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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

E-health multimedia services and applications –
Interoperability compliance testing of personal health
systems (HRN, PAN, LAN, TAN and WAN)

**Conformance of ITU-T H.810 personal health
devices: WAN interface Part 6: PCD-01 HL7
messages: Receiver**

Recommendation ITU-T H.836

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Recommendation ITU-T H.836

Conformance of ITU-T H.810 personal health devices: WAN interface Part 6: PCD-01 HL7 messages: Receiver

Summary

This Recommendation is the transposition of Continua Health Alliance Test Tool DG2013, Test Suite Structure & Test Purposes, WAN Interface; Part 6: PCD-01 HL7 Messages. Receiver (Version 1.4, 2014-01-24), that was developed by the Continua Health Alliance. A number of versions of this specification existed before transposition.

This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
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Electronic attachment: Protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

Introduction

This Recommendation is the transposition of Continua Health Alliance Test Tool DG2013, Test Suite Structure & Test Purposes, WAN Interface; Part 6: PCD-01 HL7 Messages. Receiver (Version 1.4, 2014-01-24), that was developed by the Continua Health Alliance. A number of versions of this specification existed before transposition and these can be found in the table below.

Version	Date	Revision history
1.2	2012-10-05	Initial release for Test Tool DG2011. This is the same version as "TSS&TP_1.5_WAN_PART_6_(REC PCD-01)_v1.2.doc" because new features included in [CDG 2011] do not affect the test procedures specified in this document.
1.3	2013-05-24	Initial release for Test Tool DG2012. This uses "TSS&TP_DG2011_WAN_PART_6_(REC PCD-01)_v1.2" as baseline and adds new features included in [CDG 2012]: • Adds glucose meter new spec version • Adds body composition analyser device specialization • Adds basic electrocardiograph device specialization
1.4	2014-01-24	Initial release for Test Tool DG2013. This uses "TSS&TP_DG2012_WAN_PART_6_(REC PCD-01)_v1.3.doc" as a baseline and adds new features included in [ITU-T H.810]: • Adds glucose meter BLE • Adds BLE SSP support • Adds NFC new transport • Adds INR device specialization

Recommendation ITU-T H.836

Conformance of ITU-T H.810 personal health devices: WAN interface Part 6: PCD-01 HL7 messages: Receiver

1 Scope

The scope of this Recommendation¹ is to provide a test suite structure and the test purposes (TSS & TP) for the WAN interface based on the requirements defined in the Continua Design Guidelines (CDG) [ITU-T H.810]. The objective of this test specification is to provide a high probability of air interface interoperability between different devices.

The TSS & TP for WAN interface document have been divided into the eight parts specified below. This Recommendation covers Part 6.

- **Part 1:** Web Services Interoperability. Sender
- **Part 2:** Web Services Interoperability. Receiver
- **Part 3:** SOAP/ATNA. Sender
- **Part 4:** SOAP/ATNA. Receiver
- **Part 5:** PCD-01 HL7 Messages. Sender
- **Part 6:** PCD-01 HL7 Messages. Receiver
- **Part 7:** Consent Management. Sender
- **Part 8:** Consent Management. Receiver

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[ITU-T H.810] Recommendation ITU-T H.810 (2013), *Interoperability design guidelines for personal health systems*.

[IEEE 11073-20601A] IEEE 11073-20601A-2010, *IEEE Health informatics – Personal health device communication – Part 20601: Application profile – Optimized Exchange Protocol Amendment 1*.
<<http://standards.ieee.org/findstds/standard/11073-20601a-2010.html>>

[IHE PCD-TF-2] Integrating the Healthcare Enterprise (2011), *IHE Patient Care Device (PCD) Technical Framework, Volume 2 (PCD TF-2): Transactions, Revision 1.0*.
<http://www.ihe.net/Technical_Framework/upload/IHE_PCD_TF_Vol2_FT_2011-08-12.pdf>

¹ This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

3 Definitions

3.1 Terms defined elsewhere

3.1.1 agent [IEEE 11073-20601A]: A node that collects and transmits personal health data to an associated manager.

3.1.2 manager [IEEE 11073-20601A]: A node receiving data from one or more agent systems. Some examples of managers include a cellular phone, health appliance, set top box, or a computer system.

3.2 Terms defined in this Recommendation

None.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

ATS	Abstract Test Suite
ATNA	Audit Trail and Node Authentication
CDG	Continua Design Guidelines
DUT	Device Under Test
GUI	Graphical User Interface
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IHE	Integrating the Healthcare Enterprise
INR	International Normalized Ratio
IUT	Implementation Under Test
MDS	Medical Device System
NFC	Near Field Communication
PCD	Patient Care Device
PCT	Protocol Conformance Testing
PCO	Point of Control and Observation
PHD	Personal Healthcare Device
PHDC	Personal Healthcare Device Class
PHM	Personal Health Manager
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation extra Information for Testing
SDP	Service Discovery Protocol
SOAP	Simple Object Access Protocol
TCRL	Test Case Reference List
TCWG	Test and Certification Working Group
TLS	Transport Level Security
TP	Test Purpose
TSS	Test Suite Structure

USB	Universal Serial Bus
WAN	Wide Area Network
WDM	Windows Driver Model
WS	Web Service
WSDL	Web Service Description Language
XML	extensible Markup Language

5 Conventions

The key words "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "MAY", "MAY NOT" in this document are to be interpreted as in [b-ETSI SR 001 262].

- SHALL is equivalent to 'must' or 'it is required to'.
- SHALL NOT is equivalent to 'must not' or 'it is not allowed'.
- SHOULD is equivalent to 'it is recommended to'.
- SHOULD NOT is equivalent to 'it is not recommended to'.
- MAY is equivalent to 'is permitted'.
- MAY NOT is equivalent to 'it is not required that'.

NOTE – The above-mentioned key words are capitalized for illustrative purposes only and they do not appear capitalized within this Recommendation.

Reference is made in the ITU-T H.800-series of Recommendations to different versions of the Continua Design Guidelines (CDG) by a specific designation. The list of terms that may be used in this Recommendation is provided in Table 1. Furthermore, the 2013 edition of the Continua design guidelines, which is published as [ITU-T H.810], is designated by "CDG 2013" as an extension of the designations indicated in the bibliography.

Table 1 – List of designations associated with the various versions of the CDG

CDG name	Transposed as	Version	Description	Designation
2013 plus errata	[ITU-T H.810]	4.1	CDG 2013 plus errata noting all ratified bugs.	–
2013	–	4.0	Release 2013 of CDG including maintenance updates of the CDG 2012 and additional guidelines that cover new functionalities.	Endorphin
2012 plus errata	–	3.1	CDG 2012 plus errata noting all ratified bugs [b-CDG 2012].	–
2012	–	3.0	Release 2012 of the CDG including maintenance updates of CDG 2011 and additional guidelines that cover new functionalities.	Catalyst
2011 plus errata	–	2.1	CDG 2011 integrated with identified errata.	–
2011	–	2.0	CDG 2011 of the CDG including maintenance updates of CDG 2010 and additional guidelines that cover new functionalities [b-CDG 2011].	Adrenaline
2010 plus errata	–	1.6	CDG 2010 integrated with identified errata	–

Table 1 – List of designations associated with the various versions of the CDG

CDG name	Transposed as	Version	Description	Designation
2010	–	1.5	Release 2010 of the CDG with maintenance updates of CDG Version 1 and additional guidelines that cover new functionalities [b-CDG 2010].	1.5
1.0	–	1.0	First released version of the CDG [b-CDG 1.0].	–

6 Test suite structure (TSS)

The test purposes (TPs) for the WAN interface have been divided into the main subgroups specified below. Annex A describes the TPs for subgroups 2.4.1 to 2.4.14 (shown in bold).

– **Group 1: Sender (SEN)**

- **Group 1.1: Web services interoperability (WSI)**
 - Subgroup 1.1.1: Basic profile (BP)
 - Subgroup 1.1.2: Basic security profile (BSP)
 - Subgroup 1.1.3: Reliable messaging (RM)
- **Group 1.2: SOAP (SOAP)**
 - Subgroup 1.2.1: SOAP headers (HEAD)
- **Group 1.3: Audit (ATNA)**
 - Subgroup 1.3.1: General (GEN)
 - Subgroup 1.3.2: PCD-01 (PCD-01)
 - Subgroup 1.3.3: Consent management (CM)
- **Group 1.4: PCD-01 HL7 Messages (PCD-01-DATA)**
 - Subgroup 1.4.1: General (GEN)
 - Subgroup 1.4.2: Design guidelines (DG)
 - Subgroup 1.4.3: Pulse oximeter (PO)
 - Subgroup 1.4.4: Blood pressure monitor (BPM)
 - Subgroup 1.4.5: Thermometer (TH)
 - Subgroup 1.4.6: Weighing scales (WEG)
 - Subgroup 1.4.7: Glucose meter (GL)
 - Subgroup 1.4.8: Cardiovascular fitness and activity monitor (CV)
 - Subgroup 1.4.9: Strength fitness equipment (ST)
 - Subgroup 1.4.10: Independent living activity hub (HUB)
 - Subgroup 1.4.11: Adherence monitor (AM)
 - Subgroup 1.4.12: Peak expiratory flow monitor (PF)
 - Subgroup 1.4.13: Body composition analyser (BCA)
 - Subgroup 1.4.14: Basic electrocardiograph (ECG)
- **Group 1.5: Consent management (CM)**
 - Subgroup 1.5.1: WAN XDR transaction (TRANS)
 - Subgroup 1.5.2: WAN metadata validation (META)

- Subgroup 1.5.3: WAN consent directive validation (CDV)
- Group 2: Receiver (REC)
 - Group 2.1: Web service interoperability (WSI)
 - Subgroup 2.1.1: Basic profile (BP)
 - Subgroup 2.1.2: Basic security profile (BSP)
 - Subgroup 2.1.3: Reliable messaging (RM)
 - Group 2.2: SOAP (SOAP)
 - Subgroup 2.2.1: SOAP headers (HEAD)
 - Group 2.3: Audit (ATNA)
 - Subgroup 2.3.1: General (GEN)
 - Subgroup 2.3.2: PCD-01 (PCD-01)
 - Subgroup 2.3.3: Consent management (CM)
 - **Group 2.4: PCD-01 HL7 Messages (PCD-01-DATA)**
 - **Subgroup 2.4.1: General (GEN)**
 - **Subgroup 2.4.2: Design guidelines (DG)**
 - **Subgroup 2.4.3: Pulse oximeter (PO)**
 - **Subgroup 2.4.4: Blood pressure monitor (BPM)**
 - **Subgroup 2.4.5: Thermometer (TH)**
 - **Subgroup 2.4.6: Weighing scales (WEG)**
 - **Subgroup 2.4.7: Glucose meter (GL)**
 - **Subgroup 2.4.8: Cardiovascular fitness and activity monitor (CV)**
 - **Subgroup 2.4.9: Strength fitness equipment (ST)**
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 - **Subgroup 2.4.12: Peak expiratory flow monitor (PF)**
 - **Subgroup 2.4.13: Body composition analyser (BCA)**
 - **Subgroup 2.4.14: Basic electrocardiograph (ECG)**
 - Group 2.5: Consent management (CM)
 - Subgroup 2.5.1: WAN XDR transaction (TRANS)
 - Subgroup 2.5.2: WAN service validation (SER)

7 Electronic attachment

The protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A can be downloaded from <http://handle.itu.int/11.1002/2000/12067>.

In the electronic attachment, letters "C" and "I" in the column labelled "Mandatory" are used to distinguish between "PICS" and "PIXIT" respectively during testing. If the cell is empty, the corresponding PICS is "independent". If the field contains a "C", the corresponding PICS is dependent on other PICS, and the logical expression is detailed in the "SCR_Expression" field. The static conformance review (SCR) is used in the test tool to assert whether the PICS selection is consistent.

Annex A

Test purposes (TP)

(This annex forms an integral part of this Recommendation.)

A.1 TP definition conventions

The test purposes are defined according to the following rules:

- **TP Id:** This is a unique identifier (TP/<TT>/<DUT>/<GR>/<SGR>/<XX> – <NNN>). It is specified according to the naming convention defined below:
 - Each test purpose Identifier is introduced by the prefix "TP".
 - <TT>: This is the test tool that will be used in the test case.
 - WAN: Wide area network
 - <DUT>: This is the device under test.
 - SEN: WAN observation sender
 - REC: WAN observation receiver
 - <GR>: This identifies a group of test cases.
 - <SGR>: This identifies a subgroup of test cases.
 - <XX>: This identifies the type of testing.
 - BV: Valid behaviour test
 - BI: Invalid behaviour test
 - <NNN>: This is a sequential number that identifies the test purpose (TP).
- **TP label:** This is the title of the TP.
- **Coverage:** This contains the specification reference and clause to be checked by the TP.
 - Spec: This indicates the earliest version of the specification from which the testable items to be checked by the TP are included.
 - Testable item: This contains testable items to be checked by the TP.
- **Test purpose:** This is a description of the requirements to be tested.
- **Applicability:** This contains the PICS items that define if the test case is applicable or not for a specific device. When a TP contains an "ALL" in this field it means that it applies to the device under test within that scope of the test (specialization, transport used, etc.).
- **Initial condition:** This indicates the state to which the DUT needs to be moved at the beginning of TC execution.
- **Test procedure:** This describes the steps to be followed in order to execute the test case.
- **Pass/Fail criteria:** This provides criteria to decide whether the DUT passes or fails the test case.

A.2 Subgroup 2.4.1 – General (GEN)

TP Id		TP/WAN/REC/PCD-01-DATA/GEN/BV-000		
TP label		MSH Segment		
Coverage	Spec	[b-CDG 2012] – Appendices H and K		
	Testable items	MSH-1; M	MSH-2; M	MSH-3; M
		MSH-4; M	MSH-5; M	MSH-6; M
		MSH-7; M	MSH-8; M	MSH-9; M
		MSH-10; M	MSH-11; M	MSH-12; M
		MSH-13; M	MSH-14; M	MSH-15; M
		MSH-16; M	MSH-17; M	MSH-18; M
		MSH-19; M	MSH-20; M	MSH-21; M
		MSH-22; M	MSH-23; M	MSH-24; M
		MSH-25; M	HL7Concept 2; M	CWEDataType 1; M
		CWEDataType 2; M	CWEDataType 3; C	DateTimeDataType 1; M
		NumericDataType 1; M	StringDataType 1; M	IDDataType 1; M
		ISDataType 1; M	EIDDataType 1; M	EIDDataType 2; O
		EIDDataType 3; O	EIDDataType 4; O	EIUse1; C
EIUse2; C	EIUse3; C	EIUse4; C		
Spec	[IHE PCD-TF-2]			
Testable items	HDUse1; M	HDUse2; C	HDUse3; C	
	HD-1; M	HD-2; M	HD-3; M	
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation.		
Test procedure		1. The simulated sender sends an HL7 message inside a SOAP body including an observation. 2. The receiver under test responds using another HL7 message. Check in the captured message that: a. Only one MSH segment is present and: ☐ The character ' ' is the separator element. ☐ MSH-2 = ^~\& (for Encoding characters element). ☐ MSH-3 = <Namespace ID (data type IS)>^<Universal ID (data type ST)>^<Universal Type (data type ID)> • If C_REC_DATA_001=TRUE, Namespace ID (HD-1) is optional and may contain a locally unique name for the application implementing PCD actor(s). Universal ID (HD-2) contains the EUI-64 identifier as a hexadecimal string. The IEEE defined 64-bit extended unique identifier (EUI-64) is a concatenation of the 24-bit company_id value assigned by the IEEE Registration Authority, and a 40-bit extension identifier assigned by the organization having that company_id assignment.Universal ID (HD-2) contains all three components, Third component (required): EUI-64 • If C_REC_DATA_002=TRUE, "Namespace ID" (HD-1) containing the name of the assigning authority, "Universal ID" (HD-2) containing its universal OID, and "Universal ID Type" (HD-3) containing the value ISO • Otherwise, if Universal Type (HD-3) is valued, it takes one of the following values: 'DNS' - An Internet dotted name. Either in ASCII or as integers 'GUID' – is the same as UUID 'HCD' - The CEN Healthcare Coding Scheme Designator. (Identifiers used in DICOM follow this assignment scheme.) 'HL7' - Reserved for future HL7 registration schemes 'L','M','N' - These are reserved for locally defined coding schemes. 'Random' - Usually a base64 encoded string of random bits. The uniqueness depends on the length of the bits. Mail systems often generate ASCII string "unique names", from a combination of random bits and system names. Obviously, such identifiers will not be constrained to the base64 character set. 'URI' - Uniform resource identifier 'UUID' - The DCE universal unique identifier 'x400' - An X.400 MHS format identifier 'x500' - An X.500 directory name. ☐ MSH-4, MSH-5, MSH-6 may be empty, but if they are not empty, they have the same encoding as MSH-3. ☐ MSH-7 is encoded as YYYY[MM[DD[HH[MM[SS]]]]][+/-ZZZZ]. ☐ MSH-8 is empty ☐ MSH-9 = ACK^R01^ACK		

	❑ MSH-10 is a string (that uniquely identifies the message) ❑ MSH-11 = <Processing ID (data type ID)>^<Processing Mode (data type ID)> where 'Processing ID' can be one of the following values: • 'D' for debugging • 'P' for processing • 'T' for training. And 'Processing Mode', can be one of the following values: • 'A' for archive • 'I' for initial load • 'R' for restore from archive • 'T' for current processing, transmitted at intervals • Not present (empty), meaning current processing. ❑ MSH-12 = 2.6 ❑ MSH-13 should not be valued, but if it is valued, it is a sequence number (it is allowed to have any of these characters: '+', '-' and '.') ❑ MSH-14 is empty ❑ MSH-15 = NE ❑ MSH-16 = AL ❑ MSH-17 may be empty, but if it is valued, it uses a 3-character (alphabetic) form of ISO 3166. ❑ MSH-18 may be empty, but if it is valued, it has one or more of these codes: • 'ASCII' (the default) • '8859/1' • '8859/2' • '8859/3' • '8859/4' • '8859/5' • '8859/6' • '8859/7' • '8859/8' • '8859/9' • '8859/15' • 'ISO IR14' • 'ISO IR87' • 'ISO IR159' • 'GB 18030-2000' • 'KS X 1001' • 'CNS 11643-1992' • 'BIG-5' • 'UNICODE' • 'UNICODE UTF-8' • 'UNICODE UTF-16' • 'UNICODE UTF-32' ❑ MSH-19 may be empty, but if it is valued, it is encoded as CWE data type: <Identifier (ST)>^<Text (ST)>^<Name of Coding System (ID)>^<Alternate Identifier (ST)>^<Alternate Text (ST)>^<Name of Alternate Coding System (ID)>^<Coding System Version ID (ST)>^<Alternate Coding System Version ID (ST)>^<Original Text (ST)> where CWE-1 is required, CWE-2 to CWE-6 are required but may be empty and the rest can be present. ❑ MSH-20 is empty ❑ MSH-21 = <Entity Identifier (data type ST)> ^ <Namespace ID (data type IS)> ^ <Universal ID (data type ST)> ^ <Universal ID Type (data type ID)>, where NamespaceID and UniversalID are 'HL7' MSH-22, MSH-23, MSH-24, MSH-25 are empty
Pass/Fail criteria	In step 2, all elements are as specified.
Notes	

TP Id		TP/WAN/REC/PCD-01-DATA/GEN/BV-001		
TP label		MSA and Segment Sequence Error		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDDataType 1; M	EIDDataType 2; M
		EIDDataType 3; M	EIDDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
		XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation.		
Test procedure		1. The simulated sender sends the following HL7 message without an MSH segment inside a SOAP body to make the receiver respond with another HL7 message: PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100813095715+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8196~16388 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528388^MDC_DEV_SPEC_PROFILE_PULS_OXIM^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 PulseOx v1. 5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100813095715+0000 R 20100813095715+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16388 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 NM 150456^MDC_PULS_OXIM_SAT_O2^MDC 1.0.0.8 80.5 262688^MDC_DIM_PERCENT^MDC R 20100813095715+0000 OBX 20 NM 149530^MDC_PULS_OXIM_PULS_RATE^MDC 1.0.0.9 70 264864^MDC_DIM_BEAT_PER_MIN^MDC R 20100813095715+0000 2. The receiver under test responds using another HL7 message. Check in the captured message that: a. Only one MSA segment is present and:		

	❑ MSA-1 is 'AE' – Accept Acknowledgment: Application Error ❑ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ❑ MSA-3 to MSA-8 are empty b. If the ERR segment referring to the MSA is present: ❑ ERR-1 is empty ❑ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <i><Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)></i> ❑ ERR-3 starts with the error code '100', other optional subfields might be included ❑ ERR-4 is set to: • 'E' – Error ❑ ERR-5 and ERR-6 are empty ❑ ERR-7 may be empty, but if it is valued, it is a text data ❑ ERR-8 may be empty, but if it is valued, it is a text data ❑ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ❑ ERR-10 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-11 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-12 may be empty, but if it is valued, it is encoded as: <i><WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)></i> Where: • Expiration Reason subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Protection code subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Shared Telecommunication Identifier subcomponents are: <i><Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)></i> Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	In step2, all elements in each segment are as specified.
Notes	

TP Id		TP/WAN/REC/PCD-01-DATA/GEN/BV-002		
TP label		MSA and Required Field Missing Error		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDDataType 1; M	EIDDataType 2; M
		EIDDataType 3; M	EIDDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation.		
Test procedure		1. The simulated sender sends the following HL7 message with an MSH segment including a MSH-7 empty inside a SOAP body to make the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 ORU^R01^ORU_R01 MSGID12 P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7PID 789567^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100813095715+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8196~16388 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528388^MDC_DEV_SPEC_PROFILE_PULS_OXIM^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 PulseOx v1. 5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100813095715+0000 R 20100813095715+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16388 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 NM 150456^MDC_PULS_OXIM_SAT_O2^MDC 1.0.0.8 90 262688^MDC_DIM_PERCENT^MDC R 20100813095715+0000		

	OBX 20 NM 149530^MDC_PULS_OXIM_PULS_RATE^MDC 1.0.0.9 80 264864^MDC_DIM_BEAT_PER_MIN^MDC R 20100813095715+0000 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: ☐ MSA-1 is 'AE' – Accept Acknowledgment: Application Error ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty - If the ERR segment referring to the MSA is present: ☐ ERR-1 is empty ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <i><Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)></i> ☐ ERR-3 starts with the error code '101', other optional subfields might be included ☐ ERR-4 is set to: • 'E' – Error ☐ ERR-5 and ERR-6 are empty ☐ ERR-7 may be empty, but if it is valued, it is a text data ☐ ERR-8 may be empty, but if it is valued, it is a text data ☐ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <i><WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)></i> Where: • Expiration Reason subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Protection code subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Shared Telecommunication Identifier subcomponents are: <i><Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)></i> Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	In step 2, all elements in each segment are as specified.
Notes	

TP Id		TP/WAN/REC/PCD-01-DATA/GEN/BV-003		
TP label		MSA and Data Type Error		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation.		
Test procedure		1. The simulated sender sends the following HL7 message including a wrong data type in the first OBX segment inside a SOAP body to make the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 20101015102130+0000 ORU^R01^ORU_R01 MSGID1 P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100522083542+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8196~16388 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 ST 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528388^MDC_DEV_SPEC_PROFILE_PULS_OXIM^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 PulseOx v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100522083542+0000 R 20100522083542+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16388 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 NM 150456^MDC_PULS_OXIM_SAT_O2^MDC 1.0.0.8 76 262688^MDC_DIM_PERCENT^MDC R 20100522083542+0000		

	OBX 20 NM 149530^MDC_PULS_OXIM_PULS_RATE^MDC 1.0.0.9 100 264864^MDC_DIM_BEAT_PER_MIN^MDC R 20100522083542+0000 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: ☐ MSA-1 is 'AE' – Accept Acknowledgment: Application Error ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty - If ERR segment referring to the MSA is present: ☐ ERR-1 is empty ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)> ☐ ERR-3 starts with the error code '102', other optional subfields might be included ☐ ERR-4 is set to: • 'E' – Error ☐ ERR-5 and ERR-6 are empty ☐ ERR-7 may be empty, but if it is valued, it is a text data ☐ ERR-8 may be empty, but if it is valued, it is a text data ☐ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)> Where: - Expiration Reason subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> - Protection code subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> - Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)> Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	In step 2, all elements in each segment are as specified.
Notes	

TP Id		TP/WAN/REC/PCD-01-DATA/GEN/BV-004		
TP label		MSA and Table Value not found Error		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation.		
Test procedure		1. The simulated sender sends the following HL7 message with an MSH segment including a MSH-15 = 'XXX' inside a SOAP body to make the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 20100930102130+0000 ORU^R01^ORU_R01 MSGID123 P 2.6 XXX AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100713150214+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8196~16388 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528388^MDC_DEV_SPEC_PROFILE_PULS_OXIM^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 PulseOx v1. 5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100713150214+0000 R 20100713150214+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16388 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 NM 150456^MDC_PULS_OXIM_SAT_O2^MDC 1.0.0.8 99.1 262688^MDC_DIM_PERCENT^MDC R 20100713150214+0000 OBX 20 NM 149530^MDC_PULS_OXIM_PULS_RATE^MDC 1.0.0.9 82 264864^MDC_DIM_BEAT_PER_MIN^MDC R 20100713150214+0000		

	2. The receiver under test responds using another HL7 message. Check in the captured message that: a. Only one MSA segment is present and: ☐ MSA-1 is 'AE' – Accept Acknowledgment: Application Error ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty b. If the ERR segment referring to the MSA is present: ☐ ERR-1 is empty ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <i><Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)></i> ☐ ERR-3 starts with the error code '103', other optional subfields might be included ☐ ERR-4 is set to: • 'E' – Error ☐ ERR-5 and ERR-6 are empty ☐ ERR-7 may be empty, but if it is valued, it is a text data ☐ ERR-8 may be empty, but if it is valued, it is a text data ☐ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <i><WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)></i> Where: • Expiration Reason subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Protection code subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Shared Telecommunication Identifier subcomponents are: <i><Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)></i> Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	In step 2, all elements in each segment are as specified.
Notes	

TP Id		TP/WAN/REC/PCD-01-DATA/GEN/BV-005		
TP label		MSA and Unsupported Message Type Error		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
		XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation.		
Test procedure		1. The simulated sender sends the following HL7 message with an MSH segment including a MSH-9 = ACK^A01^ACK inside a SOAP body to make the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 20100930102130+0000 ACK^A01^ACK MSGID12345 P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100910102736+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8196~16388 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528388^MDC_DEV_SPEC_PROFILE_PULS_OXIM^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 PulseOx v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100910102736+0000 R 20100910102736+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16388 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 NM 150456^MDC_PULS_OXIM_SAT_O2^MDC 1.0.0.8 83.2 262688^MDC_DIM_PERCENT^MDC R 20100910102736+0000		

	OBX 20 NM 149530^MDC_PULS_OXIM_PULS_RATE^MDC 1.0.0.9 79 264864^MDC_DIM_BEAT_PER_MIN^MDC R 20100910102736+0000 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: - MSA-1 is 'AR' – Accept Acknowledgment: Application Reject - MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent - MSA-3 to MSA-8 are empty - If ERR segment referring to the MSA is present: - ERR-1 is empty - ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <i><Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)></i> - ERR-3 starts with the error code '200', other optional subfields might be included - ERR-4 is set to: 'E' – Error - ERR-5 and ERR-6 are empty - ERR-7 may be empty, but if it is valued, it is a text data - ERR-8 may be empty, but if it is valued, it is a text data - ERR-9 may be empty, but if it is valued, it is one of these values: 'PAT' 'NPAT' 'USR' 'HD' - ERR-10 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. - ERR-11 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. - ERR-12 may be empty, but if it is valued, it is encoded as: <i><WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)></i> Where: - Expiration Reason subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> - Protection code subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> - Shared Telecommunication Identifier subcomponents are: <i><Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)></i> Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	In step 2, all elements in each segment are as specified.
Notes	

TP Id		TP/WAN/REC/PCD-01-DATA/GEN/BV-006		
TP label		MSA and Unsupported Event Code Error		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDDataType 1; M	EIDDataType 2; M
		EIDDataType 3; M	EIDDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
		XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation.		
Test procedure		1. The simulated sender sends the following HL7 message with an MSH segment including a wrong event code: MSH-9 = ORU^R02^ORU_R02 inside a SOAP body to make the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 20100930102130+0000 ORU^R02^ORU_R02 MSGID1234 P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100813095715+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8196~16388 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528388^MDC_DEV_SPEC_PROFILE_PULS_OXIM^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 PulseOx v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100813095715+0000 R 20100813095715+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16388 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 NM 150456^MDC_PULS_OXIM_SAT_O2^MDC 1.0.0.8 80.5 262688^MDC_DIM_PERCENT^MDC R 20100813095715+0000 OBX 20 NM 149530^MDC_PULS_OXIM_PULS_RATE^MDC 1.0.0.9 70 264864^MDC_DIM_BEAT_PER_MIN^MDC R 20100813095715+0000		

	2. The receiver under test responds using another HL7 message. Check in the captured message that: a. Only one MSA segment is present and: ☐ MSA-1 is 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty b. If ERR segment referring to the MSA is present: ☐ ERR-1 is empty ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <i><Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)></i> ☐ ERR-3 starts with the error code '201', other optional subfields might be included ☐ ERR-4 is set to: • 'E' – Error ☐ ERR-5 and ERR-6 are empty ☐ ERR-7 may be empty, but if it is valued, it is a text data ☐ ERR-8 may be empty, but if it is valued, it is a text data ☐ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <i><WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)></i> Where: • Expiration Reason subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Protection code subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Shared Telecommunication Identifier subcomponents are: <i><Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)></i> Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	In steop 2, all elements in each segment are as specified.
Notes	

TP Id		TP/WAN/REC/PCD-01-DATA/GEN/BV-007		
TP label		MSA and Unsupporting Processing Id Error		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDDataType 1; M	EIDDataType 2; M
		EIDDataType 3; M	EIDDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
		XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M
		XTNDataType 11; M		
Applicability		C_REC_000 AND (NOT (C_SEN_DATA_003 AND C_SEN_DATA_004 AND C_SEN_DATA_005))		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation.		
Test procedure		1. The simulated sender sends the following HL7 message with an MSH segment sending a not supported Processing (MSH-11 = 'M') inside a SOAP body to make the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 20100930102130+0000 ORU^R01^ORU_R01 MSGID123456 M 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^L OBR 1 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100813095715+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8196~16388 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528388^MDC_DEV_SPEC_PROFILE_PULS_OXIM^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 PulseOx v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100813095715+0000 R 20100813095715+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16388 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 NM 150456^MDC_PULS_OXIM_SAT_O2^MDC 1.0.0.8 85.9 262688^MDC_DIM_PERCENT^MDC R 20100813095715+0000		

	OBX 20 NM 149530^MDC_PULS_OXIM_PULS_RATE^MDC 1.0.0.9 77 264864^MDC_DIM_BEAT_PER_MIN^MDC R 20100813095715+0000 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: ☐ MSA-1 is 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty - If the ERR segment referring to the MSA is present: ☐ ERR-1 is empty ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <i><Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)></i> ☐ ERR-3 starts with the error code '202', other optional subfields might be included ☐ ERR-4 is set to: • 'E' – Error ☐ ERR-5 and ERR-6 are empty ☐ ERR-7 may be empty, but if it is valued, it is a text data ☐ ERR-8 may be empty, but if it is valued, it is a text data ☐ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <i><WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)></i> Where: • Expiration Reason subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Protection code subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Shared Telecommunication Identifier subcomponents are: <i><Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)></i> Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	In step 2, all elements in each segment are as specified.
Notes	

TP Id		TP/WAN/REC/PCD-01-DATA/GEN/BV-008		
TP label		MSA and Unsupported Version Id Error		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation.		
Test procedure		1. The simulated sender sends the following HL7 message with an MSH segment sending a MSH-12 = '2.5' inside a SOAP body to make the the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 20100930102130+0000 ORU^R01^ORU_R01 MSGID1235 P 2.5 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100322172147+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8196~16388 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528388^MDC_DEV_SPEC_PROFILE_PULS_OXIM^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 PulseOx v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100322172147+0000 R 20100322172147+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.6 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.5.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.5.2 16388 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.6.1 0^unregulated-device(0) R OBX 19 NM 150456^MDC_PULS_OXIM_SAT_O2^MDC 1.0.0.8 77.1 262688^MDC_DIM_PERCENT^MDC R 20100322172147+0000 OBX 20 NM 149530^MDC_PULS_OXIM_PULS_RATE^MDC 1.0.0.9 92 264864^MDC_DIM_BEAT_PER_MIN^MDC R 20100322172147+0000		

	2. The receiver under test responds using another HL7 message. Check in the captured message that: a. Only one MSA segment is present and: ☐ MSA-1 is 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty b. If the ERR segment referring to the MSA is present: ☐ ERR-1 is empty ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <i><Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)></i> ☐ ERR-3 starts with the error code '203', other optional subfields might be included ☐ ERR-4 is set to: • 'E' – Error ☐ ERR-5 and ERR-6 are empty ☐ ERR-7 may be empty, but if it is valued, it is a text data ☐ ERR-8 may be empty, but if it is valued, it is a text data ☐ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • N'PAT' • USR • HD ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <i><WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)></i> Where: • Expiration Reason subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Protection code subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Shared Telecommunication Identifier subcomponents are: <i><Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)></i> Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	In step 2, all elements in each segment are as specified.
Notes	

A.3 Subgroup 2.4.2 – Design guidelines (DG)

No test cases defined in this subgroup.

A.4 Subgroup 2.4.3 – Pulse oximeter (PO)

TP Id		TP/WAN/REC/PCD-01-DATA/PO/BV-000		
TP label		MSA and ERR segments		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
		XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M
		XTNDataType 11; M		
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of a pulse oximeter device.		
Test procedure		1. The simulated sender sends the following HL7 message, including the mandatory objects of a pulse oximeter device inside a SOAP body to make the receiver respond with another HL7 message. MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 POTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100903124015+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEA DBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8196~16388 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528388^MDC_DEV_SPEC_PROFILE_PULS_OXIM^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 PulseOx v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100903124015+0000 R 20100903124015+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16388 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R		

	OBX 19 NM 150456^MDC_PULS_OXIM_SAT_O2^MDC 1.0.0.6 92.3 262688^MDC_DIM_PERCENT^MDC R 20100903124015+0000 OBX 20 NM 149530^MDC_PULS_OXIM_PULS_RATE^MDC 1.0.0.7 71 264864^MDC_DIM_BEAT_PER_MIN^MDC R 20100903124015+0000 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: ☐ MSA-1 is one of the following values: 'AA' – Accept Acknowledgment: Application Accept 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty - If the ERR segment referring to the MSA is present: ☐ If a receiver reports an ERR segment with a severity (ERR-4) E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject) ☐ ERR-1 is empty ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <i><Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)></i> ☐ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included: '0' – Accepted '206' – Application record locked ☐ '207' – Application internal error ☐ ERR-4 is set to one of these valid error severity values: 'W' – Warning 'I' – Information 'E' – Error 'F' – Fatal error. ☐ ERR-5 and ERR-6 are empty ☐ ERR-7 may be empty, but if it is valued, it is a text data ☐ ERR-8 may be empty, but if it is valued, it is a text data ☐ ERR-9 may be empty, but if it is valued, it is one of these values: 'PAT' 'NPAT' 'USR' 'HD' ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <i><WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)></i> Where: - Expiration Reason subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> - Protection code subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System</i>
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	(ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> - Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)> - Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	- In step 2, all elements in each segment are as specified above - Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of the measurement: 2010-09-03 12:40:15 UTC, Values: SpO2=92.3 [%] and PulseRate=71 [bpm]
Notes	

A.5 Subgroup 2.4.4 – Blood pressure monitor (BPM)

TP Id	TP/WAN/REC/PCD-01-DATA/BPM/BV-000		
TP label	MSA and ERR segments		
Coverage	Spec	[b-CDG 2012] – Appendix K	
Testable items	MSAUse; M	MSA-1; M	MSA-2; M
	MSA-3; M	MSA-4; M	MSA-5; M
	MSA-6; M	MSA-7; M	MSA-8; M
	ERRUse 1; O	ERRUse 2; M	ERR-1; M
	ERR-2; R	ERR-3; M	ERR-4; M
	ERR-5; M	ERR-6; M	ERR-7; O
	CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
	CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
	DateTimeDataType 1; M	EIDDataType 1; M	EIDDataType 2; M
	EIDDataType 3; M	EIDDataType 4; M	EIUse1; C
	EIUse2; C	EIUse3; C	EIUse4; C
	IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
	XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
	XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
	XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M
	XTNDataType 11; M		
Applicability	C_REC_000		
Initial condition	The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of a blood pressure device.		
Test procedure	1. The simulated sender sends the following HL7 message, including the mandatory objects of a blood pressure device inside a SOAP body to make the receiver respond. The message sent is: <pre> MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^L OBR 1 BPMTest^AT4_AHD^1234567890ABCDEF^EUI-64 BPMTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100916145110+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8199~7 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NON E^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528391^MDC_DEV_SPEC_PROFILE_BP^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 BloodPressure v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100916145110+0000 R 20100916145110+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 8199 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 150020^MDC_PRESS_BLD_NONINV^MDC 1.0.1 X 20100916145110+0000 </pre>		

OBX|20|NM|150021^MDC_PRESS_BLD_NONINV_SYS^MDC|1.0.1.1|120|266016^MDC_DIM_MMHG^MDC||||R
 OBX|21|NM|150022^MDC_PRESS_BLD_NONINV_DIA^MDC|1.0.1.2|80|266016^MDC_DIM_MMHG^MDC||||R
 OBX|22|NM|150023^MDC_PRESS_BLD_NONINV_MEAN^MDC|1.0.1.3|100|266016^MDC_DIM_MMHG^MDC||||R
 OBX|23|NM|149546^MDC_PULS_RATE_NON_INV^MDC|1.0.0.8|82|264864^MDC_DIM_BEAT_PER_MIN^MDC||||R||20100916145110+0000

2. The receiver under test responds using another HL7 message. Check in the captured message that:

- a. Only one MSA segment is present and:
 - ☐ MSA-1 is one of the following values:
 - 'AA' – Accept Acknowledgment: Application Accept
 - 'AR' – Accept Acknowledgment: Application Reject
 - ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent
 - ☐ MSA-3 to MSA-8 are empty
 - b. If the ERR segment referring to the MSA is present:
 - ☐ If a receiver reports an ERR segment with severity E (error) or F (fatal error), the Message Acknowledgement value shall be CR (commit reject)
 - ☐ ERR-1 is empty
 - ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)>
 - ☐ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included:
 - '0' – Message accepted
 - '206' – Application record locked
 - '207' – Application internal error
 - ☐ ERR-4 is set to one of these valid error severity values:
 - 'W' – Warning
 - 'I' – Information
 - 'E' – Error
 - 'F' – Fatal error.
 - ☐ ERR-5 and ERR-6 are empty
 - ☐ ERR-7 may be empty, but if it is valued, it is a text data
 - ☐ ERR-8 may be empty, but if it is valued, it is a text data
 - ☐ ERR-9 may be empty, but if it is valued, it is one of these values:
 - 'PAT'
 - 'NPAT'
 - 'USR'
 - 'HD'
 - ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface.
 - ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface.
 - ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)>
- Where:
- Expiration Reason subcomponents are: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> ^<Alternate Identifier (ST)>^<Alternate Text (ST)>^<Name of Alternate Coding System (ID)>^<Coding System Version ID (ST)>^<Alternate Coding System Version ID (ST)>^<Original Text (ST)>
 - Protection code subcomponents are: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> ^<Alternate Identifier (ST)>^<Alternate Text (ST)>^<Name of Alternate Coding System (ID)>^<Coding System Version ID (ST)>^<Alternate Coding System Version ID (ST)>^<Original Text (ST)>
 - Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>^<Namespace ID (IS)>^<Universal ID (ST)>^<Universal ID Type (ID)>
- Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.

Pass/Fail criteria	- In step 2, all elements in each segment are as specified above - Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of the measurement: 2010-09-16 14:51:10 UTC, Values: Systolic=120 [mmHg], Diastolic=80 [mmHg], Mean=100 [mmHg], and PulseRate=82 [bpm]
Notes	

A.6 Subgroup 2.4.5 – Thermometer (TH)

TP Id	TP/WAN/REC/PCD-01-DATA/TH/BV-000		
TP label	MSA and ERR segments		
Coverage	Spec	[b-CDG 2012] – Appendix K	
Testable items	MSAUse; M	MSA-1; M	MSA-2; M
	MSA-3; M	MSA-4; M	MSA-5; M
	MSA-6; M	MSA-7; M	MSA-8; M
	ERRUse 1; O	ERRUse 2; M	ERR-1; M
	ERR-2; R	ERR-3; M	ERR-4; M
	ERR-5; M	ERR-6; M	ERR-7; O
	CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
	CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
	DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
	EIDataType 3; M	EIDataType 4; M	EIUse1; C
	EIUse2; C	EIUse3; C	EIUse4; C
	IDDataTypes 1; M	ISDataTypes 1; M	XTNDataTypes 1; M
	XTNDataTypes 2; M	XTNDataTypes 3; M	XTNDataTypes 4; M
	XTNDataTypes 5; M	XTNDataTypes 6; M	XTNDataTypes 7; M
	XTNDataTypes 8; M	XTNDataTypes 9; M	XTNDataTypes 10; M
	XTNDataTypes 11; M		
Applicability	C_REC_000		
Initial condition	The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of a thermometer device.		
Test procedure	1. The simulated sender sends the following HL7 message, including the mandatory objects of a thermometer device inside a SOAP body to make the receiver respond with another HL7 message. <pre> MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU- R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^L OBR 1 THTest^AT4_AHD^1234567890ABCDEF^EUI- 64 THTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED- CT 20100916145110+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8200~16 392~32776 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregu- lated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NON E^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528392^MDC_DEV_SPEC_PROFILE_TEMP^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 Thermometer v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100916145110+0000 R 201009161 45110+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body- continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body- continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16392 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unreg- ulated-device(0) R </pre>		

OBX|19|NM|150364^MDC_TEMP_BODY^MDC|1.0.0.6|36.5|268192^MDC_DIM_DEGC^MDC|||||R|||20100916145110+0000

2. The receiver under test responds using another HL7 message. Check in the captured message that:
 - a. Only one MSA segment is present and:
 - ☐ MSA-1 is one of the following values:
 - 'AA' – Accept Acknowledgment: Application Accept
 - 'AR' – Accept Acknowledgment: Application Reject
 - ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent
 - ☐ MSA-3 to MSA-8 are empty
 - b. If the ERR segment referring to the MSA is present:
 - ☐ If a receiver reports an ERR segment with severity E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject)
 - ☐ ERR-1 is empty
 - ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)>
 - ☐ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included:
 - '0' – Message accepted
 - '206' – Application record locked
 - '207' – Application internal error
 - ☐ ERR-4 is set to one of these valid error severity values:
 - 'W' – Warning
 - 'I' – Information
 - 'E' – Error
 - 'F' – Fatal error.
 - ☐ ERR-5 and ERR-6 are empty
 - ☐ ERR-7 may be empty, but if it is valued, it is a text data
 - ☐ ERR-8 may be empty, but if it is valued, it is a text data
 - ☐ ERR-9 may be empty, but if it is valued, it is one of these values:
 - 'PAT'
 - 'NPAT'
 - 'USR'
 - 'HD'
 - ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface.
 - ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface.
 - ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)>

Where:

 - Expiration Reason subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)>
 - Protection code subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)>
 - Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)>
 - Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.

Pass/Fail criteria	- In step 2, all elements in each segment are as specified above - Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of the measurement: 2010-09-16 14:51:10 UTC, Value: Body temperature= 36.5 [°C]
Notes	

A.7 Subgroup 2.4.6 – Weighing scales (WEG)

TP Id	TPWAN/REC/PCD-01-DATA/WEG/BV-000		
TP label	MSA and ERR segments		
Coverage	Spec	[b-CDG 2012] – Appendix K	
	Testable items	MSAUse; M	MSA-1; M
		MSA-3; M	MSA-4; M
		MSA-6; M	MSA-7; M
		ERRUse 1; O	ERRUse 2; M
		ERR-2; R	ERR-3; M
		ERR-5; M	ERR-6; M
		CWEDataType 1; M	CWEDataType 2; M
		CWEDataType 4; R	NumericDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M
		EIDataType 3; M	EIDataType 4; M
		EIUse2; C	EIUse3; C
		IDDataType 1; M	ISDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M
		XTNDataType 5; M	XTNDataType 6; M
		XTNDataType 8; M	XTNDataType 9; M
		XTNDataType 11; M	XTNDataType 10; M
Applicability	C_REC_000		
Initial condition	The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of a weighing scales device.		
Test procedure	1. The simulated sender sends the following HL7 message, including the mandatory object of a weighing scales device inside a SOAP body to make the receiver respond with another HL7 message: <pre> MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU- R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 WEGTest^AT4_AHD^1234567890ABCDEF^EUI- 64 WEGTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED- CT 20100916145510+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8207~24 591~16399 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregul ated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NON E^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528399^MDC_DEV_SPEC_PROFILE_SCALE^MDC 1 X 1234567890ABCDEF^EUI- 64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 WeighingScale v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100916145510+0000 R 201009161 45510+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body- continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body- continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16399 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unreg ulated-device(0) R OBX 19 NM 188736^MDC_MASS_BODY_ACTUAL^MDC 1.0.0.6 80 263875^MDC_DIM_KILO_G^MD C R 20100916145510+0000 </pre> 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: ☐ MSA-1 is one of the following values: 'AA' – Accept Acknowledgment: Application Accept 'AR' – Accept Acknowledgment: Application Reject		

	☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty b. If the ERR segment referring to the MSA is present: ☐ If a receiver reports an ERR segment with severity E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject) ☐ ERR-1 is empty ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)> ☐ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included: • '0' – Message accepted • '206' – Application record locked • '207' – Application internal error ☐ ERR-4 is set to one of these valid error severity values: • 'W' – Warning • 'I' – Information • 'E' – Error • 'F' – Fatal error. ☐ ERR-5 and ERR-6 are empty ☐ ERR-7 may be empty, but if it is valued, it is a text data ☐ ERR-8 may be empty, but if it is valued, it is a text data ☐ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)> - Where: • Expiration Reason subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Protection code subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)> • Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	• In step 2, all elements in each segment are as specified above • Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of the measurement: 2010-09-16 14:55:10 UTC, Values: Body Mass = 80 [kg]
Notes	

A.8 Subgroup 2.4.7 – Glucose meter (GL)

TP Id		TP/WAN/REC/PCD-01-DATA/GL/BV-000		
TP label		MSA and ERR segments		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of a glucose meter device.		
Test procedure		1. The simulated sender sends the following HL7 message, including the mandatory object of a glucose meter device inside a SOAP body to make the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^LOBR 1 GLTest^AT4_AHD^1234567890ABCDEF^EUI-64 GLTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100910141527+0000OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua ROBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1 4.0 ROBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1 2 17-8209~24593 ROBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua ROBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2 1 1^unregulated-device(0) ROBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC ROBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua ROBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0-1 ROBX 10 528401^MDC_DEV_SPEC_PROFILE_GLUCOSE^MDC 1 X 1234567890ABCDEF^EUI-64OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 Glucose Meter v1.0 ROBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless ROBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100910141527+0000 R 20100910141527+0000OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua ROBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua ROBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.0 ROBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 8209 ROBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) ROBX 19 NM 160184^MDC_CONC_GLU_CAPILLARY_WHOLEBLOOD^MDC 1.0.0.8 38 264274^MDC_DIM_MILLI_G_PER_DL^MDC R 20100910141527+0000 2. The receiver under test responds using another HL7 message. Check in the captured message that: a. Only one MSA segment is present and: ☐ MSA-1 is one of the following values: 'AA' – Accept Acknowledgment: Application Accept 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty b. If the ERR segment referring to the MSA is present: ☐ If a receiver reports an ERR segment with severity E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject) ☐ ERR-1 is empty		

	❑ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)> ❑ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included: • '0' – Message accepted • '206' – Application record locked • '207' – Application internal error ❑ ERR-4 is set to one of these valid error severity values: • 'W' – Warning • 'I' – Information • 'E' – Error • 'F' – Fatal error. ❑ ERR-5 and ERR-6 are empty ❑ ERR-7 may be empty, but if it is valued, it is a text data ❑ ERR-8 may be empty, but if it is valued, it is a text data ❑ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ❑ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)> Where: • Expiration Reason subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Protection code subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)> • Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail Criteria	• In step 2, all elements in each segment are as specified above • Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of the measurement: 2010-09-10 14:15:27 UTC, Values: Glucose capillary= 38 [mg/dl]
Notes	

A.9 Subgroup 2.4.8 – Cardiovascular fitness and activity monitor (CV)

TP Id		TP/WAN/REC/PCD-01-DATA/CV/BV-000		
TP label		MSA and ERR segments		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C REC 000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of a cardiovascular device.		
Test procedure		1. The simulated sender sends the following HL7 message, including the mandatory Session object and an optional object of a cardiovascular device inside a SOAP body to make the receiver respond with another HL7 message: <pre>MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 CVTest^AT4_AHD^1234567890ABCDEF^EUI-64 CVTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100910141527+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 41-8233 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NON E^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0-1 R OBX 10 528425^MDC_DEV_SPEC_PROFILE_HF_CARDIO^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 CardioV v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100910141527+0000 R 20100910141527+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 41 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 CWE 8454267^MDC_HF_SESSION^MDC 1.0.0.6 8455155^MDC_HF_ACT_RUN^MDC R 20100910141527+0000 OBX 20 NM 68185^MDC_ATTR_TIME_PD_MSMT_ACTIVE^MDC 1.0.0.6.1 25 2643204^MDC_DIM_SECS^MDC R OBX 21 NM 8454254^MDC_HF_SPEED^MDC 1.0.0.7 38.1 26870^MDC_DIM_M_PER_MIN^MDC R 20100910141527+0000 OBX 22 CWE 67883^MDC_ATTR_ID_PHYSIO^MDC 1.0.0.7.1 8456146^MDC_HF_MAX^MDC R OBX 23 ST 68167^MDC_ATTR_SOURCE_HANDLE_REF^MDC 1.0.0.7.2 1.0.0.8 R</pre> 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: ☐ MSA-1 is one of the following values: • 'AA' – Accept Acknowledgment: Application Accept • 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty - If the ERR segment referring to the MSA is present:		

	❑ If a receiver reports an ERR segment with severity E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject) ❑ ERR-1 is empty ❑ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)> ❑ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included: • '0' – Message accepted • '206' – Application record locked • '207' – Application internal error ❑ ERR-4 is set to one of these valid error severity values: • 'W' – Warning • 'I' – Information • 'E' – Error • 'F' – Fatal error. ❑ ERR-5 and ERR-6 are empty ❑ ERR-7 may be empty, but if it is valued, it is a text data ❑ ERR-8 may be empty, but if it is valued, it is a text data ❑ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ❑ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)> Where: • Expiration Reason subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Protection code subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)> • Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	• In step 2, all elements in each segment are as specified above. • Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of the measurement: 2010-09-10 14:15:27 UTC, Values: Speed= 38.1 [m/min]
Notes	

A.10 Subgroup 2.4.9 – Strength fitness equipment (ST)

TP Id		TP/WAN/REC/PCD-01-DATA/ST/BV-000		
TP label		MSA and ERR segments		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
		XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M
		XTNDataType 11; M		
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of a strength fitness device.		
Test procedure		1. The simulated sender sends the following HL7 message, including the mandatory Set object and an optional object of a strength fitness device inside a SOAP body to make the receiver respond with another HL7 message: <pre> MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU- R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 STTest^AT4_AHD^1234567890ABCDEF^EUI- 64 STTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED- CT 20100919211841+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 42-8234 ~16426 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregul ated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NON E^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0-1 R OBX 10 528426^MDC_DEV_SPEC_PROFILE_HF_STRENGTH^MDC 1 X 1234567890ABCD EF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 StrengthFitness v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100919211841+0000 R 201009192 11841+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body- continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body- continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16426 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unreg ulated-device(0) R OBX 19 NM 8454344^MDC_HF_SET^MDC 1.0.0.6 R 20100919211841+0000 459284^MDC_M USC_THORAX_PECTORAL_MAJOR^MDC OBX 20 NM 68185^MDC_ATTR_TIME_PD_MSMT_ACTIVE^MDC 1.0.0.6.1 25 264320^MDC_DIM_S EC^MDC R OBX 21 NM 8454346^MDC_HF_REPETITION_COUNT^MDC 1.0.0.7 12 262656^MDC_DIM_DIMLES S^MDC R 20100919211841+0000 OBX 22 ST 68167^MDC_ATTR_SOURCE_HANDLE_REF^MDC 1.0.0.7.1 1.0.0.6 R </pre> 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: ☐ MSA-1 is one of the following values: 'AA' – Accept Acknowledgment: Application Accept 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty - If the ERR segment referring to the MSA is present:		

	❑ If a receiver reports an ERR segment with severity E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject) ❑ ERR-1 is empty ❑ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)> ❑ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included: • '0' – Message accepted • '206' – Application record locked • '207' – Application internal error ❑ ERR-4 is set to one of these valid error severity values: • 'W' – Warning • 'I' – Information • 'E' – Error • 'F' – Fatal error. ❑ ERR-5 and ERR-6 are empty ❑ ERR-7 may be empty, but if it is valued, it is a text data ❑ ERR-8 may be empty, but if it is valued, it is a text data ❑ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ❑ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)> Where: • Expiration Reason subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Protection code subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)> • Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	• In step 2, all elements in each segment are as specified above • Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of the measurement: 2010-09-19 21:18:41 UTC, Values: Repetition Count = 12 [dimless]
Notes	

A.11 Subgroup 2.4.10 – Independent living activity hub (HUB)

TP Id		TP/WAN/REC/PCD-01-DATA/HUB/BV-000		
TP label		MSA and ERR segments		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C REC 000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of an independent living hub device.		
Test procedure		1. The simulated sender sends the following HL7 message, including one of the optional objects of an independent living hub device inside a SOAP body to make the receiver respond with another HL7 message: <pre>MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^L OBR 1 HUBTest^AT4_AHD^1234567890ABCDEF^EUI-64 HUBTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100920203341+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 71-8263-16455 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NON E^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0-1 R OBX 10 528455^MDC_DEV_SPEC_PROFILE_AI_ACTIVITY_HUB^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 HUB v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100920203341+0000 R 20100920203341+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16455 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 CWE 8519681^MDC_AI_TYPE_SENSOR_FALL^MDC 1.0.0.6 1^fall-detected(0) R 20100920203341+0000 OBX 20 CWE 8520703^MDC_AI_LOCATION^MDC 1.0.0.6.1 8522816^MDC_AI_LOCATION_BEDROOMMASTER^MDC R</pre> 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: ☐ MSA-1 is one of the following values: 'AA' – Accept Acknowledgment: Application Accept 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty - If the ERR segment referring to the MSA is present: ☐ If a receiver reports an ERR segment with severity E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject) ☐ ERR-1 is empty		

	❑ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)> ❑ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included: • '0' – Message accepted • '206' – Application record locked • '207' – Application internal error ❑ ERR-4 is set to one of these valid error severity values: • 'W' – Warning • 'I' – Information • 'E' – Error • 'F' – Fatal error. ❑ ERR-5 and ERR-6 are empty ❑ ERR-7 may be empty, but if it is valued, it is a text data ❑ ERR-8 may be empty, but if it is valued, it is a text data ❑ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ❑ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)> Where: • Expiration Reason subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Protection code subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)> • Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	• In step 2, all elements in each segment are as specified above • Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of the measurement: 2010-09-20 20:33:41 UTC, Values: Fall Sensor = "fall detected" [dimless]
Notes	

A.12 Subgroup 2.4.11 – Adherence monitor (AM)

TP Id		TP/WAN/REC/PCD-01-DATA/AM/BV-000		
TP label		MSA and ERR segments		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of an adherence monitor device.		
Test procedure		1. The simulated sender sends the following HL7 message, including the mandatory object of the standard configuration (7201) adherence monitor device inside a SOAP body to make the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^P Doe^John^Joseph^^^^L OBR 1 AMTest^AT4_AHD^1234567890ABCDEF^EUI-64 AMTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100921123934+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 16456~8264 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528456^MDC_DEV_SPEC_PROFILE_AI_MED_MINDER^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 Adherence Mon v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100921123934+0000 R 20100921123934+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16456 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 NM 8532992^MDC_AI_MED_DISPENSED_FIXED^MDC 1.0.0.6 44 262656^MDC_DIM_DIMLESS^MDC R 20100921123934+0000 OBX 20 CWE 8532994^MDC_AI_MED_STATUS^MDC 1.0.0.7 1^medication-course-complete(4) R OBX 21 8532995^MDC_AI_MED_FEEDBACK^MDC 1.0.1 X OBX 22 NM 8532996^MDC_AI_MED_UF_LOCATION^MDC 1.0.1.1 5 R 20100921123934+0000 OBX 23 NM 8532997^MDC_AI_MED_UF_RESPONSE^MDC 1.0.1.2 3 R 20100921123934+0000 2. The receiver under test responds using another HL7 message. Check in the captured message that: a. Only one MSA segment is present and: ☐ MSA-1 is one of the following values: • 'AA' – Accept Acknowledgment: Application Accept • 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty b. If the ERR segment referring to the MSA is present:		

	☐ If a receiver reports an ERR segment with severity E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject) ☐ ERR-1 is empty ☐ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <i><Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)></i> ☐ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included: • '0' – Message accepted • '206' – Application record locked • '207' – Application internal error ☐ ERR-4 is set to one of these valid error severity values: • 'W' – Warning • 'I' – Information • 'E' – Error • 'F' – Fatal error. ☐ ERR-5 and ERR-6 are empty ☐ ERR-7 may be empty, but if it is valued, it is a text data ☐ ERR-8 may be empty, but if it is valued, it is a text data ☐ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ☐ ERR-10 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-11 may be empty, but if it is valued, it is encoded as: <i><Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)></i> the rest of the elements of the CWE data type are not used in the WAN interface. ☐ ERR-12 may be empty, but if it is valued, it is encoded as: <i><WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)></i> Where: • Expiration Reason subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Protection code subcomponents are: <i><Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)></i> • Shared Telecommunication Identifier subcomponents are: <i><Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)></i> • Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	• In step 2, all elements in each segment are as specified above • Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of the measurements: 2010-09-21 12:39:34 UTC, Values: Fixed Dosage Dispensed = 44 [dimless], Status = "medication course completed", Feedback Location = 5 [dimless] and Feedback Response = 3 [dimless]
Notes	[AT4]: Possible Continua DG v2011 bug. Step 2.d shows the expected OBX segment as specified in Continua DG v2011 – Appendix J Table J-29. Based on similarity between BPM and AM compound values, we understand that correct OBX segment should be: User Feedback Channel object follows this OBX encoding: ☐ OBX-2 is empty ☐ OBX-3 = 8532995^MDC_AI_MED_FEEDBACK^MDC ☐ OBX-4 = y.0.x, where 'y' and 'x' are numbers indicating the OBX-4 of the MDS-level and the channel level for the User Feedback Channel object respectively. ☐ OBX-5 is empty ☐ OBX-11 = 'X'

A.13 Subgroup 2.4.12 – Peak expiratory flow monitor (PF)

TP Id		TP/WAN/REC/PCD-01-DATA/PF/BV-000		
TP label		MSA and ERR segments		
Coverage	Spec	[b-CDG 2012] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of a peak flow device.		
Test procedure		1. The simulated sender sends the following HL7 message, including the mandatory objects of a peak flow device inside a SOAP body to make the receiver respond with another HL7 message: <pre>MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 PFTTest^AT4_AHD^1234567890ABCDEF^EUI-64 PFTTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100921124034+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 16405~8213~24597 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528405^MDC_DEV_SPEC_PROFILE_PEFM^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 Peak Flow v1.5 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100921124034+0000 R 20100921124034+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 1.5 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16405 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 NM 152584^MDC_FLOW_AWAY_EXP_FORCED_PEAK^MDC 1.0.0.6 67 264992^MDC_DIM_L_PER_MIN^MDC R 20100921124034+0000 OBX 20 NM 152585^MDC_FLOW_AWAY_EXP_FORCED_PEAK_PB^MDC 1.0.0.7 35 264992^MDC_DIM_L_PER_MIN^MDC R 20100921124034+0000 OBX 21 NM 152586^MDC_FLOW_AWAY_EXP_FORCED_PEAK_1S^MDC 1.0.0.8 48 263744^MDC_DIM_L^MDC R 20100921124034+0000</pre> 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: ☐ MSA-1 is one of the following values: • 'AA' – Accept Acknowledgment: Application Accept • 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty - If the ERR segment referring to the MSA is present: ☐ If a receiver reports an ERR segment with severity E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject) ☐ ERR-1 is empty		

	❑ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)> ❑ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included: • '0' – Message accepted • '206' – Application record locked • '207' – Application internal error ❑ ERR-4 is set to one of these valid error severity values: • 'W' – Warning • 'I' – Information • 'E' – Error • 'F' – Fatal error. ❑ ERR-5 and ERR-6 are empty ❑ ERR-7 may be empty, but if it is valued, it is a text data ❑ ERR-8 may be empty, but if it is valued, it is a text data ❑ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ❑ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)> Where: • Expiration Reason subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Protection code subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)> • Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	• In step 2, all elements in each segment are as specified above • Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of measurements: 2010-09-21 12:40:34 UTC, Values: PEF = 67 [l/min], Personal Best = 35 [l/min], FEV1 = 48 [l]
Notes	

A.14 Subgroup 2.4.13 – Body composition analyser (BCA)

TP Id		TP/WAN/REC/PCD-01-DATA/BCA/BV-000		
TP label		MSA and ERR segments		
Coverage	Spec	[b-CDG 2011] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of a body composition analyser device.		
Test procedure		1. The simulated sender sends the following HL7 message inside a SOAP body to make the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^^L OBR 1 THTest^AT4_AHD^1234567890ABCDEF^EUI-64 THTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100916145110+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8212~16404~24596 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528404^MDC_DEV_SPEC_PROFILE_BCA^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.1 Body Composition Analyser v3.0 R OBX 12 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.2 AT4 Wireless R OBX 13 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.3 20100916145110+0000 R 20100916145110+0000 OBX 14 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.4 2^auth-body-continua R OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.4.1 3.0 R OBX 17 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.4.2 16404 R OBX 18 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.5.1 0^unregulated-device(0) R OBX 19 NM 188748^MDC_BODY_FAT^MDC 1.0.0.6 25 262688^MDC_DIM_PERCENT^MDC R 20100916145110+0000 OBX 20 NM 188740^MDC_LEN_BODY_ACTUAL^MDC 1.0.0.7 175 263441^MDC_DIM_CENTIM^MDC R 20100916145110+0000 OBX 21 NM 188736^MDC_MASS_BODY_ACTUAL^MDC 1.0.0.8 73.5 263875^MDC_DIM_KILO_G^MDC R 20100916145110+0000 2. The receiver under test responds using another HL7 message. Check in the captured message that: - Only one MSA segment is present and: ☐ MSA-1 is one of the following values: 'AA' – Accept Acknowledgment: Application Accept 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty - If the ERR segment referring to the MSA is present: ☐ If a receiver reports an ERR segment with severity E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject)		

	❑ ERR-1 is empty ❑ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)> ❑ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included: • '0' – Message accepted • '206' – Application record locked • '207' – Application internal error ❑ ERR-4 is set to one of these valid error severity values: • 'W' – Warning • 'I' – Information • 'E' – Error • 'F' – Fatal error. ❑ ERR-5 and ERR-6 are empty ❑ ERR-7 may be empty, but if it is valued, it is a text data ❑ ERR-8 may be empty, but if it is valued, it is a text data ❑ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ❑ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)> Where: • Expiration Reason subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Protection code subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)> • Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	• In step 2, all elements in each segment are as specified above • Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of measurements 2010-09-16 14:51:10 UTC, Values: Body Fat, 25 [%]; Body Height, 175 [cm] and Body Weight, 73.5 [Kg]
Notes	

A.15 Subgroup 2.4.14 – Basic electrocardiograph (ECG)

TP Id		TP/WAN/REC/PCD-01-DATA/ECG/BV-000		
TP label		MSA and ERR segments		
Coverage	Spec	[b-CDG 2011] – Appendix K		
	Testable items	MSAUse; M	MSA-1; M	MSA-2; M
		MSA-3; M	MSA-4; M	MSA-5; M
		MSA-6; M	MSA-7; M	MSA-8; M
		ERRUse 1; O	ERRUse 2; M	ERR-1; M
		ERR-2; R	ERR-3; M	ERR-4; M
		ERR-5; M	ERR-6; M	ERR-7; O
		CWEDataType 1; M	CWEDataType 2; M	CWEDataType 3; C
		CWEDataType 4; R	NumericDataType 1; M	StringDataType 1; M
		DateTimeDataType 1; M	EIDataType 1; M	EIDataType 2; M
		EIDataType 3; M	EIDataType 4; M	EIUse1; C
		EIUse2; C	EIUse3; C	EIUse4; C
		IDDataType 1; M	ISDataType 1; M	XTNDataType 1; M
		XTNDataType 2; M	XTNDataType 3; M	XTNDataType 4; M
		XTNDataType 5; M	XTNDataType 6; M	XTNDataType 7; M
XTNDataType 8; M	XTNDataType 9; M	XTNDataType 10; M		
XTNDataType 11; M				
Applicability		C_REC_000		
Initial condition		The receiver under test has published a WebService and the simulated sender is ready to send a SOAP message with an observation of a basic electrocardiograph device.		
Test procedure		1. The simulated sender sends the following HL7 message inside a SOAP body to make the receiver respond with another HL7 message: MSH ^~\& AT4_AHD^1234567890ABCDEF^EUI-64 <current time in UTC> ORU^R01^ORU_R01 MSGID<random number> P 2.6 NE AL IHE PCD ORU-R012006^HL7^2.16.840.1.113883.9.n.m^HL7 PID 789567^^^Imaginary Hospital^PI Doe^John^Joseph^^^L OBR 1 THTest^AT4_AHD^1234567890ABCDEF^EUI-64 THTest^AT4_AHD^1234567890ABCDEF^EUI-64 182777000^monitoring of patient^SNOMED-CT 20100916145110+0000 OBX 1 531981^MDC_MOC_VMS_MDS_AHD^MDC 0 X FEEDABEEDEADBEEF^EUI-64 OBX 2 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.1 2^auth-body-continua R OBX 3 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 0.0.0.1.1 4.0 R OBX 4 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 0.0.0.1.2 8204~8332 R OBX 5 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.2 2^auth-body-continua R OBX 6 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 0.0.0.2.1 1^unregulated-device(0) R OBX 7 CWE 68220^MDC_TIME_SYNC_PROTOCOL^MDC 0.0.0.3 532224^MDC_TIME_SYNC_NONE^MDC R OBX 8 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 0.0.0.4 2^auth-body-continua R OBX 9 CWE 64515^MDC_REG_CERT_DATA_CONTINUA_AHD_CERT_LIST^MDC 0.0.0.4.1 0~1 R OBX 10 528384^MDC_DEV_SPEC_PROFILE_HYDRA^MDC 1 X 1234567890ABCDEF^EUI-64 OBX 11 CWE 68186^MDC_ATTR_SYS_TYPE_SPEC_LIST^MDC 1.0.0.1 528390^MDC_DEV_SPEC_PROFILE_ECG^MDC~528525^MDC_DEV_SUB_SPEC_PROFILE_HR^MDC R 20110808135003+0000 OBX 12 ST 531969^MDC_ID_MODEL_NUMBER^MDC 1.0.0.2 Basic Electrocardiograph v3.0 R OBX 13 ST 531970^MDC_ID_MODEL_MANUFACTURER^MDC 1.0.0.3 AT4 Wireless R OBX 14 DTM 67975^MDC_ATTR_TIME_ABS^MDC 1.0.0.4 20100916145110+0000 R 20100916145110+0000 OBX 15 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.5 2^auth-body-continua R OBX 16 CWE 68218^MDC_REG_CERT_DATA_AUTH_BODY^MDC 1.0.0.6 2^auth-body-continua R OBX 17 ST 532352^MDC_REG_CERT_DATA_CONTINUA_VERSION^MDC 1.0.0.5.1 3.0 R OBX 18 NA 532353^MDC_REG_CERT_DATA_CONTINUA_CERT_DEV_LIST^MDC 1.0.0.5.2 8204~8332 R OBX 19 CWE 532354^MDC_REG_CERT_DATA_CONTINUA_REG_STATUS^MDC 1.0.0.6.1 0^unregulated-device(0) R OBX 20 NM 147842^MDC_ECG_HEART_RATE^MDC 1.0.0.7 80 264864^MDC_DIM_BEAT_PER_MIN^MDC R 20100916145110+0000 2. The receiver under test responds using another HL7 message. Check in the captured message that: a. Only one MSA segment is present and: ☐ MSA-1 is one of the following values: • 'AA' – Accept Acknowledgment: Application Accept • 'AR' – Accept Acknowledgment: Application Reject ☐ MSA-2 contains the message control ID from the MSH-10 (Message Control ID) of the incoming message for which this acknowledgement is being sent ☐ MSA-3 to MSA-8 are empty b. If the ERR segment referring to the MSA is present:		

	❑ If a receiver reports an ERR segment with severity E (Error) or F (Fatal Error), the Message Acknowledgement value shall be CR (Commit Reject) ❑ ERR-1 is empty ❑ ERR-2 should be valued with the location in the message related to the identified error, warning, or message. This field is repeated for errors which result from the combination of multiple locations. Components: <Segment ID (ST)> ^ <Segment Sequence (NM)> ^ <Field Position (NM)> ^ <Field Repetition (NM)> ^ <Component Number (NM)> ^ <Sub-Component Number (NM)> ❑ ERR-3 starts with one of the following valid error condition codes and other optional subfields might be included: • '0' – Message accepted • '206' – Application record locked • '207' – Application internal error ❑ ERR-4 is set to one of these valid error severity values: • 'W' – Warning • 'I' – Information • 'E' – Error • 'F' – Fatal error. ❑ ERR-5 and ERR-6 are empty ❑ ERR-7 may be empty, but if it is valued, it is a text data ❑ ERR-8 may be empty, but if it is valued, it is a text data ❑ ERR-9 may be empty, but if it is valued, it is one of these values: • 'PAT' • 'NPAT' • 'USR' • 'HD' ❑ ERR-10 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in the WAN interface. ❑ ERR-11 may be empty, but if it is valued, it is encoded as: <Identifier (ST)>^<Text (ST)>^< Name of Coding System (ID)> the rest of the elements of the CWE data type are not used in WAN interface. ❑ ERR-12 may be empty, but if it is valued, it is encoded as: <WITHDRAWN Constituent>^<Telecommunication Use Code (ID)>^<Telecommunication Equipment Type (ID)>^<Communication Address (ST)>^<Country Code (NM)>^<Area/City Code (NM)>^<Local Number (NM)>^<Extension (NM)>^<Any Text (ST)>^<Extension Prefix (ST)>^<Speed Dial Code (ST)>^<Unformatted Telephone Number (ST)>^<Effective Start Date (DTM)>^<Expiration Date (DTM)>^<Expiration Reason (CWE)>^<Protection Code (CWE)>^<Shared Telecommunication Identifier (EI)>^<Preference Order (NM)> Where: • Expiration Reason subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Protection code subcomponents are: <Identifier (ST)>&<Text (ST)>&< Name of Coding System (ID)> &<Alternate Identifier (ST)>&<Alternate Text (ST)>&<Name of Alternate Coding System (ID)>&<Coding System Version ID (ST)>&<Alternate Coding System Version ID (ST)>&<Original Text (ST)> • Shared Telecommunication Identifier subcomponents are: <Entity Identifier (ST)>&<Namespace ID (IS)>&<Universal ID (ST)>&<Universal ID Type (ID)> • Where XTN-2 and XTN-3 are required and XTN-4 to XTN-10 are required but may be empty. The rest are not supported.
Pass/Fail criteria	• In step 2, all elements in each segment are as specified above • Verify that the receiver under test is able to accept the data and time stamps (e.g., if there is a log verify the date and the data are displayed in some form that indicates the correct date and time and the correct data as transmitted). Date and time of measurement: 2010-09-16 14:51:10 UTC, Value: Heart Rate, 80 [beats per min.].
Notes	

Bibliography

- [b-CDG 1.0] Continua Health Alliance, Continua Design Guidelines v1.0. (2008), *Continua Design Guidelines*.
- [b-CDG 2010] Continua Health Alliance, Continua Design Guidelines v1.5 (2010), *Continua Design Guidelines*.
- [b-CDG 2011] Continua Health Alliance, Continua Design Guidelines (2011), "Adrenaline" *Continua Design Guidelines*.
- [b-CDG 2012] Continua Health Alliance, Continua Design Guidelines (2012), "Catalyst" *Continua Design Guidelines*.
- [b-ETSI SR 001 262] ETSI SR 001 262 v1.8.1 (2003): *ETSI drafting rules*.
- [b-SOAP 1.2] W3C SOAP 1.2 (2007), *SOAP Version 1.2 (Second Edition)*.
<<http://www.w3.org/TR/soap/>>

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