



Worklist client

DICOM Conformance Statement

Version 1.2

Overview

X-List is an application that provides a patient worklist to a modality. This document is intended to describe X-List's conformance to DICOM when implementing the DICOM connection interface

Networking Service Classes	Initiator or User of Service	Provider of Service
Verification	Yes	No
Modality Worklist	Yes	No

Table 1 Networking Service Class specification

From X-List a modality operator can access a list of patient and exam data supplied by the hospital's information system (RIS/HIS). The worklist is composed of study information retrieved from an Information System.



Figure: X-List is a worklist client.

Connectivity to Information Systems is achieved through the following interfaces:

- Text File (ASCII and extended character sets)
- Structured Query Language (ODBC)
- HL-7
- DICOM

Information about the remaining connection interfaces can be found in the separate documentation for each connection method.

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1. INTRODUCTION

This document is intended to describe X-List's conformance to DICOM. X-List is an application that provides a patient worklist client for a modality.

1.1 Abbreviations and Acronyms

AE	Application Entity
DICOM	Digital Imaging and Communications in Medicine
DIMSE	DICOM Message Service Element
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
UML	Unified Modelling Language

1.2 Trademarks

X-List is a registered trademark of Krucom AB.

1.3 Revision History

Revision	Date	Comments
1.0	2000-03-11	Initial Release
1.1	2000-06-15	Minor Adjustments
1.2	2003-09-02	Layout Rearrangements

2. IMPLEMENTATION MODEL

X-List provides the following functionality:

- SCU for Verification.
- SCU for Modality Worklist Information Model FIND.

2.1 Application Data Flow Diagram

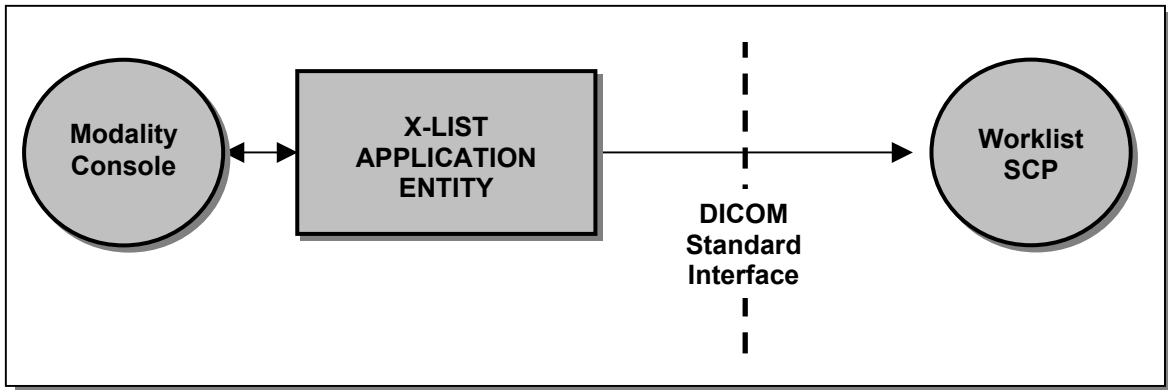


Figure 1: Application Data Flow Diagram

2.2 Functional Definition of AE

X- List can be programmed to perform the functions outlined in Figure 1. This section describes the sequences of real-world activities that are involved in performing these functions.

2.2.1 Associated Real World Activity - Verification

X- List can issue a Verification request prior to querying for a Worklist in order to test validity of the DICOM connection.

2.2.2 Modality Worklist SCU

X- List will associate and generate C-FIND-RQ messages.

3 AE SPECIFICATION

X- List provides standard DICOM conformance as a SCU to the following SOP Classes:

SOP Class Name	SOP Class UID
Verification SOP Class	1.2.840.10008.1.1
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31

Table 1: Verification SOP Class

3.1 Association Establishment Policies

3.1.1 General

The maximum size PDU transmitted by X- List is 16Kb unless the receiver specifies a lower maximum during Association Negotiation, in which case that value will be used. The maximum size of PDU that may be received by X- List is 16Kb.

3.1.2 Number of Associations

X- List supports one single Association.

3.1.3 Asynchronous Nature

X- List does not support Asynchronous Operations. All operations will be performed synchronously

3.1.4 Implementation Identifying Information

X- List will be identified by:

Implementation Class UID **1.2.752.48.1.1.1.20000228**
Implementation Version Name **KRUCOM**

3.1.5 Transfer Syntaxes

X- List uses the following Transfer Syntax with all SOP Classes.

Name-list	UID-list
DICOM Implicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2

Table 2: Transfer Syntax acceptable to X-LIST

4 ASSOCIATION INITIATION POLICY

X- List is an SCU and will attempt to initiate an Association in the following three cases:

- The user requests an update.
- Automatically when a predefined time has elapsed.
- When a bar-code reader is used to search for an examination. (option)

4.1 Verification and Modality Worklist

4.1.1 Associated Real-World Activity

X- List requests the Presentation Contexts defined in Table 4 for Verification and Modality Worklist.

4.1.2 Presentation Context

Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name	UID		
Modality Worklist Information Model – FIND	1.2.840.10008.5.1.4.31	DICOM Implicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2	SCU	None
Verification SOP Class	1.2.840.10008.1.1	DICOM Implicit VR Little Endian Transfer Syntax	1.2.840.10008.1.2	SCU	None

Table 3: Verification and Modality Worklist Presentation Context Table

4.1.3 Specific SOP Class Conformance

X- List provides standard conformance to:
DICOM Verification Service Class
DICOM Modality Worklist

5 COMMUNICATIONS PROFILES

Supported Communications Stacks

X-List inherits its TCP/IP stack from the computer system upon which it executes.

6 EXTENSIONS / SPECIALIZATIONS / PRIVATIZATIONS

None

7 CONFIGURATION

X-List's configuration parameters are stored in an INI-file. The main configurable parameters are:

- Calling AE-Title
- Called AE-Title
- TCP/IP port number
- IP Address
- Queried attributes and values.
- Poll-time enabled/set
- Bar-code query (option)