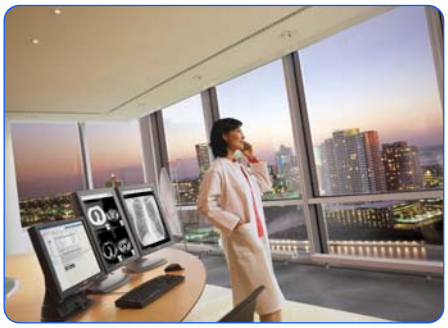
DICOM

Conformance Statement

EasyAccess RIS Interface
Release 1.2



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Document Number: XBR 231-060236.01
Date: 18 May 2006

1. PRELIMINARY DICOM CONFORMANCE STATEMENT OVERVIEW

With EasyAccess RIS Interface a new generation of (embedded) broker technology becomes available for the complete range of EasyAccess (PACS) systems; i.e. EasyAccess Entry, EasyAccess Basic and Full Enterprise.
The (embedded) EasyAccess RIS Interface is an integral part of the EasyAccess' Workflow and Image Management system (WISE) and it has all the interface capabilities and workflow supportive functionality that exists in nowadays broker systems.

The system context of the EasyAccess RIS interface in the radiology department and the hospital (enterprise) has been illustrated in Figure 1.

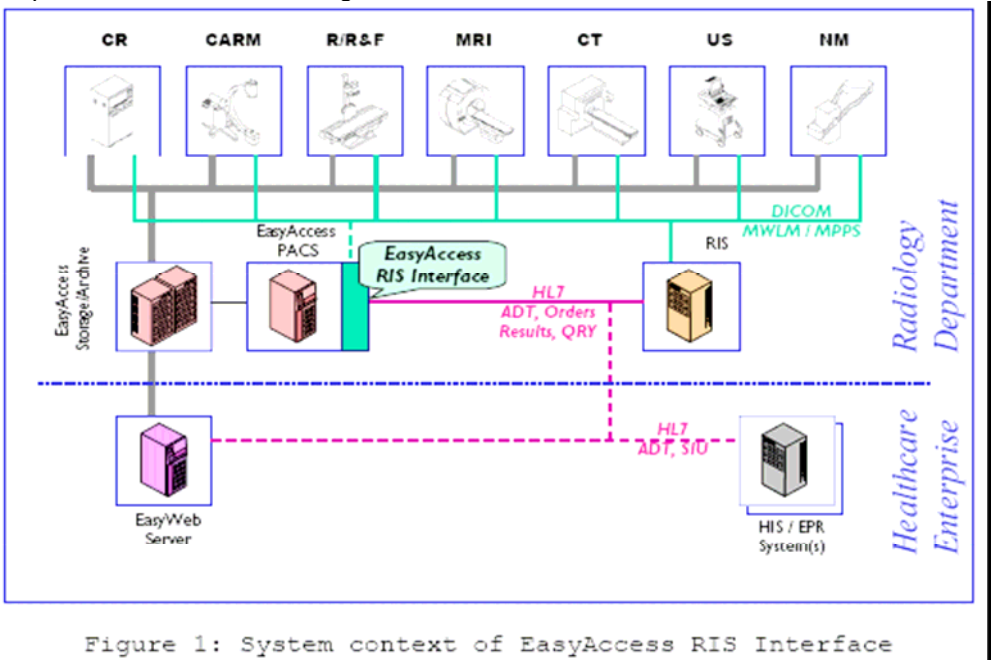

Figure 1: System context of EasyAccess RIS Interface

- The EasyAccess RIS Interface includes the following services:
  Extensive support for inbound HL7 messages (streams) between external RIS/HIS system(s) and EasyAccess PACS.
- Intuitive message parser and data mapping facility to adapt the internal EasyAccess (PACS) interface
  to the (HL7) message layout of the local RIS/HIS.
  Redirection and forwarding of inbound HL7 streams to designated, HL7 compliant devices such as Philips' (legacy) EasyLink and EasyWeb systems.
- Extensive Patient worklist support for modalities; i.e. DICOM Modality Worklist Management (MWLM) – both for single site hospitals as well as for institutions with multiple locations.
- Study status tracking through DICOM Modality Performed Procedure Step (MPPS) with the option
  to forward examination (result) data to the RIS system using a specialized HL7 message.
- Configurable Image routing services through user defined "rules" for study prefetch and/or visit prefetch
- Improved (PACS) worklist customization using the so called: "free programmable fields" extension
  of EasyAccess (R9.2 and over).
- Versatile procedure/data modelling serving American, European and IHE type procedure mapping.

Table 1: Network Services

SOP Class		User of Service (SCU)	Provider of Service (SCP)
Name	**UID**		
Transfer			
-	-	-	-
Query/Retrieve			
Study Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.2.1	Yes	No
Study Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.2.2	Yes	No
Workflow Management			
Modality Worklist Information Model – FIND	1.2.840.10008.5.1.4.31	No	Yes
Modality Performed Procedure Step	1.2.840.10008.3.1.2.3.3	Yes	Yes
Print Management			
-	-	-	-

The EasyAccess RIS Interface does not support any Media Storage Application Profiles.

2. TABLE OF CONTENTS

3. INTRODUCTION

3.1. Revision History

The revision history provides dates and differences of the different releases.

Table 2: Revision History

Document Version	Date of Issue	Author	Description
00	15 July 2005	PMS MIT-IO	Initial version.
01	18 May 2006	PMS CTO C&S	Finalization.

3.2. Audience

This Conformance Statement is intended for:

- (potential) customers
- system integrators of medical equipment
- marketing staff interested in system functionality
- software designers implementing DICOM interfaces

It is assumed that the reader is familiar with the DICOM standard.

3.3. Remarks

The Preliminary DICOM Conformance Statement is contained in chapter 4 through 8 and follows the contents and structuring requirements of DICOM PS 3.2-XXXX.

This Preliminary DICOM Conformance Statement by itself does not guarantee successful interoperability of Philips equipment with non-Philips equipment. The user (or user's agent) should be aware of the following issues:

- **Interoperability**
  Interoperability refers to the ability of application functions, distributed over two or more systems, to work successfully together. The integration of medical devices into an IT environment may require application functions that are not specified within the scope of DICOM. Consequently, using only the information provided by this Conformance Statement does not guarantee interoperability of Philips equipment with non-Philips equipment.
  It is the user's responsibility to analyze thoroughly the application requirements and to specify a solution that integrates Philips equipment with non-Philips equipment.

- **Validation**
  Philips equipment has been carefully tested to assure that the actual implementation of the DICOM interface corresponds with this Conformance Statement.
  Where Philips equipment is linked to non-Philips equipment, the first step is to compare the relevant Conformance Statements. If the Conformance Statements indicate that successful information exchange should be possible, additional validation tests will be necessary to ensure the functionality,

performance, accuracy and stability of image and image related data. It is the responsibility of the user (or user's agent) to specify the appropriate test suite and to carry out the additional validation tests.

- **New versions of the DICOM Standard**
  The DICOM Standard will evolve in future to meet the user's growing requirements and to incorporate new features and technologies. Philips is actively involved in this evolution and plans to adapt its equipment to future versions of the DICOM Standard. In order to do so, Philips reserves the right to make changes to its products or to discontinue its delivery.
  The user should ensure that any non-Philips provider linking to Philips equipment also adapts to future versions of the DICOM Standard. If not, the incorporation of DICOM enhancements into Philips equipment may lead to loss of connectivity (in case of networking) and incompatibility (in case of media).

3.4. Definitions, Terms and Abbreviations

DICOM definitions, terms and abbreviations are used throughout this Conformance Statement. For a description of these, see NEMA PS 3.3-XXXX and PS 3.4-XXXX.

EasyAccess	PACS connected to this EasyAccess RIS Interface
Philips	Philips Medical Systems

The following acronyms and abbreviations are used in this document.

AE	Application Entity
ANSI	American National Standard Institute
AP	Application Profile
BOT	Basic Offset Table
DCR	Dynamic Cardio Review
DICOM	Digital Imaging and Communications in Medicine
DIMSE	DICOM Message Service Element
DIMSE-C	DIMSE-Composite
DIMSE-N	DIMSE-Normalized
EBE	DICOM Explicit VR Big Endian
ELE	DICOM Explicit VR Little Endian
GUI	Graphic User Interface
HIS	Hospital Information System
HL7	Health Level Seven
ILE	DICOM Implicit VR Little Endian
IOD	Information Object Definition
ISIS	Information System – Imaging System
MPPS	Modality Performed Procedure Step
NEMA	National Electrical Manufacturers Association
PDU	Protocol Data Unit
RIS	Radiology Information System
RWA	Real-World Activity
SCM	Study Component Management
SCP	Service Class Provider
SCU	Service Class User
SOP	Service Object Pair
TCP/IP	Transmission Control Protocol/Internet Protocol
UID	Unique Identifier
WLM	Worklist Management

3.5. References

[DICOM] Digital Imaging and Communications in Medicine (DICOM), Part 1 – 16 (NEMA PS 3.1-XXXX – PS 3.16-XXXX),
National Electrical Manufacturers Association (NEMA)
Publication Sales 1300 N. 17th Street, Suite 1847
Rosslyn, Virginia. 22209, United States of America

4. NETWORKING

4.1. Implementation model

The implementation model consists of three sections:

- the application data flow diagram, specifying the relationship between the Application Entities and the “external world” or Real-World Activities,
- a functional description of each Application Entity, and
- the sequencing constraints among them.

4.1.1. Application Data Flow

The EasyAccess RIS Interface incorporates three application entities.

- The MWL AE provides the Modality Worklist – FIND service.
- The MPPS AE provides the Modality Performed Procedure Step service.
- The PRE-Fetch AE which provides pre-fetching functionality.

The related implementation model is shown in Figure 1.

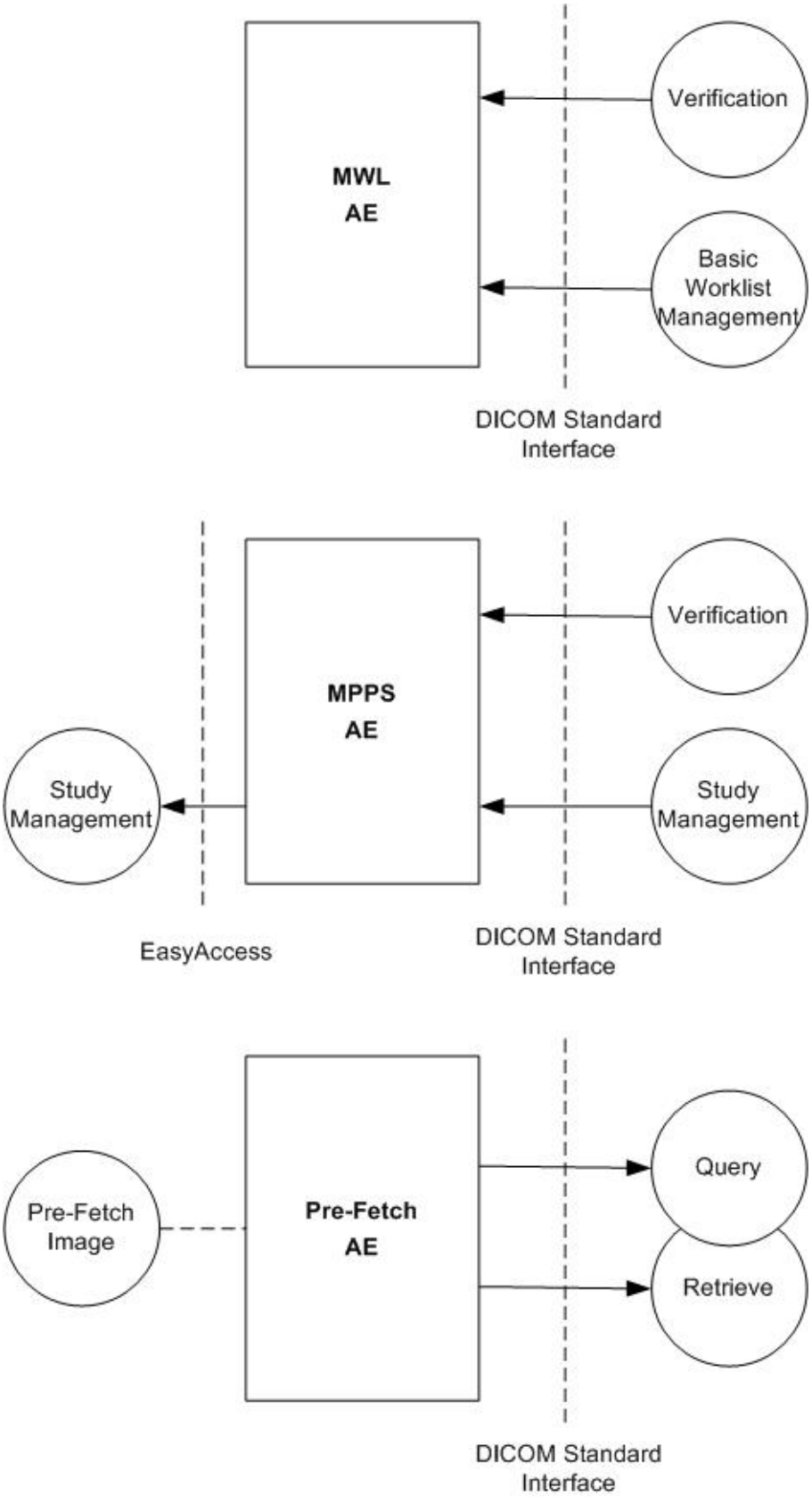

Figure 1: Application Data Flow Diagram

4.1.2. Functional Definition of AE's

This section describes in general terms the functions to be performed by each AE, and the DICOM services used to accomplish these functions.

4.1.2.1. Functional Definition of MWL AE

The MWL AE provides the Modality Worklist – FIND service. It will accept associations for querying the scheduled procedure steps and send applicable responses.

4.1.2.2. Functional Definition of MPPS AE

The MPPS AE provides the Modality Performed Procedure Step service. It will accept associations to create and set details of the performed procedure step. This information will then be passed on to the EasyAccess Study Management SCP. The status of the exam is updated.

4.1.2.3. Functional Definition of Pre-Fetch AE

The Pre-Fetch AE implements the pre-fetch of studies using the Query/Retrieve services. It will initiate associations to find and move images from a modality to EasyAccess.

4.1.3. Sequencing of Real World Activities

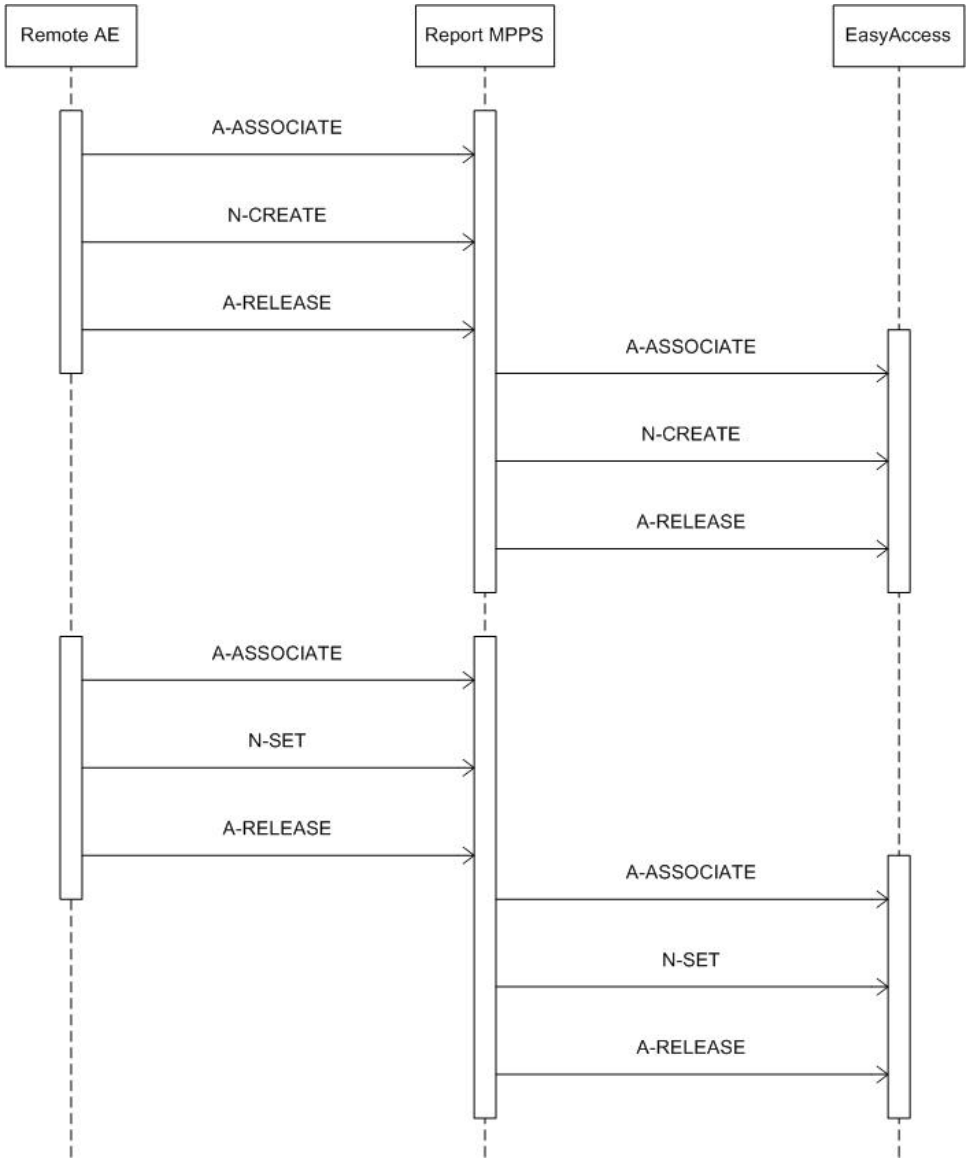

Figure 2: Sequencing of MPPS Report

4.2. AE Specifications

The network capability of the EasyAccess RIS Interface consists of three application entities.

- MWL AE
- MPPS AE
- Pre-Fetch AE

These are specified in sections 4.2.1 to 4.2.3.

4.2.1. MWL AE

4.2.1.1. SOP Classes

This Application Entity provides Standard Conformance to the following SOP Classes.

Table 3: SOP Classes for MWL AE

SOP Class Name	SOP Class UID	SCU	SCP
Verification	1.2.840.10008.1.1	No	Yes
Modality Worklist Information Model – FIND	1.2.840.10008.5.1.4.31	No	Yes

4.2.1.2. Association Policies

This section describes the general association establishment and acceptance policies of the MWL AE.

4.2.1.2.1. General

The following DICOM standard application context is specified.

Table 4: DICOM Application Context

Application Context Name	1.2.840.10008.3.1.1.1

4.2.1.2.2. Number of Associations

The MWL AE does not initiate any associations. The number of simultaneous associations that the MWL AE may accept as SCP is specified as follows.

Table 5: Number of Associations as an Association Acceptor for MWL AE

Maximum number of simultaneous associations	configurable

4.2.1.2.3. Asynchronous Nature

The MWL AE does not support asynchronous communication.

4.2.1.2.4. Implementation Identifying Information

The following values are used for Implementation Class UID and Implementation Version Name.

Table 6: DICOM Implementation Class and Version for MWL AE

Implementation Class UID	1.3.46.670589.16.12.2.1
Implementation Version Name	EASYACCESS12

4.2.1.2.5. Communication Failure Handling

The behavior of the AE during communication failure is summarized in Table 15.

Table 7: Communication Failure Behavior

Exception	Behavior
ARTIM Timeout	30
ASSOC_REPLY_TIMEOUT	15
CONNECT_TIMEOUT	15
INACTIVITY_TIMEOUT	15
WRITE_TIMEOUT	15
RELEASE_TIMEOUT	15

4.2.1.3. Association Initiation Policy

The MWL AE does not initiate any associations.

4.2.1.3.1. Query Worklist

4.2.1.3.1.1. Description and Sequencing of Activities

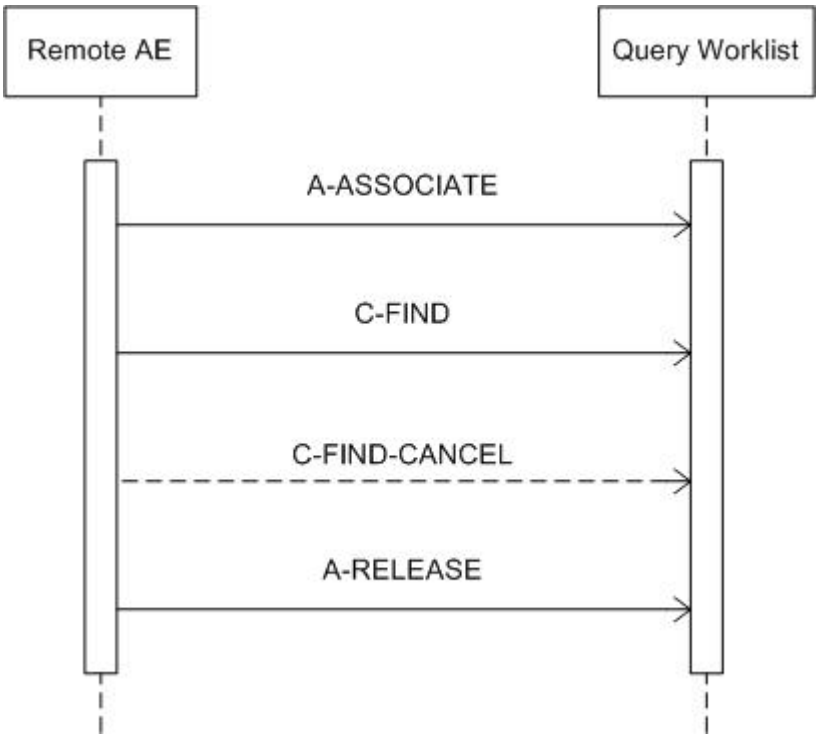

Figure 3: Sequencing of Query Worklist

4.2.1.3.1.2. Accepted Presentation Contexts

The MWL AE accepts the following presentation contexts for Query Worklist.

Table 8: Acceptable Presentation Contexts for Query Worklist

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Verification	1.2.840.10008.1.1	ILE	1.2.840.10008.1.2	SCP	None
Modality Worklist Information Model – FIND	1.2.840.10008.5.1.4.31	ILE ELE EBE	1.2.840.10008.1.2 1.2.840.10008.1.2.1 1.2.840.10008.1.2.2	SCP	None

4.2.1.3.1.3. SOP Specific Conformance for SOP Classes

4.2.1.3.1.3.1. Verification SOP Class

The behavior of an Application Entity is summarized in Table 9.

Table 9: MWL AE C-ECHO Status Response

Service Status	Code	Further Meaning	Description
Success	0000	Verification is complete	The verification request was received successfully.

4.2.1.3.1.3.2. Modality Worklist Information – FIND SOP Class

The MWL AE Query Worklist supports all required standard DICOM keys. However, note that the actual availability depends on the system configuration and the HL7 implementation. Refer to section 8.1.1.1 for the complete list of supported keys.

4.2.2. MPPS AE

4.2.2.1. SOP Classes

This Application Entity provides Standard Conformance to the following SOP Classes.

Table 10: SOP Classes for MPPS AE

SOP Class Name	SOP Class UID	SCU	SCP
Verification	1.2.840.10008.1.1	No	Yes
Modality Performed Procedure Step	1.2.840.10008.3.1.2.3.3	Yes	Yes

4.2.2.2. Association Policies

This section describes the general association establishment and acceptance policies of the MPPS AE.

4.2.2.2.1. General

The following DICOM standard application context is specified.

Table 11: DICOM Application Context

Application Context Name	1.2.840.10008.3.1.1.1

4.2.2.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as a SCU and SCP are listed in tables 14 and 15.

Table 12: Number of Associations as an Association Initiator for MPPS AE

Maximum number of simultaneous associations	configurable

Table 13: Number of Associations as an Association Acceptor for MPPS AE

Maximum number of simultaneous associations	configurable

4.2.2.2.3. Asynchronous Nature

The MPPS AE does not support asynchronous communication.

4.2.2.2.4. Implementation Identifying Information

The following values are used for Implementation Class UID and Implementation Version Name.

Table 14: DICOM Implementation Class and Version for MPPS AE

Implementation Class UID	1.3.46.670589.16.12.2.1
Implementation Version Name	EASYACCESS12

4.2.2.2.5. Communication Failure Handling

The behavior of the AE during communication failure is summarized in Table 15.

Table 15: Communication Failure Behavior

Exception	Behavior
ARTIM Timeout	30
ASSOC_REPLY_TIMEOUT	15
CONNECT_TIMEOUT	15
INACTIVITY_TIMEOUT	15
WRITE_TIMEOUT	15
RELEASE_TIMEOUT	15

4.2.2.3. Association Initiation Policy

The MPPS AE initiates an association with EasyAccess whenever it needs to pass received MPPS updates.

4.2.2.3.1. Export MPPS

4.2.2.3.1.1. Description and Sequencing of Activities

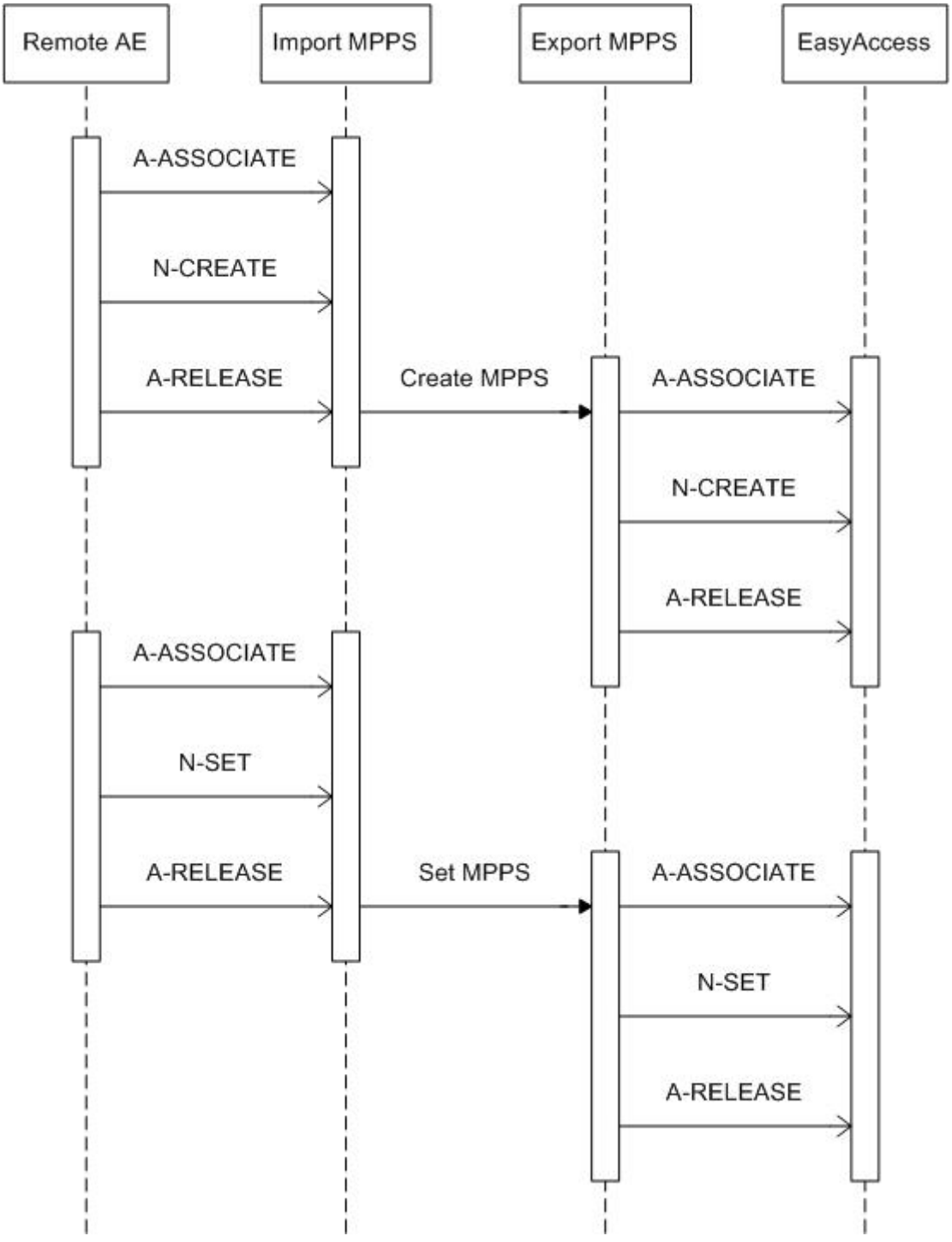

Figure 4: Sequencing of Export MPPS

4.2.2.3.1.2. Proposed Presentation Contexts

The presentation contexts proposed by MPPS AE for Export MPPS are defined in Table 16.

Table 16: Proposed Presentation Contexts for Export MPPS

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name List**	**UID List**		
Modality Performed Procedure Step N-CREATE	1.2.840.10008.3.1.2.3.3	ILE ELE EBE	1.2.840.10008.1.2 1.2.840.10008.1.2.1 1.2.840.10008.1.2.2	SCU	None
Modality Performed Procedure Step N-SET	1.2.840.10008.3.1.2.3.3	ILE ELE EBE	1.2.840.10008.1.2 1.2.840.10008.1.2.1 1.2.840.10008.1.2.2	SCU	None

4.2.2.3.1.3. SOP Specific Conformance for SOP Classes

4.2.2.3.1.3.1. Modality Performed Procedure Step SOP Class

The MPPS AE Export MPPS accepts all required standard DICOM attributes. Refer to section **Error! Reference source not found.** for the complete list of supported attributes.

4.2.2.4. Association Acceptance Policy

The MPPS AE accepts associations to verify application level communication and to receive MPPS updates.

4.2.2.4.1. Import MPPS

4.2.2.4.1.1. Description and Sequencing of Activities

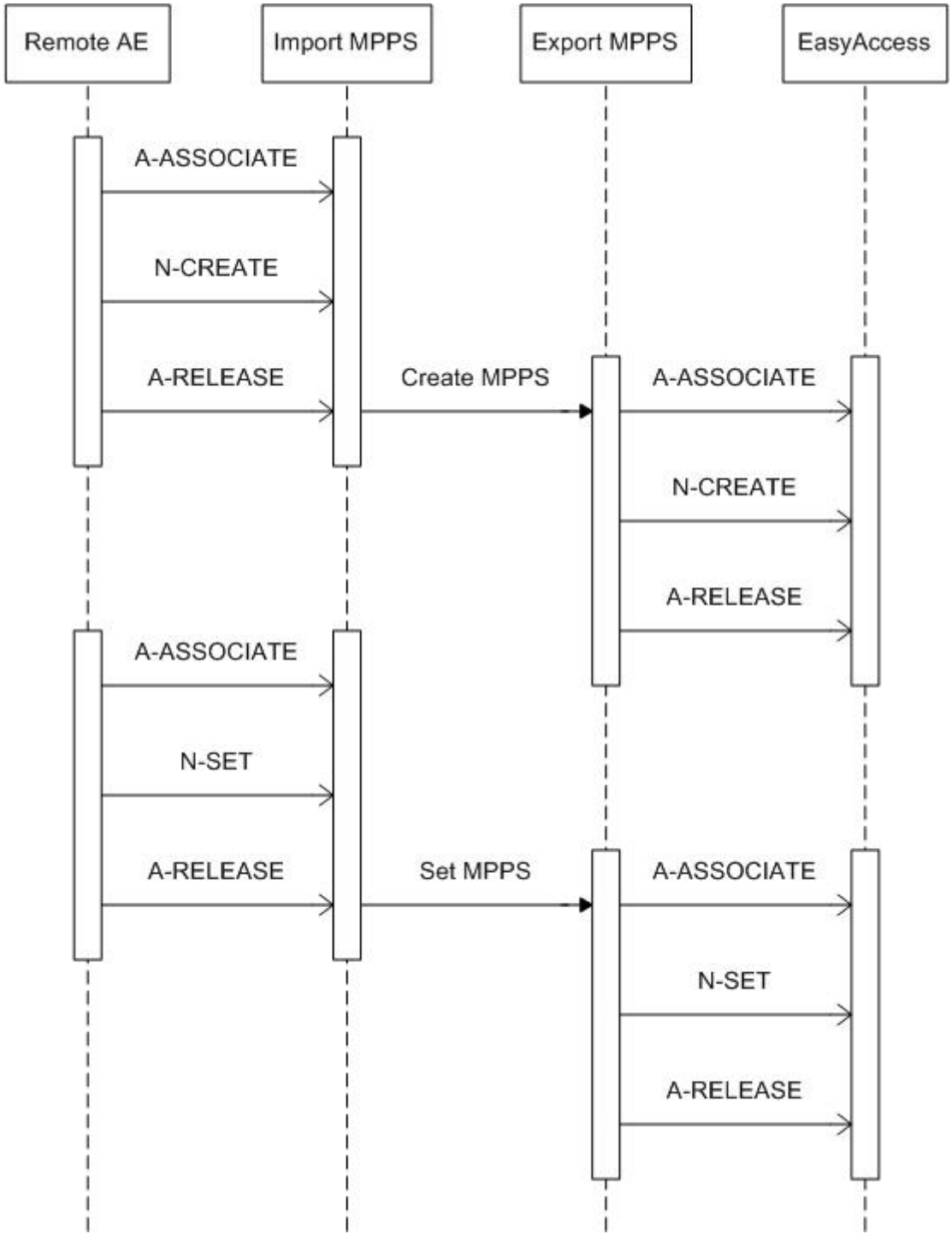

Figure 5: Sequencing of Import MPPS

4.2.2.4.1.2. Accepted Presentation Contexts

Table 17: Acceptable Presentation Contexts for Import MPPS

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name List**	**UID List**		
Verification	1.2.840.10008.1.1	ILE	1.2.840.10008.1.2	SCP	None
Modality Performed Procedure Step N-CREATE	1.2.840.10008.3.1.2.3.3	ILE ELE EBE	1.2.840.10008.1.2 1.2.840.10008.1.2.1 1.2.840.10008.1.2.2	SCP	None
Modality Performed Procedure Step N-SET	1.2.840.10008.3.1.2.3.3	ILE ELE EBE	1.2.840.10008.1.2 1.2.840.10008.1.2.1 1.2.840.10008.1.2.2	SCP	None

4.2.2.4.1.3. SOP Specific Conformance for SOP Classes

4.2.2.4.1.3.1. Verification SOP Class

The behavior of an Application Entity is summarized in Table 18.

Table 18: MPPS AE C-ECHO Status Response

Service Status	Code	Further Meaning	Description
Success	0000	Verification is complete	The verification request was received successfully.

4.2.2.4.1.3.2. Modality Performed Procedure Step SOP Class

The MPPS AE Import MPPS accepts all required standard DICOM attributes. Refer to section **Error! Reference source not found.** for the complete list of supported attributes.

Ideally, the MPPS AE considers the Study Instance UID the sole matching key when relating a performed procedure step to the originally scheduled procedure step. The Study Instance UID appears in the Scheduled Step Attribute Sequence of the N-CREATE request. The MPPS AE will initially assume that this UID was obtained by the modality through the Query Worklist of the MWL AE. This Study Instance UID should have been stored in the image set and returned as a reference in the Import MPPS N-CREATE.

If the MPPS AE fails to match on the Study Instance UID (due to the modality device having generated the UID) the MPPS AE will attempt to match the Referenced SOP Instance UID of the N-CREATE Referenced Study Sequence to the originally scheduled procedure. The Referenced Study Sequence is also available to the modality through the Query Worklist of the MWL AE, and the modality should return this reference in all MPPS N-CREATE requests.

If the MPPS SCP cannot match a performed procedure to the requested procedure using either of the above methods, the modality-generated Study Instance UID, Study

ID and Accession Number (if provided) are saved in the database of the EasyAccess RIS Interface, but the procedure is considered an unscheduled (or trauma) procedure. In this case the EasyAccess RIS Interface system records the procedure as an unknown procedure appropriate for the modality type that was the source of the N-CREATE message.
The MPPS service is configurable for patient demographic information storage in the unscheduled (or trauma) MPPS case. The options are as follows:

Option 1: Match the modality provided Patient ID to an ID known to the database and create the unscheduled procedure for that patient. If no Patient ID match is found the modality provided patient information and demographic data is saved in a new patient record created by the MPPS AE.

Option 2: Create a new patient demographic data record for each unscheduled MPPS N-CREATE event, and do NOT attempt a match on the Patient ID field.

MPPS Group Case Conformance

The group case occurs when a modality performs two or more procedures through one study acquisition. For example, a helical scan CT MWL query may indicate two orders scheduled for the current patient: a “CT Head” and “CT Neck”. The modality may have the ability to fulfill both requests via a single scan. The MPPS group case allows for the reporting of such procedures.
The MPPS AE rigorously follows the IHE (Integrating the Healthcare Enterprise) Technical Framework (Year 3 and 4) recommendations for the MPPS group case. The integration critical details are:

- A single Study Instance UID must be generated by the modality for the image and standalone IODs. The same Study Instance UID is referenced in ALL instances of the N-CREATE Scheduled Step Attribute Sequence. The MPPS AE will reject an N-CREATE group case if the Study Instance UIDs are not identical.

- The number of N-CREATE Scheduled Step Attribute Sequence items shall correspond exactly to the number of procedures being grouped.

- The Referenced Study Sequence in each occurrence of the N-CREATE Scheduled Step Attribute Sequence must be the same Referenced Study Sequence provided by Query Worklist for the procedure being grouped.
  The MPPS AE will reject an N-CREATE group case if any Referenced Study Sequence fails to match a scheduled procedure known to the EasyAccess RIS Interface system.

- The MPPS AE will verify that each Referenced Study Sequence (in the multiple N-CREATE Scheduled Step Attribute sequences) references the same patient database entity. If multiple patient references are detected, the N-CREATE request will be rejected.

MPPS Message Forwarding as an SCU

The MPPS AE can optionally forward all received N-SET and N-CREATE messages to a remote MPPS SCP. The EasyAccess RIS Interface MPPS DICOM service then appears as an MPPS SCU.
All received N-CREATE and N-SET messages are forwarded as they were received – the messages is not parsed and reassembled. The message is forwarded using the same presentation context negotiated when the originating modality performed the association with the MPPS AE.
The MPPS AE can accept multiple simultaneous associations, however the message forwarding subsystem will establish only a single association with the remote MPPS

SCP. Messages are queued and forwarded in the order in which they were received. The queue buffer size is configurable.

4.2.3. Pre-Fetch AE

The Pre-Fetch AE is responsible for moving images from the EasyAccess OFF-LINE Archive to the ON-LINE Storage.

4.2.3.1. SOP Classes

This Application Entity provides Standard Conformance to the following SOP Classes.

Table 19: SOP Classes for Pre-Fetch AE

SOP Class Name	SOP Class UID	SCU	SCP
Study Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.2.1	Yes	No
Study Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.2.2	Yes	No

4.2.3.2. Association Policies

This section describes the general association establishment and acceptance policies of the Pre-Fetch AE.

4.2.3.2.1. General

The following DICOM standard application context is specified.

Table 20: DICOM Application Context

Application Context Name	1.2.840.10008.3.1.1.1

4.2.3.2.2. Number of Associations

The number of simultaneous associations that the Pre-Fetch AE may initiate as SCU is specified as follows. The Pre-Fetch AE does not accept any associations.

Table 21: Number of Associations as an Association Initiator for Pre-Fetch AE

Maximum number of simultaneous associations	1

4.2.3.2.3. Asynchronous Nature

Not applicable.

4.2.3.2.4. Implementation Identifying Information

The following values are used for Implementation Class UID and Implementation Version Name.

Table 22: DICOM Implementation Class and Version for Pre-Fetch AE

Implementation Class UID	1.3.46.670589.16.12.2.1
Implementation Version Name	EASYACCESS12

4.2.3.2.5. Communication Failure Handling

The behavior of the AE during communication failure is summarized in Table 15.

Table 23: Communication Failure Behavior

Exception	Behavior
ARTIM Timeout	30
ASSOC_REPLY_TIMEOUT	15
CONNECT_TIMEOUT	15
INACTIVITY_TIMEOUT	15
WRITE_TIMEOUT	15
RELEASE_TIMEOUT	15

4.2.3.3. Association Initiation Policy

The Pre-Fetch AE initiates an association with EasyAccess to retrieve data from the OFF-LINE Archive

4.2.3.3.1. Query/Retrieve Image

4.2.3.3.1.1. Description and Sequencing of Activities

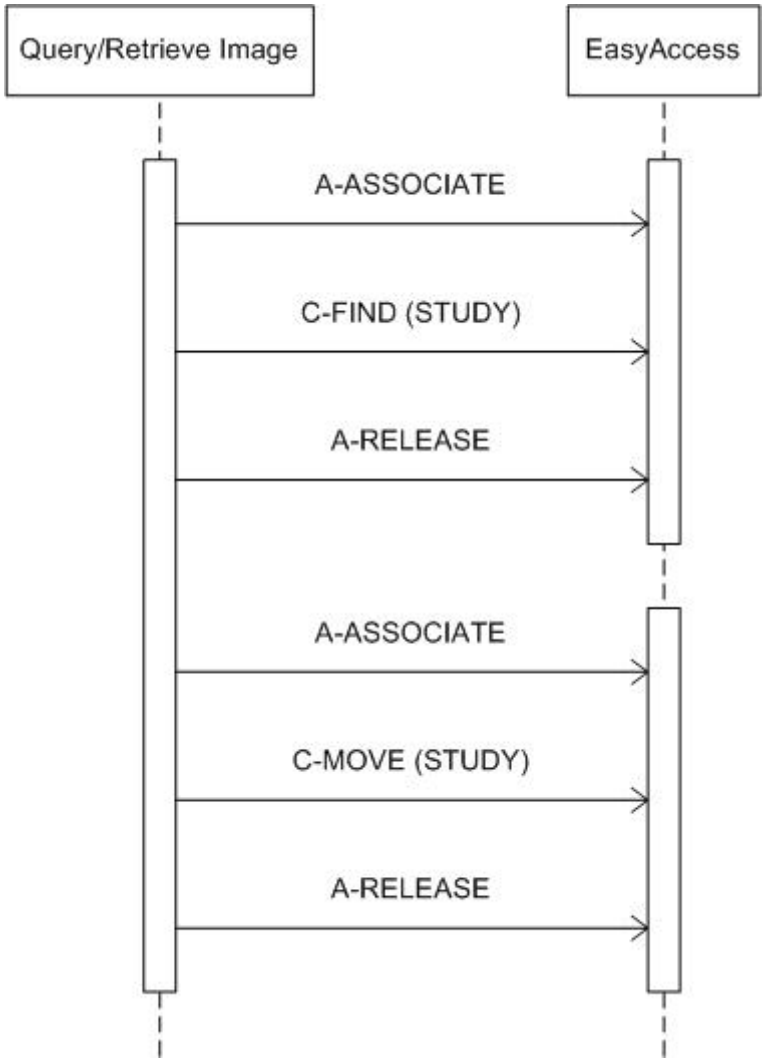

Figure 6: Sequencing of Query/Retrieve Image

4.2.3.3.1.2. Proposed Presentation Contexts

The presentation contexts proposed by Pre-Fetch AE for Query/Retrieve Image are defined in Table 24.

Table 24: Proposed Presentation Contexts for Query/Retrieve Image

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name List	UID List		
Study Root Query/Retrieve Information Model – FIND	1.2.840.10008.5.1.4.1.2.2.1	ILE ELE EBE	1.2.840.10008.1.2 1.2.840.10008.1.2.1 1.2.840.10008.1.2.2	SCU	None

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name List**	**UID List**		
Study Root Query/Retrieve Information Model – MOVE	1.2.840.10008.5.1.4.1.2.2.2	ILE ELE EBE	1.2.840.10008.1.2 1.2.840.10008.1.2.1 1.2.840.10008.1.2.2	SCU	None

The implementation of the initiator shall document which transfer syntax will be chosen in case multiple transfer syntaxes are accepted in the association acceptance.

4.2.3.3.1.3. SOP Specific Conformance for SOP Classes

4.2.3.3.1.3.1. Study Root Query/Retrieve Information Model – FIND SOP Class

4.2.3.3.1.3.2. Study Root Query/Retrieve Information Model – MOVE SOP Class

4.2.3.4. Association Acceptance Policy

Pre-Fetch AE does not accept any associations.

4.3. Network Interfaces

4.3.1. Physical Network Interface

DICOM Part 8 is supported by EasyAcces RIS Interface through TCP/IP.

4.3.1.1. Supported Communications Stacks

The EasyAccess RIS Interface provides DICOM V3.0 TCP/IP network communications support as defined in the DICOM standard PS 3.8.

4.3.1.2. TCP/IP Stack

The EasyAccess RIS Interface makes use of the Merge Technologies Inc MergeCOM-3 Advanced DICOM Toolkit, which implements the DICOM protocol over TCP/IP on any physical interconnection media supporting the TCP/IP protocol stack. The Toolkit inherits the TCP/IP stack from the host operating upon which it executes. The Toolkit has been implemented on almost every major operating system platform.

4.3.1.3. Physical Media Support

The EasyAccess RIS Interface is indifferent to the physical TCP/IP transport media; it inherits the TCP/IP transport from the system upon which it executes.

4.4. Configuration

4.4.1. AE Title/Presentation Address Mapping

The local AE title can be configured by authorized personnel. Such personnel may change configurations through the settings of the Server Configuration.

4.4.2. Configuration Parameters

The following fields are configurable for the local AE:

- Local AE Title
- Listening TCP/IP Port (default port is 104)
- Priority of child processes (default is normal)

The following fields are configurable for any remote AE:

- Remote AE Title
- Remote TCP/IP Port
- Remote IP Address

5. MEDIA INTERCHANGE

The EasyAccess RIS Interface does not support any Media Storage Application Profiles.

6. SUPPORT OF CHARACTER SETS

In addition to the default character repertoire, EasyAccess RIS Interface supports the ISO_IR 100 character set.

7. SECURITY

7.1. Security Profiles

Not applicable.

7.2. Association Level Security

Not applicable.

7.3. Application Level Security

Not applicable.

8. ANNEXES

8.1. IOD Contents

8.1.1. Created SOP Instances

8.1.1.1. Modality Worklist Information Model – FIND SOP Class

8.1.1.2. Table 25: Supported keys of the Modality Worklist Information Model – FIND SOP Class

Name	Tag	VR	Return Key Type	Comment
Patient Relationship Module				
-	-	-	-	-
Patient Identification Module				
Patient's Name	0010,0010	PN	1	Single Value and Wildcard matching.
Patient ID	0010,0020	LO	1	Single Value and Wildcard matching.
Issuer of Patient ID	0010,0021	LO	3	Single Value and Wildcard matching.
Patient Demographic Module				
Patient's Birth Date	0010,0030	DA	2	-
Patient's Sex	0010,0040	CS	2	-
Patient's Weight	0010,1030	DS	2	-
Military Rank	0010,1080	LO	3	-
Branch of Service	0010,1081	LO	3	-
Ethnic Group	0010,2160	SH	3	-
Occupation	0010,2180	SH	3	-
Patient’s Religious Preference	0010,21F0	LO	3	-
Confidentiality Constraint on Patient Data Description	0040,3001	LO	2	-
Patient Medical Module				
Medical Alerts	0010,2000	LO	2	-
Contrast Allergies	0010,2110	LO	2	-
Pregnancy Status	0010,21C0	US	2	-
Special Needs	0038,0050	LO	2	-
Patient State	0038,0500	LO	2	-
Visit Relationship Module				
Referenced Patient Sequence	0008,1120	SQ	2	-
>Referenced SOP Class UID	0008,1150	UI	1	-
>Referenced SOP Instance UID	0008,1155	UI	1	-
Visit Identification Module				
Admission ID	0038,0010	LO	2	-
Visit Status Module				
Current Patient Location	0038,0300	LO	2	-
Visit Admission Module				
-	-	-	-	-
Scheduled Procedure Step Module				

Name	Tag	VR	Return Key Type	Comment
Scheduled Procedure Step Sequence	0040,0100	SQ	1	Sequence matching.
>Modality	0008,0060	CS	1	Single Value matching.
>Scheduled Station AE Title	0040,0001	AE	1	Single Value matching.
>Scheduled Procedure Step Start Date	0040,0002	DA	1	Range Value and Single Value matching. The minimum value for a date is 18000101. Default upper bound is current date. Default range is 19700101 to one year after current day.
>Scheduled Procedure Step Start Time	0040,0003	TM	1	Range Value and Single Value matching. Default lower bound is 000000.000. Default upper bound is 235959.999.
>Scheduled Performing Physician's Name	0040,0006	PN	2	Wildcard matching.
>Scheduled Procedure Step Description	0040,0007	LO	1	-
>Scheduled Procedure Step ID	0040,0009	SH	1	-
>Scheduled Station Name	0040,0010	SH	2	Single Value matching.
>Scheduled Procedure Step Location	0040,0011	SH	2	-
>Pre-Medication	0040,0012	LO	2C	-
>Scheduled Procedure Step Status	0040,0020	CS	3	-
>Comments on the Scheduled Procedure Step	0040,0400	LT	3	-
Requested Procedure Module				
Referenced Study Sequence	0008,1110	SQ	2	-
>Referenced SOP Class UID	0008,1150	UI	1	-
>Referenced SOP Instance UID	0008,1155	UI	1	-
Study Instance UID	0020,000D	UI	1	Single Value matching.
Requested Procedure Description	0032,1060	LO	1C	-
Requested Procedure Code Sequence	0032,1064	SQ	1C	-
>Code Value	0008,0100	SH	1	-
>Coding Scheme Designator	0008,0102	SH	1	-
>Code Meaning	0008,0104	LO	3	-
Requested Procedure ID	0040,1001	SH	1	-
Reason for Requested Procedure	0040,1002	LO	3	-
Requested Procedure Priority	0040,1003	SH	2	-
Patient Transport Arrangements	0040,1004	LO	2	-

Name	Tag	VR	Return Key Type	Comment
Requested Procedure Comments	0040,1400	LT	3	-
Imaging Service Request Module				
Accession Number	0008,0050	SH	2	Range Value and Single Value matching.
Referring Physician's Name	0008,0090	PN	2	-
Requesting Physician	0032,1032	PN	2	-
Requesting Service	0032,1033	LO	3	-
Reason for the Imaging Service Request	0040,2001	LO	3	(Retired)
Issue Date of Imaging Service Request	0040,2004	DA	3	-
Issue Time of Imaging Service Request	0040,2005	TM	3	-
Call Back Phone Number	0040,2010	SH	3	-
Placer Order Number / Imaging Service Request	0040,2016	LO	3	-
Filler Order Number / Imaging Service Request	0040,2017	LO	3	-
Imaging Service Request Comments	0040,2400	LT	3	-
SOP Common Module				
Specific Character Set	0008,0005	CS	1C	-

8.1.2. Usage of Attributes from Received IOD's

Each application that depends on certain fields to function correctly should specify which ones are required for it to perform its intended function.

8.1.2.1. Modality Performed Procedure Step SOP Class

Table 26: Used Attributes

Name	Tag	VR	Definition	Comment
Performed Procedure Step Status	0040,0252	CS	1	-