# DigitexPRO

# DICOM Modality Worklist

# Conformance Statement

⊕ **SHIMADZU**

# MEDICAL SYSTEMS DEVISION

# CONTENTS

## Revision History

| Rev | Content | Date |
| --- | --- | --- |
| 0. 8 | First edition (tentative version) making | 2000/03/10 |
| 0. 81 | 2.1.2.3.2 Peculiar conformance addition to modality work list management SOP class | 2000/03/18 |
| 0. 82 | Implementation Class UID and Implementation Version Name correction | 2000/05/15 |
| 1.0 | First edition | 2000/12/05 |
| 2.0 | A revision. MPPS relation addition | 2000/12/18 |
| B | Add some attributes to Radiation Dose Module | 2003/12/01 |

# 0 Introduction

This application operates on the DICOM MWL Gateway device which supports TCP/IP. This application queries and retrieves the modality worklist for the information system in the network according to the DICOM standard. Moreover, procedure step information which has executed the modality is transmitted to the information system according to the DICOM standard.

Agreement to the DICOM standard of the above-mentioned application is written in this comformance statement.

# 1. Implementation Modal

Figure 1 shows the implementation model.

## 1.1 Application data flow

The application name on the DICOM MWL Gateway device is MWLQuery. The MWLQuery is the application to retrieve and to query the modality worklist.



DICOM Interface

TCP/IP
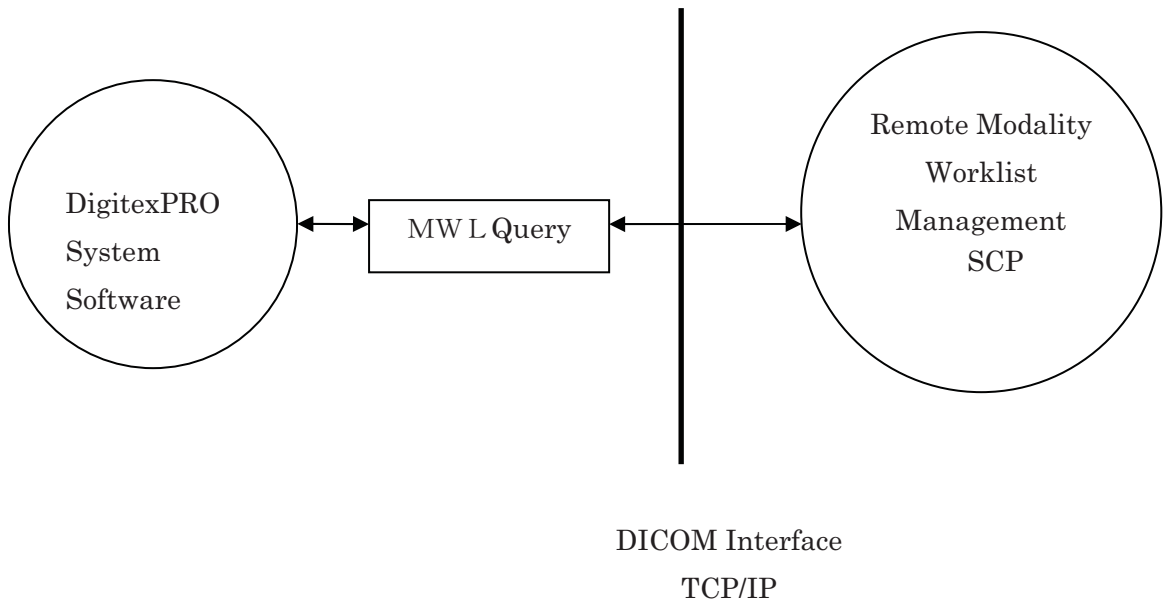
**Figure 1 -1 Implementation model for MWLQuery (Only for MWM)**

DICOM Interface

TCP/IP
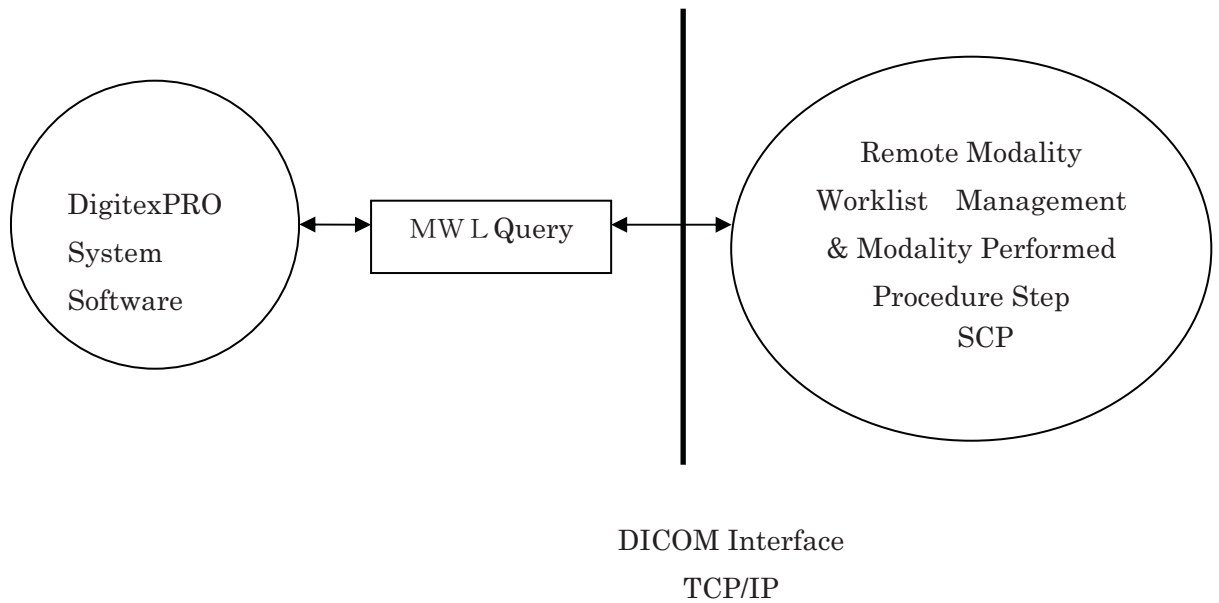
**Figure 1-2 Implementation model for MWLQuery (For MWM and MPPS)**

## 1.2 Functional definition of AE

・MWLQuery requests the DICOM Association Establishment to the SCP.

・The query condition is input, and the query request according to the query condition
is sent to SCP.

・The retrieval result is received, and the received information object is transmitted to
the DigitexPRO(DAR-3000) system software.

・It transmits the MPPS Information to MPPS SCP.

Note

The MPPS SCP shall be the same that the MWM SCP, when MWLQUERY
operates in MPPS.

# 2. AE specification

## 2.1 MWLQuery specification

MWLQuery supports the following DICOM SOP classes as Service Class User (SCU).

| SOP Class Name | SOP Class UID |
|---|---|
| Modality Worklist Information Model - FIND | 1.2.840.10008.5.1.4.31 |
| Modality Performed Procedure Step SOP Class | 1.2.840.10008.3.1.2.3.3 |

## 2.1.1 Association Establishment Policies

### 2.1.1.1 Number of Associations

The number of associations which MWLQuery requests simultaneously is one.

The number of associations which MWLQuery transmits at the same time is one.

### 2.1.1.2 Asynchronous system

The MWLQuery does not operate asynchronously.

### 2.1.1.3 Implementation identifying information

・ Implementation Class UID = "1.2.392.200036.9110.1.0.6711.199070″

・ Implementation Version Name = "MWL_MPPS_GWV1.0

## 2.1.2 Association Initiation Policy

After transmitting the association request, and receiving the acceptance, the MWLQuery sends the query condition.

After transmitting the association request, and receiving the acceptance, the MWLQuery sends the MPPS information to MPPS SCP.

### 2.1.2.1 Associated Real-World Activity

Associates real-world activity using C-FIND is that the MWLQuery retrieves the information objects from the SCP and the MWLQuery send the information objects to the DigitexPRO System Software.

The MPPS information is transmitted to the MPPS SCP.

## 2.1.2.2 Proposed Presentation Contexts

The MWLQuery propose the Presentation Contexts in Table 2.1.2.2-1.

Table 2.1.2.2-1 Proposed Presentation Contexts for MWLQuery

| Presentation Context Table | | | | | |
|---|---|---|---|---|---|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negotiation |
| Name | UID | Name | UID | | |
| Modality work list information model FIND | 1.2.840.10008.5.1.4.31 | Implicit VR Little Endian | 1.2.840.10008.1.2 | SCU | None |
| Modality Performed Procedure Step SOP Class | 1.2.840.10008.3.1.2.3.3 | Implicit VR Little Endian | 1 2.840.10008.1.2 | SCU | None |

## 2.1.2.3 SOP Specific Conformance

## 2.1.2.3.1 SOP Specific Conformance to Modality Worklist Information Class - C-FIND

## 2.1.2.3.1.1 Matching Key

### Scheduled Procedure Step Module

| Tag | Attribute Name | VR | Match-ing Key Type | Description |
|---|---|---|---|---|
| (0040,0100) | Scheduled Procedure Step Sequence | SQ | R | Sequence is limited to one item. |
| >(0008,0060) | Modality | CS | R | Single Key (RF or XA) Matching. |
| >(0040,0001) | Scheduled Station AE Title | AE | R | |
| >(0040,0002) | Scheduled Procedure Step Start Date | DA | R | Single Key Matching. |

Each matching key is configurable if it is used as the matching key or not.

## 2.1.2.3.1.2 Return Key

### Scheduled Procedure Step Module

| Tag | Attribute Name | VR | Return Key Type | Description |
|-----|----------------|----|-----------------|-------------|
| (0040,0100) | Scheduled Procedure Step Sequence | SQ | 1 | Sequence is limited to one item. |
| >(0008,0060) | Modality | CS | 1 | The return value is displayed. |
| >(0032,1070) | Requested Contrast Agent | LO | 2C | The return value is displayed. |
| >(0040,0001) | Scheduled Station AE Title | AE | 1 | The return value is displayed. |
| >(0040,0002) | Scheduled Procedure Step Start Date | DA | 1 | The return value is displayed. |
| >(0040,0003) | Scheduled Procedure Step Start Time | TM | 1 | The return value is displayed. |
| >(0040,0004) | Scheduled Procedure Step End Date | DA | 3 | The return value is displayed. |
| >(0040,0005) | Scheduled Procedure Step End Time | TM | 3 | The return value is displayed. |
| >(0040,0006) | Scheduled Performing Physician's Name | PN | 2 | The return value is displayed. |
| >(0040,0007) | Scheduled Procedure Step Description | LO | 1C | The return value is displayed. |
| >(0040,0008) | Scheduled Action Item Code Sequence | SQ | 1C | Not used |
| >>(0008,0100) | Code Value | | 1C | （not applicatabale） |
| >>(0008,0102) | Coding Scheme Designator | | 1C | （not applicatabale） |
| >>(0008,0104) | Code Meaning | | 1C | （not applicatabale） |
| >(0040,0009) | Scheduled Procedure Step ID | SH | 1 | The return value is displayed. |
| >(0040,0010) | Scheduled Station Name | SH | 2 | The return value is displayed. |
| >(0040,0011) | Scheduled Procedure Step Location | SH | 2 | The return value is displayed. |
| >(0040,0012) | Pre-Medication | LO | 2C | The return value is displayed. |
| >(0040,0400) | Comments on the Scheduled Procedure Step | LT | 3 | The return value is displayed. |

### Requested Procedure Module

| Tag | Attribute Name | VR | Return Key Type | Description |
|-----|----------------|----|-----------------|-------------|
| (0008,1110) | Referenced Study Sequence | SQ | 2 | Not used |
| >(0008,1150) | Referenced SOP Class UID | UI | 1C | （not applicatable） |
| >(0032,1155) | Referenced SOP Instance UID | UI | 1C | （not applicatable） |
| (0020,000D) | Study Instance UID | UI | 1 | The return value is displayed. |
| (0032,1060) | Requested Procedure Description | LO | 1C | The return value is displayed. |
| (0032,1064) | Requested Procedure Code Sequence | SQ | 1C | （not used） |
| >(0008,0100) | Code Value | | 1C | （not applicatable） |
| >(0008,0102) | Coding Scheme Designator | | 1C | （not applicatable） |
| >(0008,0104) | Code Meaning | | 1C | （not applicatable） |
| (0040,1001) | Requested Procedure ID | SH | 1 | The return value is displayed. |
| (0040,1002) | Reason for the Requested Procedure | LO | 3 | The return value is displayed. |
| (0040,1003) | Requested Procedure Priority | SH | 2 | （not used） |
| (0040,1004) | Requested Procedure Location | LO | 2 | （not used） |
| (0040,1005) | Requested Procedure Location | LO | 3 | （not used） |
| (0040,1006) | Placer Order Number / Procedure | | 3 | （not used） |
| (0040,1007) | Filler Order Number / Procedure | | 3 | （not used） |
| (0040,1008) | Confidentiality Code | LO | 3 | （not used） |
| (0040,1009) | Reporting Priority | SH | 3 | （not used） |
| (0040,1010) | Names of Intended Recipients of results | PN | 3 | （not used） |
| (0040,1400) | Requested Procedure Comments | LT | 3 | The return value is displayed. |

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## Imaging Service Request Module

| Tag | Attribute Name | VR | Return Key Type | Description |
|---|---|---|---|---|
| (0008,0050) | Accession Number | SH | 2 | The return value is displayed. |
| (0008,0090) | Referring Physician's Name | PN | 2 | The return value is displayed. |
| (0032,1032) | Requesting Physician | PN | 2 | The return value is displayed. |
| (0032,1033) | Requesting Service | LO | 3 | The return value is displayed. |
| (0040,2001) | Reason for the Imaging Service Request | LO | 3 | The return value is displayed. |
| (0040,2004) | Issuing Date of Imaging Service Request | DA | 3 | （not used） |
| (0040,2005) | Issuing Time of Imaging Service Request | TM | 3 | （not used） |
| (0040,2006) | Placer Order Number / Imaging Service Request | SH | 3 | （not used） |
| (0040,2007) | Filler Order Number / Imaging Service Request | SH | 3 | （not used） |
| (0040,2008) | Order entered by ... | PN | 3 | （not used） |
| (0040,2009) | Order Enterer's Location | SH | 3 | （not used） |
| (0040,2010) | Order Callback Phone Number | SH | 3 | （not used） |
| (0040,2400) | Imaging Service Request Comments | LT | 3 | （not used） |

## Patient Identification Module

| Tag | Attribute Name | VR | Return Key Type | Description |
|---|---|---|---|---|
| (0010,0010) | Patient's Name | PN | 1 | The return value is displayed. |
| (0010,0020) | Patient ID | LO | 1 | The return value is displayed. |
| (0010.0021) | Issuer of Patient ID | LO | 3 | The return value is displayed. |
| (0010,1000) | Other Patient IDs | LO | 3 | The return value is displayed. |
| (0010,1001) | Other Patient Names | PN | 3 | The return value is displayed. |
| (0010,1005) | Patient's Birth Name | PN | 3 | The return value is displayed. |
| (0010,1060) | Patient's Mother's Birth Name | PN | 3 | The return value is displayed. |
| (0010,1090) | Medical Record Locator | LO | 3 | The return value is displayed. |

## Patient Demographic Module

| Tag | Attribute Name | VR | Return Key Type | Description |
|-----|----------------|-----|-----------------|-------------|
| (0010,0030) | Patient's Birth Date | DA | 2 | The return value is displayed. |
| (0010,0032) | Patient's Birth Time | TM | 3 | （Not used） |
| (0010,0040) | Patient's Sex | CS | 2 | The return value is displayed. |
| (0010,0050) | Patient's Insurance Plan Code Sequence | SQ | 3 | （Not used） |
| >(0008,0100) | Code Value | | 1C | （Not applicatable） |
| >(0008,0102) | Coding Scheme Designator | | 1C | （Not applicatable） |
| >(0008,0104) | Code Meaning | | 1C | （Not applicatable） |
| (0010,1010) | Patient's Age | AS | 3 | Not Used<br>Derived from Patient Birth date. |
| (0010,1020) | Patient's Size | DS | 3 | The return value is displayed. |
| (0010,1030) | Patient's Weight | DS | 2 | The return value is displayed. |
| (0010,1040) | Patient's Address | LO | 3 | The return value is displayed. |
| (0010,1080) | Military Rank | LO | 3 | （Not used） |
| (0010,1081) | Branch of Service | LO | 3 | （Not used） |
| (0010,2150) | Country of Residence | LO | 3 | （Not used） |
| (0010,2152) | Region of Residence | LO | 3 | （Not used） |
| (0010,2154) | Patient's Telephone Numbers | SH | 3 | The return value is displayed. |
| (0010,2160) | Ethnic Group | SH | 3 | （Not used） |
| (0010,2180) | Occupation | SH | 3 | （Not used） |
| (0010,21F0) | Patient's Religious Preference | LO | 3 | （Not used） |
| (0010,4000) | Patient Comments | LT | 3 | The return value is displayed. |
| (0040,3001) | Patient Data Confidentiality Constraint Description | LO | 2 | （Not used） |

## Patient Medical Module

| Tag | Attribute Name | VR | Return Key Type | Description |
|-----|----------------|-----|-----------------|-------------|
| (0010,2000) | Medical Alerts | LO | 2 | The return value is displayed. |
| (0010,2110) | Contrast Allergies | LO | 2 | The return value is displayed. |
| (0010,21A0) | Smoking Status | CS | 3 | （Not used） |
| (0010,21B0) | Additional Patient History | LT | 3 | The return value is displayed. |
| (0010,21C0) | Pregnancy Status | US | 2 | The return value is displayed. |
| (0010,21D0) | Last Menstrual Date | DA | 3 | （Not used） |
| (0038,0050) | Special Needs | LO | 2 | The return value is displayed. |
| (0038,0500) | Patient State | LO | 2 | The return value is displayed. |

**Visit Identification Module**

| Tag | Attribute Name | VR | Return Key Type | Description |
|---|---|---|---|---|
| (0008,0080) | Institution Name | LO | 3 | The return value is displayed. |
| (0008,0081) | Institution Address | ST | 3 | The return value is displayed. |
| (0008,0082) | Institution Code Sequence | SQ | 3 | （Not used） |
| >(0008,0100) | Code Value | | 1C | （Not Applicatable） |
| >(0008,0102) | Coding Scheme Designator | | 1C | （Not Applicatable） |
| >(0008,0104) | Code Meaning | | 1C | （Not Applicatable） |
| (0038,0010) | Admission ID | LO | 2 | The return value is displayed. |
| (0038,0011) | Issuer of Admission ID | LO | 3 | The return value is displayed. |

**Visit Status Module**

| Tag | Attribute Name | VR | Return Key Type | Description |
|---|---|---|---|---|
| (0038,0008) | Visit Status ID | CS | 3 | The return value is displayed. |
| (0038,0300) | Current Patient Location | LO | 2 | The return value is displayed. |
| (0038,0400) | Patient's Institution Residence | LO | 3 | The return value is displayed. |
| (0038,4000) | Visit Comments | LT | 3 | The return value is displayed. |

**Visit Admission Module**

| Tag | Attribute Name | VR | Return Key Type | Description |
|---|---|---|---|---|
| (0008,0090) | Referring Physician's Name | PN | 3 | The return value is displayed. |
| (0008,0092) | Referring Physician's Address | ST | 3 | The return value is displayed. |
| (0008,0094) | Referring Physician's Phone Numbers | SH | 3 | The return value is displayed. |
| (0008,1080) | Admitting Diagnosis Description | LO | 3 | Not used |
| (0008,1084) | Admitting Diagnosis Code Sequence | SQ | 3 | Not used |
| (0038,0016) | Route of Admissions | LO | 3 | The return value is displayed. |
| (0038,0020) | Admitting Date | DA | 3 | The return value is displayed. |
| (0038,0021) | Admitting Time | TM | 3 | The return value is displayed. |

### 2.1.2.3.2 SOP Specific Conformance to SOP Class

MWLQuery provides standard conformance to DICOM Modality Performed Procedure Step SCU.

# 2.1.2.3.3 Specific Conformance to Modality Performed Procedure Step SOP class

| Attribute name | Tag | Necessary type N-CREATE | Necessary type (final state) | Necessary type N-SET | N_CREATE | N_SET | Final state | Explanation |
|---|---|---|---|---|---|---|---|---|
| Specific character set | (0008,0005) | 1C/1C (necessity when enhancing or replacement character set is used) | | It is not allowed. | It does not adjust. | It does not adjust. | It does not adjust. | |

## Performed Procedure Step Relationship

| Attribute name | Tag | Necessary type N-CREATE | Necessary type (final state) | Necessary type N-SET | N_CREATE | N_SET | Final state | Explanation |
|---|---|---|---|---|---|---|---|---|
| Scheduled Step Attributes Sequence | (0040,0270) | 1/1 | | It is not allowed. | It transmits. | | | |
| > Study Instance UID | (0020,000D) | 1/1 | | It is not allowed. | It transmits. | | | |
| > Reference Study Sequence | (0008,1110) | 2/2 | | It is not allowed. | Only Tag is transmitted. | | | |
| >> Reference SOP Class UID | (0008,1150) | 1C/1 (Required if Sequence Item is present.) | | It is not allowed. | | | | |
| >> Reference SOP Instance UID | (0008,1155) | 1C/1 (Required if Sequence Item is present.) | | It is not allowed. | | | | |
| > Accession Number | (0008,0050) | 2/2 | | It is not allowed. | It transmits. | | | |
| > Placer Order Number/Imaging Service Request | (0040,2006) | 3/3 | | It is not allowed. | | | | |
| > Filler Order Number/Imaging Service Request | (0040,2007) | 3/3 | | It is not allowed. | | | | |
| > Requested Procedure ID | (0040,1001) | 2/2 | | It is not allowed. | Only Tag is transmitted. | | | |
| > Requested Procedure Description | (0032,1060) | 2/2 | | It is not allowed. | Only Tag is transmitted. | | | |
| > Placer Order Number/Procedure | (0040,1006) | 3/3 | | It is not allowed. | | | | |
| > Filler Order Number/Procedure | (0040,1007) | 3/3 | | It is not allowed. | | | | |

| Attribute name | Tag | Necessary type N-CREATE | Necessary type N-SET | Necessary type (final state) | N_CREATE | N_SET | Final state | Explanation |
|---|---|---|---|---|---|---|---|---|
| > Scheduled Procedure Step ID | (0040,0009) | 2/2 | It is not allowed. | | It transmits. | | | |
| > Scheduled Procedure Step Description | (0040,0007) | 2/2 | It is not allowed. | | Only Tag is transmitted. | | | |
| > Scheduled Protocol Code Sequence | (0040,0008) | 2/2 | It is not allowed. | | Only Tag is transmitted. | | | |
| >> Code Value | (0008,0100) | 1C/1 (Required if Sequence Item is present.) | It is not allowed. | | | | | |
| >> Coding Scheme Designator | (0008,0102) | 1C/1 (Required if Sequence Item is present.) | It is not allowed. | | | | | |
| >> Code meaning | (0008,0104) | 3/3 | It is not allowed. | | | | | |
| Patient's Name | (0010,0010) | 2/2 | It is not allowed. | | Only the alphabet name is transmitted. | | | |
| Patient ID | (0010,0020) | 2/2 | It is not allowed. | | It transmits. | | | |
| Patient's Birth Date | (0010,0030) | 2/2 | It is not allowed. | | It transmits. | | | |
| Patient's Sex | (0010,0040) | 2/2 | It is not allowed. | | It transmits. | | | |
| Referenced Patient Sequence | (0008,1120) | 2/2 | It is not allowed. | | Only Tag is transmitted. | | | |
| > Referenced SOP Class UID | (0008,1150) | 1C/1 (Required if Sequence Item is present.) | It is not allowed. | | | | | |
| > Referenced SOP Instance UID | (0008,1155) | 1C/1 (Required if Sequence Item is present.) | It is not allowed. | | | | | |

**Performed Procedure Step Information**

| Attribute name | Tag | Necessary type N-CREATE | Necessary type N-SET | Necessary type (final state) | N_CREATE | N_SET | Final state | Explanation |
|---|---|---|---|---|---|---|---|---|
| Performed Procedure Step ID | (0040,0253) | 1/1 | It is not allowed. | | It transmits. | | | |
| Performed Station AE Title | (0040,0241) | 1/1 | It is not allowed. | | It transmits. | | | |
| Performed Station Name | (0040,0242) | 2/2 | It is not allowed. | | Only Tag is transmitted. | | | |
| Performed Location | (0040,0243) | 2/2 | It is not allowed. | | Only Tag is transmitted. | | | |
| Performed Procedure Step Start Date | (0040,0244) | 1/1 | It is not allowed. | | It transmits. | | | |
| Performed Procedure Step Start Time | (0040,0245) | 1/1 | It is not allowed. | | It transmits. | | | |
| Performed Procedure Step Status | (0040,0252) | 1/1 | 3/1 | | It transmits. | | | |
| Performed Procedure Step Description | (0040,0254) | 2/2 | 3/2 | | Only Tag is transmitted. | | | |
| Performed Procedure Step Type Description | (0040,0255) | 2/2 | 3/2 | | Only Tag is transmitted. | | | |
| Procedure Code Sequence | (0008,1032) | 2/2 | 3/2 | | Only Tag is transmitted. | | | |
| > Code Value | (0008,0100) | 1C/1 (Required if Sequence Item is present.) | 1C/1 (Required if Sequence Item is present.) | | | | | |
| > Coding Scheme Designator | (0008,0102) | 1C/1 (Required if Sequence Item is present.) | 1C/1 (Required if Sequence Item is present.) | | | | | |
| > Code Meaning | (0008,0104) | 3/3 | 3/3 | | | | | |
| Performed Procedure Step End Date | (0040,0250) | 2/2 | 3/1 | 1 | Only Tag is transmitted. | | | |
| Performed Procedure Step End Time | (0040,0251) | 2/2 | 3/1 | 1 | Only Tag is transmitted. | | | |
| Comments on the Performed Procedure Step | (0040,0280) | 3/3 | 3/3 | | Only Tag is transmitted. | | | |

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**Image Acquisition Results**

| Attribute name | Tag | Necessary type N-CREATE | Necessary type N-SET | Necessary type (final state) | N_CREATE | N_SET | Final state | Explanation |
|---|---|---|---|---|---|---|---|---|
| Modality | (0008,0060) | 1/1 | It is not allowed. | | It transmits. | | | |
| Study ID | (0020,0010) | 2/2 | It is not allowed. | | Only Tag is transmitted. | | | |
| Performed Protocol Code Sequence | (0040,0260) | 2/2 | 3/2 | | Only Tag is transmitted. | | | |
| > Code Value | (0008,0100) | 1C/1 (Required if Sequence Item is present.) | 1C/1 (Required if Sequence Item is present.) | | | | | |
| > Coding Scheme Designator | (0008,0102) | 1C/1 (Required if Sequence Item is present.) | 1C/1 (Required if Sequence Item is present.) | | | | | |
| > Code Meaning | (0008,0104) | 3/3 | 3/3 | | | | | |
| Performed Series Sequence | (0040,0340) | 2/2 | 3/1 | 1 | Only Tag is transmitted. | | It transmits. | |
| > Performing Physician's Name | (0008,1050) | 2C/2 (Required if Sequence Item is present.) | 2C/2 (Required if Sequence Item is present.)) | 2 | | | Only Tag is transmitted. | |
| > Protocol Name | (0018,1030) | 1C/1 (Required if Sequence Item is present.) | 1C/1 (Required if Sequence Item is present.) | 1 | | | It transmits. | |
| > Operator's Name | (0008,1070) | 2C/2 (Required if Sequence Item is present.)) | 2C/2 (Required if Sequence Item is present.) | 2 | | | Only Tag is transmitted. | |
| > Series Instance UID | (0020,000E) | 1C/1 (Required if Sequence Item is present.) | 1C/1 (Required if Sequence Item is present.) | 1 | | | It transmits. | |
| > Series Description | (0008,103E) | 2C/2 (Required if Sequence Item is present.)) | 2C/2 (Required if Sequence Item is present.) | 2 | | | Only Tag is transmitted. | |
| > Retrieve AE Title | (0008,0054) | 2C/2 (Required if Sequence Item is present.)) | 2C/2 (Required if Sequence Item is present.) | 2 | | | Only Tag is transmitted. | |
| > Referenced Image Sequence | (0008,1140) | 2C/2 (Required if Sequence Item is present.)) | 2C/2 (Required if Sequence Item is present.) | | | | When the DR radiography is taken, it is transmitted. | |

| Attribute name | Tag | Necessary type N-CREATE | Necessary type N-SET | Necessary type (final state) | N_CREATE | N_SET | Final state | Explanation |
|---|---|---|---|---|---|---|---|---|
| >> Referenced SOP Class UID | (0008,1150) | 1C/1 (Required if Sequence Item is present.) | 1C/1 (Required if Sequence Item is present.) | | | | When the DR radiography is taken, it is transmitted. | |
| >> Referenced SOP Instance UID | (0008,1155) | 1C/1 (Required if Sequence Item is present.) | 1C/1 (Required if Sequence Item is present.) | | | | When the DR radiography is taken, it is transmitted. | |
| > Referenced Non-Image Composite SOP Instance Sequence | (0040,0220) | 2C/2 (Required if Sequence Item is present.) | 2C/2 (Required if Sequence Item is present.)) | | | | Only Tag is transmitted. | |
| >> Referenced SOP Class UID | (0008,1150) | 1C/1 (Required if Sequence Item is present.) | 1C/1 (Required if Sequence Item is present.) | | | | | |
| >> Referenced SOP Instance UID | (0008,1155) | 1C/1 (Required if Sequence Item is present.) | 1C/1 (Required if Sequence Item is present.) | | | | | |
| > All Other Attributes from Performed Series Sequence | | 3/3 | 3/3 | | | | | |
| All Other Attributes from Radiation Dose Module, Billing and Material Management Module | | 3/3 | 3/3 | | | | | |

**Radiation Dose Module**

| Attribute name | Tag | Necessary type N-CREATE | Necessary type N-SET | Necessary type (final state) | N_CREATE | N_SET | Final state | Explanation |
|---|---|---|---|---|---|---|---|---|
| Total Time of Fluoroscopy | (0040,0300) | | | | | | It transmits. | |
| Total Number of Exposure | (0040,0301) | | | | | | It transmits. | |
| Distance Source to Detector (SID) | (0018,1110) | | | | | | | |
| Distance Source to Entrance | (0040,0306) | | | | | | | |
| Entrance Dose | (0040,0302) | | | | | | Only Tag is transmitted. | |
| Entrance Dose in mGy | (0040,8302) | | | | | | Only Tag is transmitted. | |
| Exposed Area | (0040,0303) | | | | | | Only Tag is transmitted. | |
| Image Area Dose Product | (0018,115E) | | | | | | Only Tag is transmitted. | |
| Comments on Radiation Dose | (0040,0310) | | | | | | Only Tag is transmitted. | |
| Exposure Dose Sequence | (0040,030E) | | | | | | | |
| >Radiation Mode | (0018,115A) | | | | | | transmits | 'CONTINUOUS' if fluoroscopy 'PULSED' if Radiography |
| >KVp | (0018,0060) | | | | | | Transmits | |
| >X-ray Tube Current in µA | (0018,8151) | | | | | | transmits. | |
| >Exposure Time | (0018,1150) | | | | | | transmits | |

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| Attribute name | Tag | | | | | | | Explanation |
|---|---|---|---|---|---|---|---|---|
| >Filter Type | (0018,1160) | | | | | | | Only Tag is transmitted. |
| >Filter Material | (0018,7050) | | | | | | | |

## Billing and Material Management Module

| Attribute name | Tag | Necessary type N-CREATE | Necessary type N-SET | Necessary type (final state) | N_CREATE | N_SET | Final state | Explanation |
|---|---|---|---|---|---|---|---|---|
| Film consumption sequence | (0040,0321) | | | | Only Tag is transmitted. | | | |
| > Number of films | (2100,0170) | | | | | | It transmits. | |
| > Medium type | (2000,0030) | | | | | | It transmits. | |
| > Film Size ID | (2010,0050) | | | | | | It transmits. | |
| Billing Supplies and Devices Sequence | (0040,0324) | | | | | | | |
| > Billing Item Sequence | (0040,0296) | | | | | | | |
| > Quantity Sequence | (0040,0293) | | | | | | | |
| >> Quantity | (0040,0294) | | | | | | | |
| >> Measuring Units Sequence | (0040,0295) | | | | | | | |

### 2.1.2.4 Proposed Presentation Contexts

The MWLQuery proposes the presentation context shown in Table 2.1.2.2-1.

### 2.1.2.5 Transfer Syntax Selection Policies

MWLQuery supports only the Implicit VR Little endian Transfer Syntax.

# 3. COMMUNICATION PROFILES

## 3.1 Supported Communications Stacks

The MWLQuery provides DICOM V3.0 TCP/IP Network Communication Support as defined in PS 3.8.

## 3.2 TCP/IP

## 3.2.1 Physical Media Support

MWLQuery operates by using Ethernet(10BaseT,100BaseTX).

# 4. EXTENSIONS/SPECIALIZATIONS/PRIVATIZATIONS

Not Applicable.

# 5. CONFIGURATION

## 5.1 AE Title/Presentation Address Mapping

MWLQuery only uses an original configuration file related to the network.

## 5.2 Configurable Parameters

The establishment demand of the association is done by at least using the following parameter.
- Application Entity Title
- IP Address
- Port Number
   (These parameters are congigurable.)

# 6. SUPPORT OF EXTENDED CHARACTER SETS

MWLQuery can handle these extended character sets:

ISO-IR 87: Japanese kanji (ideographic), hiragana (phonetic),
and katakana (phonetic) characters (94 2 characters, 2-byte).