DICOM Conformance Statement

Holter 3.0

PHILIPS

Issued by:

Philips Medical Systems Nederland BV, a Philips Healthcare company,

P.O. Box 10.000
5680 DA Best
The Netherlands

Internet: https://www.philips.com/healthcare/about/customer-support

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1. DICOM Conformance Statement Overview

Philips Holter monitor's provides a diagnostic tool to record ECG rhythm disturbances for outpatients as well as for inpatients in the hospital as well as for scanning services and large to mid size clinics. Depicted below is the use of Holter systems.
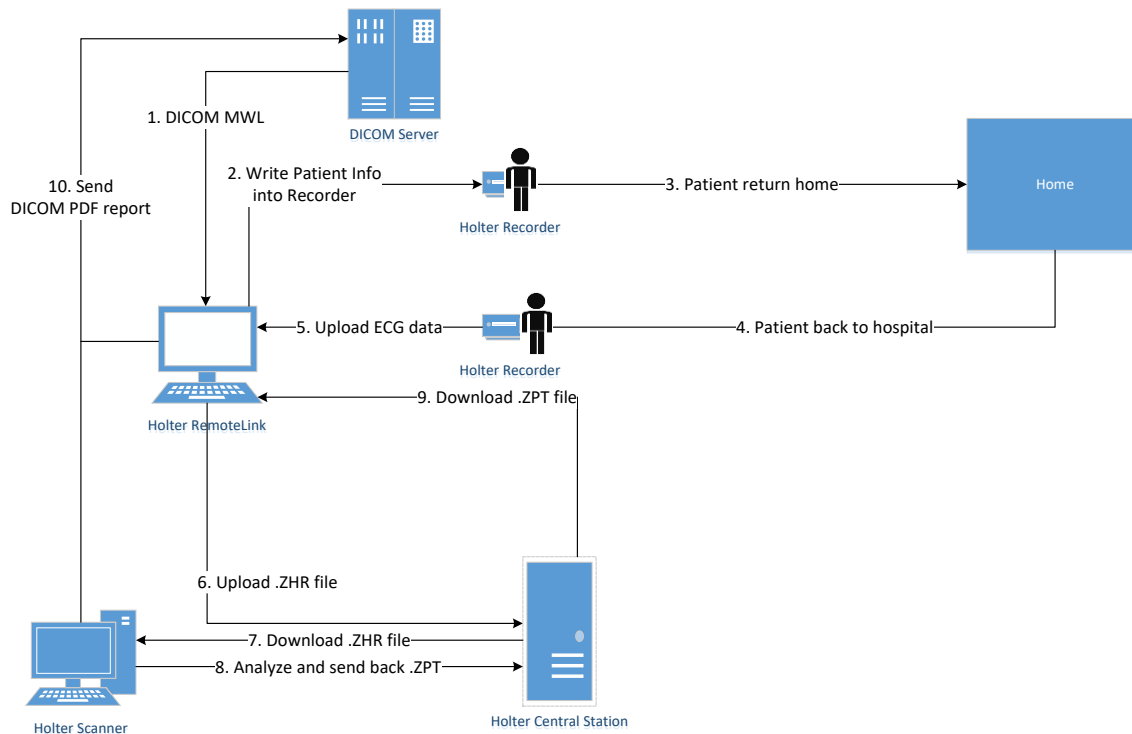
The Philips Holter offering has two distinct components:

- The Holter recorder, which is the data acquisition device and
- The Holter software, which processes the data and produces reports that can be read by Physicians.

This DICOM conformance statement describes the DICOM implementation of the Holter Software.

<p style="text-align:center">Table 1: Network Services</p>

SOP Class		User of Service (SCU)	Provider of Service (SCP)	Display
Name	UID			
Other				
Verification SOP Class	1.2.840.10008.1.1	Yes	No	N/A
Transfer				
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Yes	No	N/A
Workflow Management				
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31	Yes	No	N/A

2. Table of Contents

3. Introduction

This document describes the DICOM conformance of the common Holter Software present in the the Holter Scanner and Holter RemoteLink.

3.1. Revision History

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

Table 2: Revision History

Document Version	Date of Issue	Status	Description
00	2019-June-13	Approved	Final version

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

Table 3: Definitions, Terms and Abbreviations

Abbreviation/Term	Explanation
AE	Application Entity
ANSI	American National Standard Institute
AP	Application Profile
BOT	Basic Offset Table
CD	Compact Disc
CD-R	CD-Recordable
CD-M	CD-Medical
CR	Computed Radiography
CT	Computed Tomography
DCR	Dynamic Cardio Review
DICOM	Digital Imaging and Communications in Medicine
DIMSE	DICOM Message Service Element
DIMSE-C	DIMSE-Composite
DIMSE-N	DIMSE-Normalized
DX	Digital X-Ray
EBE	DICOM Explicit VR Big Endian
ELE	DICOM Explicit VR Little Endian
FSC	File-set Creator
FSR	File-set Reader
FSU	File-set Updater
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
MOD	Magneto-Optical Disk
MPPS	Modality Performed Procedure Step
MR	Magnetic Resonance
NEMA	National Electrical Manufacturers Association
NM	Nuclear Medicine
PDU	Protocol Data Unit
RF	X-Ray Radiofluoroscopic
RIS	Radiology Information System
RT	Radiotherapy
RWA	Real-World Activity
SC	Secondary Capture
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

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Abbreviation/Term	Explanation
US	Ultrasound
USMF	Ultrasound Multi-frame
WLM	Worklist Management
XA	X-Ray Angiographic

3.5. References

[DICOM] Digital Imaging and Communications in Medicine, Parts 1 - 21 (NEMA PS 3.1- PS 3.21),
National Electrical Manufacturers Association (NEMA) Publication Sales 1300 N. 17th Street, Suite 900 Rosslyn, Virginia.
22209, United States of America
Internet: https://www.dicomstandard.org/

4. Networking

This section contains the networking related services (vs. the media related ones).

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
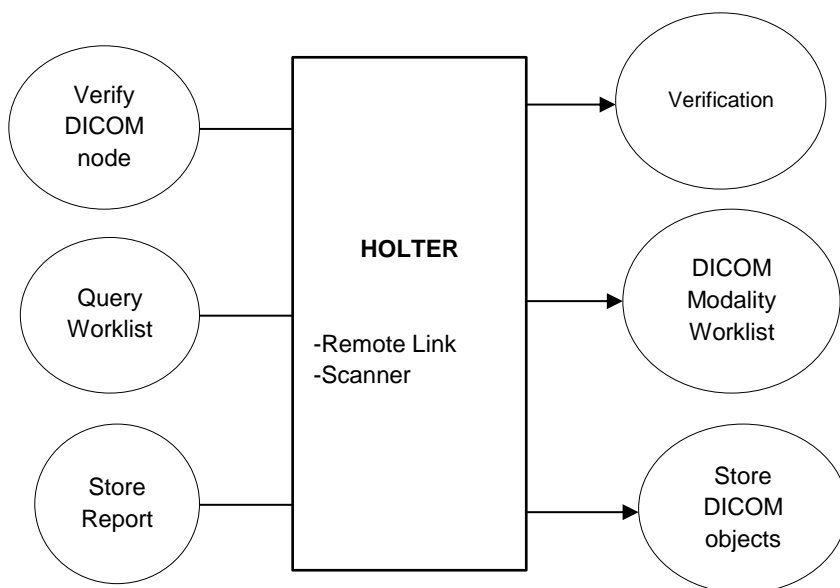
Figure 1 Application Data Flow

4.1.2.   Functional Definition of AE's

This section contains a functional definition for each individual local Application Entity.

4.1.2.1. Functional Definition of Holter AE

Holter implements one AE, ie. Holter AE which supports

- DICOM Verification as SCU
- Queries DICOM Modality worklist as SCU
- Performs DICOM print as SCU

4.1.3.   Sequencing of Real World Activities

4.2. AE Specifications

This section in the DICOM Conformance Statement is a set of Application Entity specifications. There are as many of these subsections as there are different AE's in the implementation.

4.2.1. Holter AE

Detail of this specific Application Entity is specified in this section.

4.2.1.1. SOP Classes

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

Table 4: SOP Classes for Hardcopy AE

SOP Class Name	SOP Class UID	SCU	SCP
Verification SOP Class	1.2.840.10008.1.1	Yes	No
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Yes	No
Modality Worklist Information Model - FIND SOP Class	1.2.840.10008.5.1.4.31	Yes	Yes

Note: Any SOP specific behavior is documented later in the conformance statement in the applicable SOP specific conformance section.

4.2.1.2. Association Policies

Each AE specification contains a description of the general association establishment and acceptance policies of the AE.

4.2.1.2.1. General

The DICOM standard application context is specified below.

Table 5: DICOM Application Context

Description	Value
Application Context Name	1.2.840.10008.3.1.1.1

4.2.1.2.2. Number of Associations

The number of simultaneous associations that an Application Entity may support as an Initiator or Acceptor is specified here.

Table 6: Number of associations as an Association Initiator for this AE

Description	Value
Maximum number of simultaneous associations	1

4.2.1.2.3. Asynchronous Nature

The implementation supports negotiation of multiple outstanding transactions, along with the maximum number of outstanding transactions supported.

Table 7: Asynchronous nature as an Association Initiator for this AE

Description	Value
Maximum number of outstanding asynchronous transactions	1

4.2.1.2.4. Implementation Identifying Information

The value supplied for Implementation Class UID and version name are documented here.

Table 8: DICOM Implementation Class and Version for Holter AE

Implementation Class UID	1.3.46.670589.49.2.3.1
Implementation Version Name	HOLTERDCM_1_0_0

4.2.1.2.5. Communication Failure Handling

The behavior of the AE during communication failure is summarized in the next table.

Table 9: Communication Failure Behavior

Exception	Behavior
Timeout	Failed to connect to DICOM server message is displayed to the user
Association aborted	Failed to connect to DICOM server message is displayed to the user
Failed to connect	Failed to connect to DICOM server message is displayed to the user

4.2.1.3. Association Initiation Policy

The behavior of this Application Entity is summarized in the next Table.
The Application Entity will respond to a received Association rejection as shown in the next table.

Table 10: Association Rejection response

Result	Source	Reason/Diagnosis	Behavior
1 - rejected-permanent	1 - DICOM UL service-user	1 - no-reason-given	Message is shown on a dialog box:
		2 - application-context-name-not supported	"'Failed to get worklist from DICOM Server'" in case of MWL query.
		3 - calling-AE-title-not-recognized	
		7 - called-AE-title-not-recognized	
	2 - DICOM UL service-provider (ACSE related function)	1 - no-reason-given	"'Failed to export PDF file to DICOM Server'" in case of Image export.
		2 - protocol-version-not-supported	
	3 - DICOM UL service-provider (Presentation related function)	1 - temporary-congestion	
		2 - local-limit-exceeded	
2 - rejected-transient	1 - DICOM UL service-user	1 - no-reason-given	Message is shown on a dialog box:
		2 - application-context-name-not-supported	"'Failed to get worklist from DICOM Server'" in case of MWL query.
		3 - calling-AE-title-not-recognized	
		7 - called-AE-title-not-recognized	
	2 - DICOM UL service-provider (ACSE related function)	1 - no-reason-given	"'Failed to export PDF file to DICOM Server'" in case of Image export.
		2 - protocol-version-not-supported	

Result	Source	Reason/Diagnosis	Behavior
	3 - DICOM UL service-provider (Presentation related function)	1 - temporary-congestion	
		2 - local-limit-exceeded	

The behavior of the AE on receiving an Association abort is summarized in the next table.

<p align="center">Table 11: Association Abort Handling</p>

Source	Reason/Diagnosis	Behavior
0 - DICOM UL service-user (initiated abort)	0 - reason-not-specified	Message is shown on a dialog box:
2 - DICOM UL service-provider (initiated abort)	0 - reason-not-specified	"'Failed to get worklist from DICOM Server'" in case of MWL query.
	1 - unrecognized-PDU	
	2 - unexpected-PDU	
	4 - unrecognized-PDU-parameter	"'Failed to export PDF file to DICOM Server'" in case of Image export.
	5 - unexpected-PDU-parameter	
	6 - invalid-PDU-parameter-value	

4.2.1.3.1. (Real-World) Activity – Verification as SCU

4.2.1.3.1.1. Description and Sequencing of Activities

<p align="center">Figure 2 Verification as SCU</p>

4.2.1.3.1.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

<p align="center">Table 12: Proposed Presentation Contexts for (Real-World) Activity – Verification As SCU</p>

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

4.2.1.3.1.3. SOP Specific Conformance for Verification SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

Table 13: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Successful response received.	A User dialog appear with the message 'Succeed to connect to DICOM server'
<Any other code>	<xxxx>	Not successful.	A User dialog appear with the message "Failed to connect to DICOM server"

4.2.1.3.1.3.1. Dataset Specific Conformance for Verification SOP Class C-ECHO-SCU

Not Applicable.

4.2.1.3.2. (Real-World) Activity – Modality Worklist as SCU

4.2.1.3.2.1. Description and Sequencing of Activities
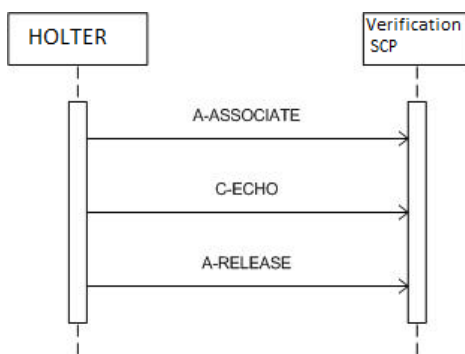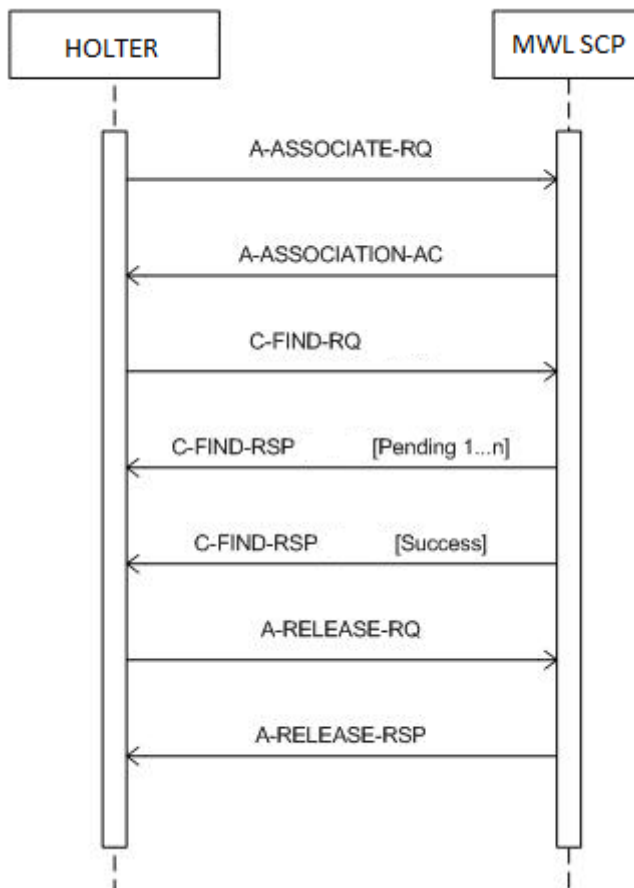

Figure 3 Data Flow Diagram – Modality Worklist as SCU

4.2.1.3.2.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 14: Proposed Presentation Contexts for (Real-World) Activity – Verification As SCU

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

4.2.1.3.2.3. SOP Specific Conformance for Modality Worklist Information Model - FIND SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

Table 15: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	Matching is complete	The returned responses are displayed on the worklist results.
Pending	FF00	Matches are continuing	The returned responses are displayed on the worklist results.
Refused	A700	Request : out of resources	Message is displayed to the user "Worklist from DICOM server is empty"
Failure	C000	Unable to Process	Message is displayed to the user "Worklist from DICOM server is empty"

When there are no matches and the SCP returns no responses with data, a dialog is shown to the user saying that the "Worklist from the DICOM server is empty."

4.2.1.3.2.3.1. Dataset Specific Conformance for Modality Worklist Information Model - FIND SOP Class

The table below should be read as follows:

Attribute Name: Attributes supported to build a Modality Worklist Request Identifier.

Tag: DICOM tag for this attribute.

VR: DICOM VR for this attribute.

M: Matching Keys for (automatic) Worklist Update.

R: Return Keys. An "X" will indicate that this attribute as matching key can be used.

Q: Interactive Query Key. An "X" will indicate that this attribute is used as Query key.

D: Displayed Keys. An "X" indicates that this Worklist attribute is displayed o the user during a patient registration dialog.

IOD: An "X" indicates that this Worklist attribute is included into all object Instances created during performance of the related Procedure Step.

Type of matching:The following types of matching exists:

      Single Value Matching

      List of UID Matching

      Wild Card Matching

      Range Matching

      Sequence Matching

      Universal Matching

Table 16: Worklist Request Identifier

Attribute Name	Tag	VR	M	R	Q	D	IOD	Type Of Matching	Comment
Modality Worklist Information Model - FIND SOP Class									
Scheduled Procedure Step Module									
Scheduled Procedure Step Sequence	0040,0100	SQ		X				Universal	
>Modality	0008,0060	CS		X				Universal	
>Scheduled Station AE Title	0040,0001	AE		X				Universal	
>Scheduled Procedure Step Start Date	0040,0002	DA	X	X	X	X	X	Universal	
>Scheduled Procedure Step Start Time	0040,0003	TM		X				Universal	
>Scheduled Procedure Step Description	0040,0007	LO		X				Universal	
>Scheduled Protocol Code Sequence	0040,0008	SQ		X				Universal	
>>Code Value	0008,0100	SH		X				Universal	
>>Coding Scheme Designator	0008,0102	SH		X				Universal	
>>Coding Scheme Version	0008,0103	SH		X				Universal	
>Scheduled Procedure Step ID	0040,0009	SH		X				Universal	
>Scheduled Station Name	0040,0010	SH		X				Universal	
>Scheduled Procedure Step Location	0040,0011	SH		X				Universal	
Requested Procedure Module									
Requested Procedure Description	0032,1060	LO		X				Universal	
Requested Procedure ID	0040,1001	SH		X				Universal	
Requested Procedure Priority	0040,1003	SH		X				Universal	
Imaging Service Request Module									
Accession Number	0008,0050	SH		X				Universal	
Referring Physician's Name	0008,0090	PN		X				Universal	
Requesting Physician	0032,1032	PN		X				Universal	
Visit Identification Module									
Admission ID	0038,0010	LO	X	X	X	X	X	Universal	
Visit Status Module									
Current Patient Location	0038,0300	LO		X				Universal	
Patient Identification Module									
Patient's Name	0010,0010	PN	X	X	X	X	X	Universal	
Patient ID	0010,0020	LO	X	X	X	X	X	Universal	
Patient Demographic Module									
Patients Birth Date	0010,0030	DA	X	X	X	X	X	Universal	
Patient's Sex	0010,0040	CS		X				Universal	
Patient's Weight	0010,1030	DS		X		X	X	Universal	
Patient Medical Module									
Medical Alerts	0010,2000	LO		X				Universal	
Attributes For The Modality Worklist C-Find Identifier									
Specific Character Set	0008,0005	CS		X				Universal	
Module Extended And Additional Attributes Module									
Institution Name	0008,0080	LO	X	X	X	X	X	Universal	

Modality Worklist Information Model - FIND SOP Class								
Attribute Name	**Tag**	**VR**	**M**	**R**	**Q**	**D**	**IOD**	**Type Of Matching**	**Comment**
Study Description	0008,1030	LO		X				Universal	
Other Patient IDs	0010,1000	LO		X				Universal	
Patient's Age	0010,1010	AS		X				Universal	
Patient's Size	0010,1020	DS		X				Universal	
Ethnic Group	0010,2160	SH		X				Universal	
Study Instance UID	0020,000D	UI		X				Universal	
Study ID	0020,0010	SH		X				Universal	
Series Number	0020,0011	IS		X				Universal	
Patient's Institution Residence	0038,0400	LO		X				Universal	
Requested Procedure Location	0040,1005	LO		X				Universal	

4.2.1.3.3. (Real-World) Activity – Image Export

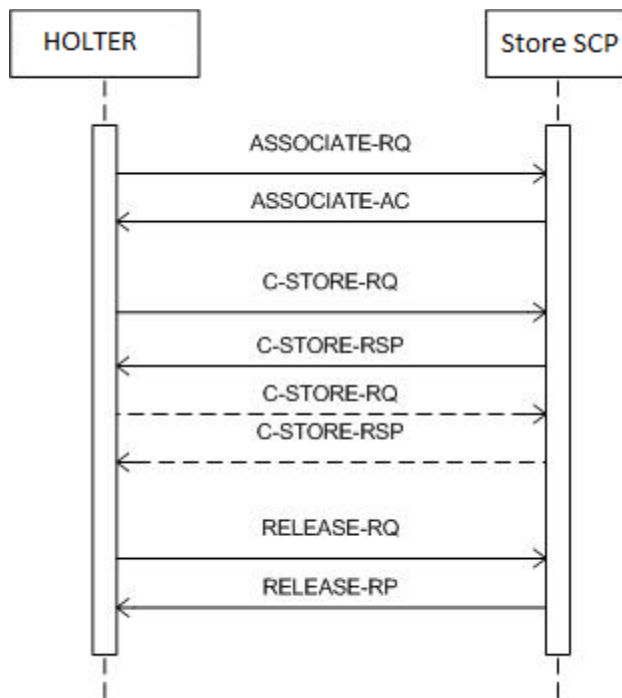### 4.2.1.3.3.1. Description and Sequencing of Activities

Figure 4 Data flow diagram – Image Export

4.2.1.3.3.2. Proposed Presentation Contexts

The presentation contexts are defined in the next table.

Table 17: Proposed Presentation Contexts for (Real-World) Activity – Image Export

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name List**	**UID List**		
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		

4.2.1.3.3.3. SOP Specific Conformance for Verification SOP Class

This section and sub-section include the manufacturer SOP and Dataset specific information as well the status codes and their corresponding behavior.

Table 18: Status Response

Service Status	Error Code	Further Meaning	Behavior
Success	0000	e.g. Matching is complete	Exported report to DICOM server is displayed
Failure	A901	Dataset does not match SOP Class	"Failed to export PDF file to DICOM server" is displayed to the user.
	A701	Out of Resources	"Failed to export PDF file to DICOM server" is displayed to the user.
	C000	Cannot understand	"Failed to export PDF file to DICOM server" is displayed to the user.
	0210	Duplicate Invocation	"Failed to export PDF file to DICOM server" is displayed to the user.
	0117	Invalid Object Instance	"Failed to export PDF file to DICOM server" is displayed to the user.
	0212	Mistyped Argument	"Failed to export PDF file to DICOM server" is displayed to the user.
	0107	Attribute List Error	"Failed to export PDF file to DICOM server" is displayed to the user.
Warning	B000	Coercion of Data Elements	"Failed to export PDF file to DICOM server" is displayed to the user.
	B007	Dataset does not match SOP Class	"Failed to export PDF file to DICOM server" is displayed to the user.
	B006	Elements Discarded	"Failed to export PDF file to DICOM server" is displayed to the user.

4.2.1.3.3.3.1. Dataset Specific Conformance for Storage SOP classes C-STORE-SCU

Not Applicable.

4.3.   Network Interfaces

4.3.1.   Physical Network Interfaces

The System provides only DICOM V3.0 TCP/IP Network Communication Support as defined in PS 3.8 of the standard.
TCP/IP is the only protocol stack supported.
Supported physical medium include:
IEEE 802.3-1995, 10BASE-T
IEEE 802.3-1995, 100BASE-TX (Fast Ethernet)
IEEE 802.3, 1000BASE-X (Fiber Optic Gigabit Ethernet).

The TCP/IP Stack as supported by the underlying Operating System.
The API is the WinSock 2 interface as supported by the underlying Operating System.

4.3.2.   Additional Protocols

Not applicable

4.4. Configuration

Any implementation's DICOM conformance may be dependent upon configuration, which takes place at the time of installation. Issues concerning configuration are addressed in this section.

4.4.1. AE Title/Presentation Address Mapping

An important installation issue is the translation from AE title to presentation address. How this is to be performed is described here.

4.4.1.1. Local AE Titles

The local AE title mapping and configuration are specified as:

Table 19: AE Title configuration table

Application Entity	Default AE Title	Default TCP/IP Port
HOLTER AE	NA	NA

4.4.1.2. Remote AE Title/Presentation Address Mapping

The configuration of the remote application is specified here.

4.4.2. Parameters

The specification of important operational parameters, their default value and range (if configurable) are specified here.

Table 20: Configuration Parameters Table

Parameter	Configurable	Default Value
General Parameter		
Time-out waiting for acceptance or rejection Response to an Association Open Request (Application Level timeout)	No	-
General Dimse level time-out values (Verification)	No	-
Time-out for response to TCP/IP connect request. (Low-level timeout)	No	-
Time-out waiting for acceptance of a TCP/IP message over the network (Low-level timeout)	No	
Any changes to default TCP/IP settings, such as configurable stack parameters.	No	
AE Specific Parameters		
Size constraint in maximum object size	No	-
Maximum PDU size the AE can send	No	16384
AE specific DIMSE level time-out values	No	
Basic Worklist Management Specific Parameters		
Date Range	No	Any
Background Query	No	No supported
Maximum items Query (Limit before Cancellation)	No	No limit
Query Modality Type	No	Not supported

5. Media Interchange

5.1.   Implementation model

Not applicable

5.2.   AE Specifications

Not applicable

5.3.   Augmented and Private Application Profiles

Not applicable

5.4.   Media Configuration

Not applicable

6. Support of Character Sets

Any support for character sets in Network and Media services is described here.

Table 21: Supported DICOM Character Sets

Character Set Description	Defined Term	ESC Sequence	ISO Registration Number	Code Element	Character Set
Latin alphabet No. 1	ISO_IR 100	-	ISO-IR 6	G0	ISO 646
		-	ISO-IR 100	G1	Supplementary set of ISO 8859

7. Security

No Security profiles are supported.

7.1.   Security Profiles

7.1.1.   Security use Profiles

Not applicable

7.1.2.   Security Transport Connection Profiles

Not applicable

7.1.3.   Digital Signature Profiles

Not applicable

7.1.4.   Media Storage Security Profiles

Not applicable

7.1.5.   Attribute Confidentiality Profiles

Not applicable

7.1.6.   Network Address Management Profiles

Not applicable

7.1.7.   Time Synchronization Profiles

Not applicable

7.1.8.   Application Configuration Management Profiles

Not applicable

7.1.9.   Audit Trail Profiles

Not applicable

7.2.   Association Level Security

Not applicable

7.3.   Application Level Security

Not applicable

8. Holter Application

8.1.   IOD contents

8.1.1.   Created SOP Instances

This section specifies each IOD created by this application and specifies the content for each IOD created (including private IODs).
For each attribute in the IOD the following information is supplied:
•   Attribute name
•   Tag
•   VR – Value representation
•   Value - specifies possible values
•   Presence of value - specifies if attribute is always present or only under specific conditions
•   Source of value - specifies the source of the value
•   Comment - gives additional information on the attribute

Abbreviations used in the IOD tables for the column "Presence of Module" are:
ALWAYS   The module is always present.
CONDITIONAL   The module is used under specified condition.

Abbreviations used in the Module table for the column "Presence of Value" are:
ALWAYS   The attribute is always present with a value.
EMPTY The attribute is always present without any value. (attribute sent zero length)
VNAP   The attribute is always present and its Value is Not Always Present.
(attribute sent zero length if no value is present)
ANAP   The attribute is present under specified condition – if present then it will always have a value.

The abbreviations used in the Module table for the column "Source" are:
AUTO   The attribute value is generated automatically.
CONFIG The attribute value source is a configurable parameter.
COPY   The attribute value source is another SOP instance.
FIXED   The attribute value is hard-coded in the application.
IMPLICIT   The attribute value source is a user-implicit setting.
MPPS   The attribute value is the same as that use for Modality Performed Procedure Step.
MWL   The attribute value source is a Modality Worklist.
USER   The attribute value source is explicit user input.

8.1.1.1. List of Created SOP Classes

Table 22 List of Created SOP Classes

SOP Class Name	SOP Class UID
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1

8.1.1.2. Encapsulated PDF Storage

Table 23 SOP Class Modules

Information Entity	Module	Presence	Conditions
Patient	Patient Module	Always	
Study	General Study Module	Always	
Series	Encapsulated Document Series Module	Always	
Equipment	General Equipment Module	Always	

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	SC Equipment Module	Always	
Encapsulated Document	Encapsulated Document Module	Always	
	SOP Common Module	Always	

Table 24 Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	MWL, USER	
Patient ID	0010,0020	LO		VNAP	MWL, USER	
Patient's Birth Date	0010,0030	DA		VNAP	MWL, USER	
Patient's Sex	0010,0040	CS		VNAP	MWL, USER	

Table 25 General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	AUTO	
Study Time	0008,0030	TM		VNAP	AUTO	
Accession Number	0008,0050	SH		VNAP		
Referring Physician's Name	0008,0090	PN		VNAP	MWL, USER	
Study Instance UID	0020,000D	UI		ALWAYS	AUTO	
Study ID	0020,0010	SH		VNAP	AUTO	

Table 26 Encapsulated Document Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS		ALWAYS	AUTO	
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	
Series Number	0020,0011	IS		ALWAYS	AUTO	

Table 27 General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips	VNAP	FIXED	

Table 28 SC Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Conversion Type	0008,0064	CS		ALWAYS		

Table 29 Encapsulated Document Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Content Date	0008,0023	DA		VNAP	AUTO	
Acquisition DateTime	0008,002A	DT		VNAP	AUTO	
Content Time	0008,0033	TM		VNAP	AUTO	
Concept Name Code Sequence	0040,A043	SQ		VNAP	AUTO	
Document Title	0042,0010	ST		VNAP	AUTO	

Table 30 SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
SOP Class UID	0008,0016	UI		ALWAYS	FIXED	
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	

8.1.2. Usage of Attributes from Received IOD

The following table lists the functionality supported by this application.

8.1.3. Attribute Mapping

Not Applicable.

8.1.4. Coerced/Modified fields

Not Applicable.

8.2. Data Dictionary of Private Attributes

Not Applicable.

8.3. Coded Terminology and Templates

Not Applicable.

8.3.1. Template Specifications

Not Applicable.

8.3.2. Private code definitions

Not Applicable.

8.4. Grayscale Image consistency

Not Applicable.

8.5. Standard Extended/Specialized/Private SOPs

Not Applicable.

8.6. Private Transfer Syntaxes

Not Applicable.