# DICOM 3.0
# Conformance Statement
# MIERIS MWL v 6.1

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# Table of Contents


**1.0 Introduction** ..... 3
**1.1 Scope and Audience** ..... 3
**1.2 Reference** ..... 3
**1.3 Definitions** ..... 3
2.0 Implementation model ..... 4
2.1 Application data flow diagram ..... 4
2.2 Functional definition of Application Entities ..... 5
2.3 Sequencing of Real World Activities ..... 5
3 Application Entity specifications ..... 6
3.1 AE Title ..... 6
3.2 AE SCP Classes ..... 6
3.3 MIE_MWL_SCP Association Establishment ..... 6
4 Communication Profiles ..... 10
4.1 Supported Communications Stacks ..... 10
4.2 TCP/IP Stack ..... 10
4.3 Physical Media Support ..... 10
5 EXTENSIONS / SPECIALIZATIONS / PRIVATIZATIONS ..... 10

# 1.0 Introduction

## 1.1 Scope and Audience

This is the DICOM conformance statement for the **MIERIS MWL** 6.1 product
Which supports:

DICOM Modality Work List Management (of the Query/Retrieve Services)
as a Service Class Provider (SCP)

This document has been written using the guidelines provided in the DICOM standard
This version of this document applies to Release 1.0 of **MIERIS MWL** 6.1
Future Release of the product may support other DICOM Service

## 1.2 Reference

[1] ACR/NEMA Standards Publications, No PS3, DICOM Standards:
Part 1 - Introduction
Part 2 - Conformance
Part 3 - Information Object Definitions
Part 4 - Service Class Specifications
Part 5 - Data Structures and Encoding
Part 6 - Data Dictionary
Part 7 - Message Exchange
Part 8 - Network Communication Support
Part 9 - Point to Point Communication Support for Message Exchange
Part 10 - Media Storage and File Format for Media Interchange
Part 11 - Media Storage Application Profiles
Part 12 - Storage Functions and Media Formats for Data Interchange
Part 13 - Print Management Point-to-Point Communication Support

## 1.3 Definitions

The following are symbols and abbreviations used within this document.

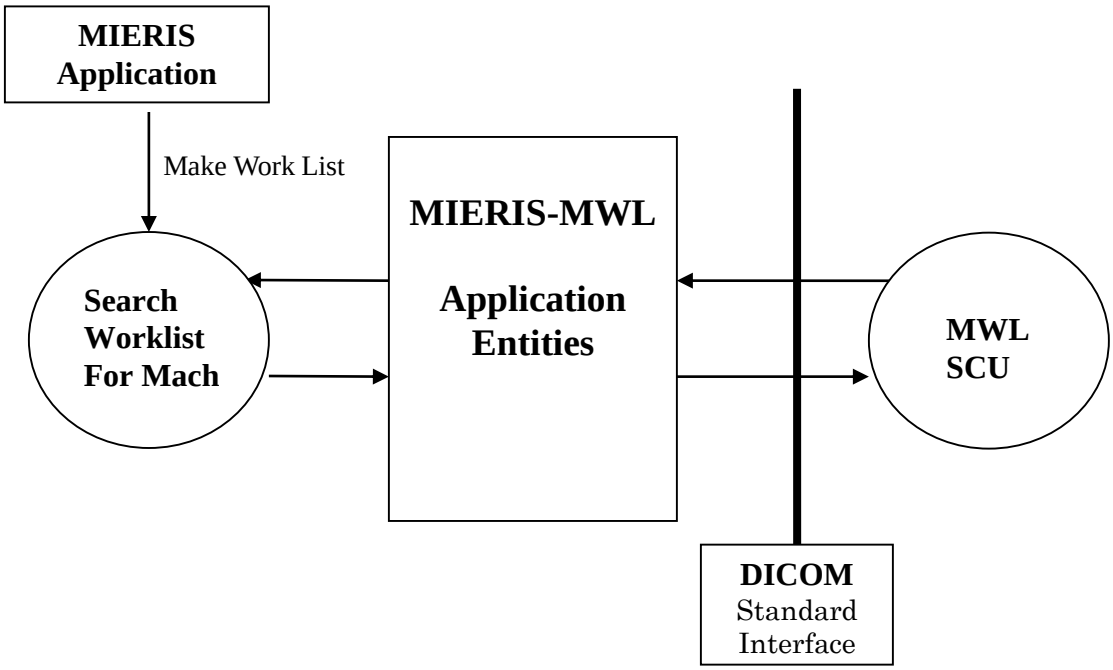
| | |
|---|---|
| AE | Application Entity |
| ACR | American College of Radiology |
| DICOM | Digital Imaging and Communications in Medicine |
| DIMSE | DICOM Message Service Element |
| DIMSE-C | DICOM Message Service Element-Composite |
| DIMSE-N | DICOM Message Service Element-Normative |
| NEMA | National Electrical Manufacturers 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 |
| SR | Structured Reports |

## 2.0 Implementation model

The primary functions provided by **MIERIS MWL** are:

Respond to DICOM Basic Modality Worklist Queries using data retrieved from the repository

### 2.1 Application data flow diagram



## 2.2 Functional definition of Application Entities

All **MIERIS MWL** DICOM-related network communication with imaging related client applications is accomplished using the DICOM protocol over a network using the TCP/IP protocol stack. The following functions are supported entity acts as a Service Class provider (SCP) for the following service classes.

DICOM Modality Work List Management (of the Query/Retrieve Services) as a Service Class Provider (SCP)

## 2.3 Sequencing of Real World Activities

Not applicable.

# 3 Application Entity specifications

There are one DICOM application entities implemented. They are MIE_MWL_SCP it is DICOM Service Class Providers As such, both wait for associations rather than initiating them.

## 3.1 AE Title

The AE Title as implemented on **MIERIS MWL** uses an AE title of MIE_MWL_SCP. It can be changed by the user

### 3.2 AE SCP Classes

The **MIERIS MWL** server application provides standard conformance as:

A DICOM 3.0 Verification SCP and
A DICOM 3.0 Query/Retrieve SCP when servicing queries for Modality Work List

| SOP Class UID | SOP Class Name |
|---|---|
| 1.2.840.10008.1.1 | Verification SOP Class |
| 1.2.840.10008.5.1.4.31 | Modality Work List Management |

### 3.3 MIE_MWL_SCP Association Establishment

#### 3.3.1 Application Context Name

All associations with the MIE_MWL_SCP are established using the DICOM 3.0. Application Context Name of "1.2.840.10008.3.1.1.1".

#### 3.3.2 Number of Associations

The maximum number of associations is limited only by the available system, Memory and internal operation systems TCP/IP stack limitations.

#### 3.3.3 Asynchronous Nature

Not applicable.

#### 3.3.4 Implementation Identification

The Implementation Class Unique Identifier (UID) for the MIE_MWL_SCP AE is "1.2.826.0.1.3680043.1.1.4.2.100.2"
This Implementation Identification is an example only and future names may change.

### 3.3.6 Version Name

The Implementation Version Name for the MIE_MWL_SCP is “DCMOBJX.X.XXX.X”. *1
This version name is an example only and future names may change.
*1 ”X.X.XXX.X” is Software version

| Presentation Context Table | | | | | |
|---|---|---|---|---|---|
| Abstract Syntax | | Transfer Syntax | | Role | Extended Negociation |
| Name | UID | Name | UID | | |
| Verification SOP Class | 1.2.840.10008.1.1 | Implicit VR Little Endian<br>Explicit VR Little Endian | 1.2.840.10008.1.2<br>1.2.840.10008.1.2.1 | SCP | None |
| Modality Worklist C-FIND | 1.2.840.10008.5.1.4.31 | Implicit VR Little Endian<br>Explicit VR Little Endian | 1.2.840.10008.1.2.1 | SCP | None |

### 3.4.5 Modality Work List Requests

The following table identifies the match types used by the MIERIS MWL MWL SCP.The values in this table indicates how the received MWL attribute data is processed by the MIERIS MWL MWL SCP.

| MWL Matching Key Types | |
|---|---|
| RV | Range Value match |
| SV | Single Value match |
| WC | Wild Card match |
| RET | Return value only |

MIERIS MWL supports the following element for the MWL SOP class however, specific availability per site is dependant on the site’s data availability and system configuration. DICOM attributes not listed in this table are handled in that a zero-length attribute will be returned in response to a query for the specified attribute.

| MWL Attributes | | | |
|---|---|---|---|
| **Description / Module** | **Tag** | **Matching Key Type** | **Return Key Type** |
| Scheduled Procedure Step | | | |
| Scheduled Procedure Step Sequence | (0040,0100) | | 1 |
| >Scheduled Station AE Title | (0040,0001) | SV | 1 |
| >Scheduled Procedure Step Start Date | (0040,0002) | SV, RV | 1 |
| >Scheduled Procedure Step Start Time | (0040,0003) | SV, RV | 1 |
| >Scheduled Procedure Step Location | (0040,0011) | RET | 2 |
| >Modality | (0008,0060) | SV | 1 |
| >Scheduled Performing Physicianionmeth | (0040,0006) | RET | 2 |
| >Scheduled Procedure Step Description | (0040,0007) | RET | 1C |
| >Scheduled Station Name | (0040,0010) | RET | 2 |
| >Scheduled Procedure Step ID | (0040,0009) | RET | 1 |
| >Scheduled Protocol Code Sequence | (0040,0008) | RET | 1C |
| >>Code Value | (0008,0100) | RET | 1C |
| >>Coding Scheme Designator | (0008,0102) | RET | 1C |
| >>Code Meaning | (0008,0104) | RET | 3 |
| Requested Procedure | | | |
| Requested Procedure ID | (0040,1001) | SV | 1 |
| Requested Procedure Description | (0032,1060) | RET | 1C |
| Requested Procedure Code Sequence | (0032,1064) | RET | 1C |
| >>Code Value | (0008,0100) | RET | 1C |
| >>Coding Scheme Designator | (0008,0102) | RET | 1C |
| >>Code Meaning | (0008,0104) | RET | 3 |
| Study Instance UID | (0020,000D) | RET | 1 |
| Referenced Study Sequence | (0008,1110) | RET | 2 |
| >Referenced SOP Class UID | (0008,1150) | RET | 1C |
| >Referenced SOP Instance UID | (0008,1155) | RET | 1C |
| Patient Transport Arrangements | (0040,1004) | RET | 2 |
| Imaging Service Request | | | |
| Accession Number | (0008,0050) | SV | 2 |
| Requesting Physician | (0032,1032) | RET | 2 |
| Requesting Service | (0032,1033) | RET | 3 |
| Requesting Physicianestgeme | (0008,0090) | RET | 2 |
| Visit Identification | | | |
| Admission ID | (0038,0010) | RET | 2 |
| Visit Status | | | |

| | | | |
|---|---|---|---|
| Current Patient Location | (0038,0300) | RET | 2 |
| Patient Identification | | | |
| Patient Identi | (0010,0010) | SV, WC | 1 |
| Patient ID | (0010,0020) | SV | 1 |
| Patient Demographic | | | |
| Patient Demographici | (0010,0030) | RET | 2 |
| Patient030) g | (0010,0040) | RET | 2 |
| Confidentiality constraint on patient data | (0040,3001) | RET | 2 |
| Patient Medical | | | |
| Patient State | (0038,0500) | RET | 2 |
| Pregnancy Status | (0010,21C0) | RET | 2 |
| Contrast Allergies | (0010,2110) | RET | 2 |
| Patient110) ergi | (0010,1030) | RET | 2 |
| Special Needs | (0038,0050) | RET | 2 |

### 3.4.6 MWL C-Find Response Codes

The MIE_MWL_SCP AE responds to a C-Find request with the following Response codes:

| MWL C-Find Response Codes | |
|---|---|
| **Response** | **Value** |
| C_FIND_SUCCESS | 0x0000 |
| C_FIND_PENDING | 0xFF00 |
| C_FIND_CANCEL_REQUEST_RECEIVED | 0xFE00 |
| C_FIND_FAILURE_REFUSED_NO_RESOURCES | 0xA700 |
| C_FIND_FAILURE_UNABLE_TO_PROCESS | 0xC000 |

### 3.4.7 MWL Search Constraints

The MWL search is a function of the criterion (data attributes) specified in the incoming C-FIND. The MWL SCP does not apply any default constraints on an incoming query, with the exception of the following.

1. If the incoming query is a time range with no date constraint, the current date will be used as the date constraint and the time range query will be executed under the current (today's) date.

2. For time ranges, a missing lower bound is substituted by 000000 and the missing upper bound is substituted by 235959.

3. If the incoming query is a time and date range, the time range is ignored if the date range is over more than one day.

# 4 Communication Profiles

## 4.1 Supported Communications Stacks

**MIERIS MWL** provides DICOM V3.0 TCP/IP Network Communication Support as defined in PS 3.8.

## 4.2 TCP/IP Stack

**MIERIS MWL** inherits the TCP/IP stack from the MS Windows system upon which it executes.

## 4.3 Physical Media Support

**MIERIS MWL** is indifferent to the physical medium over which TCP/IP executes; they inherit this from the MS Windows system upon which they execute.

# 5 EXTENSIONS / SPECIALIZATIONS / PRIVATIZATIONS

No extended, specialized or private SOP classes are supported.
No private transfer syntaxes are supported.