Yes	No
TRANSFER		
Ophthalmic Photography 8bit Image Storage	Yes	No
VL Photographic Image Storage	Yes	No
Secondary Capture Image Storage	Yes	No
WORKFLOW MANAGEMENT		
Modality Worklist Information Model - FIND	Yes	No
Storage Commitment Push Model SOP Class	Yes	No
QUERY / RETRIEVE		
Patient Root Query / Retrieve Information Model – FIND	Yes	No

2. TABLE OF CONTENTS

3. INTRODUCTION

3.1. REVISION HISTORY

Document Version	Date of Issue	Author	Description
1.00	Jun. 7th, 2022	Eye Care Product System Dept.	The Publication of the first edition.

3.2. AUDIENCE

This document is intended for hospital staffs, health system integrators, software engineers, service staffs who have a basic knowledge of DICOM.

3.3. ABBREVIATIONS

- ACR American College of Radiology
- AE Application Entity
- ANSI American National Standards Institute
- ASCII American Standard Code for Information Interchange
- DICOM Digital Imaging and Communication in Medicine
- DIMSE DICOM Message Service Element
- DIMSE-C DICOM Message Service Element-Composite
- DIMSE-N DICOM Message Service Element-Normalized
- IE Information Entity
- IOD Information Object Definition
- ISO International Standards Organization
- NEMA National Electrical Manufacture Association
- OSI Open Systems Interconnection
- 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

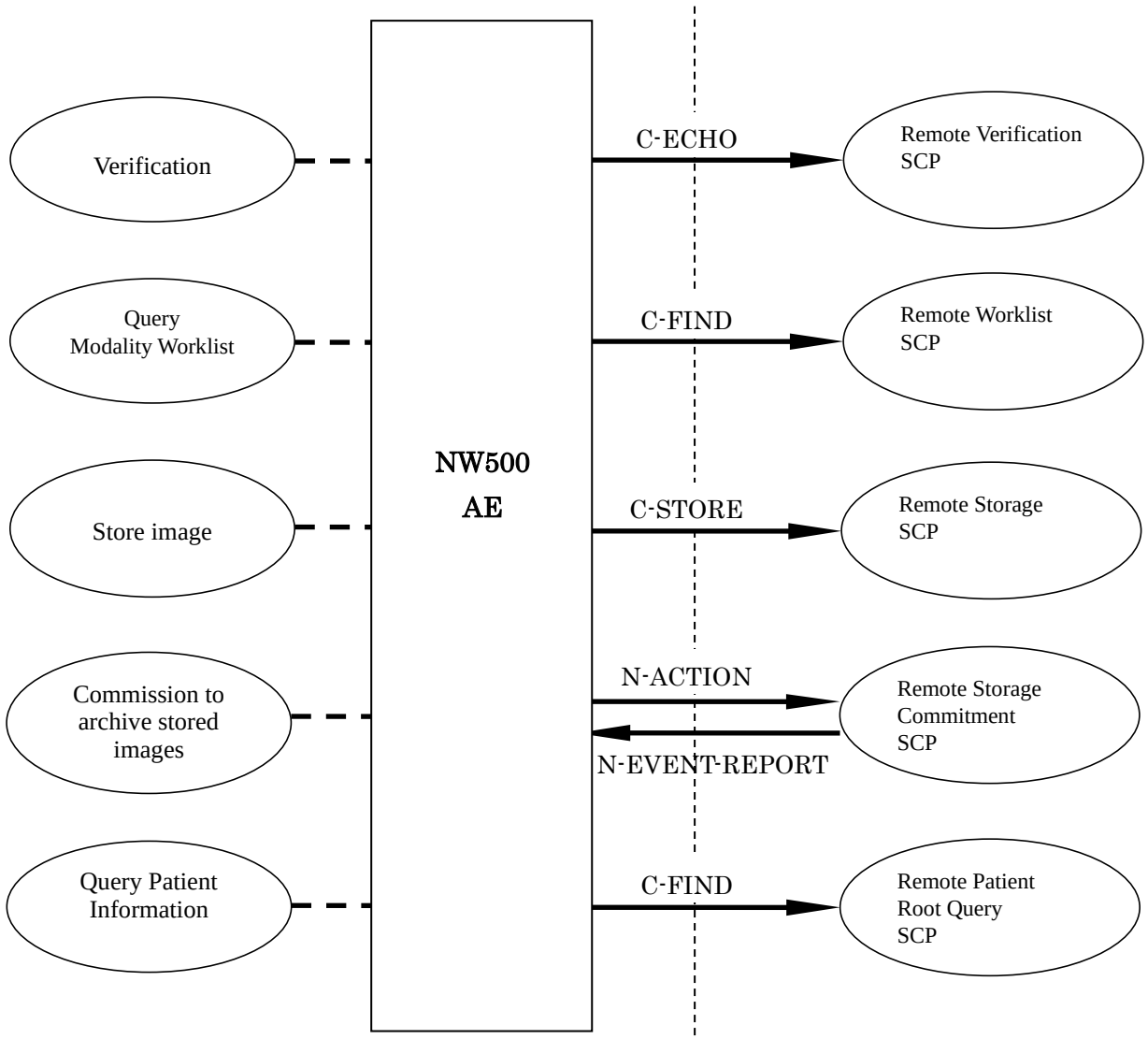
3.4. REFERENCES

- ACR-NEMA DICOM (Digital Imaging and Communication in Medicine)

4. NETWORKING

4.1. IMPLEMENTATION MODEL

4.1.1. Application Data Flow



DICOM Standard Interface

4.1.2. Function Definitions of AE's

4.1.2.1. Function Definitions of Verification Entity

NW500 AE checks the connection settings of DICOM by sending a C-ECHO request message to a remote NW500 AE.

4.1.2.2. Function Definitions of Worklist Application Entity

NW500 AE receives a study order list by sending a search condition with a C-FIND request message to a remote NW500 AE. And the study order list is displayed on NW500.

4.1.2.3. Function Definitions of Storage Application Entity

NW500 AE sends a captured image with a C-STORE request message to a remote NW500 AE. NW500 AE corresponds to OP, VL and SC modality.

4.1.2.4. Function Definitions of Storage Commitment Application Entity

NW500 AE sends a storage commitment message with a N-ACTION request message to a remote NW500 AE. After a remote NW500 AE completes the requested process, a NW500 AE receives the result of the storage commitment with a N-EVENT-REPORT message from a remote NW500 AE.

4.1.2.5. Function Definitions of Patient Root Query Application Entity

NW500 AE receives a patient list by sending a condition of query with a C-FIND request message to a remote NW500 AE. And the patient list is displayed on NW500.

4.2. AE SPECIFICATIONS

4.2.1. Verification

NW500 AE provides Standard Conformance to the following DICOM V3.0 SOP class as a SCU.

4.2.1.1. SOP Class

SOP Class Name	SOP Class UID	Role
Verification	1.2.840.10008.1.1	SCU

4.2.1.2. Association Policies

4.2.1.2.1. General

The Application Context Name for DICOM 3.0 is the only Application Context proposed.

Application Context Name	1.2.840.10008.3.1.1.1

4.2.1.2.2. Number of Associations

NW500 AE can establish only one association simultaneously.

4.2.1.2.3. Asynchronous Nature

NW500 AE allows only a single operation for an association. Therefore, an asynchronous operation is not supported.

4.2.1.2.4. Implementation Identifying Information

NW500 AE specifies the following implementation identifying information.

Implementation Class UID	1.2.392.200106.1650.1.5
Implementation Version Name	TP_VER_NW500_100

4.2.1.2.5. Association Initiation Policy

4.2.1.2.5.1. Description and Sequencing Activities

After NW500 AE establishes a new association to check the connection settings, it sends a verification request message to a remote NW500 AE by using a C-ECHO service of DIMSE-C.

4.2.1.2.5.2. Proposed Presentation Contexts

NW500 AE can propose the Presentation Contexts shown in the following table.

Presentation Context					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Verification	1.2.840.10008.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None

4.2.1.2.5.3. SOP Specific Conformance for Verification SOP Class

When the result of data communications is successful, NW500 AE judges that verification is successful even if the release of an association fails.

4.2.1.2.6. A receiving policy of association

NW500 AE does not accept any association requests.

4.2.2. Worklist

NW500 AE provides Standard Conformance to the following DICOM V3.0 SOP class as a SCU.

4.2.2.1. SOP Class

SOP Class Name	SOP Class UID	Role
Modality Worklist Information Model-FIND	1.2.840.10008.5.1.4.31	SCU

4.2.2.2. Association Policies

4.2.2.2.1. General

The Application Context Name for DICOM 3.0 is the only Application Context proposed.

Application Context Name	1.2.840.10008.3.1.1.1

4.2.2.2.2. Number of Associations

NW500 AE can establish only one association simultaneously.

4.2.2.2.3. Asynchronous Nature

NW500 AE allows only a single operation for an association. Therefore, an asynchronous operation is not supported.

4.2.2.2.4. Implementation Identifying Information

NW500 AE specifies the following implementation identifying information.

Implementation Class UID	1.2.392.200106.1650.1.1
Implementation Version Name	TP_MWL_NW500_100

4.2.2.2.5. Activity

4.2.2.2.5.1. Description and Sequencing Activities

After NW500 AE establishes a new association to receive a study order list, it sends a search condition to a remote NW500 AE by using a C-FIND service of DIMSE-C.

4.2.2.2.5.2. Proposed Presentation Contexts

NW500 AE can propose the Presentation Contexts shown in the following table.

Presentation Context					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Modality Worklist Information Model-FIND	1.2.840.10008.5.1.4.31	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None

4.2.2.2.5.3. SOP Specific Conformance for Worklist SOP Class

When the result of data communications is successful, NW500 AE judges that the acquisition of a study order list is successful even if the release of an association fails.

Tag Description	Tag	Matching	Display
Scheduled Procedure Step			
Scheduled Procedure Step Sequence	(0040,0100)		
>Scheduled Station AE Title	(0040,0001)	S+	
>Scheduled Procedure Step Start Date	(0040,0002)	S	
>Scheduled Procedure Step Start Time	(0040,0003)		
>Modality	(0008,0060)	S+	
>Scheduled Performing Physicians Name	(0040,0006)		
>Scheduled Procedure Step Description	(0040,0007)		
>Scheduled Station Name	(0040,0010)		
>Scheduled Procedure Step Location	(0040,0011)		
>Scheduled Action Item Code Sequence	(0040,0008)		
>>Code Value	(0008,0100)		
>>Coding Scheme Designator	(0008,0102)		
>>Coding Scheme Version	(0008,0103)		
>>Coding Meaning	(0008,0104)		
>Pre-Medication	(0040,0012)		
>Scheduled Procedure Step ID	(0040,0009)		
>Requested Contrast Agent	(0032,1070)		
>Scheduled Procedure Step Status	(0040,0020)		
Requested Procedure			
Requested Procedure ID	(0040,1001)		
Requested Procedure Description	(0032,1060)		
Requested Procedure Code Sequence	(0032,1064)		
>Code Value	(0008,0100)		
>Coding Scheme Designator	(0008,0102)		
>Coding Meaning	(0008,0104)		
Study Instance UID	(0020,000D)		
Study Date	(0008,0020)		
Study Time	(0008,0030)		
Requested Procedure Priority	(0040,1003)		
Patient Transport Arrangements	(0040,1004)		
Imaging Service Request			
Accession Number	(0008,0050)		○
Requesting Physician	(0032,1032)		
Referring Physician's Name	(0008,0090)		
Requesting Service	(0032,1033)		
Visit Identification			
Admission ID	(0038,0010)		
Visit Status			
Current Patient Location	(0038,0300)		
Patient Identification			
Patient's Name	(0010,0010)	*	○
Patient ID	(0010,0020)	*	○
Other Patient IDs	(0010,1000)		
Patient Demographic			
Patients Birth Date	(0010,0030)		
Patient's Sex	(0010,0040)		○
Patient's Weight	(0010,1030)		
Ethnic Group	(0010,2160)		
Confidentiality Constraint On Patient Data	(0040,3001)		
Patient State	(0038,0500)		
Pregnancy Status	(0010,21C0)		

Medical Alerts	(0010,2000)		
Contrast Allergies	(0010,2110)		
Special Needs	(0038,0050)		
Referenced Study Sequence	(0008,1110)		

Tag : Tag Number

Matching : Search key for updating the worklist. 'S' provides an attribute for a single inspection inspection. '+' indicates a configurable item in the setting page.
'*' indicates a wildcard search is available.

Display : '×' indicates the items that NW500 can display on the monitor screen.

4.2.2.2.6. A receiving policy of association

NW500 AE does not accept any association requests.

4.2.3. Storage

NW500 AE provides Standard Conformance to the following DICOM V3.0 SOP class as a SCU.

4.2.3.1. SOP Classes

SOP Class Name	SOP Class UID	Role
Ophthalmic Photography 8 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.1	SCU
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	SCU
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	SCU

4.2.3.2. Association Policies

4.2.3.2.1. General

The Application Context Name for DICOM 3.0 is the only Application Context proposed.

Application Context Name	1.2.840.10008.3.1.1.1

4.2.3.2.2. Number of Associations

NW500 AE can establish only one association simultaneously.

4.2.3.2.3. Asynchronous Nature

NW500 AE allows only a single operation for an association. Therefore, an asynchronous operation is not supported.

4.2.3.2.4. Implementation Identifying Information

NW500 AE specifies the following implementation identifying information.

Implementation Class UID	1.2.392.200106.1650.1.2
Implementation Version Name	TP_STO_NW500_100

4.2.3.2.5. Activity

4.2.3.2.5.1. Description and Sequencing Activities

After NW500 AE establishes a new association to store an image, it sends an image to a remote NW500 AE by using a C-STORE service of DIMSE-C.

4.2.3.2.5.2. Proposed Presentation Contexts

The store AE can propose the Presentation Contexts shown in the following table.

Presentation Context					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None

		JPEG Baseline Lossy Compression (*)	1.2.840.10008.1.2.4.50	SCU	None
SC Image Storage	1.2.840.10008.5.1.4.1.1.7	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		JPEG Baseline Lossy Compression (*)	1.2.840.10008.1.2.4.50	SCU	None
Ophthalmic Photography 8 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		JPEG Baseline Lossy Compression (*)	1.2.840.10008.1.2.4.50	SCU	None

(*) JPEG Baseline (Process 1)

4.2.3.2.5.3. SOP Specific Conformance for Storage SOP Class

When the result of data communications is successful, NW500 AE judges that the storing of an image is successful even if the release of an association fails.

The details of IODs which is sent by NW500 AE are described in ANNEX A.

4.2.3.2.6. A receiving policy of association

The store AE does not accept any association requests.

4.2.4. Storage Commitment

NW500 AE provides Standard Conformance to the following DICOM V3.0 SOP class as a SCU.

4.2.4.1. SOP Class

SOP Class Name	SOP Class UID	Role
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1	SCU

4.2.4.2. Association Policies

4.2.4.2.1. General

The Application Context Name for DICOM 3.0 is the only Application Context proposed.

Application Context Name	1.2.840.10008.3.1.1.1

4.2.4.2.2. Number of Associations

NW500 AE can establish only one association simultaneously.

4.2.4.2.3. Asynchronous Nature

NW500 AE allows only a single operation for an association. Therefore, an asynchronous operation is not supported.

4.2.4.2.4. Implementation Identifying Information

NW500 AE specifies the following implementation identifying information.

Implementation Class UID	1.2.392.200106.1650.1.4
Implementation Version Name	TP_COM_NW500_100

4.2.4.2.5. Activity

4.2.4.2.5.1. Description and Sequencing Activities

After NW500 AE establishes a new association to ask to save an image enduringly, it sends a storage commitment request message to a remote NW500 AE by using a N-ACTION service of DIMSE-N. Then, when a remote AE completes a process of a storage commitment request, it sends a result of storage commitment to NW500 AE by using a N-EVENT-REPORT service of DICOM-N. Therefore, NW500 AE accepts a transmission request of a result in the association which was established for N-ACTION. However, if the association already is released at that time, a remote NW500 AE establishes a new association to send a transmission request of a result.

4.2.4.2.5.2. Proposed Presentation Contexts

NW500 AE can propose the Presentation Contexts shown in the following table.

Presentation Context					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Storage Commitment	1.2.840.10008.1.20.1	Implicit VR	1.2.840.10008.1.2	SCU	None

Push Model SOP Class		Little Endian			
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None

4.2.4.2.5.3. SOP Specific Conformance for Storage Commitment SOP Class

When the result of data communications is successful, NW500 AE judges that a request of saving an image enduringly is successful even if the release of an association fails.

Attribute Name	Tag	Type	Attribute Description
Storage Commitment Request			
Transaction UID	(0008,1195)	1	A value created by NW500.
Referenced SOP Sequence	(0008,1199)	1	A value acquired from Storage data.
>Referenced SOP Class UID	(0008,1150)	1	A value acquired from Storage data.
>Referenced SOP Instance UID	(0008,1155)	1	A value acquired from Storage data.

4.2.4.2.6. A receiving policy of association

NW500 AE accepts the following association request which is requested from a remote NW500 AE.

- A notification request of a result of a storage commitment

4.2.5. Patient Root Query

NW500 AE provides Conformance to the following DICOM V3.0 SOP class as a SCU.

4.2.5.1. SOP Class

SOP Class Name	SOP Class UID	Role
Patient Root Query / Retrieve Information Model - FIND	1.2.840.10008.5.1.4.1.2.2.1	SCU

4.2.5.2. Association Policies

4.2.5.2.1. General

The Application Context Name for DICOM 3.0 is the only Application Context proposed.

Application Context Name	1.2.840.10008.3.1.1.1

4.2.5.2.2. Number of Associations

NW500 AE can establish only one association simultaneously.

4.2.5.2.3. Asynchronous Nature

NW500 AE allows only a single operation for an association. Therefore, an asynchronous operation is not supported.

4.2.5.2.4. Implementation Identifying Information

Implementation Class UID	1.2.392.200106.1650.1.6
Implementation Version Name	TP_QUE_NW500_100

4.2.5.2.5. Activity

4.2.5.2.5.1. Description and Sequencing Activities

After NW500 AE establishes a new association to receive a patient information list from PACS, it sends a search condition to a remote NW500 AE by using a C-FIND service of DIMSE-C.

4.2.5.2.5.2. Proposed Presentation Contexts

NW500 AE can propose the Presentation Contexts shown in the following table.

Presentation Context					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Patient 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
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None

4.2.5.2.5.3. SOP Specific Conformance for Patient Root Query SOP Class

When the result of data communications is successful, NW500 AE judges that the acquisition of a patient information list is successful even if the release of an association fails.

And the value of Query / Retrieve level is fixed to 'PATIENT'.

Tag Description	Tag	Matching	Display
Patient Level			
Patient's Name	(0010,0010)		×
Patient ID	(0010,0020)	*	×
Patients Birth Date	(0010,0030)		
Patient's Sex	(0010,0040)		×
Ethnic Group	(0010,2160)		

Tag : Tag Number

Matching : Search key for updating the patient list. '*' indicates a wildcard search is available.

Display : '×' indicates the items that NW500 can display on the monitor screen.

4.2.5.2.6. A receiving policy of association

NW500 AE does not accept any association requests.

4.3. NETWORK INTERFACES

NW500 supports DICOM TCP/IP network communication which is defined in PS 3.8 of DICOM Standard. In addition, NW500 supports the TCP/IP protocol stack of Linux system.

4.3.1. Physical Network Interface

NW500 supports a single network interface. One of the following physical network interfaces will be available.

Ethernet 1000base T
Ethernet 100base T

4.3.2. IPv4 and IPv6 Support

NW500 only supports IPv4 connections.

4.4. DATA DICTIONARY OF PRIVATE ATTRIBUTES

NW500 does not support any Private Attributes.

4.5. STANDARD EXTENDED / SPECIALIZED / PRIVATE SOP CLASSES

NW500 does not support any Extended, Specialized or Private SOP Classes.

4.6. PRIVATE TRANSFER SYNTAXES

NW500 does not support any Private Transfer Syntaxes.

4.7. CONFIGURATION

4.7.1. AE Title / Presentation Address Mapping

NW500 uses the AE titles and TCP/IP ports which are specified in the setting page.

4.7.2. Parameters

Many parameters for the general operations can be specified by using a configuration user interface. The following table shows the configurable parameters for DICOM communication.

SCU		
Items	Parameters	Descriptions
NW500	IP Address	Default: None
	Port Number	Default: 64001
	AE Title	Default: TP_AM_NW500_001
SCP		
Items	Parameters	Descriptions
Modality Worklist	IP Address	Default: None
	Port Number	Default: 0
	AE Title	Default: None
Storage	IP Address	Default: None
	Port Number	Default: 0
	AE Title	Default: None
	Modality	Default: SC The following values are available. - OP - VL - SC
	SC Modality	Default: SC The following values are available. - SC - OP - XC - OT
	Transfer Syntax	Default: Implicit VR Little Endian The following values are available. - Implicit VR Little Endian, - Explicit VR Little Endian, - JPEG Baseline Lossy Compression
Storage Commitment	IP Address	Default: None
	Port Number	Default: 0
	AE Title	Default: None
Patient Root Query	IP Address	Default: None
	Port Number	Default: 0
	AE Title	Default: None

5. MEDIA INTERCHANGE

NW500 does not support Media Interchange.

6. SUPPORT OF CHARACTER SETS

NW500 supports the following character sets.

- ISO_IR 6
- ISO 2022 IR 87
- ISO 2022 IR 13

ANNEX A

A.1 IODs of NW500 AE

When NW500 AE sends an image, after generating an IOD which conforms to one of the following SOP classes, NW500 AE sends it.

A.1.1 Ophthalmic Photography 8 Bit Image IOD

Information Entity	Module	Reference	Usage*1
Patient	Patient	A.2.1	M
Study	General Study	A.2.2	M
Series	General Series	A.2.3	M
	Ophthalmic Photography Series	A.2.4	M
Frame Of Reference	Synchronization	A.2.5	M
Equipment	General Equipment	A.2.6	M
Image	General Image	A.2.7	M
	Image Pixel	A.2.8	M
	Cine	A.2.14	C
	Multi Frame	A.2.15	M
	Acquisition Context	A.2.9	U
	Ophthalmic Photography Image	A.2.16	M
	Ocular Region Imaged	A.2.17	M
	Ophthalmic Photography Acquisition Parameters	A.2.18	M
	Ophthalmic Photographic Parameters	A.2.19	M
	SOP Common	A.2.10	M

*1: M=Mandatory, C=Conditional, U=User option

A.1.2 VL Photographic Image IOD

Information Entity	Module	Reference	Usage*1
Patient	Patient	A.2.1	M
Study	General Study	A.2.2	M
Series	General Series	A.2.3	M
Equipment	General Equipment	A.2.6	M
Image	General Image	A.2.7	M
	Image Pixel	A.2.8	M
	Acquisition Context	A.2.9	M
	VL Image	A.2.12	M
	SOP Common	A.2.10	M

*1: M=Mandatory, C=Conditional, U=User option

A.1.3 Secondary Capture Image IOD

Information Entity	Module	Reference	Usage*1
Patient	Patient	A.2.1	M
Study	General Study	A.2.2	M
Series	General Series	A.2.3	M
Equipment	General Equipment	A.2.6	U
	SC Equipment	A.2.11	M
Image	General Image	A.2.7	M
	Image Pixel	A.2.8	M
	SC Image	A.2.13	M
	SOP Common	A.2.10	M

*1: M=Mandatory, C=Conditional, U=User option

A.2 Module lists of IODs

A.2.1 Patient Module

Attribute Name	Tag	Type	Attribute Description
Patient's Name	(0010,0010)	2	A value acquired from MWL, a value acquired from PACS, a value generated by NW500 or empty.
Patient ID	(0010,0020)	2	A value acquired from MWL, a value acquired from PACS or a value generated by NW500.
Patient's Birth Date	(0010,0030)	2	A value acquired from MWL or a value acquired from PACS.
Patient's Sex	(0010,0040)	2	A value acquired from MWL or a value acquired from PACS.

A.2.2 General Study Module

Attribute Name	Tag	Type	Attribute Description
Study Instance UID	(0020,000D)	1	A value acquired from MWL or a value generated by NW500.
Study Date	(0008,0020)	2	A value generated by NW500.
Study Time	(0008,0030)	2	A value generated by NW500 or empty.
Referring Physician's Name	(0008,0090)	2	A value acquired from MWL or empty.
Study ID	(0020,0010)	2	A value acquired from MWL or empty.
Accession Number	(0008,0050)	2	A value acquired from MWL or empty.
Study Description	(0008,1030)	3	fundus photo

A.2.3 General Series Module

Attribute Name	Tag	Type	Attribute Description
Modality	(0008,0060)	1	VL or SC
Series Instance UID	(0020,000E)	1	A value generated by NW500.
Series Number	(0020,0011)	2	A value generated by NW500.
Laterality	(0020,0060)	2C	R or L. In case of OP, this tag does not exist in an IOD.
Series Date	(0008,0021)	3	A value generated by NW500.
Series Time	(0008,0031)	3	A value generated by NW500.
Series Description	(0008,103E)	3	color
Patient Position	(0018,5100)	2C	Empty. In case of VL, this tag exists in an IOD.
Request Attributes Sequence	(0040,0275)	3	-
>Requested Procedure ID	(0040,1001)	1C	A value acquired from MWL.
>Scheduled Procedure Step ID	(0040,0009)	1C	A value acquired from MWL.
> Scheduled Procedure Step Description	(0040,0007)	3	A value acquired from MWL.
> Scheduled Protocol Code Sequence	(0040,0008)	3	-
>>Code Value	(0008,0100)	2	A value acquired from MWL.
>>Coding Scheme Designator	(0008,0102)	2	A value acquired from MWL.
>>Code Meaning	(0008,0104)	2	A value acquired from MWL.

A.2.4 Ophthalmic Photography Series Module

In case of 'Ophthalmic Photography 8 Bit Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Modality	(0008,0060)	1	OP

A.2.5 Synchronization Module

In case of 'Ophthalmic Photography 8 Bit Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Synchronization Frame of Reference UID	(0020,0200)	1	A value generated by NW500.
Synchronization Trigger	(0018,106A)	1	NO TRIGGER
Acquisition Time Synchronized	(0018,1800)	1	N

A.2.6 General Equipment Module

Attribute Name	Tag	Type	Attribute Description
Manufacturer	(0008,0070)	2	A preset value
Institution Name	(0008,0080)	3	A preset value
Station Name	(0008,1010)	3	A preset value
Institutional Department Name	(0008,1040)	3	A preset value
Manufacturer's Model Name	(0008,1090)	3	NW500
Device Serial Number	(0018,1000)	3	Device Serial Number
Software Versions	(0018,1020)	3	Software Version

A.2.7 General Image Module

Attribute Name	Tag	Type	Attribute Description
Instance Number	(0020,0013)	2	A value generated by NW500.
Patient Orientation	(0020,0020)	2C	L¥F
Content Date	(0008,0023)	2C	A value generated by NW500.
Content Time	(0008,0033)	2C	A value generated by NW500.
Image Type	(0008,0008)	3	ORIGINAL¥PRIMARY
Acquisition Number	(0020,0012)	3	A value generated by NW500. In case of OP, this tag exists in an IOD.
Acquisition Date	(0008,0022)	3	Same as Content Date.
Acquisition Time	(0008,0032)	3	Same as Content Time.
Acquisition Date Time	(0008,002A)	3	A value generated from Content Date and Content Time. In case of OP, this tag exists in an IOD.
Burned In Annotation	(0028,0301)	3	NO
Lossy Image Compression	(0028,2110)	3	00 or 01

A.2.8 Image Pixel Module

Attribute Name	Tag	Type	Attribute Description
Sample per Pixel	(0028,0002)	1	A value generated by NW500.
Photometric Interpretation	(0028,0004)	1	A value generated by NW500.
Rows	(0028,0010)	1	A value generated by NW500.
Columns	(0028,0011)	1	A value generated by NW500.
Bits Allocated	(0028,0100)	1	A value generated by NW500.
Bits Stored	(0028,0101)	1	A value generated by NW500.
High Bit	(0028,0102)	1	A value generated by NW500.
Pixel Representation	(0028,0103)	1	A value generated by NW500.
Pixel Data	(7FE0,0010)	1C	A value generated by NW500.
Planar Configuration	(0028,0006)	1C	A value generated by NW500.

A.2.9 Acquisition Context Module

Attribute Name	Tag	Type	Attribute Description
Acquisition Context Sequence	(0040,0555)	2	Empty. In case of OP and VL, this tag is used.

A.2.10 SOP Common Module

Attribute Name	Tag	Type	Attribute Description
SOP Class UID	(0008,0016)	1	A value generated by NW500.
SOP Instance UID	(0008,0018)	1	A value generated by NW500.
Specific Character Set	(0008,0005)	1C	In case of using Japanese, this tag is used.
Instance Creation Date	(0008,0012)	3	A value generated by NW500.
Instance Creation Time	(0008,0013)	3	A value generated by NW500.

A.2.11 SC Equipment Module

In case of 'Secondary Capture Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Conversion Type	(0008,0064)	1	WSD

A.2.12 VL Image Module

In case of 'VL Photographic Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Image Type	(0008,0008)	1	ORIGINAL¥PRIMARY
Photometric Interpretation	(0028,0004)	1	A value generated by NW500.
Bits Allocated	(0028,0100)	1	A value generated by NW500.
Bits Stored	(0028,0101)	1	A value generated by NW500.
High Bit	(0028,0102)	1	A value generated by NW500.
Pixel Representation	(0028,0103)	1	A value generated by NW500.
Sample per Pixel	(0028,0002)	1	A value generated by NW500.
Planar Configuration	(0028,0006)	1C	A value generated by NW500.
Content Time	(0008,0033)	1C	A value generated by NW500.
Lossy Image Compression	(0028,2110)	2	00 or 01
Anatomic Region Sequence	(0008,2218)	1C	-
> Code Value	(0008,0100)	2	A value defined in CID 4029.
> Coding Scheme Designator	(0008,0102)	2	A value defined in CID 4029.
> Code Meaning	(0008,0104)	2	A value defined in CID 4029.
Pixel Data	(7FE0,0010)	1	A value generated by NW500.
Pixel Spacing	(0028,0030)	3	1.85E-03¥1.85E-03

A.2.13 SC Image Module

In case of 'Secondary Capture Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Pixel Spacing	(0028,0030)	1C	1.85E-03¥1.85E-03

A.2.14 Cine Module

In case of 'Ophthalmic Photography 8 Bit Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Frame Time	(0018,1063)	1C	0

A.2.15 Multi Frame Module

In case of 'Ophthalmic Photography 8 Bit Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Number of Frames	(0028,0008)	1	1
Frame Increment Pointer	(0028,0009)	1	(0018,1063)

A.2.16 Ophthalmic Photography Image Module

In case of 'Ophthalmic Photography 8 Bit Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Image Type	(0008,0008)	1	ORIGINAL¥PRIMARY¥¥COLOR
Instance Number	(0020,0013)	1	A value generated by NW500.
Samples per Pixel	(0028,0002)	1	A value generated by NW500.
Photometric Interpretation	(0028,0004)	1	A value generated by NW500.
Pixel Representation	(0028,0103)	1	A value generated by NW500.
Planar Configuration	(0028,0006)	1C	A value generated by NW500.
Pixel Spacing	(0028,0030)	1C	1.85E-03¥1.85E-03
Content Time	(0008,0033)	1	A value generated by NW500.
Content Date	(0008,0023)	1	A value generated by NW500.
Acquisition Date Time	(0008,002A)	1C	A value generated by NW500.
Lossy Image Compression	(0028,2110)	1	00 or 01
Burned In Annotation	(0028,0301)	1	NO

A.2.17 Ocular Region Imaged Module

In case of 'Ophthalmic Photography 8 Bit Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Image Laterality	(0020,0062)	1	R, L or B.
Anatomic Region Sequence	(0008,2218)	1	-
> Code Value	(0008,0100)	2	A value defined in ID 4029.
> Coding Scheme Designator	(0008,0102)	2	A value defined in ID 4029.
> Code Meaning	(0008,0104)	2	A value defined in ID 4029.

A.2.18 Ophthalmic Photography Acquisition Parameters Module

In case of 'Ophthalmic Photography 8 Bit Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Patient Eye Movement Commanded	(0022,0005)	2	YES or NO
Patient Eye Movement Commanded Code Sequence	(0022,0006)	1C	If (0022,0005) tag has YES, this tag is used.
> Code Value	(0008,0100)	2	CID 4201
> Coding Scheme Designator	(0008,0102)	2	CID 4201
> Code Meaning	(0008,0104)	2	CID 4201
Refractive State Sequence	(0022,001B)	2	Empty
Emmetropic Magnification	(0022,000A)	2	A value generated by NW500.
Intra Ocular Pressure	(0022,000B)	2	Empty
Pupil Dilated	(0022,000D)	2	Empty

A.2.19 Ophthalmic Photographic Parameters Module

In case of 'Ophthalmic Photography 8 Bit Image', this module is used.

Attribute Name	Tag	Type	Attribute Description
Acquisition Device Type Code Sequence	(0022,0015)	1	-
> Code Value	(0008,0100)	2	A value defined in CID 4202.
> Coding Scheme Designator	(0008,0102)	2	A value defined in CID 4202.
> Code Meaning	(0008,0104)	2	A value defined in CID 4202.
Detector Type	(0022,0016)	2	Empty
Light Path Filter Type Stack Code Sequence	(0022,0017)	2	Empty
Image Path Filter Type Stack Code Sequence	(0022,0018)	2	Empty
Lenses Code Sequence	(0022,0019)	2	Empty
Detector Type	(0018,7004)	2	Empty

End of report.