



## **DataBridge HL7 Specification**

### **Components Designed to Facilitate the Integration of VistA to Clinical Information Systems**

**November, 2008**

**Version 1.0**

## Table of Contents

Introduction:.....	3
Communication—.....	3
Display format of specifications— .....	3
VA Event Drivers .....	3
ADT Event drivers.....	3
SIU Event Drivers.....	4
Lab ORU Event Driver .....	4
Surgical ORU Event Driver.....	4
Pharmacy order messages .....	4
Lab order messages.....	4
Radiology order messages .....	4
Nursing order messages .....	4
Diet order messages .....	4
Appointment SIU message Driver.....	5
Radiology Event Driver .....	5
Vitals Signs Query messages.....	5
Message Types:.....	6
SIU Message Segments.....	6
ADT Message Segments:.....	6
Diet Order Message Segments:.....	6
Lab Order Message Segments: .....	6
Lab ORU Message Segments: .....	7
Nursing Order Message Segments:.....	7
Radiology Order Message Segments:.....	7
Surgery ORU Message Segments.....	7
Pharmacy Order message segments.....	7
Radiology message segments .....	8
Vital Sign Query message segments.....	8
Revision History .....	9

## 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	
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### ***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***

<b>Segment</b>	<b>Notes:</b>
MSH—Message Header	
PID-- Patient Identification	
OBR-- Observation Request segment	
OBX-- Observation/Result segment	

### ***Pharmacy Order message segments***

<b>Segment</b>	<b>Notes:</b>
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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