

**DataBridge HL7 Specification**

**Components Designed to Facilitate the Integration**

**of VistA to Clinical Information Systems**

**November, 2008**

**Version 1.0**

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# Introduction:

DataBridge is an interface that filters information from ***VistA/CPRS*** to a commercial Vitals/ICU/Anesthesia record keeping (VIARK) system successfully integrating the two systems together using various communication technologies. This HL7 Specification is only one of the communication modalities employed by DataBridge. VHA has a need for an electronic solution to share information between VistA and commercial Clinical Information Systems (CIS) used in the Operating Room (OR), Intensive Care Units (ICU), and various vitals intake systems that might be attached to either specialty system thereof.

## Communication—

DataBridge utilizes TCP/IP sockets to send and receive version 1.6 HL7 messages. A static outgoing port must be established between the VA site and the Vendor partner. The port ranges available for each facility may vary. All incoming traffic will utilize the VA listener on Port 5000.

## Display format of specifications—

This DataBridge document displays the message types and field specifications in a table format. The Veterans Administration has a software tool—Message Work Bench which can display the sample messages contained in this document in a derived specification format document. Each sample message in MWB format is a 30-40 page document. These MWB documents are available upon request from DSS, Inc.

## VA Event Drivers

Each of the below listed VA Server protocols are subscribed to with a DSIH DataBridge router protocol. The DSIH router protocol contains a field called ‘Routing Logic’ which defines an ‘M’ routine that is used to standardize the existing Vista message to the standard format utilized with DataBridge. Specific client and server protocols in the DSIH DataBridge namespace re-serve the modified message to an appropriate DSIH logical link

### ADT Event drivers

VAFC ADT-A01 SERVER Admission message

VAFC ADT-A02 SERVER Inter-ward Transfer message

VAFC ADT-A03 SERVER Discharge message

VAFC ADT-A04 SERVER This protocol fires off of the PIMS Registration option

VAFC ADT-A08 SERVER Registration's ADT-A08 Server Protocol

VAFC ADT-A08-SCHED SERVER Provides A08 updates from daily appointment list.

VAFC ADT-A08-SDAM SERVER Provides A08 updates from scheduling event driver

VAFC ADT-A08-TSP SERVER Provides A08 updates from PIMS patient movement events

VAFC ADT-A11 SERVER Cancel Admission message

VAFC ADT-A12 SERVER Cancel Transfer message

VAFC ADT-A13 SERVER Cancel discharge message

### SIU Event Drivers

SR Notification of Appointment Booking Notification of New Surgery Appointment Booking

SR Notification of Appointment Rescheduling Notification of Surgery Appointment Rescheduling

SR Notification of Appointment Modification Notification of Surgery Appointment Modification

SR Notification of Appointment Cancellation Notification of Surgery Appointment Cancellation

### Lab ORU Event Driver

LA7 LAB RESULTS AVAILABLE (EVN) Lab Results Available Event

This lab event driver is part of Vista Patch LA\*5.2\*68 which is as of April 2008 not released. In order to produce the Lab result messages displayed in the example, the VA site must request ‘Late Beta’ test status for this patch. Laboratory messages may be turned off with the DSIH package parameters if the site cannot get the patch, or the site does not want to transmit Lab messages.

### Surgical ORU Event Driver

SR Unsolicited transmission of VistA Requested Observation

Pharmacy order messages

Pharmacy order messages are obtained via the internal CPRS-Pharmacy interface:

PS EVSEND OR—Extended action protocol with the Item-- DSIH DATABRIDGE PS ROUTER to capture the order messages.

Lab order messages

Lab order messages are obtained via the internal CPRS-Lab interface:

OR EVSEND LRCH—Extended action protocol with the Item-- DSIH DATABRIDGE LAB ORDER ROUTER to capture the order messages.

Radiology order messages

Radiology order messages are obtained via the internal CPRS-Radiology interface:

OR EVSEND RA—Extended action protocol with the Item-- DSIH DATABRIDGE RAD ORDER ROUTER to capture the order messages.

Nursing order messages

Nursing order messages are obtained via the internal CPRS-Nursing interface:

OR EVSEND ORG—Extended action protocol with the Item-- DSIH DATABRIDGE NURSE ORDER ROUTER to capture the order messages.

Diet order messages

Diet order messages are obtained via the internal CPRS-DIET interface:

OR EVSEND FH—Extended action protocol with the Item-- DSIH DATABRIDGE FH ORDER ROUTER to capture the order messages.

### Appointment SIU message Driver

The appointment SIU message driver for Data Bridge is the DSIH DATABRIDGE APT SIU EVENT DRIVER protocol added as a subscriber to the SDAM APPOINTMENT EVENTS protocol which is the Appointment Event Driver. All scheduling events occur using this SDAM protocol.

### Radiology Event Driver

RA RPT 2.3 Rad/nuc Med report released/verified

This radiology event driver creates a new message with each released/verified result.

### Vitals Signs Query messages

The Vital sign query is an incoming message that requests from VistA a complete set of Vitals. These vitals are returned in the message Ack.Message Types:

Each message type will be displayed with its expected segments. The segments will be displayed with each field descriptions.

## SIU Message Segments

|  |  |
| --- | --- |
| MSH—Message Header |  |
| SCH—Schedule Activity Information |  |
| PID—Patient Identification |  |
| OBX-- Observation/Result segment |  |
| DG1—Diagnosis |  |
| RGS—Resource Group |  |
| AIS—Appointment Information—General |  |
| AIG—Resource Information |  |
| AIL—Appointment Information—Location |  |
| AIP—Appointment Information--Personnel |  |

## ADT Message Segments:

|  |  |
| --- | --- |
| MSH—Message Header |  |
| EVN—Message Event |  |
| PID—Patient Identification |  |
| PD1—Patient Additional Demographics |  |
| PV1—Patient Visit |  |
| AL1--Allergies | Not in A02 and A03 |
| DG1--Diagnosis | Not in A02 |

## Diet Order Message Segments:

|  |  |
| --- | --- |
| MSH—Message Header |  |
| PID—Patient Identification |  |
| PV1—Patient Visit |  |
| ORC—Common Order Segment |  |
| ODS-- |  |

## Lab Order Message Segments:

|  |  |
| --- | --- |
| MSH—Message Header |  |
| PID—Patient Identification |  |
| ORC—Common Order Segment |  |
| OBR—Observation Request segment |  |

## Lab ORU Message Segments:

|  |  |
| --- | --- |
| MSH—Message Header |  |
| PID—Patient Identification |  |
| PV1—Patient Visit |  |
| ORC—Common Order Segment |  |
| OBR—Observation Request segment |  |
| OBX—Observation/Result segment |  |
| NTE—Notes and Comments segment |  |

## Nursing Order Message Segments:

|  |  |
| --- | --- |
| MSH—Message Header |  |
| PID—Patient Identification |  |
| PV1—Patient Visit |  |
| ORC—Common Order Segment |  |
| OBR—Observation Request segment |  |
| NTE—Notes and Comments segment |  |

## Radiology Order Message Segments:

|  |  |
| --- | --- |
| MSH—Message Header |  |
| PID—Patient Identification |  |
| PV1—Patient Visit |  |
| ORC—Common Order Segment |  |
| OBR—Observation Request segment |  |
| OBX-- Observation/Result segment |  |

## Surgery ORU Message Segments

|  |  |
| --- | --- |
| **Segment** | **Notes:** |
| MSH—Message Header |  |
| PID-- Patient Identification |  |
| OBR-- Observation Request segment |  |
| OBX-- Observation/Result segment |  |
|  |  |

## Pharmacy Order message segments

|  |  |
| --- | --- |
| **Segment** | **Notes:** |
| MSH—Message Header |  |
| PID-- Patient Identification |  |
| PV1—Patient Visit |  |
| ORC-- Common Order Segment |  |
| RXO--Pharmacy/treatment order |  |
| RXE--Pharmacy/treatment encoded order |  |
| RXR--Pharmacy/treatment route |  |
| RXC--Pharmacy/treatment component order |  |
| OBR-- Observation Request segment |  |
| OBX-- Observation/Result segment |  |
| AL1-- Patient Allergies |  |

## Radiology message segments

|  |  |
| --- | --- |
| MSH—Message Header |  |
| PID—Patient Identification |  |
| PV1—Patient Visit |  |
| OBR—Observation Request segment |  |
| OBX—Observation/Result segment |  |

## Vital Sign Query message segments

|  |  |
| --- | --- |
| MSH—Message Header |  |
| QRD—Query definition |  |

|  |  |
| --- | --- |
| MSA—Message Header |  |
| QRD—Query definition |  |
| PID—Patient Identification |  |
| OBR-- Observation Request segment |  |
| OBX-- Observation/Result segment |  |

# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Change Description** |
| 0.9 | 4/23/08 | D. Nitsche | Initial document creation |
| 0.9 | 4/28/08 | D. Nitsche | Surgical SCH messages added |
| 0.9 | 5/6/08 | D. Nitsche | Completed draft document |
| 0.9 | 5/15/08 | D. Nitsche | Added additional segments and notes on MWB format availability and notes on PID.3 repeating fields. |
| 1.0 | 8/1/2008 | D. Nitsche | Add in version 1.0 segments. |
| 1.0 | 8/6/2008 | D. Nitsche | Add in additional samples for Pharmacy, Radiology and Vital Sign Query |
| 1.0 | 9/2/2008 | D. Nitsche | Add in additional Order message types for Lab, Nursing, Diets and Radiology. |
| 1.0 | 3/23/2009 | E. O’Brien | Updated document for RFP |
|  |  |  |  |