

# **AGFA HEALTHCARE HL7 Conformance Statement**

## **Enterprise Imaging 8.1**

Document No. 001533 - Revision 6

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## Document Information

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# 1 INTRODUCTION

## 1.1 Revision Record

Revision Number	Date	Reason for Change
1.0	March 18 <sup>th</sup> 2016	Initial draft
6	June 9 <sup>th</sup> 2016	Update product naming

## 1.2 Purpose and Intended Audience of this Document

This document is a HL7 Conformance Statement for the HL7 Services of Enterprise Imaging 8.1.

The user of this document is involved with system integration and/or software design. We assume that the reader is familiar with the terminology and concepts that are used in the HL7 standard and the IHE Technical Framework.

Readers not familiar with HL7 terminology should first read the appropriate parts of the HL7 standard itself, prior to reading this conformance statement.

Although the use of this conformance statement in conjunction with the HL7 standard is intended to facilitate communication with Enterprise Imaging 8.1, it is not sufficient to guarantee, by itself, the inter-operation of the connection between Enterprise Imaging 8.1 and the 3<sup>rd</sup> party HL7-based system.

To help this integration validation we provide HL7 Conformance Profiles bundled together in a zip file "[001534 Enterprise Imaging 8.1 HL7 conformance profiles](#)", also available on <http://www.agfahealthcare.com/hl7>. These conformance profiles are related to the Core Server component and the Web Server component.

*Note:*

*Core Server might also support trigger events that are not included in this conformance statement, provided that the message content can be converted to one of the supported trigger events.*

*For example, Core Server has limited support for SIU messages since some SIU trigger events can be converted to ORM trigger events (with potential loss of some SIU data which isn't supported in an ORM trigger event).*

*Another example is the limited support for patient linking since the A24 trigger event can be converted to an A40 trigger event.*

*This requires a thorough analysis by Agfa Healthcare Professional Services that ultimately determine whether or not Core Server can support a non-listed trigger event.*

The integration of any device into a system of interconnected devices goes beyond the scope of the HL7 standard and this conformance statement when *interoperability* is desired. The responsibility for analyzing the applications requirements and developing a solution that integrates the Agfa equipment with other vendors' systems is the user's responsibility and should not be underestimated.

## 1.3 Acronyms and Abbreviations

Definitions, terms and abbreviations used in this document, many of which are defined within the HL7 standard. Abbreviations and terms are as follows:

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ADT	Admission, Discharge, and Transfer message
AL1	Patient Allergy Information segment
DFT	Detail Financial Transaction message
EVN	Event Type segment
HL7	Health Level 7
IHE	Integrating the Healthcare Enterprise
MFN	Master Files Notification message
MRG	Merge Patient Information segment
MSH	Message Header segment
NTE	Notes and comments segment
OBR	Observation Request segment
OBX	Observation/Result segment
OF	Order Filler – Device that sends filled orders (ORM)
OP	Order Placer
ORC	Common Order segment
ORM	Order Request Message
ORU	Observation Results - Unsolicited message
PID	Patient ID segment
PV1	Patient Visit segment
QRD	Query Definition segment
RIS	Radiology Information System
SCH	Scheduling Activity Information segment
SIU	Scheduling Information Unsolicited message

## 1.4 Related Documents

- HL7 Standard , see [www.hl7.org](http://www.hl7.org)
- IHE Radiology Technical Framework Revision 14.0 – Final Text, July, 2015 – see [http://www.ihe.net/Technical\\_Frameworks/](http://www.ihe.net/Technical_Frameworks/) for the latest revisions

## 2 INBOUND MESSAGES

### 2.1 Core Server

#### 2.1.1 Supported Trigger Events

##### 2.1.1.1 Supported ACK Events

For more information about the processed segments and segment mappings, refer to the document specified in the 'Conformance profile document' column.

**Table 2-1 Supported ACK Events**

Func Area	Event Code	ACK Trigger Event Description	Conformance profile document
ACK	ALL	General ACK Message	ENTERPRISE IMAGING INBOUND ACK.pdf

##### 2.1.1.2 Supported ADT Events

For more information about the processed segments and segment mappings, refer to the document specified in the 'Conformance profile document' column.

**Table 2-2 Supported ADT Events**

Func Area	Event Code	ADT Trigger Event Description	Conformance profile document
ADT	A01	Admit / Visit notification	ENTERPRISE IMAGING INBOUND ADT_A01.pdf
ADT	A02	Transfer a patient	ENTERPRISE IMAGING INBOUND ADT_A02.pdf
ADT	A03	Discharge / End visit	ENTERPRISE IMAGING INBOUND ADT_A03.pdf
ADT	A04	Register a patient	ENTERPRISE IMAGING INBOUND ADT_A04.pdf
ADT	A05	Pre-admit a patient	ENTERPRISE IMAGING INBOUND ADT_A05.pdf
ADT	A06	Change an outpatient to an inpatient	ENTERPRISE IMAGING INBOUND ADT_A06.pdf
ADT	A07	Change an inpatient to an outpatient	ENTERPRISE IMAGING INBOUND ADT_A07.pdf
ADT	A08	Update patient information	ENTERPRISE IMAGING INBOUND ADT_A08.pdf
ADT	A11	Cancel admit/visit notification	ENTERPRISE IMAGING INBOUND ADT_A11.pdf
ADT	A12	Cancel transfer	ENTERPRISE IMAGING INBOUND ADT_A12.pdf
ADT	A13	Cancel discharge/end visit	ENTERPRISE IMAGING INBOUND ADT_A13.pdf
ADT	A28	Add person information	ENTERPRISE IMAGING INBOUND ADT_A28.pdf
ADT	A31	Update person information	ENTERPRISE IMAGING INBOUND ADT_A31.pdf
ADT	A38	Cancel pre-admit	ENTERPRISE IMAGING INBOUND ADT_A38.pdf
ADT	A40	Merge patient - patient identifier list	ENTERPRISE IMAGING INBOUND ADT_A40.pdf

##### 2.1.1.2.1 Important fields in ADT segments

The ADT segments and associated fields supported by Enterprise Imaging Workflow are described in the conformance profiles documents. The purpose of this chapter is to emphasize the importance of certain fields:

- Enterprise Imaging Workflow expects to receive the Patient ID in PID-3.1 and the assigning Authority in PID-3.4

### 2.1.1.3 Supported MFN Events

For more information about the processed segments and other details, refer to the document specified in the 'Conformance profile document' column.

**Table 2-3 Supported MFN Events**

Func Area	Event Code	MFN Trigger Event Description	Conformance profile document
MFN	M02	Staff/Practitioner master file	ENTERPRISE IMAGING INBOUND MFN_M02.pdf

### 2.1.1.4 Supported ORM Events

For more information about the processed segments and other details, refer to the document specified in the 'Conformance profile document' column.

**Table 2-4 Supported ORM Events**

Func Area	Event Code	ORM Trigger Event Description	Conformance profile document
ORM	O01	Order message	ENTERPRISE IMAGING INBOUND ORM_O01

#### 2.1.1.4.1 Important fields in ORM segments

The ORM segments and associated fields supported by Core Server are described in the conformance profiles documents. The purpose of this chapter is to emphasize the importance of certain fields when Core Server receives an ORM O01 from an external Ordering system:

- Patient ID in PID-3.1 and the Assigning Authority in PID-3.4.
- Ordering department code and name (Matching the pre-defined departments in Core Server Platform) in ORC-17.1 and ORC-17.2.
- Order Filler number in OBR-3.1.
- Exam code and exam name (matching the pre-defined exams in Core Server) in OBR-4.1 and OBR-4.2.
  - If OBR-43 is filled in, Core Server will use it as "performing department". It will use OBR-4.3 otherwise (like in version 8.0.x).
- Accession Number / Requested Procedure ID / Scheduled Procedure Step ID in OBR-18 / OBR-19 / OBR-20.
- If the ORM is related to an exam / acquisition modality for which Core Server is the DICOM Modality Worklist provider, the proper population of the following fields will automatically populate the DMWL for the modality linked to the specified acquisition room without further action of the user:
  - OBR-4.1 & OBR-4.2: Exam code and Exam name.
  - OBR 27.4: SPS start date &time.
  - OBR-34.5: Acquisition Room.

Sample ORM message:

Here is an example of ORM message received by Core Server from an external Order Filler (IHE compliant). This is an order for which Core Server will provide the DICOM Modality Worklist to the modality seating in the **DERMATOROOM1** in the dermatology department (code: **DERMATO**). Exam\_code^exam\_name **11910^Venogram** are defined in Core Server:

```
MSH|^~\&|OM_RAD_OF|IHE|ICIS1DC1Agility1|ICIS1|20140727211205||ORM^O01^ORM_O01|20140727211205|P|2.3.1|||||8859/1

PID|||2214^^^&1.3.6.1.4.1.21367.2015&ISO
^PI||Anseyving^Job^^^^^L|Aliee^^^^^M|20030109072359|M||Vingerling^^Goeree-Overflakkee^^3241EB^NLD

PV1||O|||||Davies^Davies|||||||2215^^^&1.3.6.1.4.1.21367.2015&ISO
|||||V

ORC|NW|445^GAZELLE_OP|139^GAZELLE_OF^1.3.6.1.4.1.12559.11.1.2.2.10.3^ISO|446^GAZELLE_OP|SC|^2014072712000|||6101^DANKE^LOREN^P^^DR||6101^DANKE^LOREN^P^^DR|||D
ERMATO^dermatology^

OBR|1|445^GAZELLE_OP|139^GAZELLE_OF^1.3.6.1.4.1.12559.11.1.2.2.10.3^ISO|11910^Venogram^DERMATO^911910^XRF:Venogram^99IHE|P|||||6101^DANKESCHON^LORENSKE^P^^DR|
|00112|OMRP109|OMSPS109|||RF|||^2014072712000||WALK|||^DERMATOROOM1|||||
||11910^Venogram^IHE99

ZDS|1.3.6.1.4.1.12559.11.1.2.2.10.1.1109^OrderManager^Application^DICOM
```

**2.1.1.5 Supported ORU Events**

For more information about the processed segments and segment mappings, refer to the document specified in the 'Conformance profile document' column.

**Table 2-5 Supported ORU Events**

Func Area	Event Code	ORU Trigger Event Description	Conformance profile document
ORU	R01	Unsolicited transmission of an observation Message	AGILITY (R)IS INBOUND ORU_R01.pdf
ORU	R01	Unsolicited transmission of an observation Message	AGILITY (R)IS INBOUND ORU_R01_HEARTSTATION.pdf



## 3 OUTBOUND MESSAGES

### 3.1 Core Server

#### 3.1.1 Supported Trigger Events

##### 3.1.1.1 Supported DFT Events

For more information about the processed segments and segment mappings, refer to the document specified in the 'Conformance profile document' column.

**Table 3-1 Supported DFT Events**

Func Area	Event Code	DFT Trigger Event Description	Conformance profile document
DFT	P03	Order message	ENTERPRISE IMAGING OUTBOUND DFT_P03.pdf

##### 3.1.1.2 Supported ORM Events

For more information about the processed segments and segment mappings, refer to the document specified in the 'Conformance profile document' column.

**Table 3-2 Supported ORM Events**

Func Area	Event Code	ORM Trigger Event Description	Conformance profile document
ORM	O01	Order message	ENTERPRISE IMAGING OUTBOUND ORM_O01.pdf

##### 3.1.1.3 Supported ORU Events

For more information about the processed segments and segment mappings, refer to the document specified in the 'Conformance profile document' column.

**Table 3-3 Supported ORU Events**

Func Area	Event Code	ORU Trigger Event Description	Conformance profile document
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII ENCAPSULATED DATA {ORC-OBR}-OBX.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII ENCAPSULATED DATA {[ORC]-OBR-OBX}.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII ENCAPSULATED DATA-ORU_R01.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII LINE BY LINE {ORC-OBR}-OBX.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII LINE BY LINE {[ORC]-OBR-OBX}.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII LINE BY LINE.pdf
ORU	R01	Unsolicited transmission of an observation Message	OUTBOUND ORU_R01 - ASCII NARRATIVE REPORTING {[ORC]-OBR-OBX}.pdf

Func Area	Event Code	ORU Trigger Event Description	Conformance profile document
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII NARRATIVE REPORTING {ORC-OBR}-OBX.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII NARRATIVE REPORTING.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - Base64 ENCAPSULATED DATA PDF {ORC-OBR}-OBX.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - Base64 ENCAPSULATED DATA PDF {[ORC]-OBR}-OBX}.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - Base64 ENCAPSULATED DATA PDF.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - FORMATTED TEXT {[ORC]-OBR}-OBX}.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - FORMATTED TEXT {ORC-OBR}-OBX.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - FORMATTED TEXT.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - REFERENCE POINTER {ORC-OBR}-OBX.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - REFERENCE POINTER {[ORC]-OBR}-OBX}.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - REFERENCE POINTER.pdf

## 4 QUERIES

### 4.1 Web Server

#### 4.1.1 Query

Web Server translates user based patient-level queries into HL7 PDQ messages.

Web Server uses the HL7 PIX services to combine patients together as well as to allow querying for longitudinal records against external non-HL7 systems which require specific patient identities.

Web Server can use v2.1 through 2.6 queries, but defaults to v2.5 and will accept the related responses, as well as v3 SOAP based queries.

#### 4.1.2 Supported Query events

For more information about the processed segments and segment mappings, refer to the document specified in the Conformance profile document column.

**Table 4 Supported Query Events**

Func Area	Event Code	QRY Trigger Event	Conformance profile document <sup>1</sup>
QBP	Q23	Query for associated patient identities	<a href="#">XERO PIX Query</a> <a href="#">XERO PIX Query Response</a>
QBP	Q22	Query for patient demographics	<a href="#">XERO PDQ Query</a> <a href="#">XERO PDQ Query Response</a>

<sup>1</sup> These documents are included in the zip file "[001534 Enterprise Imaging 8.1 HL7 conformance profiles](#)", also available on <http://www.agfahealthcare.com/hl7>.