Department of Veterans Affairs

**Telepathology - Innovation 873**

**Telepathology Worklist**

Requirements Specification Document



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Version 1.3

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| 11/11/2011 | 0.11 | Draft – Section 2.6 | Duc Nguyen |
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# Introduction

Anatomic pathology (AP) involves reaching a diagnosis based on examination of tissues and/or body fluid samples. It includes gross and microscopic examination of the samples. Mostly the examination and diagnosis is done locally. Consultations and second opinions are obtained using mail or couriers to deliver data to the consulting clinician or clinicians. The Department of Veterans Affairs (VA) successfully deployed telemedicine applications in the areas of diabetic retinal screening and Teledermatology. Consequently, the VistA Imaging project was directed to develop Telepathology software for deployment and use in the VA enterprise. This document describes the requirements for the first phase in developing a Telepathology solution.

The Care Coordination and Telehealth Program Office are requesting the Veterans Health Information Systems and Technology (VistA) Imaging develop and support a solution for Telepathology use and functionality. A successful implementation of the Telepathology solution will enable physicians to expedite treatment of (VA) patients.

Currently pathology services in Veteran’s Health Administration (VHA) are based on the longstanding traditional model of reviewing pathological specimens to make the clinical diagnosis. This traditional model involves the physical preparation, staining, mounting of tissue on glass slides from pathological specimens and their review by a pathologist at the same site where the slides were prepared, or at a distant site, where the slides are sent for review. This traditional model adds a delay time in the diagnosis. Recent advances in the form of Telepathology provide the ability to send data from pathological specimens using information and telecommunications technologies, so this data can be reviewed by a pathologist at a distant site.

Rural areas with few or no pathology services can use Telepathology to support their patients. This will increase the efficiency of pathology services by enabling primary interpretations, consultation services, continuing coverage when pathologists are on leave and in the future support for Tumor Board evaluations.

VHA has affiliations with academia and commercial medical centers in the contiguous United States, employing leaders in the field of pathology, on staff. The ability to network these resources and share such expertise would have a profound effect on the delivery of care to veteran patients.

The VistA Imaging team has determined that it will take a two phase approach for development of the VistA Imaging Telepathology Application (VITA). The initial phase will focus on the development of an application to handle the daily pathology workflow and on acquisition, sharing and storing of pathology snapshots from digital pathology vendors within the VistA Imaging framework.; the second phase will focus on implementing an interactive mechanism to request consultations between VHA sites

## Purpose

The MAG\*3.0\*138 Requirements Specification Document (RSD) is intended to document the initial requirements and enhancements that allow for VistA Imaging to develop software in support of pathology and Telepathology services. This application will assist in the day-to-day work load management for pathology cases with the sharing and communication of Telepathology images among VA pathologists.

The application will support Pathology activities to include:

* Day-to-day workload management within the clinics and hospitals
* The ability to store pathology snapshots into VistA Imaging from Digital Pathology Systems.

Subsequent work that is not within phase 1 of this project includes:

* Support of tumor board conferences and grand rounds
* Gross pathology
* Research and education support
* A mechanism to support pathologic consultation requests and services
* A mechanism to support reporting consultations and concurrences from other VHA locations and clinics.

This working document is intended for the Office of Telehealth Services, pathologists, and information technology developers, analysts, program managers and project managers.

## Scope

This document provides the requirements to develop a Telepathology application within the framework of VistA Imaging and an applicable Laboratory package from the VistA Electronic Health Record (EHR).

The VistA Imaging system captures clinical images, scanned documents, motion video, and other non-textual data files and makes them part of the patient’s electronic health record. VistA Imaging facilitates medical decision-making by delivering the multimedia component of the patient record to the clinician’s desktop in an integrated, timely and accurate manner.

The architecture of VistA Imaging allows clinicians access to images and text data at all times anywhere in the hospital. VistA Imaging’s Remote Image Views component enables image sharing between VA hospitals and facilities. A patient’s images can be accessed by VA caregivers from any place in the VA enterprise. VistA Imaging provides a framework for image file storage, management, and retrieval from magnetic and optical disk servers and supports data capture, storage, and retrieval over local and wide area networks. The primary communication methods used within the scope of this project will be the VistA Imaging Exchange service (VIX). The VIX is deployed to all 145 VistA Imaging sites as well as employing 3 Central VistA Imaging Exchange (CVIX) servers within the VHA. It serves as the primary method for transmission of image and image data requests between the sites in the VHA and between the VHA and the Department of Defense (DoD).

VistA Imaging facilitates interoperability between the EHR VistA and commercial PACS systems using HL7 (Health Level seven) and DICOM (Digital Imaging and Communications in Medicine) standards and the IHE (Integrating the Healthcare Enterprise) technical framework.

VistA Imaging operates using a set of standard index terms to facilitate grouping, sorting, filtering and retrieval of images (e.g. specialty, event, procedure, document type).

The VITA shall provide a comprehensive Worklist of all active pathology cases for a particular clinic. From within this Worklist a pathologist will have the ability to view their daily case load for their specific site, view andimages associated into VistA Imaging. . ~~During the~~ The phase two development of the Telepathology Project will focus on implementing a consultation mechanism between sites to better serve those within the VHA with limited to no pathology services. . VistA Imaging will store the relevant snap shot pathology images and data back into the VistA allowing for a complete digital pathology record.

The software developed will follow the available standards to include Food and Drug Administration (FDA), Health Insurance Portability and Accountability Act of 1996 (HIPAA) as well as VA, Federal security and patient safety guidelines.

## Acronyms and Definitions

### Acronyms

| Acronym | Definition |
| --- | --- |
| CBOC | Community Based Outpatient Clinic |
| CCOW | Clinical Context Object Workgroup |
| CPRS | Computerized Patient Record System |
| DICOM | Digital Imaging and Communication in Medicine |
| GUI | Graphical User Interface |
| HL7 | Health Level 7 |
| IFC | Inter-Facility Consults |
| IHE | Integrating the Healthcare Enterprise |
| JPC | Joint Pathology Center (Formerly the Armed Forces Institute of Pathology) |
| JPEG | Joint Photographic Experts Group |
| LSRP | Laboratory System Reengineering Project |
| PMA | Pathology Management Application |
| PCP | Primary Care Physician |
| QA | Quality Assurance |
| SPI | Sensitive Patient Information |
| VHA | Veterans Health Administration |
| VISA | VistA Imaging Service Oriented Architecture |
| VISN | Veterans Integrated Service Network |
| VistA | Veterans Health Information Systems and Technology Architecture |
| VI | VistA Imaging |
| VITA | VistA Imaging Telepathology Application |
| VIX | VistA Imaging Exchange Server |
| WSS | Whole Slide Scan and/or Scanner |
| WSI | Whole Slide Images/Imaging |

### Definitions

| Term | Definition |
| --- | --- |
| Acquisition Site | Refers to the originating location of the pathology specimen |
| Concurrence | Agreement of Opinion |
| Consultation | A meeting with an expert or professional, such as a medical doctor, in order to seek advice |
| Complete | The status of a report that has been finalized but not yet verified/released. |
| DICOM | Digital Imaging Communications in Medicine |
| HL7 | Health Level 7 International standards messaging for health systems |
| Interpretation Site | Refers to the location which is providing the interpretation of the slide/specimen |
| Pathology | The branch of medicine concerned with the cause, origin, and nature of disease, including the changes occurring as a result of disease. |
| Report | Within the frameworks of the Telepathology Application, a report includes the findings of a pathologist for a case. |
| Supplementary report | An addendum to any primary report. |
| Telepathology | The use of telecommunications technology to facilitate the transfer of image-rich pathology data between remote locations for the purposes of diagnosis, education, and research. |
| Telepathology Application | A telepathology solution that enables the transfer of image-rich pathology data between remote locations in the VA for the purposes of diagnosis. |
| Telepathology Worklist | A component of the Telepathology Application that allows pathologists to view the list of cases at their site and at one or more consulting sites. |
| Telepathology Configurator | A component of the Telepathology Application that allows administrators to configure components of the application. |

## References

* IHE Anatomic Pathology (PAT: Technical framework, Volume 1, Revision 2.0, July 2010
* IHE Anatomic Pathology (PAT): Technical framework, Volume 1, Revision 2.0, July 2010
* Digital Imaging and Communications in Medicine (DICOM), DICOM Standards Committee, Working Group 26, Pathology: Supplement 145: Whole Slide Microscopic Image IOD and SOP Classes, Aug. 2010
* Digital Imaging and Communications in Medicine (DICOM), Supplement 122: Specimen Module and Revised Pathology SOP Classes, DICOM Standards Committee, Working Groups 26, Pathology, Aug. 2008
* 11. Department of Veterans Affairs M Programming Standards and Conventions
* FDA Medical Device Quality Systems Manual

# Specifications

MAG\*3.0\*138 will provide the pathologists an integrated Worklist that will provide the ability to manage daily workload, request consultations, provide concurrences and allow for remote views and results on digital pathology images.

* The system shall allow the pathologists to view a comprehensive list of all Surgical Pathology (SP), Cytopathology (CY) and Electron Microscopy (EM) cases for their site.
* It shall improve support of gross pathology focusing on surgical pathology, cytopathology and electron microscopy by providing the pathologist access to images associated with the cases.

## Accessibility Specifications

MAG\*3.0\*138 shall be 508-compliant subordinated to VistA Imaging and VHA 508 compliance standards.

## Business Rules Specifications

All business rules addressing pathology shall be taken into consideration for the development of the Telepathology project.

## Design Constraints Specifications

* The ability to extract pathology accessions and the information contained within accession from the VistA Laboratory package will require the VistA Imaging Development team to develop and release a standalone Laboratory patch.
  + The VistA Imaging team will base the Laboratory patch on current code that has is active in the field.
* Third party vendor development is outside the control of the VistA Imaging development team.
* Third party vendors may not have the ability to transmit images in DICOM or additional VistA Imaging supported formats.

##### The DICOM working group for Anatomic Pathology has not released an industry standard for storage of these objects.

##### This software is dependent on MAG\*3.0\*110.

## Disaster Recovery Specifications

The Disaster recovery of this application will follow the COOP and CONOPS of the VistA Imaging Program.

## Documentation Specifications

The following end user documents will likely be affected and need to be generated or updated for this effort.

* Telepathology Application User Guide
* VistA Imaging Installation Guide
* VistA Imaging Technical Manual
* VistA Imaging Security Guide

## Functional Specifications

### VITA shall provide a centralized Telepathology Worklist for all anatomic pathology cases. (TPWL)

1. The Telepathology Worklist shall authenticate users into the VistA system utilizing access and verify codes.
2. The Telepathology Worklist shall display a site introduction message during initial log on.
3. The Telepathology Worklist shall provide a list of unread cases.
   1. The Telepathology Worklist shall include unread cases from the local site.
   2. ~~The Telepathology Worklist shall provide a user the ability to place a reserve on a case.~~ Requirement has been removed, reservations happen on editing a report.
   3. ~~The Telepathology Worklist shall provide the user the ability to un-reserve a case.~~ Requirement has been removed, un-reserving cases happen when edit report is closed.
   4. When a case has been verified and released the case shall be moved to a list of read cases.
4. The Telepathology Worklist shall provide a list of cases for which the report has been verified and released.
5. The Telepathology Worklist shall display a list of verified/released cases from the local site.
6. ~~The Telepathology Worklist shall provide a user the ability to place a reserve on a case.~~ Requirement has been removed, reservations happen on editing a report.
7. The Telepathology Worklist shall provide the user the ability to un-~~reserve a case~~. Requirement has been removed, un-reserving cases happen when edit report is closed.
8. The Telepathology Worklist shall display the following patient and case attributes (when available):

* Patient name
* Patient identifier
* Date and time of accession
* The sample accession number (case number, order number)
* Total number of specimens(if available)
* Notes (yes/no)
* Reserved by column indicator

1. The Telepathology Worklist shall identify the user logged into the Telepathology Application.
2. The Telepathology Worklist shall provide a user a mechanism to:
   * 1. View a report
     2. Launch a Health Summary that is patient specific
     3. Refresh the displayed information.
3. The Telepathology Worklist shall display the site that the user is logged into by displaying a site identifier.
4. The sort order for the Telepathology Worklist shall be selectable, based on any displayed attribute.
5. The Telepathology Worklist shall allow users to create custom filters using one or more attributes.
6. A user shall be able to edit a stored filter.
7. A filter shall be able to be deleted.
8. A filter shall be able to be applied to the selected worklist.
9. The Telepathology Worklist shall be configurable for user preferences.
10. Shall allow for columns to be resized
11. Shall allow for columns to be reorder
12. Shall allow for layout preferences to be saved.
13. On the Telepathology Worklist a user shall have the ability to provide a note on a specific case.
14. A User shall be able to create a free text note.
15. Users shall be prompted with a warning message when Sensitive Patient Information (SPI) is being accessed.
16. When a user accesses a sensitive patient record the user’s information shall be logged to DG SECURITY LOG (#38.1) which is the VistA audit file.
17. The Telepathology Worklist shall display a health summary for a selected patient.
18. The health summary shall allow for default reports to be configured.
19. The user shall have the ability to select additional reports from the health summary list on an ad hoc basis.
20. The Telepathology Worklist shall maintain an application log to track system errors.
21. The application log shall display a log which will provide user access to error messages.
22. The application log shall display a log which will provide System Administrative access to error messages.

### The Telepathology Configurator shall allow for site configuration. (TPC)

TP-TPC-FR-1 The Telepathology Configurator shall authenticate users into the VistA system utilizing access and verify codes.

TP-TPC-FR-2 The Telepathology Configurator shall display a site introduction message during initial log on.

TP-TPC-FR-3 The Telepathology Configurator shall allow access only to users who hold the MAG SYSTEM key.

TP-TPC-FR-4 The Telepathology Configurator shall allow for other application parameters to be configured.

TP-TPC-FR-5 The Telepathology Configurator shall provide a default setting for the Telepathology Worklist timeout and Read list retention.

TP-TPC-FR-6 A user shall be able to edit the Telepathology Worklist timeout.

TP-TPC-FR-7 A user shall be able to edit the Read list Retention.

### Updating DICOM Modality Worklist , HDIG and Importer functionalities for Anatomic Pathology. (IMAGES)

1. Shall allow for acquisition of DICOM Images using MODALITY WORKLIST
2. Shall allow for DICOM objects to be associated with an Anatomic Pathology order through the HDIG.
3. Shall associate images with Anatomic Pathology (SP,CY and EM) cases using the DICOM TEMP LAB LIST file (2006.5838)

TP-IMAGES-FR-2.1 Shall associate images from the DICOM TEMP LAB LIST file (2006.5838) above to the AP TIU report.

1. Shall allow for exporting of the DICOM objects the DICOM Export application on the Legacy DICOM gateway.
2. Shall be able to utilize the VistA Imaging DICOM Importer to obtain images for Anatomic Pathology.
3. Shall be able to utilize DICOM Correct to reconcile image with Anatomic Pathology cases.
4. Shall be able to View the DICOM Images associated with the Anatomic Pathology case – view the report from Imaging by right-clicking on ICON

### Health Level Seven Messaging Requirements for Interfacing with VistA and Vendor Digital Pathology Systems. (HL7)

1. Shall generate HL7 messages for Anatomic Pathology events
   1. Log in a case (Log-in menu, anat path ... [LRAPL]) – puts the new case on the modality worklist and on the TelePath worklist with status UNREAD.
   2. Data entry (Data entry, anat path ... [LRAPD]) – updates the case on the modality worklist
   3. Edit (Edit/modify data, anat path ... [LRAPE]) – updates the case on the modality worklist
   4. Completing report (Edit/modify data, anat path ... [LRAPE]) – entering the date that the report is completed removes the case from the modality worklist
   5. Deleting a case (Delete accession #, anat path [LRAPKILL]) – removes the case from the modality worklist

Verifying a case (Electronically Sign Reports) – changes the status the to READ on the TelePath worklist. This step also generates a TIU document with which acquired DICOM images may be associated

1. When an accession is logged in the Telepathology package, VistA shall produce an HL7 order message for transmission to the site's digital pathology system.
2. The format of the HL7 order message produced by VistA shall conform to that of the Accession Message given in Section 1.4.1 of the document *Profiles for HL7 Messages from VistA to Commercial Image Managers (Anatomic Pathology Workflow)*, as published on <http://www.va.gov/imaging/hl7.asp>.

Contents of HL7 Order Message

1. The HL7 order message produced by VistA shall contain one MSH (message header) segment; one PID (patient identification and demographics) segment; one PV1 (patient visit) segment; one ORC (order control) segment; one TQ1 (timing/quantity) segment; one OBR (observation request) segment; zero to many OBX (observation result) segments; one to many SPM (specimen information) segments; one IPC (imaging procedure code) segment.

MSH (Message Header) Segment

Presence of MSH Segment

1. Each HL7 order message produced by VistA shall contain one (1) MSH segment at the beginning of the message.

Contents of MSH Segment

Field *MSH-1-Field Separator*- Presence of Field *MSH-1-Field Separator*

1. The MSH segment of the HL7 order message produced by VistA shall contain one instance of field *MSH-1-field separator*.

Length of Field *MSH-1-Field Separator*

1. Field *MSH-1-field separator* shall be one character in length.

Contents of Field *MSH-1-Field Separator*

1. Field *MSH-1-field separator* shall contain a printable character.

Field MSH-2-Encoding Characters – with Presence of Field *MSH-2-Encoding Characters*

1. The MSH segment of the HL7 order message produced by VistA shall contain one instance of field *MSH-2-encoding characters*.

Length of Field *MSH-2-Encoding Characters*

1. Field *MSH-2-encoding characters* shall be four characters in length.

Contents of Field *MSH-2-Encoding Characters*

1. Field *MSH-2-encoding characters* shall contain four printable characters, hereinafter referred to respectively as component separator, repetition separator, escape character, and subcomponent separator.

Field *MSH-3-Sending Application*

Presence of Field *MSH-3-Sending Application*

1. The MSH segment of the HL7 order message produced by VistA shall contain one instance of field *MSH-3-sending application*.

Length of Field *MSH-3-Sending Application*

1. The length of field *MSH-3-sending application* shall be between 1 and 227 characters inclusive.

Contents of Field *MSH-3-Sending Application*

1. Field *MSH-3-sending application* shall contain the value of the APPLICATION NAME field (#.01) of the entry associated with the VistA anatomic pathology application in the VistA HLO APPLICATION REGISTRY file (#779.2).

Field *MSH-4-Sending Facility*

Presence of Field *MSH-4-Sending Facility*

1. The MSH segment of the HL7 order message produced by VistA shall contain one instance of field *MSH-4-sending facility*.

Length of Field *MSH-4-Sending Facility*

1. The length of field *MSH-4-sending facility* shall be between 1 and 227 characters inclusive.

Component Structure of Field *MSH-4-Sending Facility*

1. Field *MSH-4-sending facility* shall contain three components.

Contents of Component 1 of Field *MSH-4-Sending Facility*

1. The first component of field *MSH-4-sending facility* shall contain the value of the STATION NUMBER field (#.02) of the entry associated with the originating VistA system in the VistA HLO SYSTEM PARAMETERS file (#779.1).

Contents of Component 2 of Field *MSH-4-Sending Facility*

1. The second component of field *MSH-4-sending facility* shall contain the value of the DOMAIN NAME field (#.01) of the entry associated with the originating VistA system in the VistA HLO SYSTEM PARAMETERS file (#779.1), followed by colon (**:**), followed by the value of the TCP/IP PORT (OPTIMIZED) field (#400.08) of the entry associated with the commercial pathology application in the VistA HL LOGICAL LINK file (#870).

Contents of Component 3 of field *MSH-4-Sending Facility*

1. The third component of field *MSH-4-sending facility* shall contain the value **DNS**.

Field *MSH-5-Receiving Application*

Presence of Field *MSH-5-Receiving Application*

1. The MSH segment of the HL7 order message produced by VistA shall contain one instance of field *MSH-5-receiving application*.

Length of Field *MSH-5-Receiving Application*

1. The length of field *MSH-5-receiving application* shall be from 1 to 227 characters inclusive.

Contents of Field *MSH-5-Receiving Application*

1. Field *MSH-5-receiving application* shall contain the value of the APPLICATION NAME field (#.01) of the entry associated with the commercial pathology application in the VistA HLO APPLICATION REGISTRY file (#779.2).

Field *MSH-6-Receiving Facility*

Presence of Field *MSH-6-Receiving Facility*

1. The MSH segment of the HL7 order message produced by VistA shall contain one instance of field *MSH-6-receiving facility*.

Length of Field *MSH-6-Receiving Facility*

1. The length of field *MSH-6-receiving facility* shall be between 1 and 227 characters inclusive.

Component Structure of Field *MSH-6-Receiving Facility*

1. Field *MSH-6-receiving facility* shall contain three components.

Contents of Component 1 of Field *MSH-6-Receiving Facility*

1. The first component of field *MSH-6-receiving facility* shall contain the value of the STATION NUMBER field (#.02) of the entry associated with the originating VistA system in the VistA HLO SYSTEM PARAMETERS file (#779.1).

Contents of Component 2 of Field *MSH-6-Receiving Facility*

1. The second component of field *MSH-6-receiving facility* shall contain the value of the DOMAIN NAME field (#.01) of the entry associated with the originating VistA system in the VistA HLO SYSTEM PARAMETERS file (#779.1), followed by colon (**:**), followed by the value of the TCP/IP PORT (OPTIMIZED) field (#400.08) of the entry associated with the commercial pathology application in the VistA HL LOGICAL LINK file (#870).

Contents of Component 3 of field *MSH-6-Receiving Facility*

1. The third component of field *MSH-6-receiving facility* shall contain the value **DNS**.

Field *MSH-7-Date/Time of Message*

Presence of Field *MSH-7-Date/Time of Message*

1. The HL7 order message produced by VistA shall contain one instance of field *MSH-7-date/time of message*.

Length of Field *MSH-7-Date/Time of Message*

1. The length of field *MSH-7-date/time of message* shall be between 1 and 26 characters inclusive.

Contents of Field *MSH-7-Date/Time of Message*

1. Field *MSH-7-date/time of message* shall contain the date of creation of the message in format YYYYMMDD, followed by the time of creation of the message in format HHMM, followed by the offset of the time zone of the originating VistA system from Universal Coordinated Time, structured as either plus sign (+) or minus sign (-) followed by hours and minutes in format HHMM.

Field *MSH-9-Message Type*

Presence of Field *MSH-9-Message Type*

1. The HL7 order message produced by VistA shall contain one instance of field *MSH-9-message type*.

Length of Field *MSH-9-Message Type*

1. The length of field *MSH-9- message type* shall be between 1 and 15 characters inclusive.

Component Structure of Field *MSH-9-Message Type*

1. Field *MSH-9-message type* shall contain three components.

Contents of Component 1 of Field *MSH-9-Message Type*

1. The first component of field *MSH-9-message type* shall contain the value **OML**.

Contents of Component 2 of Field *MSH-9-Message Type*

1. The second component of field *MSH-9-message type* shall contain the value **O21**.

Contents of Component 3 of field *MSH-9-Message Type*

1. The third component of field *MSH-9-message type* shall contain the value **OML\_O21**.

Field *MSH-10-Message Control ID*

Presence of Field *MSH-10-Message Control ID*

1. The MSH segment of the HL7 order message produced by VistA shall contain one instance of field *MSH-10-message control ID*.

Length of Field *MSH-10-Message Control ID*

1. The length of field *MSH-10-message control ID* shall be between 1 and 20 characters inclusive.

Contents of Field *MSH-10-Message Control ID*

1. Field *MSH-10-message control ID* shall contain an alphanumeric string assigned by the VistA HL7 package at the time of message generation.

Field *MSH-11-Processing ID*

Presence of Field *MSH-11-Processing ID*

1. The MSH segment of the HL7 order message produced by VistA shall contain one instance of field *MSH-11-processing ID*.

Length of Field *MSH-11-Processing ID*

1. The length of field *MSH-11-processing ID* shall be between 1 and 3 characters inclusive.

Component Structure of Field *MSH-11-Processing ID*

1. Field *MSH-11-processing ID* shall contain two components.

Contents of Component 1 of Field *MSH-11-Processing ID*

1. The first component of field *MSH-11-processing ID* shall contain the value **T** if the message was produced on a test system or **P** if the message was produced on a production system.

Contents of Component 2 of Field *MSH-11-Processing ID*

1. The second component of field *MSH-11-processing ID* shall be empty.

Field *MSH-12-Version ID*

Presence of Field *MSH-12-Version ID*

1. The MSH segment of the HL7 order message produced by VistA shall contain one instance of field *MSH-12-version ID*.

Length of Field *MSH-12-Version ID*

1. The length of field *MSH-12-version ID* shall be between 1 and 60 characters inclusive.

Contents of Field *MSH-12-Version ID*

1. Field *MSH-12-version ID* shall contain the value **2.4**.

PID (Patient Identification) Segment

Presence of PID Segment

1. Each HL7 order message produced by VistA shall contain one PID segment immediately following the MSH segment.

Contents of PID Segment

Field *PID-3-Patient Identifier List*

Presence of Field *PID-3-Patient Identifier List*

1. The PID segment of the HL7 order message shall contain three instances of field *MSH-3-patient identifier list*.

Length of Field *PID-3-Patient Identifier List*

1. The length of each instance of field *PID-3-patient identifier list* shall be between 1 and 250 characters inclusive.

Component Structure of Field *PID-3-Patient Identifier List*

1. Each instance of field *PID-3-Patient Identifier List* shall contain five components.

Contents of Component 1 of Field *PID-3-Patient Identifier List*

1. Component 1 of field *PID-3-Patient Identifier List* shall contain the patient's identity value.

Contents of Component 2 of Field *PID-3-Patient Identifier List*

1. Component 2 of field *PID-3-Patient Identifier List* shall be empty.

Contents of Component 3 of Field *PID-3-Patient Identifier List*

1. Component 3 of field *PID-3-Patient Identifier List* shall be empty.

Contents of Component 4 of Field *PID-3-Patient Identifier List*

1. Component 4 of field *PID-3-Patient Identifier List* shall contain the assigning authority for the patient's identity value in field 1.

Contents of Component 5 of Field *PID-3-Patient Identifier List*

1. Component 5 of field *PID-3-Patient Identifier List* shall contain the identifier type of the patient's identity value in field 1.

Instance Structure of Field *PID-3-Patient Identifier List*

Contents of Instance 1 of Field *PID-3-Patient Identifier List*

Contents of Component 1 of Instance 1 of Field *PID-3-Patient Identifier List*

1. Component 1 of Instance 1 of Field *PID-3-Patient Identifier List* shall contain the VistA site number, followed by hyphen (**-**), followed by the internal entry number of the patient in the VistA PATIENT file (#2).

Contents of Component 4 of Instance 1 of Field *PID-3-Patient Identifier List*

1. Component 4 of Instance 1 of Field *PID-3-Patient Identifier List* shall contain the value **USVHA**.

Contents of Component 5 of Instance 1 of Field *PID-3-Patient Identifier List*

1. Component 5 of Instance 1 of Field *PID-3-Patient Identifier List* shall contain the value **PI**.

Contents of Instance 1 of Field *PID-3-Patient Identifier List*

Contents of Component 1 of Instance 2 of Field *PID-3-Patient Identifier List*

1. Component 1 of Instance 2 of Field *PID-3-Patient Identifier List* shall contain the Integration Control Number (ICN) associated with the patient in VistA.

Contents of Component 4 of Instance 2 of Field *PID-3-Patient Identifier List*

1. Component 4 of Instance 2 of Field *PID-3-Patient Identifier List* shall contain the value **USVHA**.

Contents of Component 5 of Instance 2 of Field *PID-3-Patient Identifier List*

1. Component 5 of Instance 2 of Field *PID-3-Patient Identifier List* shall contain the value **NI**.

Contents of Instance 3 of Field *PID-3-Patient Identifier List*

Contents of Component 1 of Instance 3 of Field *PID-3-Patient Identifier List*

1. Component 1 of Instance 3 of Field *PID-3-Patient Identifier List* shall contain the value of the SOCIAL SECURITY NUMBER field (#.09) of the patient in the VistA PATIENT file (#2).

Contents of Component 4 of Instance 3 of Field *PID-3-Patient Identifier List*

1. Component 4 of Instance 3 of Field *PID-3-Patient Identifier List* shall contain the value **USVHA**.

Contents of Component 5 of Instance 3 of Field *PID-3-Patient Identifier List*

1. Component 5 of Instance 3 of Field *PID-3-Patient Identifier List* shall contain the value **SS**.

Field *PID-5-Patient Name*

Presence of Field *PID-5-Patient Name*

1. The PID segment of the HL7 order message shall contain one instance of field *PID-5-patient name*.

Length of Field *PID-5-Patient Name*

1. The length of field *PID-5-patient name* shall be between 1 and 250 characters inclusive.

Contents of Field *PID-5-Patient Name*

1. Field PID-5-Patient Name shall contain the value of the NAME field (#.01) of the patient in the VistA PATIENT File (#2).

Component Structure of Field *PID-5-Patient Name*

1. Field PID-5-Patient Name shall contain seven components.

Contents of Component 1 of Field *PID-5-Patient Name*

1. The first component of Field *PID-5-Patient Name* shall contain the value of the patient's last name.

Contents of Component 2 of Field *PID-5-Patient Name*

1. The second component of Field *PID-5-Patient Name* shall contain the value of the patient's first name.

Contents of Component 3 of Field *PID-5-Patient Name*

1. The third component of Field *PID-5-Patient Name* shall contain the value of the patient's middle name(s), if any.

Contents of Component 4 of Field *PID-5-Patient Name*

1. The fourth component of Field *PID-5-Patient Name* shall contain the value of the patient's name suffix, if any.

Contents of Component 5 of Field *PID-5-Patient Name*

1. The fifth component of Field *PID-5-Patient Name* shall contain the value of the patient's name prefix, if any.

Contents of Component 6 of Field *PID-5-Patient Name*

1. The sixth component of Field *PID-5-Patient Name* shall be empty.

Contents of Component 7 of Field PID-5-Patient Name

1. The seventh component of Field *PID-5-Patient Name* shall contain the value **L**.

Field *PID-7-Date/Time of Birth*

Presence of Field *PID-7-Date/Time of Birth*

1. The HL7 order message produced by VistA shall contain one instance of field *PID-7-date/time of Birth*.

Length of Field *PID-7-Date/Time of Birth*

1. The length of field *PID-7-date/time of birth* shall be between 1 and 26 characters inclusive.

Contents of Field *PID-7-Date/Time of Birth*

1. Field *PID-7-date/time of birth* shall contain the value of the DATE OF BIRTH field (#.03) of the patient in the VistA PATIENT File (#2): first the date of birth in format YYYYMMDD, then, if available, the time of birth in format MMSS.

Field *PID-8-Administrative Sex*

Presence of Field *PID-8-Administrative Sex*

1. The HL7 order message produced by VistA shall contain one instance of field

PID-8-Administrative Sex.

Length of Field *PID-8-Administrative Sex*

1. The length of field *PID-8-Administrative Sex* shall be 1 character.

Contents of Field *PID-8-Administrative Sex*

1. Field *PID-8-Administrative Sex* shall contain either **F** or **M**.

Field *PID-10-Race*

Presence of Field *PID-10-Race*

1. The HL7 order message produced by VistA shall contain one instance of field

*PID-10-race*, if race information is available for the patient in VistA.

Length of Field *PID-10-Race*

1. The length of field *PID-10-race* shall be between 1 and 250 characters inclusive.

Component Structure of Field *PID-10-Race*

1. Field *PID-10-race* shall contain six components.

Contents of Component 1 of Field *PID-10-Race*

1. The first component of Field *PID-10-race* shall contain the VA code corresponding to the patient's race as recorded in VistA, if such information is available.

Contents of Component 2 of Field *PID-10-Race*

1. If the first component of Field *PID-10-race* is present, the second component of Field *PID-10-race* shall contain the text corresponding to the code in the first component.

Contents of Component 3 of Field *PID-10-Race*

1. If the first component of Field *PID-10-race* is present, the third component of Field *PID-10-race* shall contain the value **0005**.

Contents of Component 4 of Field *PID-10-Race*

1. The fourth component of Field *PID-10-race* shall contain the CDC code corresponding to the patient's race as recorded in VistA, if such information is available.

Contents of Component 5 of Field *PID-10-Race*

1. If the fourth component of Field *PID-10-race* is present, the fifth component of Field *PID-10-race* shall contain the text corresponding to the code in the fourth component.

Contents of Component 6 of Field *PID-10-Race*

1. If the fourth component of Field *PID-10-race* is present, the sixth component of Field *PID-10-race* shall contain the value **CDC**.

Field *PID-11-Patient Address*

Presence of Field *PID-11-Patient Address*

1. The HL7 order message produced by VistA shall contain one instance of field *PID-11-patient address,* if address information is available for the patient in VistA.

Length of Field *PID-11-Patient Address*

1. The length of field *PID-11-patient address*, if present, shall be between 1 and 250 characters inclusive.

Component Structure of Field *PID-11-Patient Address*

Contents of Component 1 of Field *PID-11-Patient Address*

1. If field *PID-11-patient address* is present, the first component shall contain the first line of the patient's street address.

Contents of Component 2 of Field *PID-11-Patient Address*

1. If field *PID-11-patient address* is present, the second component, if present, shall contain the second line of the patient's street address.

Contents of Component 3 of Field *PID-11-Patient Address*

1. If field *PID-11-patient address* is present, the third component shall contain the city of the patient's address.

Contents of Component 4 of Field *PID-11-Patient Address*

1. If field *PID-11-patient address* is present, the fourth component shall contain the state abbreviation of the patient's address.

Contents of Component 5 of Field *PID-11-Patient Address*

1. If field *PID-11-patient address* is present, the fifth component shall contain the ZIP code of the patient's address.

Field *PID-13-Phone Number-Home*

Presence of Field *PID-13-Phone Number-Home*

1. The HL7 order message produced by VistA shall contain one instance of field

*PID-13-phone number-home*, if home phone number information is available for the patient in VistA.

Length of Field *PID-13-Phone Number-Home*

1. The length of field *PID-13-phone number-home*, if present, shall be between 1 and 250 characters inclusive.

Component Structure of Field *PID-13-Phone Number-Home*

1. Field *PID-13-phone number-home*, if present, shall contain 12 components.

Contents of Component 1 of Field *PID-13-Phone Number-Home*

1. If field *PID-13-phone number-home* is present, the first component shall be empty.

Contents of Component 2 of Field *PID-13-Phone Number-Home*

1. If field *PID-13-phone number-home* is present, the second component shall contain the value **PRN**.

Contents of Component 3 of Field *PID-13-Phone Number-Home*

1. If field *PID-13-phone number-home* is present, the third component shall contain the value **PH**.

Contents of Components 4 Through 11 of Field *PID-13-Phone Number-Home*

1. If field *PID-13-phone number-home* is present, the fourth through eleventh components shall be empty.
2. 1.3.2.2.7.4.5 Contents of Component 12 of Field *PID-13-Phone Number-Home*
3. If field *PID-13-phone number-home* is present, the twelfth component shall contain the unformatted phone number.

Field *PID-14-Phone Number-Business*

Presence of Field *PID-14-Phone Number-Business*

1. The PID segment shall contain one instance of field *PID-14-phone number-business*, if business phone number information is available for the patient in VistA.

Length of Field *PID-14-Phone Number-Business*

1. The length of field *PID-14-phone number-business* shall be between 1 and 250 characters inclusive.

Component Structure of Field *PID-14-Phone Number-Business*

1. Field *PID-14-phone number-business*, if present, shall contain 12 components.

Contents of Component 1 of Field *PID-14-Phone Number-Business*

1. If field *PID-14-phone number-business* is present, the first component shall be empty.

Contents of Component 2 of Field *PID-14-Phone Number-Business*

1. If field *PID-14-phone number-business* is present, the second component shall contain the value **WPN**.

Contents of Component 3 of Field *PID-14-Phone Number-Business*

1. If field *PID-14-phone number-business* is present, the third component shall contain the value **PH**.

Contents of Components 4 Through 11 of Field *PID-14-Phone Number-Business*

1. If field *PID-14-phone number-business* is present, the fourth through eleventh components shall be empty.

Contents of Component 12 of Field *PID-14-Phone Number-Business*

1. If field *PID-14-phone number-business* is present, the twelfth component shall contain the unformatted phone number.

Field *PID-22-Ethnic Group*

Presence of Field *PID-22-Ethnic Group*

1. The PID segment shall contain one instance of field *PID-22-ethnic group*, if ethnicity information is available for the patient in VistA.

Length of Field *PID-22-Ethnic Group*

1. The length of field *PID-22-ethnic group* shall be between 1 and 250 characters inclusive.

Component Structure of Field *PID-22-Ethnic Group*

1. Field *PID-22-ethnic group* shall contain up to six components.

Contents of Component 1 of Field *PID-22-Ethnic Group*

1. The first component of Field *PID-22-ethnic group* shall contain the VA code corresponding to the patient's race as recorded in VistA, if such information is available.

Contents of Component 2 of Field *PID-22-Ethnic Group*

1. If the first component of Field *PID-22-ethnic group* is present, the second component of Field *PID-22-ethnic group* shall contain the text corresponding to the code in the first component.

Contents of Component 3 of Field *PID-22-Ethnic Group*

1. If the first component of Field *PID-22-ethnic group* is present, the third component of Field *PID-22-ethnic group* shall contain the value **0005**.

Contents of Component 4 of Field *PID-22-Ethnic Group*

1. The fourth component of Field *PID-22-ethnic group* shall contain the CDC code corresponding to the patient's ethnic as recorded in VistA, if such information is available.

Contents of Component 5 of Field *PID-22-Ethnic Group*

1. If the fourth component of Field *PID-22-ethnic group* is present, the fifth component of Field *PID-22-ethnic group* shall contain the text corresponding to the code in the fourth component.

Contents of Component 6 of Field *PID-22-Ethnic Group*

1. If the fourth component of Field *PID-22-ethnic group* is present, the sixth component of Field *PID-22-ethnic group* shall contain the value **CDC**.

PV1 (Patient Visit) Segment

Presence of PV1 Segment

1. Each HL7 order message produced by VistA shall contain one PV1 segment immediately following the PID segment.

Contents of PV1 SegmentField *PV1-2-Patient Class*

Presence of Field *PV1-2-Patient Class*

1. The PV1 segment shall contain one instance of field *PV1-2-patient class.*

Length of Field *PV1-2-Patient Class*

1. The length of field *PV1-2-patient class* shall be 1 character.

Contents of Field *PV1-2-Patient Class*

1. Field *PV1-2-patient class* shall contain either **O** (outpatient) or **I** (inpatient).

Field *PV1-3-Assigned Patient Location*

Presence of Field *PV1-3-Assigned Patient Location*

1. If field *PV1-2-patient class* is valued **I**, the PV1 segment shall contain one instance of field *PV1-3-assigned patient location*.

Length of Field *PV1-3-Assigned Patient Location*

1. The length of field *PV1-3-assigned patient location* shall be between 1 and 80 characters inclusive.

Component Structure of Field *PV1-3-Assigned Patient Location*

1. If field *PV1-3-assigned patient location* is present, it shall contain three components.

Contents of Component 1 of Field *PV1-3-Assigned Patient Location*

1. If field *PV1-3-assigned patient location* is present, its first component shall contain the ward in which the patient is located.

Contents of Component 2 of Field *PV1-3-Assigned Patient Location*

1. If field *PV1-3-assigned patient location* is present, its second component shall contain the room in which the patient is located.

Contents of Component 3 of Field *PV1-3-Assigned Patient Location*

1. If field *PV1-3-assigned patient location* is present, its third component shall contain the bed in which the patient is located.

Field *PV1-16-VIP Indicator*

Presence of Field *PV1-16-VIP Indicator*

1. If either the patient is an employee or the patient's record is designated sensitive, the PV1 segment shall contain one instance of field *PV1-16-VIP indicator*.

Length of Field *PV1-16-VIP Indicator*

1. If field *PV1-16-VIP indicator* is present, its length shall be between 1 and 2 characters inclusive.

Contents of Field *PV1-16-VIP Indicator*

1. If field *PV1-16-VIP indicator* is present, it shall contain **E** (patient is an employee), **S** (patient is sensitive), or **ES** (patient is an employee and patient record is sensitive).

Field *PV1-19-Visit Number*

Presence of Field *PV1-19-Visit Number*

1. The PV1 segment shall contain one instance of field *PV1-19-visit number*.

Length of Field *PV1-19-Visit Number*

1. The length of field *PV1-19-Visit Number* shall be between 1 and 250 characters inclusive.

Contents of Field *PV1-19-Visit Number*

Patient Is an Inpatient

1. If the patient is an inpatient, field *PV1-19-Visit Number* shall contain **I** followed by the visit number as recorded in VistA.

Patient Is an Outpatient

1. If the patient is an outpatient, field *PV1-19-Visit Number* shall contain **O** followed by the current date in FileMan format.

ORC (Order Control) Segment

Presence of ORC Segment

1. Each HL7 order message produced by VistA shall contain one ORC segment immediately following the PV1 segment.

Contents of ORC Segment

Field *ORC-1-Order Control*

Presence of Field *ORC-1-Order Control*

1. The ORC segment shall contain one instance of field *ORC-1-order control*.

Length of Field *ORC-1-Order Control*

1. The length of field *ORC-1-order control* shall be between 1 and 2 characters inclusive.

Contents of Field *ORC-1-Order Control*

1. Field *ORC-1-order control* shall contain **NW** (new order service), **XO** (change order/service request) or **CA** (cancel order/service request).

Field *ORC-2-Placer Order Number*

Presence of Field *ORC-2-Placer Order Number*

1. The ORC segment shall contain one instance of field *ORC-2-placer order number*.

Length of Field *ORC-2-Placer Order Number*

1. The length of field *ORC-2-placer order number* shall be between 1 and 22 characters inclusive.

Contents of Field *ORC-2-Placer Order Number*

1. Field *ORC-2-placer order number* shall contain the internal entry number of the accession on the VistA LAB DATA File (#63).

Field *ORC-9-Date/Time of Transaction*

Presence of Field *ORC-9-Date/Time of Transaction*

1. The ORC segment shall contain one instance of field *ORC-9-date/time of transaction*.

Length of Field *ORC-9-Date/Time of Transaction*

1. The length of field *ORC-9-date/time of transaction* shall be between 1 and 26 characters inclusive.

Contents of Field *ORC-9-Date/Time of Transaction*

1. Field *ORC-9-date/time of transaction* shall contain the date of creation of the transaction in format YYYYMMDD, followed by the time of creation of the transaction in format HHMM, followed by the offset of the time zone of the originating VistA system from Universal Coordinated Time, structured as either plus sign (+) or minus sign (-) followed by hours and minutes in format HHMM.

Field *ORC-10-Entered By*

Presence of Field *ORC-10-Entered By*

1. The ORC segment shall contain one instance of field *ORC-10-entered by*.

Length of Field *ORC-10-Entered By*

1. The length of field *ORC-10-entered by* shall be between 1 and 250 characters inclusive.

Component Structure of Field *ORC-10-Entered By*

1. Field *ORC-10-entered by* shall contain four components.

Contents of Component 1 of Field *ORC-10-Entered By*

1. The first component of field *ORC-10-entered by* shall contain the VistA user number (DUZ) of the user who entered the transaction.

Contents of Component 2 of Field *ORC-10-Entered By*

1. The second component of field *ORC-10-entered by* shall contain the last name of the user who entered the transaction*.*

Contents of Component 3 of Field *ORC-10-Entered By*

1. The third component of field *ORC-10-entered by* shall contain the first name of the user who entered the transaction*.*

Contents of Component 4 of Field *ORC-10-Entered By*

1. The fourth component of field *ORC-10-entered by*, if present, shall contain the middle name(s) of the user who entered the transaction*.*

Field *ORC-12-Ordering Provider*

Presence of Field *ORC-12-Ordering Provider*

1. The ORC segment shall contain one instance of field *ORC-12-ordering provider*.

length of Field *ORC-12-Ordering Provider*

1. The length of field *ORC-12-ordering provider* shall be between 1 and 250 characters inclusive.

Component Structure of Field *ORC-12-Ordering Provider*

1. Field *ORC-12-ordering provider* shall contain four components.

Contents of Component 1 of Field *ORC-12-Ordering Provider*

1. The first component of field *ORC-12-ordering provider* shall contain the internal entry number on the VistA NEW PERSON file (#200) of the provider who ordered the transaction.

Contents of Component 2 of Field *ORC-12-Ordering Provider*

1. The second component of field *ORC-12-ordering provider* shall contain the last name of the provider who ordered the transaction*.*

Contents of Component 3 of Field *ORC-12-Ordering Provider*

1. The third component of field *ORC-12-ordering provider* shall contain the first name of the provider who ordered the transaction*.*

Contents of Component 4 of Field *ORC-12-Ordering Provider*

1. The fourth component of field *ORC-12-ordering provider*, if present, shall contain the middle name(s) of the provider who ordered the transaction*.*

Field *ORC-14-Call Back Phone Number*

Presence of Field *ORC-14-Call Back Phone Number*

1. The ORC segment shall contain between 1 and 8 instances inclusive of field *ORC-14-call back phone number*, if phone numbers are available for the provider in fields .131 through .138 of the VistA NEW PERSON File (#200).

Length of Field *ORC-14-Call Back Phone Number*

1. The length of each instance of field *ORC-14-call back phone number* shall be between 1 and 250 characters inclusive.

Component Structure of Field *ORC-14-Call Back Phone Number*

1. Each instance of field *ORC-14-call back phone number* shall contain 12 components.

Contents of Component 1 of Field *ORC-14-Call Back Phone Number*

1. For each instance of field *ORC-14-call back phone number* that is present, the first component shall be empty.

Contents of Component 2 of Field *ORC-14-Call Back Phone Number*

1. For each instance of field *ORC-14-call back phone number* that is present, the second component, if valued, shall contain the value **PRN** (principal residence number), **WPN** (work phone number), or **BPN** (beeper number).

Contents of Component 3 of Field *ORC-14-Call Back Phone Number*

1. For each instance of field *ORC-14-call back phone number* that is present, the third component shall contain the value **PH** (phone), **FX** (fax), or **BP** (beeper).

Contents of Components 4 Through 11 of Field *ORC-14-Call Back Phone Number*

1. For each instance of field *ORC-14-call back phone number* that is present, the fourth through eleventh components shall be empty.

Contents of Component 12 of Field *ORC-14-Call Back Phone Number*

1. For each instance of field *ORC-14-call back phone number* thatis present, the twelfth component shall contain the unformatted phone number.

Field *ORC-16-Order Control Code Reason*

Presence of Field *ORC-16-Order Control Code Reason*

1. The ORC segment shall contain one instance of field *ORC-16-order control code reason*.

Length of Field *ORC-16-Order Control Code Reason*

1. The length of field *ORC-16-order control code reason* shall be between 1 and 250 characters inclusive.

Contents of Field *ORC-16-Order Control Code Reason*

1. Field *ORC-16-order control code reason* shall contain **NEWORDR** (new order), **CXLORDR** (cancel order), **LOADREQ** (slide load request), **UNLOADREQ** (slide unload request), or **DELETEREQ** (whole-slide image deletion request).

Field *ORC-17-Entering Organization*

Presence of Field *ORC-17-Entering Organization*

1. The ORC segment shall contain one instance of field *ORC-17-entering organization*.

Length of Field *ORC-17-Entering Organization*

1. The length of field *ORC-17-Entering Organization* shall be between 1 and 250 characters inclusive*.*

Component Structure of Field *ORC-17-Entering Organization*

Contents of Component 1 of Field *ORC-17-Entering Organization*

1. The first component of field *ORC-17-entering organization* shall contain the internal entry number on the VistA SERVICE/SECTION file (#49) of the service/section of the user who entered the transaction from the SERVICE/SECTION field (#29) of the VistA NEW PERSON File (#200).

Contents of Component 2 of Field *ORC-17-Entering Organization*

1. The second component of field *ORC-17-entering organization* shall contain the name of the service/section of the user who entered the transaction from the NAME field (#.01) of the VistA SERVICE/SECTION file (#49).

Contents of Component 3 of Field *ORC-17-Entering Organization*

1. The third component of field *ORC-17-entering organization* shall contain **VISTA49**.

TQ1 (Timing/Quantity) Segment - Presence of TQ1 Segment

1. Each HL7 order message produced by VistA shall contain one TQ1 segment immediately following the ORC segment.

Contents of TQ1 Segment

Field *TQ1-1-Set ID-* Presence of Field *TQ1-1-Set ID*

1. The TQ1 segment shall contain one instance of field *TQ1-1-set ID*.

Length of Field *TQ1-1-Set ID*

1. The length of field *TQ1-1-set ID* shall be 1 character.

Contents of Field *TQ1-1-Set ID*

1. Field *TQ1-1-set ID* shall contain the value **1**.

Field *TQ1-9-Priority*

Presence of Field *TQ1-9-Priority*

1. The TQ1 segment shall contain one instance of field *TQ1-9-priority*.

Length of Field *TQ1-9-Priority*

1. The length of field *TQ1-9-priority* shall be 1 character.

Contents of Field *TQ1-9-Priority*

1. Field *TQ1-9-priority* shall contain the value **R** (routine).

OBR (Observation Request) Segment- Presence of OBR Segment

1. Each HL7 order message produced by VistA shall contain one OBR segment immediately following the TQ1 segment.

Contents of OBR Segment- Field *OBR-1-Set ID*

Presence of Field *OBR-1-Set ID*

1. The OBR segment shall contain one instance of field *OBR-1-set ID*.

Length of Field *OBR-1-Set ID*

1. The length of field *OBR-1-set ID* shall be 1 character.

Contents of Field *OBR-1-Set ID*

1. Field *OBR-1-set ID* shall contain the value **1**.

Field *OBR-2-Placer Order Number*

Presence of Field *OBR-2-Placer Order Number*

1. The OBR segment shall contain one instance of field *OBR-2-placer order number*.

Length of Field *OBR-2-Placer Order Number*

1. The length of field *OBR-2-placer order number* shall be between 1 and 22 characters inclusive.

Contents of Field *OBR-2-Placer Order Number*

1. Field *OBR-2-placer order number* shall contain the internal entry number of the accession on the VistA LAB DATA File (#63).

Field *OBR-4-Universal Service Identifier*

Presence of Field *OBR-4-Universal Service Identifier*

1. The OBR segment shall contain one instance of field *OBR-4-universal service identifier.*

Length of Field *OBR-4-Universal Service Identifier*

1. The length of field *OBR-4-universal service identifier* shall be between 1 and 250 characters inclusive.

Component Structure of Field *OBR-4-Universal Service Identifier*

Contents of Component 1 of Field *OBR-4-Universal Service Identifier*

1. The first component of field *OBR-4-universal service identifier* shall contain either the name of the requested procedure, or its internal entry number on the LABORATORY TEST File (#60).

Contents of Component 2 of Field *OBR-4-Universal Service Identifier*

1. The second component of field *OBR-4-universal service identifier* shall contain the name of the requested procedure.

Contents of Component 3 of Field *OBR-4-Universal Service Identifier*

1. If, and only if, the first component of field *OBR-4-universal service identifier* is an internal entry number on the VistA LABORATORY TEST File (#60), the third component shall be present and shall be valued **VISTA60**.

Field *OBR-16-Ordering Provider*

Presence of Field *OBR-16-Ordering Provider*

1. The OBR segment shall contain one instance of field *OBR-16-ordering provider*.

Length of Field *OBR-16-Ordering Provider*

1. The length of field *OBR-16-ordering provider* shall be between 1 and 250 characters inclusive.

Component Structure of Field *OBR-16-Ordering Provider*

1. Field *OBR-16-ordering provider* shall contain four components.

Contents of Component 1 of Field *OBR-16-Ordering Provider*

1. The first component of field *OBR-16-ordering provider* shall contain the internal entry number on the VistA NEW PERSON file (#200) of the provider who ordered the transaction.

Contents of Component 2 of Field *OBR-16-Ordering Provider*

1. The second component of field *OBR-16-ordering provider* shall contain the last name of the provider who ordered the transaction*.*

Contents of Component 3 of Field *OBR-16-Ordering Provider*

1. The third component of field *OBR-16-ordering provider* shall contain the first name of the provider who ordered the transaction*.*

Contents of Component 4 of Field *OBR-16-Ordering Provider*

1. The fourth component of field *OBR-16-ordering provider*, if present, shall contain the middle name(s) of the provider who ordered the transaction*.*

Field *OBR-17-Call Back Phone Number*

Presence of Field *OBR-17-Call Back Phone Number*

1. The OBR segment shall contain between 1 and 8 instances inclusive of field *OBR-17-call back phone number*, if phone numbers are available for the provider in fields .131 through .138 of the VistA NEW PERSON File (#200).

Length of Field *OBR-17-Call Back Phone Number*

1. The length of each instance of field *OBR-17-call back phone number* shall be between 1 and 250 characters inclusive.

Component Structure of Field *OBR-17-Call Back Phone Number*

1. Each instance of field *OBR-17-call back phone number* shall contain 12 components.

Contents of Component 1 of Field *OBR-17-Call Back Phone Number*

1. For each instance of field *OBR-17-call back phone number* that is present, the first component shall be empty.
2. 1.3.6.2.5.3.2 Contents of Component 2 of Field *OBR-17-Call Back Phone Number*
3. For each instance of field *OBR-17-call back phone number* that is present, the second component, if valued, shall contain the value **PRN** (principal residence number), **WPN** (work phone number), or **BPN** (beeper number).

Contents of Component 3 of Field *OBR-17-Call Back Phone Number*

1. For each instance of field *OBR-17-call back phone number* that is present, the third component shall contain the value **PH** (phone), **FX** (fax), or **BP** (beeper).

Contents of Components 4 Through 11 of Field *OBR-17-Call Back Phone Number*

1. For each instance of field *OBR-17-call back phone number* that is present, the fourth through eleventh components shall be empty.

Contents of Component 12 of Field *OBR-17-Call Back Phone Number*

1. For each instance of field *OBR-17-call back phone number* thatis present, the twelfth component shall contain the unformatted phone number.

SPM (Specimen Information) Segment

Presence of SPM Segment

1. Each HL7 order message produced by VistA shall contain, immediately following the OBR segment, one SPM segment for each specimen in the accession.

Contents of SPM Segment

Presence of Field *SPM-1-Set ID*

1. The SPM segment shall contain one instance of field *SPM-1-set ID*.

Length of Field *SPM-1-Set ID*

1. The length of field *SPM-1-set ID* shall be 1 character.

Contents of Field *SPM-1-Set ID*

1. Field *SPM-1-set ID* shall contain the ordinal value of the SPM segment in the message. For the first SPM segment in the message, the value shall be **1** ; for the second, **2**; etc.

Field *SPM-2-Specimen ID*

Presence of Field *SPM-2-Specimen ID*

1. The SPM segment shall contain one instance of field *SPM-2-specimen ID*.

Length of Field *SPM-2-Specimen ID*

1. The length of field *SPM-2-specimen ID* shall be between 1 and 80 characters inclusive.

Contents of Field *SPM-2-Specimen ID*

1. Field *SPM-2-specimen ID* shall contain the accession identifier.

Field *SPM-14-Specimen Description*

Presence of Field *SPM-14-Specimen Description*

1. The SPM segment shall contain one instance of field *SPM-14-specimen description*.

Length of Field *SPM-14-Specimen Description*

1. The length of field *SPM-14-specimen description* shall be between 1 and 250 characters inclusive.

Contents of Field *SPM-14-Specimen Description*

1. Field *SPM-14-specimen description* shall contain the value of the SPECIMEN field (#.01) of the SPECIMEN sub-field of the EM (#63.02), SURGICAL PATHOLOGY (#63.08), or CYTOPATHOLOGY (#63.09) sub-field of the LAB DATA file (#63).

OBX (Observation Results) Segment

Presence of OBX Segment

1. Each HL7 order message produced by VistA shall contain an OBX segment corresponding to each of the following specimen attributes, if information about that attribute is available:
   1. SUBSPECIALTY
   2. BLOCK TYPE/STAGE
   3. BLOCK ID
   4. PROCEDURE ID
   5. SLIDES/SECTIONS PREPARED
   6. CONTROL SLIDES
   7. DATE/TIME SLIDES/SECTIONS PREPARED
   8. DATE/TIME SLIDES/SECTIONS EXAMINED
   9. SLIDES/SECTIONS COUNTED
   10. NEW SLIDES/SECTIONS
   11. SLIDES/SECTIONS EXAMINED
   12. NON-CONTROL SLIDES/SECTIONS COUNTED
   13. PRINTS MADE
   14. DATE/TIME PRINTS MADE
   15. PRINTS COUNTED
   16. EXAMINED SECTIONS COUNTED

Contents of OBX Segment

Field *OBX-1-Set ID*

Presence of Field *OBX-1-Set ID*

1. Each OBX segment shall contain one instance of field *OBX-1-set ID*.

Length of Field *OBX-1-Set ID*

1. The length of field *OBX-1-set ID* shall be 1 character.

Contents of Field *OBX-1-Set ID*

1. Field *OBX-1-set ID* shall contain the ordinal value of the OBX segment in the message. For the first OBX segment in the message, the value shall be **1** ; for the second, **2**; etc.

Field *OBX-2-Value Type*

Presence of Field *OBX-2-Value Type*

1. Each OBX segment shall contain one instance of field *OBX-2-value type*.

Length of Field *OBX-2-Value Type*

1. The length of field *OBX-2-value type* shall be between 1 and 3 characters inclusive.

Contents of Field *OBX-2-Value Type*

1. Field *OBX-2-value type* shall contain the code for the HL7 data type of the attribute whose name appears in field *OBX-3-observation identifier* and whose value appears in field *OBX-5-observation value*: either **CWE** (coded with exceptions), **DTM** (date/time), **NM** (numeric), or **ST** (string).

Field *OBX-3-Observation Identifier*

Presence of Field *OBX-3-Observation Identifier*

1. Each OBX segment shall contain one instance of field *OBX-3-observation identifier*.

Length of Field *OBX-3-Observation Identifier*

1. The length of field *OBX-3-observation identifier* shall be between 1 and 250 characters inclusive.

Component Structure of Field *OBX-3-Observation Identifier*

Contents of Component 1 of Field *OBX-3-Observation Identifier*

1. The first component of field *OBX-3-observation identifier* shall be empty.

Contents of Component 2 of Field *OBX-3-Observation Identifier*

1. The second component of field *OBX-3-observation identifier* shall contain the name of the attribute whose value appears in field *OBX-5-observation value*.

Contents of Components 3 through 6 of Field *OBX-3-Observation Identifier*

1. The third through sixth components of field *OBX-3-observation identifier* shall be empty.

Field *OBX-5-Observation Value*

Presence of Field *OBX-5-Observation Value*

1. Each OBX segment shall contain one instance of field *OBX-5-observation value*.

Length of Field *OBX-5-Observation Value*

1. Field *OBX-5-observation value* shall be of any length.

Contents of Field *OBX-5-Observation Value*

1. Field *OBX-5-observation value* shall contain the value of the attribute whose name appears in field *OBX-3-observation identifier*. Its structure shall correspond to the HL7 data type whose code appears in field *OBX-2-value type*.

Field *OBX-11-Observation Result Status*

Presence of Field *OBX-11-Observation Result Status*

1. Each OBX segment shall contain one instance of field *OBX-11-observation result status*.

Length of Field *OBX-11-Observation Result Status*

1. The length of field *OBX-11-observation result status* shall be 1 character.

Contents of Field *OBX-11-Observation Result Status*

1. Field *OBX-11-observation result status* shall contain the value **O** (order detail description only, no result).

Field *OBX-14-Date/Time of the Observation*

Presence of Field *OBX-14-Date/Time of the Observation*

1. Each OBX segment shall contain one instance of field *OBX-14-date/time of the observation*, if the observation has a date and time on file.

Length of Field *OBX-14-Date/Time of the Observation*

1. If field *OBX-14-date/time of the observation* is valued, its length shall be between 1 and 26 characters inclusive.

Contents of Field *OBX-14-Date/Time of the Observation*

1. Field *OBX-14-date/time of the observation* shall contain the date that the attribute value was obtained in format YYYYMMDD, followed by the time that the attribute value was obtained in format HHMM, followed by the offset of the time zone of the originating VistA system from Universal Coordinated Time, structured as either plus sign (+) or minus sign (-) followed by hours and minutes in format HHMM.

IPC (Imaging Procedure Control) Segment

Presence of IPC Segment

1. Each HL7 order message produced by VistA shall contain an IPC segment immediately following the OBX segment(s), if any, following the SPM segment.

Contents of IPC Segment

Field *IPC-1-Accession Identifier*

Presence of Field *IPC-1-Accession Identifier*

1. The IPC segment shall contain one instance of field *IPC-1-accession identifier*.

Length of Field *IPC-1-Accession Identifier*

1. The length of field *IPC-1-accession identifier* shall be between 1 and 22 characters inclusive.

Contents of Field *IPC-1-Accession Identifier*

1. Field *IPC-1-accession identifier* shall contain the internal entry number of the accession on the VistA LAB DATA File (#63).

Field *IPC-2-Requested Procedure ID*

Presence of Field *IPC-2-Requested Procedure ID*

1. The IPC segment shall contain one instance of field *IPC-2-requested procedure ID*.

Length of Field *IPC-2-Requested Procedure ID*

1. The length of field *IPC-2-requested procedure ID* shall be between 1 and 22 characters inclusive.

Contents of Field *IPC-2-Requested Procedure ID*

1. Field *IPC-2-requested procedure ID* shall contain the internal entry number of the accession on the VistA LAB DATA File (#63).

Field *IPC-3-Study Instance UID*

Presence of Field *IPC-3-Study Instance UID*

1. The IPC segment shall contain one instance of field *IPC-3-study instance UID*.

Length of Field *IPC-3-Study Instance UID*

1. The length of field *IPC-3-study instance UID* shall be between 1 and 70 characters inclusive.

Contents of Field *IPC-3-Study Instance UID*

1. Field *IPC-3-study instance UID* shall contain the value of the UID ROOT field (#1) of the VistA DICOM UID ROOT file (#2006.15), followed by **.1.5.**, followed by the station number as defined by VA Kernel functions with alpha characters converted to their ASCII decimal equivalents, followed by dot (**.**), followed by the internal entry number of the accession on the VistA LAB DATA File (#63).

Field *IPC-4-Scheduled Procedure Step ID*

Presence of Field *IPC-4-Scheduled Procedure Step ID*

1. The IPC segment shall contain one instance of field *IPC-4-scheduled procedure step ID*.

Length of Field *IPC-4-Scheduled Procedure Step ID*

1. The length of field *IPC-4-scheduled procedure step ID* shall be between 1 and 22 characters inclusive.

Contents of Field *IPC-4-Scheduled Procedure Step ID*

1. Field *IPC-4-scheduled procedure step ID* shall contain the internal entry number of the accession on the VistA LAB DATA File (#63).

### Requirements for Telepathology - Innovation 873

1. The Telepathology Application shall interface with Whole Slide Imaging Vendors Systems and Robotics Streaming systems.
2. The Telepathology Worklist shall develop a method to launch the third party vendor viewer automatically.
3. Authorized users shall be able to assign priority at the Telepathology Worklist level when using the consultation functionality.
4. The Telepathology Application shall allow for “Method” and “Priority” to be selected as means of sort, filter and implement as dynamic fields.
5. The Telepathology Application shall allow for a 5 digit site identifier to be implemented as a prefix in the accession number.
6. The Telepathology Application shall provide a method that will allow consultations to be requested from pathologists to pathologist.
7. Users shall be able to search for CPT codes.
8. The Telepathology Worklist shall automatically refresh when a new case is accessioned or when a change to the case occurs.
9. The Telepathology Report Editor shall support the use of dictation/transcription technology.

### VITA shall provide a centralized Telepathology Worklist for all anatomic pathology cases. (TPWL)

1. The Telepathology Worklist shall include unread cases from other sites for which they are configured to perform primary interpretations.
2. The Telepathology Worklist shall include unread cases from site for which it is providing consultations.
3. The Telepathology Worklist shall provide a mechanism to request consultations on a completed case.
4. The Telepathology Worklist shall provide a user the ability to edit a report.
5. The Telepathology Worklist shall provide a list of anatomic pathology cases for a selected patient.
   1. The Telepathology Worklist shall display all unread cases for a selected patient.
   2. The Telepathology Worklist shall provide a user the ability to edit a report.
   3. The Telepathology Worklist shall display all verified/released cases for a selected patient.
6. The Telepathology Worklist shall display a list of verified/released cases from other sites for which they are configured to perform primary interpretations..
7. The Telepathology Worklist shall display a list of verified/released cases from site in which it is supporting for consultation requests.
8. A user shall be able to edit a note on a case. (Postponed requirement)
9. A user shall be able to remove a note from a case. (Postponed requirement)

### VITA shall provide a Telepathology Report Editor for completing pathology reports. (TPR)

1. Users of the Telepathology Report Editor shall be able to enter data for a report for Surgical Pathology (SP), Cytopathology (CY), and Electron Microscopy (EM) Anatomic Pathology cases.
2. The Telepathology Report Editor window shall display these fields:
   1. Patient Name
   2. Patient ID
   3. Date Specimen was received
   4. Date Completed
   5. Submitted By
   6. Pathologist
   7. Resident/Technician
   8. Accession Number
   9. Practitioner
3. The Telepathology Report Editor shall allow for updates to the Pathologist, Resident/Technician and Practitioner fields.
4. Users shall be able to view verified/released report data for a selected case.
5. Default report templates shall be provided for Surgical Pathology (SP), Electron Microscopy, and Cytopathology (CY).
6. For interpretations a user shall be able to save the main report for a selected case.
   1. Users shall be able to complete the main report
   2. Users shall be able to edit the main report data
   3. Users shall be able to remove report data from the main report.
7. Main Report Data shall be stored on the acquisition site’s VistA database.
8. All required report fields shall be identified with an asterisk within the main screen of the Telepathology Report Editor
9. The field Gross Description shall be required for all reports.
10. Authorized users shall be able to verify and release reports directly from the Telepathology Report Editor.
11. The Telepathology Report Editor shall allow for electronic signatures.
12. For sites that do not utilize electronic signatures a user may verify and release a report with the proper credentials.
13. All verified/released report data shall be viewable as read only.
14. When the main report has been verified and released the Telepathology Report Editor shall provide the user an option to send an email message to additional parties.
15. This message shall be generated after the report has been verified released.
16. The message shall display the accession number in the subject line.
17. The Telepathology Report Editor shall allow for a user to create and verify a supplementary report for a selected case.
    1. The supplementary report shall be attached to the main report.
    2. The user shall be able to create a supplementary report for any case.
    3. The user shall be able to edit a supplementary report.

### The Telepathology Configurator shall allow for site configuration. (TPC)

1. The Telepathology Configurator shall provide a mechanism that allows a site to manage remote sites for which they read.
   1. A user shall be able to select a site from a list of all available sites to add to the list of remote sites for which they read.
   2. The Telepathology Configurator shall allow for a user to modify the active/inactive status of a remote site for which they read.
   3. The Telepathology Configurator shall allow for a user to delete a site from the list of remote sites for which they read.
2. The Telepathology Configurator shall provide a mechanism that allows a site to manage remote sites that read for them.
   1. The Telepathology Configurator shall allow a user to select a site from a list of all available sites to add to the list of remote sites that read for them.
   2. The Telepathology Configurator shall allow for a user to modify the active/inactive status of remote sites that read for them.
   3. The Telepathology Configurator shall allow for a user to identify the type of service (interpretation/consultation) that the remote site is providing.
   4. The Telepathology Configurator shall allow for a user to delete a site from the list of remote sites that reads for them.
3. The Telepathology Configurator shall provide a mechanism that allows a site to configure its report templates.
   1. The Telepathology Configurator shall allow for a site to configure an SP template.
   2. The Telepathology Configurator shall allow for a site to configure an EM template.
   3. The Telepathology Configurator shall allow for a site to configure a CY template.
   4. The Telepathology Configurator shall allow users to identify fields that will be included on the report from a list of available fields.
   5. The Telepathology Configurator shall allow users to identify fields that are required.
   6. The Telepathology Configurator shall prevent the Gross Description field from being removed from the list of required fields.
   7. The Telepathology Configurator shall allow for the user to change the order in which the fields appear on the report.
   8. The Telepathology Configurator shall allow for the user to save the template.
4. A user shall be able to edit the Report editor lock duration.
5. The Telepathology Configurator shall allow for the site specific changes to be saved.

### VITA shall support the ability to enter necessary coding that is completed by pathologists. (CODE)

1. Shall provide a user the mechanism to enter System Nomenclature of Medicine Clinical Terms (SNOMED) and Clinical Procedure Terminology (CPT) codes directly from the Telepathology Report Editor on the Coding Tab.
2. Users shall be able to associate SNOMED codes to a report.
   1. The user shall be able to add SNOMED codes.
   2. The user shall be able to search for SNOMED codes.
   3. The user shall be able to delete SNOMED codes from a report.
3. Users shall have the ability to assign CPT codes for a case.
   1. The user shall have the ability to add CPT codes.
   2. The user shall have the ability to enter a CPT code and apply a multiplying factor.
4. When the CPT coding is completed, the Telepathology Report Editor shall provide a confirmation message stating the status of each code entry.
5. All CPT and SNOMED codes shall be saved to the VistA database where the case being worked on is located.
6. The user shall be required to enter a facility location when assigning CPT codes.

### The VITA shall support the need for consultative services within pathology. (CONSULTS)

1. The Telepathology Worklist shall provide a method for requesting consultations for a case.
2. The Telepathology Worklist shall provide the ability for a user to request a consultation from one or more sites.
3. A user may recall a consultation after it has been requested.
4. A user may complete a consultation.
5. A user may decline a consultation.
6. The Telepathology Worklist shall display the consultation status.
7. The consultation status field shall be set to pending if the request has not completed.
8. The consultation status field shall be set to completed when the consulting site completes the report.
9. The consultation status field shall be set to decline when a site has declined the consultation.
   1. For a consultation, the user shall only be able to enter data within the supplementary report.
   2. The consulting site shall be able to view the main report data as read only.
   3. A user shall be able to create a supplementary report.
   4. A user shall be able to edit a supplementary report.
   5. An authorized user shall be able to complete the supplementary report.
   6. The completed supplementary report shall include the user’s name, site and date of completion.
   7. The supplementary report information shall be stored into the acquisition site’s VistA database.
   8. Upon completion of a consultation, the Telepathology Report Editor shall generate a new report.
   9. The reference report shall be saved to the local database.
   10. The reference report shall be verified and released.
   11. The reference report shall reference back to the main report at the acquisition site.
   12. The status of the consultation status shall be updated to complete.
   13. When a consultation is requested for a patient that is not registered in the consultation site’s VistA system, VITA shall send a message requesting the patient be registered at the consulting site.

## Graphical User Interface (GUI) Specifications

Specifications for this section are addressed in sections 2.6.1 and 2.6.2.

## Multi-Divisional Specifications

N/A

## Performance Specifications

VITA shall run on Windows 7 and Windows XP.

## Quality Attributes Specifications

VITA shall follow the Quality Attribute Specifications.

## Reliability Specifications

N/A

## Scope of Integration

For MAG\*3.0\*138 it will be necessary to develop integration agreements with VHA VistA packages.

For VHA, Integration Agreements (IA) will be obtained with the party associated with maintaining the current VistA Laboratory code. This IA is required to help facilitate the population of cases onto the Telepathology Worklist with accession numbers and information at the time they are accessioned into the VistA Laboratory Package.

Additional IA’s will be required once interfaces with the DPS vendors are implemented within phase two of this project. It is expected that an integration agreement will be required with the existing DPS vendors within the VHA.

## Security Specifications

|  |  |
| --- | --- |
| The following security keys are necessary for access to VITA and are role based access keys. MAG SYSTEM | Provides the system administrator access to the VITA applications as well as transaction and error message logs. |
| LR LAB | Required for access to the Lab system. |
| LR VERIFY | Required to verify and release pathology reports. |
| MAGTP WORKLIST MGR | Secondary menu option that is required to access the Telepathology Worklist. |

## System Features

System Features can be found in Section 1.1 and within the Functional Requirements listed above in section 2.6.1-2.6.6.

## Usability Specifications

N/A

# Applicable Standards

# Interfaces

## Communications Interfaces

Communications are facilitated by the VIX within the VistA Imaging Service Architecture (VISA).

## Software Interfaces

There are no external software interfaces in place with this project at this time.

## User Interfaces

There are no external user interfaces in place with the project at this time.

# Legal, Copyright, and Other Notices

# Purchased Components

There are no purchased components for this project.

# User Class Characteristics

There are no changes to the current user class characteristics at this time.

# Estimation

Function Point Analysis Results Table

**Function Point Analysis Results Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Project Software Functional Size and Size-based Effort and Duration Estimate** | | | | | | |
|  | **Application** | | | | |  |
| **Item** | **A** | **B** | **C** | **D** | **E** | **Total** |
| **Counted Function Points** |  |  |  |  |  |  |
| **Estimated Scope Growth** |  |  |  |  |  |  |
| **Estimated Size At Release** |  |  |  |  |  |  |
| **Size-based Effort Estimates** | | | | | **Labor Hours** | **Probability** |
| **Low Effort estimate – with indicated probability, project will consume no more than:** | | | | |  |  |
| **High Effort estimate -- with indicated probability, project will consume no more than:** | | | | |  |  |
| **Size-based Duration Estimates** | | | | | **Work Days** | **Probability** |
| **Low Duration estimate – with indicated probability, project will consume no more than:** | | | | |  |  |
| **High Duration estimate -- with indicated probability, project will consume no more than:** | | | | |  |  |

|  |
| --- |
| **[Insert Cumulative Probability (“S-curve”) Charts here]** |

# Attachment A – Approval Signatures

This section is used to document the approval of the Requirements Specification Document during the Formal Review. The review should be ideally conducted face to face where signatures can be obtained ‘live’ during the review however the following forms of approval are acceptable:

1. Physical signatures obtained face to face or via fax

2. Digital signatures tied cryptographically to the signer

3. /es/ in the signature block provided that a separate digitally signed e-mail indicating the signer’s approval is provided and kept with the document

The Chair of the governing Integrated Project Team (IPT), Business Sponsor, IT Program Manager, and the Project Manager are required to sign. Please annotate signature blocks accordingly.

REVIEW DATE:

SCRIBE:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signed: Date:

Larry Carlson*, Integrated Project Team (IPT) Chair*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signed: Date:

Adam Darkins MD*., Business Sponsor*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signed: Date:

*<IT Program Manager>*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signed: Date:

*<Project Manager>*