

HL7 Conformance Statement

Product **Image-Arena 4.3**
Product No.: **T.08.0122**
Effective Date: 2010-09-28
Originator: Benjamin Wagner
Document 05
rev.:

Table of contents

| | | |
|---|--------------------------|----|
| 1 | GENERAL INFORMATION..... | 3 |
| 2 | INCOMING MESSAGES | 5 |
| 3 | OUTGOING MESSAGES | 12 |
| 4 | ACKNOWLEDGEMENTS | 12 |
| 5 | SAMPLE MESSAGES..... | 12 |

1 General information

1.1 Revision history

| REV | Date (YYYY-MM-DD) | Author | Reason | Changes |
|-----|----------------------|---------------|-----------------------------|--|
| INI | 2008-08-01 | HKra | Initial | Initial |
| 02 | 2009-01-22 | RSle | New Feature | New: Send Images via HL7 (OnKeyNote / link to JPG/...) |
| 03 | 2009-11-16 | RSle | New Feature | Receive HL7 Message (Patient Update / Patient Merge) Change of Semantic file structure |
| 04 | 2010-04-19 | BWag | Complete change of document | Complete change of document |
| 05 | 2010-09-28 | BWag/ DPan | Update of ACK section | More detailed description added |

Table 1: Revision history

1.2 Abbreviations

| | |
|-------|---|
| ADT | Admission, Discharge, and Transfer message |
| EVN | Event Type segment |
| HL7 | Health Level 7 |
| IHE | Integrating the Healthcare Enterprise |
| DICOM | Digital Imaging and Communication in Medicine |
| MRG | Merge Patient Information segment |
| MSH | Message Header segment |
| OBR | Observation Request segment |
| OBX | Observation Result segment |
| ORC | Common Order segment |
| ORM | Order Request message |
| ORU | Observation Results - Unsolicited message |
| PID | Patient ID segment |
| PV1 | Patient Visit segment |
| MDM | Medical document management |

1.3 Related documents

HL7 standard v 2.3.x

1.4 Purpose and intended audience

This document is an HL7 conformance statement for HL7 services associated with Image-Arena 4.3.

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 HL7 2.3.x 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 Image-Arena 4.3, it is not sufficient to guarantee, by itself the inter-operation of the connection between Image-Arena 4.3 and the 3rd party HL7-based system.

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 TomTec equipment with other vendors' systems is the user's responsibility.

2 INCOMING MESSAGES

2.1 Supported trigger events

2.1.1 ADT messages

2.1.1.1 Message overview

| Event code | Description | Inbound supported |
|------------|---|-------------------|
| A01 | Admit a patient | * |
| A08 | Update patient information (patient's visit data) | √ |
| A11 | Cancel admit | √ |
| A28 | Add person information | * |
| A29 | Delete person information | ** |
| A31 | Update person data | √ |
| A34 | Merge person data | √ |
| A45 | Move visit information – visit number | √ |

Table 2: Supported ADT events

*) Content of message types can be processed, but messages are ignored by default. Intended use of messages can be triggered by ORM messages (e.g. ORM^O01 – with control code (ORC.1) NW creates a patient/study in Image-Arena 4.3)

**) Person is only deleted if no DICOM objects belong to the patient. As soon as DICOM objects belong to the patient, the patient/study has to be deleted manually

2.1.1.2 ADT segments processed

The following segments are processed when Image-Arena 4.3 receives an ADT message:

- **MSH**
- [EVN]
- **PID**
- **PV1**
- **MRG**

2.1.2 ORM messages

2.1.2.1 Overview

| Event code | Description | Inbound supported |
|------------|-----------------------|-------------------|
| O01 | General order message | √ |

Table 3: Supported ORM events

2.1.2.2 Supported control codes

| Control code | Description | Inbound supported |
|--------------|--------------|-------------------|
| NW | New order | √ |
| XO | Change order | * |
| OC | Order cancel | √ |

Table 4: Supported order control codes from ORC.1

*) The support can be changed by configuration.

2.1.2.3 ORM segments processed

The following segments are processed when Image-Arena 4.3 receives an ORM message:

- MSH
- PID
- PV1
- ORC
- [OBR]

2.2 Supported HL7 attributes

2.2.1 MSH

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|----------------------------------|--------------------------|---------------------------|----------|
| 1 | Field Separator | YES | YES | |
| 2 | Encoding Characters | YES | YES | ^~\& |
| 3 | Sending Application | YES | YES | |
| 4 | Sending Facility | N | N | |
| 5 | Receiving Application | N | N | |
| 6 | Receiving Facility | N | N | |
| 7 | Date/time of Message | N | YES | |
| 8 | Security | N | N | |
| 9 | Message Type | YES | YES | |
| 10 | Message Control ID | YES | YES | |
| 11 | Processing ID | YES | YES | |
| 12 | Version ID | YES | YES | |
| 13 | Sequence Number | N | N | |
| 14 | Continuation Pointer | N | N | |
| 15 | Accept Acknowledgement Type | N | N | |
| 16 | Application Acknowledgement Type | N | N | |
| 17 | Country Code | N | N | |
| 18 | Character Set | N | N | |
| 19 | Principal Language of Message | N | N | |

Table 5: MSH attribute support in Image-Arena 4.3

2.2.2 PID

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|-----------------------------------|--------------------------|---------------------------|----------|
| 1 | Set ID - PID | N | N | |
| 2 | Patient ID (external) | N | N | |
| 3 | Patient ID (internal) | YES | YES | |
| 4 | Alternate Patient ID - PID | N | N | |
| 5 | Patient Name | N | YES | |
| 6 | Mother's Maiden Name | N | N | |
| 7 | Date/Time of Birth | N | YES | |
| 8 | Sex | N | YES | |
| 9 | Patient Alias | N | N | |
| 10 | Race | N | N | |
| 11 | Patient Address | N | N | |
| 12 | County Code | N | N | |
| 13 | Phone Number - Home | N | N | |
| 14 | Phone Number - Business | N | N | |
| 15 | Primary Language | N | N | |
| 16 | Marital Status | N | N | |
| 17 | Religion | N | N | |
| 18 | Patient Account Number | N | N | |
| 19 | SSN Number - Patient | N | N | |
| 20 | Driver's License Number - Patient | N | N | |
| 21 | Mother's Identifier | N | N | |
| 22 | Ethnic Group | N | N | |
| 23 | Birth Place | N | N | |
| 24 | Multiple Birth Indicator | N | N | |
| 25 | Birth Order | N | N | |
| 26 | Citizenship | N | N | |
| 27 | Veterans Military Status | N | N | |
| 28 | Nationality | N | N | |
| 29 | Patient Death Date and Time | N | N | |
| 30 | Patient Death Indicator | N | N | |

Table 6: PID attribute support in Image-Arena 4.3

2.2.3 PV1

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|---------------------------|--------------------------|---------------------------|----------|
| 1 | Set ID - PV1 | N | N | |
| 2 | Patient Class | N | N | |
| 3 | Assigned Patient Location | N | N | |
| 4 | Admission Type | N | N | |
| 5 | Pre-admit Number | N | N | |
| 6 | Prior Patient Location | N | N | |
| 7 | Attending Doctor | N | N | |
| 8 | Referring Doctor | N | N | |
| 9 | Consulting Doctor | N | N | |
| 10 | Hospital Service | N | N | |
| 11 | Temporary Location | N | N | |
| 12 | Pre-admit Test Indicator | N | N | |
| 13 | Re-admission Indicator | N | N | |
| 14 | Admit Source | N | N | |
| 15 | Ambulatory Status | N | N | |
| 16 | VIP Indicator | N | N | |
| 17 | Admitting Doctor | N | N | |
| 18 | Patient Type | N | N | |
| 19 | Visit Number | YES | YES | |
| 20 | Financial Class | N | N | |
| 21 | Charge Price Indicator | N | N | |
| 22 | Courtesy Code | N | N | |
| 23 | Credit Rating | N | N | |
| 24 | Contract Code | N | N | |
| 25 | Contract Effective Date | N | N | |
| 26 | Contract Amount | N | N | |
| 27 | Contract Period | N | N | |
| 28 | Interest Code | N | N | |
| 29 | Transfer to Bad Debt Code | N | N | |
| 30 | Transfer to Bad Debt Date | N | N | |
| 31 | Bad Debt Agency Code | N | N | |
| 32 | Bad Debt Transfer Amount | N | N | |
| 33 | Bad Debt Recovery Amount | N | N | |
| 34 | Delete Account Indicator | N | N | |
| 35 | Delete Account Date | N | N | |
| 36 | Discharge Disposition | N | N | |
| 37 | Discharged to Location | N | N | |
| 38 | Diet Type | N | N | |
| 39 | Servicing Facility | N | N | |
| 40 | Bed Status | N | N | |
| 41 | Account Status | N | N | |
| 42 | Pending Location | N | N | |
| 43 | Prior Temporary Location | N | N | |
| 44 | Admit Date/Time | N | N | |
| 45 | Discharge Date/Time | N | N | |

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|---------------------------|--------------------------|---------------------------|----------|
| 46 | Current Patient Balance | N | N | |
| 47 | Total Charges | N | N | |
| 48 | Total Adjustments | N | N | |
| 49 | Total Payments | N | N | |
| 50 | Alternate Visit ID | N | N | |
| 51 | Visit Indicator | N | N | |
| 52 | Other Healthcare Provider | N | N | |

Table 7: PV1 attribute support in Image-Arena 4.3

2.2.4 MRG

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|-----------------------------------|--------------------------|---------------------------|----------|
| 1 | Prior Patient Identifier internal | YES | YES | |
| 2 | Prior Alternate Patient ID | N | N | |
| 3 | Prior Patient Account Number | N | N | |
| 4 | Prior Patient ID | N | N | |
| 5 | Prior Visit Number | N | N | |
| 6 | Prior Alternate Visit ID | N | N | |
| 7 | Prior Patient Name | N | N | |

Table 8: MRG attribute support in Image-Arena 4.3

2.2.5 ORC

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|---------------------------|--------------------------|---------------------------|----------|
| 1 | Order Control | YES | YES | |
| 2 | Placer Order Number | YES | YES | |
| 3 | Filler Order Number | YES | YES | |
| 4 | Placer Group Number | N | N | |
| 5 | Order Status | N | N | |
| 6 | Response Flag | N | N | |
| 7 | Quantity/Timing | N | N | |
| 8 | Parent | N | N | |
| 9 | Date/Time of Transaction | N | N | |
| 10 | Entered By | N | N | |
| 11 | Verified By | N | N | |
| 12 | Ordering Provider | N | N | |
| 13 | Enterer's Location | N | N | |
| 14 | Call Back Phone Number | N | N | |
| 15 | Order Effective Date/Time | N | N | |
| 16 | Order Control Code Reason | N | N | |
| 17 | Entering Organization | N | N | |
| 18 | Entering Device | N | N | |
| 19 | Action By | N | N | |

Table 9: ORC attribute support in Image-Arena 4.3

2.2.6 OBR

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|---|--------------------------|---------------------------|-----------------------------|
| 1 | Set ID - OBR | N | N | |
| 2 | Placer Order Number | YES | YES | Required if ORC.2 is absent |
| 3 | Filler Order Number | YES | YES | Required if ORC.3 is absent |
| 4 | Universal Service ID | N | N | |
| 5 | Priority | N | N | |
| 6 | Requested Date/time | N | N | |
| 7 | Observation Date/Time # | N | N | |
| 8 | Observation End Date/Time # | N | N | |
| 9 | Collection Volume | N | N | |
| 10 | Collector Identifier | N | N | |
| 11 | Specimen Action Code | N | N | |
| 12 | Danger Code | N | N | |
| 13 | Relevant Clinical Info. | N | N | |
| 14 | Specimen Received Date/Time | N | N | |
| 15 | Specimen Source | N | N | |
| 16 | Ordering Provider | N | N | |
| 17 | Order Callback Phone Number | N | N | |
| 18 | Placer Field 1 | N | N | |
| 19 | Placer Field 2 | N | N | |
| 20 | Filler Field 1 | N | N | |
| 21 | Filler Field 2 | N | N | |
| 22 | Results Rpt/Status Chng - Date/Time | N | N | |
| 23 | Charge to Practice | N | N | |
| 24 | Diagnostic Serv Sect ID | N | N | |
| 25 | Result Status | N | N | |
| 26 | Parent Result | N | N | |
| 27 | Quantity/Timing | N | N | |
| 28 | Result Copies To | N | N | |
| 29 | Parent | N | N | |
| 30 | Transportation Mode | N | N | |
| 31 | Reason for Study | N | N | |
| 32 | Principal Result Interpreter | N | N | |
| 33 | Assistant Result Interpreter | N | N | |
| 34 | Technician | N | N | |
| 35 | Transcriptionist | N | N | |
| 36 | Scheduled Date/Time | N | N | |
| 37 | Number of Sample Containers | N | N | |
| 38 | Transport Logistics of Collected Sample | N | N | |
| 39 | Collector's Comment | N | N | |
| 40 | Transport Arrangement Responsibility | N | N | |
| 41 | Transport Arranged | N | N | |
| 42 | Escort Required | N | N | |
| 43 | Planned Patient Transport Comment | N | N | |

Table 10: OBR attribute support in Image-Arena 4.3

3 OUTGOING MESSAGES

3.1 IA internal trigger events

- OnNewStudy – activated whenever a study is added to the Image-Arena 4.3 data base
- OnComplete – activated whenever the study state changes to “completed”
- OnFinalize – activated whenever the study state changes to “finalized”
- OnDelete – activated whenever a study is deleted

Further events can be implemented by configuration (e.g. OnMeasureComplete) but have to be clarified beforehand.

3.2 Supported message types

3.2.1 ORU

3.2.1.1 Message overview

| Event code | Description | Outbound supported |
|------------|----------------------------------|--------------------|
| R01 | Observation result - unsolicited | √ |

Table 11: Supported ORU events

3.2.1.2 ORU Segments

The following segments are processed when Image-Arena 4.3 receives an ORU message:

- MSH
- PID
- PV1
- OBR
- OBX

3.2.2 MDM

3.2.2.1 Message overview

| Event code | Description | Outbound supported |
|------------|--|--------------------|
| T01 | Medical document management - original document notification | √ |

Table 12: Supported MDM events

3.2.2.2 MDM Segments

The following segments are processed when Image-Arena 4.3 receives an MDM message:

- MSH
- PID
- PV1
- TXA

3.3 Supported HL7 attributes

3.3.1 MSH

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|----------------------------------|-----------------------|------------------------|----------|
| 1 | Field Separator | YES | YES | |
| 2 | Encoding Characters | YES | YES | ^~\& |
| 3 | Sending Application | YES | YES | |
| 4 | Sending Facility | N | N | |
| 5 | Receiving Application | N | N | |
| 6 | Receiving Facility | N | N | |
| 7 | Date/time of Message | N | YES | |
| 8 | Security | N | N | |
| 9 | Message Type | YES | YES | |
| 10 | Message Control ID | YES | YES | |
| 11 | Processing ID | YES | YES | |
| 12 | Version ID | YES | YES | |
| 13 | Sequence Number | N | N | |
| 14 | Continuation Pointer | N | N | |
| 15 | Accept Acknowledgement Type | N | N | |
| 16 | Application Acknowledgement Type | N | N | |
| 17 | Country Code | N | N | |
| 18 | Character Set | N | N | |
| 19 | Principal Language of Message | N | N | |

Table 13: Outgoing MSH attribute support in Image-Arena 4.3

3.3.2 PID

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|-----------------------------------|--------------------------|---------------------------|----------|
| 1 | Set ID - PID | N | N | |
| 2 | Patient ID (external) | N | N | |
| 3 | Patient ID (internal) | YES | YES | |
| 4 | Alternate Patient ID - PID | N | N | |
| 5 | Patient Name | YES | YES | |
| 6 | Mother's Maiden Name | N | N | |
| 7 | Date/Time of Birth | N | YES | |
| 8 | Sex | N | YES | |
| 9 | Patient Alias | N | N | |
| 10 | Race | N | N | |
| 11 | Patient Address | N | N | |
| 12 | County Code | N | N | |
| 13 | Phone Number - Home | N | N | |
| 14 | Phone Number - Business | N | N | |
| 15 | Primary Language | N | N | |
| 16 | Marital Status | N | N | |
| 17 | Religion | N | N | |
| 18 | Patient Account Number | N | N | |
| 19 | SSN Number - Patient | N | N | |
| 20 | Driver's License Number - Patient | N | N | |
| 21 | Mother's Identifier | N | N | |
| 22 | Ethnic Group | N | N | |
| 23 | Birth Place | N | N | |
| 24 | Multiple Birth Indicator | N | N | |
| 25 | Birth Order | N | N | |
| 26 | Citizenship | N | N | |
| 27 | Veterans Military Status | N | N | |
| 28 | Nationality | N | N | |
| 29 | Patient Death Date and Time | N | N | |
| 30 | Patient Death Indicator | N | N | |

Table 14: Outgoing PID attribute support in Image-Arena 4.3

3.3.3 PV1

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|---------------------------|--------------------------|---------------------------|----------|
| 1 | Set ID - PV1 | N | N | |
| 2 | Patient Class | N | N | |
| 3 | Assigned Patient Location | N | N | |
| 4 | Admission Type | N | N | |
| 5 | Preadmit Number | N | N | |
| 6 | Prior Patient Location | N | N | |
| 7 | Attending Doctor | N | N | |
| 8 | Referring Doctor | N | N | |
| 9 | Consulting Doctor | N | N | |
| 10 | Hospital Service | N | N | |
| 11 | Temporary Location | N | N | |
| 12 | Preadmit Test Indicator | N | N | |
| 13 | Re-admission Indicator | N | N | |
| 14 | Admit Source | N | N | |
| 15 | Ambulatory Status | N | N | |
| 16 | VIP Indicator | N | N | |
| 17 | Admitting Doctor | N | N | |
| 18 | Patient Type | N | N | |
| 19 | Visit Number | YES | YES | |
| 20 | Financial Class | N | N | |
| 21 | Charge Price Indicator | N | N | |
| 22 | Courtesy Code | N | N | |
| 23 | Credit Rating | N | N | |
| 24 | Contract Code | N | N | |
| 25 | Contract Effective Date | N | N | |
| 26 | Contract Amount | N | N | |
| 27 | Contract Period | N | N | |
| 28 | Interest Code | N | N | |
| 29 | Transfer to Bad Debt Code | N | N | |
| 30 | Transfer to Bad Debt Date | N | N | |
| 31 | Bad Debt Agency Code | N | N | |
| 32 | Bad Debt Transfer Amount | N | N | |
| 33 | Bad Debt Recovery Amount | N | N | |
| 34 | Delete Account Indicator | N | N | |
| 35 | Delete Account Date | N | N | |
| 36 | Discharge Disposition | N | N | |
| 37 | Discharged to Location | N | N | |
| 38 | Diet Type | N | N | |
| 39 | Servicing Facility | N | N | |
| 40 | Bed Status | N | N | |
| 41 | Account Status | N | N | |
| 42 | Pending Location | N | N | |
| 43 | Prior Temporary Location | N | N | |
| 44 | Admit Date/Time | N | N | |
| 45 | Discharge Date/Time | N | N | |

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|---------------------------|--------------------------|---------------------------|----------|
| 46 | Current Patient Balance | N | N | |
| 47 | Total Charges | N | N | |
| 48 | Total Adjustments | N | N | |
| 49 | Total Payments | N | N | |
| 50 | Alternate Visit ID | N | N | |
| 51 | Visit Indicator | N | N | |
| 52 | Other Healthcare Provider | N | N | |

Table 15: Outgoing PV1 attribute support in Image-Arena 4.3

3.3.4 OBR

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|---|--------------------------|---------------------------|----------|
| 1 | Set ID - OBR | N | N | |
| 2 | Placer Order Number | YES | YES | |
| 3 | Filler Order Number | YES | YES | |
| 4 | Universal Service ID | N | N | |
| 5 | Priority | N | N | |
| 6 | Requested Date/time | N | N | |
| 7 | Observation Date/Time # | N | N | |
| 8 | Observation End Date/Time # | N | N | |
| 9 | Collection Volume | N | N | |
| 10 | Collector Identifier | N | N | |
| 11 | Specimen Action Code | N | N | |
| 12 | Danger Code | N | N | |
| 13 | Relevant Clinical Info. | N | N | |
| 14 | Specimen Received Date/Time | N | N | |
| 15 | Specimen Source | N | N | |
| 16 | Ordering Provider | N | YES | |
| 17 | Order Callback Phone Number | N | N | |
| 18 | Placer Field 1 | N | N | |
| 19 | Placer Field 2 | N | N | |
| 20 | Filler Field 1 | N | N | |
| 21 | Filler Field 2 | N | N | |
| 22 | Results Rpt/Status Chng - Date/Time | N | YES | |
| 23 | Charge to Practice | N | N | |
| 24 | Diagnostic Serv Sect ID | N | N | |
| 25 | Result Status | N | YES | |
| 26 | Parent Result | N | N | |
| 27 | Quantity/Timing | N | N | |
| 28 | Result Copies To | N | N | |
| 29 | Parent | N | N | |
| 30 | Transportation Mode | N | N | |
| 31 | Reason for Study | N | N | |
| 32 | Principal Result Interpreter | N | N | |
| 33 | Assistant Result Interpreter | N | N | |
| 34 | Technician | N | N | |
| 35 | Transcriptionist | N | N | |
| 36 | Scheduled Date/Time | N | N | |
| 37 | Number of Sample Containers | N | N | |
| 38 | Transport Logistics of Collected Sample | N | N | |
| 39 | Collector's Comment | N | N | |
| 40 | Transport Arrangement Responsibility | N | N | |
| 41 | Transport Arranged | N | N | |
| 42 | Escort Required | N | N | |
| 43 | Planned Patient Transport Comment | N | N | |

Table 16: Outgoing OBR attribute support in Image-Arena 4.3

3.3.5 OBX

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|------------------------------|--------------------------|---------------------------|----------|
| 1 | Set ID - OBX | N | N | |
| 2 | Value Type | YES | YES | |
| 3 | Observation Identifier | YES | YES | |
| 4 | Observation Sub-Id | N | N | |
| 5 | Observation Value | N | YES | |
| 6 | Units | N | N | |
| 7 | Reference Range | N | N | |
| 8 | Abnormal Flags | N | N | |
| 9 | Probability | N | N | |
| 10 | Nature of Abnormal Test | N | N | |
| 11 | Observ Result Status | N | YES | |
| 12 | Data Last Obs Normal Values | N | N | |
| 13 | User Defined Access Checks | N | N | |
| 14 | Date/Time of the Observation | N | N | |
| 15 | Producer's Id | N | N | |
| 16 | Responsible Observer | N | N | |
| 17 | Observation Method | N | YES | |

Table 17: Outgoing OBX attribute support in Image-Arena 4.3

3.3.6 TXA

| SEQ | ELEMENT NAME | Value required YES/NO | Default mapping YES/NO | Comments |
|-----|--|--------------------------|---------------------------|----------|
| 1 | Set ID - Document | YES | YES | |
| 2 | Document Type | YES | YES | |
| 3 | Document Content Presentation | N | N | |
| 4 | Activity Date/Time | N | N | |
| 5 | Primary Activity Provider Code/Name | N | N | |
| 6 | Origination Date/Time | N | N | |
| 7 | Transcription Date/Time | N | N | |
| 8 | Edit Date/Time | N | YES | |
| 9 | Originator Code/Name | N | N | |
| 10 | Assigned Document Authenticator | N | N | |
| 11 | Transcriptionist Code/Name | N | N | |
| 12 | Unique Document Number | N | N | |
| 13 | Parent Document Number | N | N | |
| 14 | Placer Order Number | N | N | |
| 15 | Filler Order Number | N | N | |
| 16 | Unique Document File Name | YES | YES | |
| 17 | Document Completion Status | N | N | |
| 18 | Document Confidentiality Status | N | N | |
| 19 | Document Availability Status | N | N | |
| 20 | Document Storage Status | N | N | |
| 21 | Document Change Reason | N | N | |
| 22 | Authentication Person, Time Stamp | N | N | |
| 23 | Distributed Copies (Code and Name of Recipients) | N | N | |

Table 18: Outgoing TXA attribute support in Image-Arena 4.3

3.4 Further Image-Arena 4.3 attributes

- Encapsulated PDF
- Link to PDF
- Link to JPG
- Measurements

4 Acknowledgements

HL7 ACK messages are used to ensure that HL7 messages are properly transferred between the systems. Depending on inbound- respectively outbound messages Image-Arena handles the ACK messages in a different way.

4.1 Incoming ACK messages

Image-Arena is able to handle the received ACK messages in different way depending on configuration:

- System doesn't support any ACK → NO_ACK_EXPECTED by Image-Arena
- System is sending an ACK, which is useless for Image Arena → IGNORE_ACK_CONTENT
- System is sending an ACK with configured values → handling can be configured in the corresponding semantic file: segments ACK_MSH and ACK_MSA → ACK_MSH, ACK_MSA

4.2 Outgoing ACK messages

Once an HL7 message is received, Image-Arena returns dedicated ACK messages. There are different types of outgoing ACK messages:

- AA: HL7 message is accepted (Accept)
- AE: Receiving error or wrong classification of the HL7 message (Error)
- AE: No license available for sending a HL7 message (NoLicense)
- AE: HL7 message is ignored (IgnoreMessage)

The required configuration can be done in the appropriate Semantic-file section:

[ACK_Files]

IgnoreMessage=HL7AckAccept.ini

NoLicense=HL7AckError.ini

Error=HL7AckError.ini

Accept=HL7AckAccept.ini

5 Sample messages

5.1 INCOMING

5.1.1 ORM^O01 – order control NW

MSH|^~\&|KIS|KIS|IMAGING|KIS|20091217140211||ORM^O01|MSGACCNO09000004|P|2.3
 PID|||123456|130197|TESTNACHNAME^VORNAME^|19630830|M||Strasse^Köln^50999^D |||||
 PV1|||ST1^^^|M^^^^931020|||KIS^BEHANDELNDER^ARZT^|N|||||130197|K|||||200904070800
 00||||ACCNO-09-00046
 AL1|||"
 ORC|NW|385361|ACCNO-09-
 00046^^1.2.276.0.48.10002.251877312678.20080526120123483000||||20091217140211|KIS^BEHANDELN
 DER^ARZT^|KIS^BEHANDELNDER^ARZT^|1.2.40.0.13.0.11.4444.5.0900046.000330.2009121714021
 1^1.2.40.0.13.0.11.4444.5.0900046.000330.20091217140211||
 OBR||385361|ACCNO-09-
 00046^^1.2.276.0.48.10002.251877312678.20080526120123483000|FSOECHO^Echokardiographie,
 transthorakal^Echo2D^ECHOKARDIOGRAPHIE^US|||||KIS^BEHANDELNDER^ARZT^|2009121714
 0211|US|||||20091218|||||Echokardiographie 2D

5.1.2 ADT^A11

MSH|^~\&|KIS|KIS|IMAGING|PACS|200903191039||ADT^A11|814474|P|2.3||||D||DE
 EVN|A11|200903191047|200903191047||GRAU||
 PID|||123456|130198|TESTNACHNAME^VORNAME^|19630830|M||Strasse^Köln^50999^D |||||
 PV1|||ST1^^^|M^^^^931020|||KIS^BEHANDELNDER^ARZT^|N|||||130198|K|||||200904070800
 00||||ACCNO-09-00047
 PV2|1||01^KH-Behandlung,vollstat.^301|||||N|||||N|
 ZBE|950996^KIS|200903200000||DELETE|

5.1.3 ADT^A31

MSH|^~\&|KIS||RECAPP|KIS|200903181633||ADT^A31|812700|P|2.3||||D||DE
 EVN|A31|200903181641|200903181641||FIRE||
 PID|1|123456|123456||NACH-A31^NEU^^^|19991219|M||Strasse.8^Kiel^24103^D |||||||N||D |

5.1.4 ADT^A34

MSH|^~\&|KIS||RECAPP|KIS|200903181518||ADT^A34|812487|P|2.3||||D||DE
 EVN|A34|200903181526|200903181526||KIS||
 PID|1|222222|222222||Patientenmerge^B^^^^|F||^D |||||||N||D |
 MRG|123456|

5.1.5 ADT^A45

MSH|^~\&|KIS||RECAPP|KIS|200903181602||ADT^A45|812621|P|2.3||||D||DE
EVN|A45|200903181610|200903181610||KIS||
PID|1|666666|666666||HL7^TESTBERT^^^^||M||^D |||||||N||D |
MRG|123456|
PV1|||ST1^^^|M^^^931020|||KIS^BEHANDELNDER^ARZT^^||N|||||333333|K|||||||200904070800
00|||||ACCNO-09-1111

5.2 OUTGOING

5.2.1 MDM^T01

MSH|^~\&|TOMTEC|IMAGEARENA||200903180913||MDM^T01|TT-10000-PR|D|2.3.1||||DE|8859/1|GER||
PID||000018||SURNAME^FIRSTNAME^||19000101|M|||||||
PV1|||||121314|||||
TXA||Additional-PDF|||||200903180913|||||1.2.276.0.48.10000.808619208.20090318091341824000.pdf|||||