Telemis-Medical

HL7 Conformance Statement

Version 4.98

Revised October 2024

Telemis s.a.
Avenue Athena, 2
B-1348 Louvain-la-Neuve
Belgium

Tel. +32-10-48 00 11
Mail info@telemis.com
Web site https://www.telemis.com

About this document

Disclaimer
Telemis believes that the information in this document is accurate at the release date but shall not be liable for errors contained herein or for any loss or damages in connection with this document.

Telemis reserves the right to revise and to make changes to this document at any time, without any obligation to notify of such revisions and changes. The latest up-to-date version is always available at www.telemis.com/hl7.

Contact information
Telemis s.a. Avenue Athena, 2
B-1348 Louvain-la-Neuve
Belgium

Tel. +32-10-48 00 11
Mail info@telemis.com
Website https://www.telemis.com

TABLE OF CONTENTS

1. Introduction

1.1 Purpose of this Document

This document is an HL7 Conformance Statement for the TM-Medical HL7 services. It is intended to be used by software designers and/or system integrators who will be involved in integrating TM-Medical products family with complementary products like hospital or radiological information systems.
This document is based on the assumption that the reader has the working knowledge of the HL7 standard and IHE Radiology Technical Framework.

TM-Medical supports different HL7 messages to:

- Offer patient encounter and/or demographic information management.
- Offer reception of reports information for extraction and storing.
- Offer reception of information to schedule and/or update procedures and thus generate DICOM worklists from received procedures

The supported HL7 messages versions are:

- 2.3.x
- 2.4
- 2.5
- 2.5.1
- 2.6

While we encourage you to follow standard messaging, our product is able to map any kind of message to any functionality we offer. Of course, in this document only standard messaging is described.

1.2 Abbreviations and acronyms

The following list definitions, terms and abbreviations used in this document, many of which are defined within the HL7, Dicom or IHE standards.

ADT Admission, Discharge, and Transfer message
EVN Event Type segment
MRG Merge Patient Information segment
MSH Message Header segment

NTE Notes and comments segment
OBR Observation Request segment
OBX Observation/Result segment
OF Order Filler – Device that sends filled orders (ORM)
OP Order Placer
ORC Common Order segment
ORM Order Request Message
ORU Observation Results - Unsolicited message
PID Patient ID segment
PV1 Patient Visit segment
RIS Radiology Information System
SIU Scheduling Information Unsolicited message

1.3 Related Documents

- HL7 Standard Versions 2.2 to 2.6
  www.hl7.org
- IHE Radiology Technical Framework Revision 17.0 – Final Text, July, 2018
  https://www.ihe.net/Technical_Frameworks

2. Communication profiles

2.1 TCP communications

We receive HL7 messages using the Minimum Lower Level Protocol (MLLP).
Acknowledge messages are built using the same start and end indicators and segment separator as in the input messages.

2.2 Shared drive

We can work with shared network folders to import messages as a file. According to a configurable polling interval, we search for files in the specified shared folder and process them. Once processed, they are deleted.
In this case, no acknowledge messages are generated.

3. Inbound messages

2.1 Supported Events

2.1.1 ADT - Administrative Discharge Transfer Events

Event code	Description	Telemis Service
A04	Register patient	Create Patient
A08	Update patient	Update Patient
A31	Update person information	Update Patient
A40	Merge patient - internal ID	Update Patient
A47	Change Patient Identifier List	Update Patient

2.1.2 ORM - Order Message Events

Event code	Description	Telemis Service
O01	General order message	Worklist

2.1.3 OMI - Imaging Order Events

Event code	Description	Telemis Service
O23	Imaging order	Worklist

2.1.4 ORU - Observation Result Events

Event code	Description	Telemis Service
R01	Unsolicited Transmission of an observation	Report acquisition

2.1.5 MDM - Medical Documents Management Events

Event code	Description	Telemis Service
T02	Original document notification and content	Report acquisition

2.1.5 SIU- Scheduling

Event code	Description	Telemis Service
S12	Notification of new appointment booking	Create Worklist
S14	Notification of appointment modification	Update Worklist
S15	Notification of appointment cancellation	Delete Worklist

2.2 Attributes Mappings

2.2.1 MSH Segment Mappings

Seq	Name	Required	Comments
1	Field Separator	R	
2	Encoding Characters	R	
3	Sending Application	R	No verification performed
4	Sending Facility	R	No verification performed
5	Receiving Application	R	No verification performed
6	Receiving Facility	R	No verification performed
7	Date/Time Of Message	R	
8	Security	O	
9	Message Type	R	
10	Message Control ID	R	
11	Processing ID	R	
12	Version ID	R	
13	Sequence Number	O	
14	Continuation Pointer		

15	Accept Acknowledgment Type	O	
16	Application Acknowledgment Type	O	
17	Country Code	O	
18	Character Set	O	If not set, a default one is used (UTF-8). This default value can be customised.
19	Principal Language Of Message	O	

2.2.2 PID Segment Mappings

Seq	Name	Required	Comments/Telemis Field
3	Patient ID (Internal ID)	R	If PID.3.1 specified in mapping, we consider a single Patient Id If PID.3 specified, we consider a list of patient identification following the HL7 standard, where the assigning authority is specified.
4	Alternate Patient ID - PID	O	Other patient id
5	Patient Name	R	PID.5.1 ⟶ Name PID.5.2 ⟶ First name PID.5.3 ⟶ Second first name
7	Date/Time of Birth	O	Patient birthdate
8	Sex	R	Patient sex
23	Birth Place	O	Patient Birthplace

2.2.3 PV1 Segment Mappings

Seq	Name	Required	Comments/Telemis Field
8	Referring Doctor	O	PV1.8.2 → Last Name PV1.8.3 → First Name
16	VIP Indicator	O	PV1.16.1 → Vip status
19	Visit Number	O	Admission ID

2.2.4 MRG Segment Mapping

Seq	Name	Required	Comments/Telemis Field
1	Prior Patient Identifier List	R	Must be present for patient ID list update.
2	Prior Alternate Patient ID	R	Old patient ID (if MRG.4 not present)
4	Prior Patient ID	O	Old patient ID
7	Prior Patient Name	O	MRG.7.1 → Name MRG.7.2 → First name MRG.7.3 → Second first name

2.2.5 ORC Segment Mappings

Seq	Name	Required	Comments/Telemis Field
1	Order Control	R	Command
7	Quantity/Timing	R	Study Date/Time
12	Ordering Provider	O	Requesting Physician

2.2.6 OBR Segment Mappings

Seq	Name	Required	Comments/Telemis Field
3	Filler Order Number	R	Accession Number
4	Universal Service ID		OBR.4-4 ⟶ Protocol Code
7	Observation Date/Time	R	Study date/time
24	Diagnostic Serv Sect ID	O	Modality
34	Technician +	O	Performing Physician
44	Procedure code	O	Study Description

2.2.7 OBX Segment Mappings

Seq	Name	Required	Comments/Telemis Field
3	Observation Identifier	R	OBX-3.2⟶ Study Instance UID
5	Observation Value	R	Report content

2.3 Acknowledgements

If the incoming HL7 message is successfully processed, an ACK is returned. The used *Acknowledged Code* is **AA**.
If the processing has failed, a *NAK* is returned. The *Acknowledged Code* being set to **AR** in case the message is not supported, or **AE** if an error occurred during processing.

3. Outbound messages

No outbound messages are generated.

4. Support of character sets

If a character set is defined in the MSH-18 sequence, we will use it. If none is specified, by default, we use UTF-8. However, this default value can be overridden by a specific configuration.