

Laboratory Data Sharing and Interoperability

LEDI IV Patch

Version 1.6

Software Design Document (SDD)







VA Emblem






March 2013

Revision History




Date	Revision	Description	Author
Sep 2005	0.1	Initial Draft	[REDACTED]
Oct 2005	0.2	Added technical detail from Developers	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
Oct 2011	0.3	<ul style="list-style-type: none"> - Inserted File 63 Remediation SDD since the LR *5.2*404 patch has been included within the November, 2011 BETA Preparatory Patch to SQA - Removed all DOD & CHCS related references since the Cerner Lab Info Management System will be handling those communications. - Indicated that all electronic Anatomic Pathology and Microbiology orders and results are not in the LEDI IV software and will not be until the LSRP install occurs in Increment 6. - Added in Functional changes arising from 5 Change Requests and Code Change Requests. 	[REDACTED]
Oct 2011	0.4	<ul style="list-style-type: none"> -Reviewed with LEDI IV DEV Team. -Modified the new CRs removing two of them per Developer Input. -Added two more New CRs from a Second Developer 	[REDACTED]
Oct 2011	0.5	<ul style="list-style-type: none"> - Per Development, the SNOMED CT Codes belong as new functionality in the SDD. Patch LR 346 did not cover the SNOMED CT codes so they are new to LEDI IV/LDSI. -Matched the SNOMED CT Code requirements between the SRS and the SDD by copying over all of the LEDI IV/LDSI active SNOMED CT requirements from the SRS to the SDD. - Removed SNOMED CT Requirements 35 and 36 since these two requirements for SNOMED CT Codes are covered in the LEX *2*41 patch. - Added Code CR 5504 per Development. 	[REDACTED]
Nov 2011	0.6	Input from Development team	Dev Team

Nov 2011	0.7	<p>-Accepted Changes Preparatory to Sending Out SDD for Final Review.</p> <p>-Removed the “end-user” aspect of File 63 --- Remediation since the tool will clean up the errors automatically.</p>	
Nov 2011	0.8	<p>-Marked up some items that need to be modified to reflect the auto-run of File 63 Remediation.</p> <p>-Added input from Dev team for final review.</p> <p>-Added in several requirements from the LOINC section of the SRS to the SDD.</p> <p>-Added files/fields from the Patch Des to the SDD that are not already covered</p> <p>-Removed duplicate Acronym table from SDD. Removed a VUID-related requirement on that no one could verify.</p>	
Nov 2011	0.8	<p>-Removed VUID reference from SNOMED enhancements.</p> <p>-Removed VUID requirements #31 and #32.</p> <p>-Renumbered remaining requirements.</p>	
Jun 2012	0.9	Signatures obtained per ProPath requirement	
Jun 2012	1.0	All signatures obtained	
Oct 2012	1.1	<p>Updated to reflect the halting of the LSRP Cerner project as well as changes to how File 63 Remediation functions.</p> <p>Removed the “AP and MICRO” from the patch name since AP and MICRO will not be a part of LEDI IV V20.</p> <p>Also removed the sentence that indicates that File 63 remediation is required for LEDI Interface to function. That is no longer true.</p> <p>Added patch HDI*1*7 to the combined patch list for LEDI IV.</p> <p>Removed the dependency on the STS SMOMED CT release. This functionality will be delivered in the follow up LEDI IV update patch,</p> <p>. Removed the “Beta Preparatory Patch” from the title as well as from several paragraphs within the SDD.</p> <p>Also, removed “LDST” from several places in the SDD since that is redundant.</p>	

		<p>Input from SQA on the changes made since June, 2012:</p> <p>Under section 1.2, added the list of patches to be included in this combined build,</p> <p>Added what is out of scope (LOINC) for this combined patch,</p> <p>Removed “Microbiology” from routine LRWLST11,</p> <p>Entered Functional Req. # 29 to the Data Dictionary requirement 4.2.1.16,</p> <p>Added “Lab Mapping” and a description to Design requirement 4.2.1.21,</p> <p>Added “Reprocess HL7” to design requirement 4.2.1.23,</p> <p>Added “the Developer” ” in sections 4.2.2.16.1 & in 4.2.2.26,</p> <p>Added detail to section 2.1.3 about communication interfaces,</p> <p>Updated the File 63 Remediation functional requirements to match the SRS,</p> <p>Updated font size in requirement section 3.2,</p> <p>Per Development:</p> <p>Added “on the first of the month” to Functional Requirement number 1 under File # 63 remediation.</p> <p>Tech Writer:</p> <p>Clarified under Section 5.4 that the File 63 Remediation functionality is now a part of the LEDI IV SRS.</p> <p>Format clean-ups.</p> <p>Added new signature page.</p> <p>Removed the new signature page and replaced it with the prior signature page. No need to redo them.</p>	
Oct 2012	1.2	<p>Initial revisions added for the LEDI IV Update patch. The CRs and CCRs are listed below.</p> <p>Version 1.3, November 2012 Updated with LEDI IV Update 1, (LR*5.2*427/LA*5.2*80) Requirements.</p> <p>8555: Skip AP Accession Number</p>	

		<p>8556: Move Pathologist signature on AP report.</p> <p>8693: Enable AP MICRO interface.</p>	
Oct 2012	1.3	<p>Removed Note #2 in section 1.2 about AP/Micro being out of scope.</p> <p>Added reference to patch LR*5.2*427 and LA*5.2*80 for enabling AP/Micro orders and results in 2.1.</p> <p>Added LEDI IV Update patches as a dependency in section 2.4.</p> <p>Added various missing Micro requirements from the latest updated SRS v2.2 into section 3.2.1.</p> <p>Added various missing AP requirements from the latest updated SRS v2.2 into section 3.2.2.</p> <p>Removed section 3.2.3.8 Functional Requirement 36 on page 49, regarding un-editable field .01 for files 61, 61.2, and 62.</p> <p>Removed one sentence from section 3.2.3.11 Functional Requirement 39 on page 50, regarding un-editable field .01 for files 61, 61.2, and 62.</p>	
Oct 2012	1.3	<p>Added CCR 8554 Enable editing of the NAME (.01) fields in files 61, 61.2 and 62 to the list of CCRs</p> <p>Updated the logic for CCR 8555 to match that of the SRS.</p> <p>Added a Note to the Purpose Section listing the Update 1 patch numbers and a brief description of what is included in this update patch.</p> <p>Renumbered the sequence of design requirements to accommodate the new ones added by Patrick Hua.</p> <p>Completed a spell check.</p> <p>Did not re-sequence the T.O.C. yet to ensure traceability for SQA and to ensure the readers understand that the numbering sequence followed what was done for LEDI IV.</p>	
Oct 2012	1.3	<p>Incorporated PM feedback:</p> <p>Accepted the minor removal revisions done by a PM to make subsequent reviews more easy,</p> <p>Made <i>VistA</i> look consistent throughout,</p> <p>Made MICRO look consistent throughout (except where the <i>VistA</i> options were specified in one</p>	

		<p>section),</p> <p>Updated note in Para 1.1.</p> <p>Removed two requirements that were not valid for File #63.5 and File #63.6.</p>	
Nov 2012	1.3	<p>Dev approved SDD after the title page was updated to reflect the original patch numbers.</p> <p>Removed all references to “Update 1.”</p>	
Dec 2012	1.4	<p>Removed names from the Center column of this table.</p> <p>Made revision history date format consistent.</p> <p>Added “Constraints” paragraph in File 63 Remediation Addendum</p>	
Jan 2013	1.5	<p>The SDD now includes both the first and second LEDI IV Update which is identified by patch numbers LR*5.2*427/LA*5.2*80.</p> <p>Section 2.2.5: Added Code CR4828 Option to check SCT mappings against the Lexicon to the list.</p> <p>File 63 Remediation Addendum Functional Requirements Section: Replaced LDSI with “LEDI” to make the SDD consistent with the SRS.</p> <p>Requirement # 36: Added that Collection Sample “Can be any entry in File #62”.</p> <p>Requirement #46: Removed the word “generic” from the sentence.</p> <p><u>LRAP VR Definition Table:</u> Added “If user indicates “No” at the Accept prompt, that means the results are rejected.</p> <p><u>Throughout the SDD:</u> Removed the “1” from Update 1.</p> <p><u>Requirement #86:</u> Made minor update for readability.</p> <p><u>Design Table for Routine LRAPR*:</u> Removed all of point 3 under Modified Logic.</p> <p><u>Section 5.3:</u> Removed “Beta Preparatory” from the Scope</p>	

		<p>sentence. It no longer applies.</p> <p><u>Section 3.2.2.39.1:</u> Per Development, Replaced Routine LRAPLG with LRVRAP4,</p> <p>Removed all “TBD” entries from Routine LRAPR</p> <p>Accepted revisions from PM. Marked the changes from the prior patch in yellow for ease of review.</p> <p>Removed the sentence that read “New Additions from the LEDI IV/LDSI SRS dated Oct., 2011. No longer relevant.</p>	
Feb 2013	1.6	<p>Added additional Micro routines to section 3.2.1.25.1 (Entry points).</p> <p>Added Data Dictionaries to section 3.2.1.28 (Data Dictionaries).</p> <p>Added AP routine to section 3.2.2.39.1 (Entry points).</p> <p>Added SNOMED routines to section 3.2.3.21.1 (Entry points).</p> <p>Added Option to section 3.2.3.31 (Options).</p> <p>Added additional AP routines to section 3.2.2.39.</p> <p>Added routines to sections 9.2.1 and 9.2.2.</p>	
Mar 2013	1.6	<p>Closed the open item on Requirement # 72.</p> <p>Per PM, removed any reference to “maintenance” patch and replaced it with “update” patch.</p>	
May 2013	1.6	<p>Completed some Section 508 Remediation steps.</p>	

Approval Signatures

This section is used to document the approval of the Software Design 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
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1. Introduction

1.1. Purpose

The purpose of this Software Design Document (SDD) is to describe the technical requirements for the Laboratory Data Sharing and Interoperability (LDSI) enhancement pilot project. LDSI is the name of the Veterans Affairs (VA) project for electronic laboratory data sharing. This project supports bi-directional interface.

The targeted audience of this SDD includes Veterans Affairs development teams, Contractor development team personnel, VA Lab stakeholders (Program Office personnel and *VistA* Lab subject matter experts (SMEs) as well as technical experts and *VistA* Data Systems & Integration (VDSI reviewers).

VA management has determined that the features of the File 63 (Lab Data results file) remediation should be included within this patch. There are also several Change Requests as well as Code Change Requests arising from the Alpha test that are included in this SDD.

LDSI also corrects system defects that have an impact upon the applications (such as errors in anatomic pathology interpretation signatures), and remediates direct global call retirements that affect the *VistA* lab package.

NOTE: This 2013 SDD is an updated version of LEDI IV SDD. The LEDI IV Update patch consists of two maintenance fixes as well as the enhancement to allow Anatomic Pathology and Microbiology (AP/MICRO) orders and results to be sent and received electronically. Additionally, some of the functionality (AP/MICRO interface) that had been removed from this SDD for the LEDI IV nationally released software is now being put back in. The maintenance Change Requests are included in this Software Design Document.

1.2. Scope

The software patches to be developed for LEDI IV are as follows:

- LR*5.2*350
- LA*5.2*74
- HDI*1.0*7

The software patches to be developed for LEDI IV Updates are as follows:

- LR*5.2*427
- LA*5.2*80

This design document will support and document the functionality as specified in the software requirements document (SRS) that LEDI IV and LEDI IV Updates provide for the electronic sharing of lab data between VA *VistA* Laboratories and Commercial Reference Labs and the Laboratory System.

NOTE: The Lab Standardization (STS) team will install the LDSI API (Application Programmer Interface) Standardization in conjunction with the LEXICON LOINC release to the test sites. Therefore, this functionality is out of scope for this SDD.

1.3. Definitions and Acronyms

1.3.1. Definitions

Term	Definition
Backdoor method	The term is used to describe the process of ordering laboratory tests directly into the Laboratory application by one of the Laboratory options. The suggested or correct manner of ordering entails placing the order into the <i>VISTA</i> Clinical Patient Record System (CPRS).
E3R	The Electronic Error and Enhancement Report system is located on the VA FORUM mail system. The utility provides tools for entering, tracking and reporting enhancement requests for <i>VISTA</i> packages.
FORUM	VA's national electronic mail system is used for electronic discussions, conferences, distribution of VA directives, news, and computer programs. In addition to network mail, FORUM also hosts several national databases. A national communications system that is used within the Department of Veterans Affairs. In addition to network mail, FORUM hosts several national databases that include: Physician Data Query (PDQ) Cancer Information Database; Performance Excellence Database for sharing quality assurance success stories; National On-Line Information System for tracking problems reported to IRM Field Office specialists; Interlibrary Loan System; National Vacancy File; Facility ADP Plans; DHCP Site implementation System; and E3R System designed for entering Requests for software enhancements. A Physician's Guide for Disability Evaluation Exams is also available.

1.3.2. Acronyms

Acronym	Definition
AP	Anatomic Pathology
API	Application Program Interface
CH	Chemistry
CPRS	Computerized Patient Record System
CY	Cytology
DBS	Database Server
DHCP	Decentralized Hospital Computer Program
E3R	Electronic Error and Enhancement Report
EA	Enter/verify/modify (Autoinstrument) option located in <i>VISTA</i>
EM	Electron Microscopy
EM	Enter/verify/modify (manual) option located in <i>VISTA</i>
ERT	Enterprise Reference Terminology
GUI	Graphic User Interface
HCS	Health Care System

Acronym	Definition
HDI	Health Data and Informatics
HL7	Health Level 7
ICR	Integration Control Registry
IP	Internet Protocol
IPT	Integrated Project Team
LA	Laboratory AutoInstrument
LA7	Laboratory AutoInstrument 7
LEDI	Laboratory Electronic Data Interchange
LEDI III	Laboratory Electronic Data Interchange, version 3
LEDI IV	Laboratory Electronic Data Interchange, version 4
LDSI	Laboratory Data Sharing Interoperability
LIM	Laboratory Information Manager
LIM's	Laboratory Information Manager's
LMI	Local Management Interface
LOINC®	Logical Observation Identifier Names and Codes
M/Cache	MUMPS/Cache
MB	Megabytes
MI	Microbiology
MSM	Micrometrics' Standard MUMPS
MUMPS	Massachusetts General Hospital Utility for Multi-Programming System
NOIS	National On-Line Information Sharing
ORM	HL7 Order Message
ORU	HL7 Result Message (Observation Result Unsolicited)
P&LMS	Pathology & Laboratory Medicine Service
SDD	Software Design Document
SP	Surgical Pathology
SRS	Software Requirements Specification
SMEs	Subject matter experts
STS	Standards & Terminology Services
TCP	Transmission Control Protocol
UID	Unique Identifier assigned to <i>VISTA</i> Laboratory accessions
VA	Veterans Affairs
VAMC(s)	Veterans Affairs Medical Center (s)
VDSI	<i>Vista</i> Data Systems & Integration
VHA	Veterans Health Administration
<i>VISTA</i>	Veterans Health Information System and Technology Architecture
VPN	Virtual Private Network
VSU	VPN Service Unit
WAN	Wide Area Network

1.4. References

1. Software Requirements Specification (SRS), Laboratory Data Sharing Interoperability (LDSI), Phase I (Chemistry (CH)-Subscript Tests), version 1.2, dated March 2004.
2. Requirements Document sent as an attachment named LDSI Phase II Tasks in an Outlook message entitled LDSI/SNOMED Internal Team Call, sent by [REDACTED] dated August 29, 2005.
3. Requirements Document sent as an attachment named LDSI Phase II Tasks in an Outlook message entitled LDSI Phase II/LEDI IV Draft Task List, sent by [REDACTED] dated August 29, 2005.
4. Requirements Document sent as an attachment named LDSI Requirements Microbiology & AP in an Outlook message entitled LDSI Requirements, sent by [REDACTED], dated September 6, 2005.
5. LDSI Microbiology and Anatomic Pathology Laboratory Face –to-Face Team Meeting, September 19-23, 2005 at the Dallas Office of Information.
6. Software Requirements Specification (SRS), Laboratory Data Sharing Interoperability (LDSI), NDAA Pilot Project, MICRO & AP, version 0.1, dated September 2005.

2. Overall Description

2.1. Product Perspective

Laboratory Electronic Data Interchange (LEDI IV) provides Health Level 7 (HL7) bi-directional electronic sharing of lab data between VA *VistA* Laboratories and Commercial Reference Labs and the Laboratory System (aka, "Lab System").

LDSI/LEDI IV corrects system defects that have an impact upon the applications (such as errors in anatomic pathology interpretation signatures), and remediates direct global call retirements that affect the *VistA* lab package.

Note: The sending of Anatomic Pathology (AP) and Microbiology (MICRO) orders and results will be enabled in the LEDI IV Update patches (LR*5.2*427 and LA*5.2*80).

Users build orders, create shipping manifests, close/ship shipping manifest, and verify/ release and modify results into *VISTA* for VA facilities via LEDI.

2.1.1. Hardware Interfaces

No special hardware interfaces are required for LEDI IV.

2.1.2. Software Interfaces

VistA Labs that Use Laboratory System

- LEDI IV Update software will be utilized to send and receive lab orders and results, including MICRO and AP.
- Between Laboratory System and the associated *VistA* database.
- Between Laboratory System and commercial reference labs.

VA Lab to VA Lab Interfaces:

LDSI/LEDI IV enhances the general LEDI III functionality.

For VA to Commercial Reference (external to VA) Lab:

LEDI IV enhances the general LEDI III functionality.

2.1.3. Communications Interfaces

This electronic messaging functionality is based on the Health Level Seven (HL7) Version 2.3 and *VistA* Health Level Seven (HL7) Version 1.6 Standard Specifications.

2.1.4. Memory Constraints

There are no memory constraints for this project.

2.1.5. Special Operations

This functionality does not require any special operations.

2.2. Product Features

This functionality is preparatory for the electronic sending of orders and results for Anatomic Pathology and Microbiology. The creation of these fields that will eventually allow the electronic sending of orders and results is in scope for this Increment 6 SDD. The electronic sending is out of scope.

2.2.1. Enhancements to Microbiology Functionality

- Modify microbiology editing routines to include and provide formatted output to be used by the LEDI application.
- Modify microbiology editing routines to incorporate SNOMED CT and provide formatting for output to the LEDI application.
- Modify the microbiology editing to pass laboratory data including specimen and collection sample codes to the LEDI application.
- Modify the microbiology editing routines to add and map appropriate SNOMED CT codes for Topology and Collection Sample.
- Modify the microbiology to include a routine(s) to interface with the LEDI via the transient global ^LAH, including all appropriate laboratory results and SNOMED CT codes.
- Modify the microbiology editing and accession handling routines to accommodate LOINC and SNOMED CT codes for order/test codes for orderable procedures.
- Modify the microbiology to include a routine(s) to interface with the LEDI by:
- Creation/use of a transient global, ^LAH, to read/store all appropriate laboratory results and SNOMED CT codes in the required format as needed by the LEDI application.
- Modify the microbiology to process data acquired via the intermediate LAH data structure so as to read it from, or store it in, File #63.
- Modify the microbiology accession handling and editing routines to recognize LEDI generated orders. For LEDI generated orders, modify the editing routines to announce completion of LEDI order processing and to store the results in the ^LAH global interface.
- Modify file 63 to add fields for urgency at test level, CPRS order #, and order type-original, reflex, or add-on.
- Modify the following fields in File 63 - Lab Data, field .07 – Order Test field (multiple), shall to include the microbiology data resulting from LEDI generated orders:
 - * .31 UID
 - * .32 Ordering site
 - * .33 Collection site
 - * .34 Host UID
 - * .342 Order Site UID

* .35 Ordered Test

- Modify File #63 and the microbiology editing routines to determine and store preliminary, final and amended changes for each isolate.
- Modify File #63 and the microbiology editing routines to processes and track deletions, additions and/or changes to microbiology results for all microbiology sub-sections.
- Modify file 63 to add isolate id fields for ordering site , and isolate id fields for performing site to organism node in 63.0.
- Modify file 63 to add field for UID. The UID^LRX API is called to generate the UID to store in this field.
- Modify LRWLST11 from hard set of these fields to DBS call.

2.2.2. Enhancements to AP Functionality

- Modify the AP login software to accommodate outgoing HL7 orders.
- Modify the AP login software to add “Specimen Type” prompt in order to allow selection of Topography codes.
- Modify AP login software to include selection of multiple test codes and topography specimen type and generate a default collection sample.
- Modify the AP login software to generate a generic collection sample.
- Modify AP login software to copy the test code entry function from CY and apply it to EM, and SP.
- Modify AP login software allow entry of multiple test codes for all three sections, CY, EM, SP.
- Modify the AP prompt, “Select Accession Number/Pt name:” to accept UID.
- Modify AP login software to call an API that will return UID data to be stored in file #63 and #69.
- Modify the AP login software to apply a default Urgency value that is appropriate for outgoing orders.
- Modify the HL7 message creation software to apply the appropriate SNOMED-CT code mappings.
- Modify the AP verification/release software to retrieve the incoming results from LAH global and present those results in a viewable format for the user to review.
- Modify the AP verification/release software to validate, accept, and then release incoming results.
- Modify the AP verification/release software to determine if results are in-house or incoming from ^LAH.

2.2.3. Enhancements to SNOMED CT Functionality

- Data retrieval and extraction of the following files and submitted to HDR for data standardization of SNOMED codes for Microbiology data:
 - * File 61 - Topography Field
 - * File 61.2 - Etiology Field
 - * File 62 - Collection Sample
 - * File 62.06 - Antimicrobial Susceptibility

- Data retrieval and extraction of the following files and submitted to HDR for data standardization of SNOMED codes for Microbiology data:
 - * File 61 - Topography Field
 - * File 61.2 - Etiology Field
 - * File 62 - Collection Sample
 - * File 62.06 - Antimicrobial Susceptibility
- Modify the *VISTA* Laboratory application to access SNOMED CT data stored in the Lexicon database.
- API(s) shall be provided by the Lexicon Utility package to support SNOMED access by the Laboratory package.
- The Lexicon Utility application shall provide a mechanism for updating future SNOMED codes.
- Create new reports of mapped and unmapped SNOMED codes to be available through the *VISTA* Laboratory application.
- There is a new mail group entitled LAB MAPPING for sending automated system messages to the recipients when certain fields of monitored files are added and/or modified.

2.2.4. Enhancements to LOINC Functionality

- Provide the Logic for mapping MICRO and AP tests to LOINC codes.
- Provide the support and awareness to successfully pass LOINC codes with MICRO and AP results.
- The *VISTA* Laboratory application shall provide the support and awareness to successfully pass LOINC codes with MICRO and AP results.
- The *Vista* Lab shall use standardized LOINC Codes which is an HDR requirement.

2.2.5. Change Requests Impacting User Functionality

1. **CCR 00005519** Change AN2 cross-reference to use the first 20 characters of the location. This will affect the users if they customized the LRRMM TASK MAIL LAB REPORTS option by setting LRRLROC or LRRLST in the Entry Action. Users must now use the first 20 characters of the Institution Name.
2. **CCR 00006164** Change How Non-Performing Tests Operate in LEDI IV. When individual tests from an exploded panel are not performed, LEDI IV now sends back an OBX (Observation Result) to the receiving system letting them know which tests were not performed. The HL7 message going back to the collecting site will contain a result of 'canc'. This way the site can use EA to accept the result coming in.
3. **CR00005538** Prevent user from being able to cancel tests that have results. The option to allow users to 'Delete entire order or individual test' has been modified to prevent a user from Not Performing any tests that have results. This applies. This applies even if the results have not been verified yet.
4. **Code CR00005156** Add a parameter to control the sending of HL7 messages for various area of *Vista* Laboratory. This CR enables or disables the user from sending orders and results via LEDI, behind the scenes. There is no user-set parameter with this feature. The parameter is set to "Disabled" or "Enabled" for each section of Laboratory sections ("CH", "MI", and "AP"). This parameter

can be set so that each section of laboratory can be enabled or disabled for each agency such as VA, DOD, etc.

5. **Code CCR00005504 LEDI IV Enhancement: Parameter for Performing Lab** LEDI IV brought in functionality to identify the performing lab for the entire AP or MICRO report or for specific sections. The display of the performing lab selection is cumbersome for sites that don't frequently have more than one performing site. And the performing lab prompt is displayed more than once, which adds additional key strokes/returns to pass through. The users now have a parameter to identify the performing lab for AP/MICRO reports. This parameter applies to all reports so that individual assignments aren't necessary.
6. **Code CCR00008076 Sort File #63 Remediation Report for CH.** The File 63 Remediation results Mailman Message is now sorted for the CH subscript errors.
7. **Code CCR00008693 Enable LEDI for MICRO and AP.** The functionality to electronically transmit AP orders and AP and MICRO results via the LEDI interface had been disabled by default for LEDI IV. At the time, this functionality was planned to be implemented with the future release of a COTS Laboratory System. Since that Laboratory System project was halted for re-evaluation, this functionality will need to be re-enabled for LEDI as part of the LEDI IV Update update patch.
8. **Code CCR00008556 Performing Laboratory on AP report e-signature on AP report.** Performing Laboratory information should display after the e-signature - not before. In their own words: "The reason that it is a concern is because every outside report we get the address and location are after the signature of the pathologist. With it before, the signature gets lost and it is difficult to find.
9. **Code CCR00008555 AP Accession Number Can Get Skipped If User Times Out**
If multiple users are logging in AP specimens to the same Accession Area at the same time and a user gets timed out of *VistA Lab* due to inactivity (e.g., walking away to do another task), there is a possibility that the number that they were working on can possibly get skipped unless someone manually chooses it. The same result can occur if a user deletes an accession number.

LEDI IV Updates have a new parameter called "Method of assigning a default AP accession number". The user can set the parameter to *First available number* where the system starts searching from **zero**, takes the first available accession number and defaults that number to the next accession. Or, the user may choose to set the parameter to *Next Available Sequential Number*. With this option the system searches from the last assigned number for the AP accession area. The system then finds and defaults the next available number in sequence as the AP accession number.

This is a package level parameter that is available across AP sections, i.e. Surgical Pathology, Cytology and Electron Microscopy. If not set, the default parameter is *First Available Number*.

10. **Code CCR00008554 NAME field needs to be made editable in files 61, 62, 61.2.** The NAME field (#.01) in the TOPOGRAPHY FIELD file (#61), COLLECTION SAMPLE file (#62), and ETIOLOGY FIELD file (#61.2) are now editable with the LEDI IV Update patch.
11. **Code CR4828 Option to check SCT mappings against the Lexicon**
When a SNOMED CT (SCT) mapping file is loaded, the system validates each SNOMED CT ID against the Lexicon. If there is an exception found (e.g., the code is inactive) the system sends an alert to Standards & Terminology Services (STS) so that STS can send an updated mapping for this entry. However, it is possible for a code to be active at the time of the load, but be deprecated when a Lexicon patch is installed that updates the SNOMED CT code set. To ensure the SCT mappings stay current, a new option will be created, 'Check SNOMED CT Mappings Against the Lexicon' [LA7TASK SCT MAPPINGS CHECK]. This option checks the SCT mappings against the Lexicon for exceptions, and should be scheduled to run on a recurring basis. If the option finds any exceptions:
 - a. The SCT CODE STATUS field (#21) for the entry will be updated to 'Error',
 - b. An HDI exception alert will be sent to STS,
 - c. A MailMan message will be sent to the G.LMI and G.LAB MESSAGING Mail Groups with a list of the exceptions found.

2.3. User Characteristics

The intended users of this software enhancement project include laboratory users at VA labs.

2.4. Dependencies and Constraints

Constraint: The Nationally released LEDI IV must be in production before the LEDI IV Update is released nationwide.

3. Specific Requirements

3.1. Database Repository

The Lexicon database will store the SNOMED CT codes that are required for this project.

3.2. System Features

3.2.1. Microbiology Section Requirements

3.2.1.1. Functional Requirement 1

The *VISTA* Laboratory microbiology application shall determine the test order number, type of specimen and collection sample codes to use in the message.

3.2.1.2. Functional Requirement 2

The *VISTA* Laboratory microbiology application shall use the appropriate Systemized Nomenclature of Medicine Clinical Terminology (SNOMED CT) mappings to be included in HL7 segments for specimen types, collection samples, organisms and other etiological agents.

3.2.1.3. Functional Requirement 3

The *VISTA* Laboratory microbiology application shall support specimen and collection sample codes to use in message.

3.2.1.4. Functional Requirement 4

The *VISTA* Laboratory microbiology application shall include appropriate SNOMED CT mappings in HL7 segments for the following files:

File 61 – Topography Field	File 61.2 – Etiology Field	File 62 - Collection Sample
20 SNOMED CT ID (XNJ12)	21 SCT CODE STATUS (S)	21 SCT CODE STATUS (S)
21 SCT CODE STATUS (S)	22 SCT TOP CONCEPT (*P64.061')	22 SCT TOP CONCEPT (*P64.061')
22 SCT TOP CONCEPT (*P64.061')	23 SCT STATUS DATE (Multiple-61.023)	23 SCT STATUS DATE (Multiple-61.023)
23 SCT STATUS DATE (Multiple-61.023)	.01 SCT STATUS DATE (D)	.01 SCT STATUS DATE (D)
.01 SCT STATUS DATE (D)	1 STATUS CHANGE TO (S)	1 STATUS CHANGE TO (S)
1 STATUS CHANGE TO (S)	24 SCT COMMENTS (Multiple-61.024)	24 SCT COMMENTS (Multiple-61.024)
24 SCT COMMENTS (Multiple-61.024)	.01 SCT COMMENT TYPE (MF)	.01 SCT COMMENT TYPE (MF)
.01 SCT COMMENT TYPE (MF)	.02 SCT COMMENT TEXT (F)	.02 SCT COMMENT TEXT (F)
.02 SCT COMMENT TEXT (F)	N/A	21 SCT CODE STATUS (S)

3.2.1.5. Functional Requirement 5

The VISTA Laboratory microbiology application shall support SNOMED CT encoded data for inclusion in LEDI HL7 messaging.

3.2.1.6. Functional Requirement 6

The VISTA Laboratory microbiology application shall support order/test codes for orderable procedures.

3.2.1.7. Functional Requirement 7

The VISTA Laboratory microbiology application shall move results in HL7 result (ORU) message into the intermediate data structure.

- (1) The VISTA Laboratory microbiology application shall create and store in LAH global.
- (2) The VISTA Laboratory microbiology application shall process results from LAH global for final storage in File #63.

3.2.1.8. Functional Requirement 8

The VISTA Laboratory microbiology application shall process and store actual result reports received via LEDI HL7 messaging for the following sections:

- (1) Bacteriology section
- (2) Mycobacterium section
- (3) Mycology section
- (4) Virology
- (5) Parasitology

3.2.1.9. Functional Requirement 9

The VISTA Laboratory [LEDI] application shall store the incoming pending order in File #69.6 – Laboratory Pending Order File.

File #69.6 LAB PENDING ORDERS ENTRY FILE

File #69.6 - Lab Pending Orders Entry File	File #69.6 - Lab Pending Orders Entry File	File #69.6 - Lab Pending Orders Entry File
N/A	.01 NAME (RF), [0;1]	.02 SEX (S), [0;2]
.03 DOB (D), [0;3]	.06 RACE (F), [1;1]	.09 PAT ID (F), [0;9]
ORDERING SITE (P4'), [0;4]	COLLECTING SITE (P4'), [0;5]	ORDERING SITE UID (F), [0;6]
ORDERING SITE ACC # (F), [0;12]	SPECIMEN (P61'), [0;7]	COLLECTION SAMPLE (P62'), [0;8]
SPECIMEN STATUS (*P64.061'), [0;10]	FILE REF (P67'), [0;11]	VISIT NUMBER (NJ8,0), [0;13]
ORDERED DATE/TIME (D), [1;1]	COLLECTED DATE/TIME (D), [1;2]	11.1 COLLECTION END DATE/TIME (D), [1;9]
SHIPPED DATE/TIME (D), [1;3]	RECD DATE/TIME (D), [1;4]	TRANS DATE/TIME (D), [1;5]
DATA ACCEPT DATE/TIME (D), [1;6]	COMPLETE DATE/TIME (D), [1;7]	INCOMING MESS # (F), [1;8]
SHIPPING MANIFEST (F), [0;14]	20 ORDERED TESTS (Multiple-69.64), [2;0]	.01 NLT TEST (F), [0;1]
NLT CODE (F), [0;2]	REMOTE TEST NAME (F),	REMOTE TEST # (F), [0;4]

	[0;3]	
REMOTE URGENCY (F), [0;5]	TEST STATUS (*P64.061'), [0;6]	OUT GOING MESS # (F), [0;8]
ACCESSION D/T (D), [0;7]	HOST UID (F), [0;9]	COMPLETE D/T (D), [0;10]
HOST TEST (P60'), [0;11]	HOST URGENCY (*P62.05'), [0;12]	ORDERING PROVIDER (F), [1;1]
700.04HL OBR-4 (F), [700.04;E1,200]	700.18HL OBR-18 (F), [700.18;E1,60]	700.19HL OBR-19 (F), [700.19;E1,60]
99 COMMENTS (Multiple-69.699), [99;0]	.01 COMMENTS (W), [0;1]	700 HL ENCODING CHARACTERS (F), 700;E1,5]
700.02 HL PID-2 (F), [700.02;E1,250]	700.04 HL PID-4 (F), [700.04;E1,250]	N/A

3.2.1.10. Functional Requirement 10

The VISTA Laboratory Microbiology application, specifically File #63 – LAB DATA (result storage) shall be modified by adding additional fields for urgency, CPRS order number, and the order type (i.e. original, reflex, add-on).

The following fields in File #63 - LAB DATA, field .35 – Order Test field (multiple) shall be added to include the microbiology data resulting from LEDI generated orders under each of the above mentioned sections:

File 63 - Lab Data	File 63 - Lab Data	File 63 - Lab Data
.35 ORDERED TEST (Multiple-63.5)	4 LAB ORDER # (F)	8 SPECIMEN TOPOGRAPHY (P61')
.01 ORDERED TEST (FO)	5 ORDERED TYPE (*P64.061')	9 COLLECTION SAMPLE (P62')
2 ORDERED URGENCY (*P62.05')	6 ORDERING PROVIDER LOCAL (P200')	10 DISPOSITION (*P64.061')
3 CPRS ORDER # (P100'), [0;3]	7 ORDERING PROVIDER REMOTE (F)	11 DISPOSITION DATE/TIME (D)
12 DISPOSITION BY (P200'), [0;12]	13 LAB TEST ORDERED (P60'), [0;13]	14 PARENT TEST (P60'), [0;14]
15 PARENT NLT (F), [0;15]	N/A	N/A

3.2.1.11. Functional Requirement 11

The VISTA Laboratory microbiology application shall be able to process results with deletions, additions and/or changes in organisms within the various sections in the “MI” subscript (to include Bacteriology, Mycobacterium, Mycology, Virology, Parasitology). And notify requesting provider via standard CPRS notification processes of result availability.

LRVR	Enter/verify data (auto instrument)
LRMIEDZ	Results entry

3.2.1.12. Functional Requirement 12

The VISTA Laboratory microbiology application shall be able to process results with deletions, additions and/or changes in antibiotics within the various sections in the “MI” subscript (to include Bacteriology, Mycobacterium, Mycology, Virology,

Parasitology). And notify requesting provider via standard CPRS notification processes of result availability.

LRVR	Enter/verify data (auto instrument)
LRMIEDZ	Results entry

3.2.1.13. Functional Requirement 13

The *VISTA* Laboratory microbiology application shall extract, use, and assign isolate identifications (IDs) to track specific organisms identified and reported via preliminary, final, supplemental, corrected and amended changes. This requires DD changes to File #63 – LABORATORY DATA.

.1 ISOLATE ID (FI), [.1;1]

3.2.1.14. Functional Requirement 14

The *VISTA* Laboratory microbiology application shall store within each sub-file at the 0.1 node with the field name of ISOLATE ID.

3.2.1.15. Functional Requirement 15

In addition to the normal log-in process, the *VISTA* Laboratory microbiology application shall be able to generate and store unique identifiers (UIDs) for microbiology orders and results. The UID^LRX API shall generate the UID and stores it in File 63.

.31 UID (F), [ORU;1]

3.2.1.16. Functional Requirement 16

The *VISTA* Laboratory HL7 Messaging application shall generate exceptions for incomplete LEDI orders located in File #69.6.

- Missing/invalid topography
- Missing/invalid collection sample
- Missing/invalid test order code

3.2.1.17. Functional Requirement 17

The *VISTA* Laboratory HL7 Messaging application shall generate exceptions for LEDI results that cannot be processed.

- Missing/invalid specimen id
- Incorrect topography

3.2.1.18. Functional Requirement 18

The *VISTA* Laboratory Microbiology application shall trigger an event to notify the LEDI application to return the results to the requestor, once an order is released and identified as LEDI associated. Likewise, this mechanism shall be used to check for a LEDI generated microbiology order.

3.2.1.19. Functional Requirement 19

The *VISTA* Laboratory Microbiology application shall use existing LEDI functionality to initiate and transmit LEDI HL7 result (ORU) messages.

3.2.1.20. Functional Requirement 20

The *VISTA* Laboratory Microbiology application, specifically File #63 – LAB DATA (result storage) shall be modified by adding additional fields for LEDI result (ORU) node for the “MI” subscript for LEDI generated orders.

- (1) .31 UID
- (2) .32 Ordering site
- (3) .33 Collection site
- (4) .34 Host UID
- (5) .342 Order Site UID
- (6) .35 Ordered Test

3.2.1.21. Functional Requirement 21

The *VISTA* Laboratory Microbiology application shall store test order/result codes (LOINC/NLT/SNOMED CT) for data in File #63 – LAB DATA.

3.2.1.22. Functional Requirement 22

The *VISTA* Laboratory Microbiology application shall store the performing laboratory reported by the reference lab.

- (1) .345 RELEASING SITE (P4'), [RF;1]
- (2) .12 PRODUCING LABORATORY (Multiple-63.00012), [PL;0]
- (3) .01 LAB DATA REFERENCE (F), [0;1]
- (4) .02 INSTITUTION (P4'), [0;2]

3.2.1.23. Functional Requirement 23

The *VISTA* Laboratory Microbiology application shall display the performing laboratories and reporting laboratory on all reports.

3.2.1.24. Functional Requirement 24

The LEDI software shall create and add the new File #62.47 – LAB CODE MAPPING to the Laboratory application.

3.2.1.25. Design Element Tables

3.2.1.25.1. (Entry Points)

Routine Name	LRWLST11
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
SRS Traceability	Functional Requirement 13 (3.2.1.13)

Routine Name	LRWLST11	
Related Options	N/A	
Related Routines	Routines “Called By”	Routines “Called”
	LRWLST1	LRWLS12
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input checked="" type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: Data needed for ORU and ORUT nodes. Definition:	
Output Attribute Name and Definition	Name: ORU and ORUT nodes in LAB DATA file (#63). Definition:.	
Current Logic		
N/A		
Modified Logic		
Modify from hard set to DBS call to set ORU and ORUT nodes in file 63 all accession areas.		

Routine Name	LRMILEDI	
Enhancement Category	<input checked="" type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability	N/A	
Related Options	N/A	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	N/A
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input checked="" type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: Definition:	
Output Attribute Name and Definition	Name: Definition:	
Current Logic		
This routine will be used to process data from and to the LAH global. For results that have been passed to the LAH global by LEDI this routine will be used to populate the Lab Data Microbiology file (#63.05) with		

Routine Name	LRWLST11
	the results and will provide appropriate triggers to other Microbiology processes so that they are notified. that LEDI results are available.
Modified Logic	
	N/A

Routine Name	LRMILEDO	
Enhancement Category	<input checked="" type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability	N/A	
Related Options	N/A	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	N/A
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input checked="" type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: Definition:	
Output Attribute Name and Definition	Name: Definition:	
Current Logic		
	This routine will be used to process data to be sent to the LAH global. This routine will extract the required information from the Lab Data Microbiology file (#63.05), structure that data for use by LEDI and store the data in the global LAH.	
Modified Logic		
	N/A	

Routine Name	LRLIST	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	Summary list (supervisors’) [LR SUP SUMMARY]	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	N/A

Routine Name	LRLIST
Data Dictionary (DD) References	N/A
Related Protocols	N/A
Related Integration Control Registrations (ICRs)	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: Definition:
Output Attribute Name and Definition	Name: Definition:
Current Logic	
N/A	
Modified Logic	
This routine was modified to handle an additional time stamp that was added with LEDI IV, so that missing accessions could be correctly included in the report.	

Routine Name	LRMIPLOG	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	All results for selected accessions [LRMIPLOG]	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	LRMIPSZ1
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and	Name: N/A	

Routine Name	LRMIPLOG
Definition	Definition:
Current Logic	
N/A	
Modified Logic	
This routine was modified to put page breaks between accessions.	

Routine Name	LRMIPSZ3			
Enhancement Category	<input type="checkbox"/> New	<input checked="" type="checkbox"/> Modify	<input type="checkbox"/> Delete	<input type="checkbox"/> No Change
Requirement Traceability Matrix	N/A			
Related Options	Enter/verify data (auto instrument) [LRVR]			
Related Routines	Routines “Called By”		Routines “Called”	
	LRVR		N/A	
Data Dictionary (DD) References	N/A			
Related Protocols	N/A			
Related Integration Control Registrations (ICRs)	N/A			
Data Passing	<input type="checkbox"/> Input	<input type="checkbox"/> Output Reference	<input type="checkbox"/> Both	<input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A			
Output Attribute Name and Definition	Name: N/A Definition: N/A			
Current Logic				
N/A				
Modified Logic				
Bulletproof code to protect against a Mumps error that occurs when the LOINC code does not match when accepting Micro results from a host site.				

Routine Name	LRMIVER1
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change

Routine Name	LRMIVER1	
Requirement Traceability Matrix	N/A	
Related Options	Verification of data by supervisor [LRMIVER]	
Related Routines	Routines “Called By”	Routines “Called”
	LRMIVER	LRMIPSZ1
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
N/A		
Modified Logic		
Modified routine to put page breaks between accessions.		

Routine Name	LRPHSET2	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	Add to collection list [LRPHMAN]	
Related Routines	Routines “Called By”	Routines “Called”
	LRPHSET1	N/A
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	

Routine Name	LRPHSET2
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
N/A	
Modified Logic	
Fixed routine to use correct cross-reference.	

Routine Name	LRRMM	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	Create and Mail Lab Reports [LRRMM TASK MAIL LAB REPORTS]	
Related Routines	Routines "Called By"	Routines "Called"
	N/A	LRRP1,LRRP2,LRX
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
N/A		
Modified Logic		
Modified routine to print a form-feed before printing a micro report.		

Routine Name	LRRPLU	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	Results entry [LRMIEDZ]	
Related Routines	Routines “Called By”	Routines “Called”
	LRMIEDZ2	LRRPL
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
N/A		
Modified Logic		
Modified routine to fix a bug that was preventing certain Microbiology fields from being assigned a performing laboratory during results entry.		

Routine Name	LRVRMI2, LRVRMI2A, LRVRMI3, LRVRMI4, LRVRMI4A	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	Enter/verify data (auto instrument) [LRVR]	
Related Routines	Routines “Called By”	Routines “Called”
	LRVR0	N/A
Data Dictionary (DD) References	N/A	

Routine Name	LRVRMI2, LRVRMI2A, LRVRMI3, LRVRMI4, LRVRMI4A
Related Protocols	N/A
Related Integration Control Registrations (ICRs)	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
N/A	
Modified Logic	
Modified routines so that the status goes to complete when viewing in CPRS.	

Routine Name	LAMIAUT4	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	Verify Micro Auto Data [LA MI VERIFY AUTO]	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	N/A
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
N/A		

Routine Name	LAMIAUT4
Modified Logic	
This routine was modified to ask for performing lab and to send CPRS alerts.	

3.2.1.26. Templates

Template Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability	N/A	
Template Type	<input type="checkbox"/> Sort <input type="checkbox"/> Input <input type="checkbox"/> Print <input type="checkbox"/> Other	
Related Options	N/A	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	N/A
Data Dictionary References	N/A	
Global References	N/A	

3.2.1.27. Bulletins

Bulletin Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability	N/A	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	N/A
Mail Subject	N/A	
Mail Group	N/A	
Parameters	N/A	
Data Dictionary References	N/A	

3.2.1.28. Data Dictionaries

File Name and Number	LAB DATA FILE #63.05		
Enhancement Category	<input type="checkbox"/> New	<input checked="" type="checkbox"/> Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
SRS Traceability	Functional Requirement # 29		
Related Options	N/A		

Data Dictionary References	N/A
Related Protocols	N/A
Related Database Integration Agreements	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both Reference <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
File Documentation	N/A
File Auditing, Security, and Archiving	N/A

File Name and Number	LAB CODE MAPPING (#62.47)
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Requirements Traceability Matrix	N/A
Related Options	N/A
Data Dictionary (DD) References	N/A
Related Protocols	N/A
Related Integration Control Registrations (ICRs) Agreements	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both Reference <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
File Documentation	Help text and descriptions will be updated.
File Auditing, Security, and Archiving	N/A

File Name and Number	LA7 MESSAGE PARAMETER (62.48)
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Requirements Traceability Matrix	N/A
Related Options	N/A
Data Dictionary (DD) References	N/A
Related Protocols	N/A
Related Integration Control Registrations (ICRs) Agreements	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both Reference <input type="checkbox"/> Global Reference <input type="checkbox"/> Local

File Documentation	Help text and descriptions will be updated.
File Auditing, Security, and Archiving	N/A

3.2.1.29. Field Definition Information

Field Name	UID
Field Description	This is the UID used by the HOST LEDI system for this order/accession.
Field #	63.05.,31
Node #	ORU
Piece #	1
New Field	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Data Type	<input type="checkbox"/> Date/Time <input type="checkbox"/> Numeric <input type="checkbox"/> Set of Codes <input checked="" type="checkbox"/> Free Text <input type="checkbox"/> Pointer to a File <input type="checkbox"/> Variable-Pointer
Identifier	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Uneditable Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Mandatory Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Documentation or Help Changes Necessary	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Definition	Free Text 10-15 characters in length
Input/Output Transform	INPUT: K:\$L(X)>15!(\$L(X)<10) X
Cross-Reference (id and type)	<input type="checkbox"/> Regular <input type="checkbox"/> Kwic <input type="checkbox"/> Mnemonic <input type="checkbox"/> Mumps <input type="checkbox"/> Soundex <input type="checkbox"/> Trigger <input type="checkbox"/> Bulletin

Field Name	ORDERING SITE
Field Description	<p>This field contains the pointer to the INSTITUTION file for the Mail Man domain location of the computer system. All LEDI results are returned to the Ordering computer system.</p> <p>Location to send LEDI HL7 result messages.</p> <p>This field is used by the LEDI software.</p>
Field #	63.05.,32
Node #	ORU
Piece #	2
New Field	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Data Type	<input type="checkbox"/> Date/Time <input type="checkbox"/> Numeric <input type="checkbox"/> Set of Codes <input type="checkbox"/> Free Text <input checked="" type="checkbox"/> Pointer to a File <input type="checkbox"/> Variable-Pointer
Identifier	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Uneditable Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Mandatory Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Documentation or Help Changes Necessary	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Definition	POINTER TO INSTITUTION FILE (#4)
Input/Output Transform	N/A
Cross-Reference (id and type)	<input type="checkbox"/> Regular <input type="checkbox"/> Kwic <input type="checkbox"/> Mnemonic <input type="checkbox"/> Mumps <input type="checkbox"/> Soundex <input type="checkbox"/> Trigger <input type="checkbox"/> Bulletin

Field Name	COLLECTION SITE
Field Description	<p>This field contains the pointer to the Institution file for the actual collection site. The ordering site is the MailMan location for the computer system. MailMan domain location and the collecting site may be different.</p> <p>This field is used by LEDI.</p>
Field #	63.05.,33
Node #	ORU
Piece #	3
New Field	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Data Type	<input type="checkbox"/> Date/Time <input type="checkbox"/> Numeric <input type="checkbox"/> Set of Codes <input type="checkbox"/> Free Text <input checked="" type="checkbox"/> Pointer to a File <input type="checkbox"/> Variable-Pointer
Identifier	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Uneditable Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Mandatory Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Documentation or Help Changes Necessary	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Definition	POINTER TO INSTITUTION FILE (#4)
Input/Output Transform	N/A
Cross-Reference (id and type)	<input type="checkbox"/> Regular <input type="checkbox"/> Kwic <input type="checkbox"/> Mnemonic <input type="checkbox"/> Mumps <input type="checkbox"/> Soundex <input type="checkbox"/> Trigger <input type="checkbox"/> Bulletin

Field Name	HOST UID
Field Description	<p>Each order/accession is given a HOST UID. The UID is stored in this location. If LEDI software is used to accession specimens, usually the collecting sites UID is used to track specimens. If the collecting UID conflict is the HOST system number sequence, the HOST UID will be used instead of the collecting site's UID.</p> <p>This field is used by LEDI software.</p>

Field #	63.05.,34
Node #	ORU
Piece #	4
New Field	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Data Type	<input type="checkbox"/> Date/Time <input type="checkbox"/> Numeric <input type="checkbox"/> Set of Codes <input checked="" type="checkbox"/> Free Text <input type="checkbox"/> Pointer to a File <input type="checkbox"/> Variable-Pointer
Identifier	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Uneditable Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Mandatory Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Documentation or Help Changes Necessary	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Definition	FREE TEXT, 10-15 characters in length
Input/Output Transform	INPUT: K:\$L(X)>15!(\$L(X)<10) X
Cross-Reference (id and type)	<input type="checkbox"/> Regular <input type="checkbox"/> Kwic <input type="checkbox"/> Mnemonic <input type="checkbox"/> Mumps <input type="checkbox"/> Soundex <input type="checkbox"/> Trigger <input type="checkbox"/> Bulletin

Field Name	ORDERING SITE UID
Field Description	This field contains the collecting sites UID for this specimen. This field is used by LEDI software.
Field #	63.05.,342
Node #	ORU
Piece #	5
New Field	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Data Type	<input type="checkbox"/> Date/Time <input type="checkbox"/> Numeric <input type="checkbox"/> Set of Codes <input checked="" type="checkbox"/> Free Text <input type="checkbox"/> Pointer to a File <input type="checkbox"/> Variable-Pointer
Identifier	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Uneditable Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Mandatory Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Documentation or Help Changes Necessary	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Definition	FREE TEXT, 10-15 characters in length
Input/Output Transform	INPUT: K:\$L(X)>15!(\$L(X)<10) X
Cross-Reference (id and type)	<input type="checkbox"/> Regular <input type="checkbox"/> Kwic <input type="checkbox"/> Mnemonic <input type="checkbox"/> Mumps <input type="checkbox"/> Soundex <input type="checkbox"/> Trigger <input type="checkbox"/> Bulletin

Field Name	ORDERED TEST
Field Description	This field contains the ordered test NLT code requested by the clinical provider. If this test is a panel, all atomic tests within the panel will be associated with the ordered test using this NLT code.
Field #	63.05,,35
Node #	ORUT
Piece #	0
New Field	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Data Type	<input type="checkbox"/> Date/Time <input type="checkbox"/> Numeric <input type="checkbox"/> Set of Codes <input checked="" type="checkbox"/> Free Text <input type="checkbox"/> Pointer to a File <input type="checkbox"/> Variable-Pointer
Identifier	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Uneditable Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Mandatory Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Documentation or Help Changes Necessary	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Definition	Multiple
Input/Output Transform	N/A
Cross-Reference (id and type)	<input type="checkbox"/> Regular <input type="checkbox"/> Kwic <input type="checkbox"/> Mnemonic <input type="checkbox"/> Mumps <input type="checkbox"/> Soundex <input type="checkbox"/> Trigger <input type="checkbox"/> Bulletin

Field Name	ORDERED TEST
Field Description	This field contains the ordered test NLT code requested by the clinical provider. If this test is a panel, all atomic tests within the panel will be associated with the ordered test using this NLT code.
Field #	63.5,,01
Node #	0
Piece #	1
New Field	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Data Type	<input type="checkbox"/> Date/Time <input type="checkbox"/> Numeric <input type="checkbox"/> Set of Codes <input checked="" type="checkbox"/> Free Text <input type="checkbox"/> Pointer to a File <input type="checkbox"/> Variable-Pointer
Identifier	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Uneditable Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Mandatory Field	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Documentation or Help Changes Necessary	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Field Definition	FREE TEXT, 5-15 characters in length
Input/Output Transform	INPUT: K:\$L(X)>15!(\$L(X)<5) X

	OUTPUT: S ZZY=\$O(^LAM("C",Y_",0)) I ZZY,\$D(^LAM(ZZY,0)0#2 S Y=\$P(^0),U)
Cross-Reference (id and type)	<input checked="" type="checkbox"/> Regular <input type="checkbox"/> Kwic <input type="checkbox"/> Mnemonic <input type="checkbox"/> Mumps <input type="checkbox"/> Soundex <input type="checkbox"/> Trigger <input type="checkbox"/> Bulletin
	B X-REF

This is more MICRO field additions for SDD. These are the urgency, cprs order number, order type, ordering provider, specimen type, and collection sample fields for the ORUT node.

Field Name	URGENCY			
Field Description	This field contains a pointer to the URGENCY file (#62.05). This is the urgency of the order.			
Field #	63.5,1			
Node #	ORUT			
Piece #	2			
New Field	Yes	No		
Data Type	Date/Time	Numeric	Set of Codes	Free Text
	Pointer to a File		Variable-Pointer	
Identifier	Yes	No		
Uneditable Field	Yes	No		
Mandatory Field	Yes	No		
Field Documentation or Help Changes Necessary	Yes	No		
Field Definition	POINTER TO URGENCY FILE (#62.05)			
Input/Output Transform	N/A			
Cross-Reference (id and type)	Regular	Kwic	Mnemonic	Mumps

Field Name	CPRS ORDER NUMBER			
Field Description	This field contains the pointer to the ORDER file (#100). This is the CPRS order number.			
Field #	63.5,2			
Node #	ORUT			
Piece #	3			
New Field	Yes	No		
Data Type	Date/Time	Numeric	Set of Codes	Free Text
	Pointer to a File		Variable-Pointer	
Identifier	Yes	No		
Uneditable Field	Yes	No		

Mandatory Field	Yes	No
Field Documentation or Help Changes Necessary	Yes	No
Field Definition	POINTER TO ORDER FILE (#100)	
Input/Output Transform	N/A	
Cross-Reference (id and type)	Regular	Kwic Mnemonic Mumps

Field Name	ORDER TYPE			
Field Description	This field contains the order type, original, reflex, or add-on.			
Field #	63.5, 3			
Node #	ORUT			
Piece #	4			
New Field	Yes	No		
Data Type	Date/Time	Numeric	Set of Codes	Free Text
	Pointer to a File		Variable-Pointer	
Identifier	Yes	No		
Uneditable Field	Yes	No		
Mandatory Field	Yes	No		
Field Documentation or Help Changes Necessary	Yes	No		
Field Definition	SET 'O' FOR ORIGINAL; 'R' FOR REFLEX; 'A' FOR ADD-ON			
Input/Output Transform	N/A			
Cross-Reference (id and type)	Regular	Kwic	Mnemonic	Mumps

Field Name	ORDERING PROVIDER			
Field Description	This field contains the ordering provider. It is a pointer to NEW PERSON file (#200).			
Field #	63.5, 4			
Node #	ORUT			
Piece #	5			
New Field	Yes	No		
Data Type	Date/Time	Numeric	Set of Codes	Free Text
	Pointer to a File		Variable-Pointer	

Identifier	Yes	No
Uneditable Field	Yes	No
Mandatory Field	Yes	No
Field Documentation or Help Changes Necessary	Yes	No
Field Definition	POINTER TO NEW PERSON FILE (#200).	
Input/Output Transform	INPUT TRANSFORM:S DIC("S")="I \$D(^VA(200,""AK.PROVIDER"", \$P (^0),U)))",D="AK.PROVIDER" D IX^DIC K DIC S DIC=DIE,X=+Y K:Y<0 X	
Cross-Reference (id and type)	Regular	Kwic Mnemonic Mumps

Field Name	SPECIMEN TYPE			
Field Description	This field contains the name of the specimen or source. It is a pointer to the TOPOGRAPHY FIELD file (#61).			
Field #	63.5, 5			
Node #	ORUT			
Piece #	6			
New Field	Yes	No		
Data Type	Date/Time	Numeric	Set of Codes	Free Text
	Pointer to a File		Variable-Pointer	
Identifier	Yes	No		
Uneditable Field	Yes	No		
Mandatory Field	Yes	No		
Field Documentation or Help Changes Necessary	Yes	No		
Field Definition	POINTER TO TOPOGRAPHY FIELD FILE (#62).			
Input/Output Transform	N/A			
Cross-Reference (id and type)	Regular	Kwic	Mnemonic	Mumps

Field Name	COLLECTION SAMPLE			
Field Description	This field contains the name of the collection sample. It is a pointer to the COLLECTION SAMPLE file (#62).			
Field #	63.5, 6			
Node #	ORUT			
Piece #	7			
New Field	Yes	No		

Data Type	Date/Time	Numeric	Set of Codes	Free Text
	Pointer to a File		Variable-Pointer	
Identifier	Yes	No		
Uneditable Field	Yes	No		
Mandatory Field	Yes	No		
Field Documentation or Help Changes Necessary	Yes	No		
Field Definition	POINTER TO COLLECTION SAMPLE FILE (#62).			
Input/Output Transform	N/A			
Cross-Reference (id and type)	Regular	Kwic	Mnemonic	Mumps

DD listing of these fields:

63.05.,31 UID ORU;1 FREE TEXT

INPUT TRANSFORM: K:\$L(X)>15!(\$L(X)<10) X

LAST EDITED: JAN 31, 2001

HELP-PROMPT: Answer must be 10-15 characters in length.

DESCRIPTION: This is the UID used by the HOST LEDI system for this order/accession.

63.05.,32 ORDERING SITE ORU;2 POINTER TO INSTITUTION FILE (#4)

LAST EDITED: AUG 20, 2004

DESCRIPTION: This field contains the pointer to the INSTITUTION file for the MailMan domain location of the computer system. All LEDI results are returned to the Ordering computer system.

Location to send LEDI HL7 result messages.

This field is used by LEDI software.

63.05.,33 COLLECTION SITE ORU;3 POINTER TO INSTITUTION FILE (#4)

LAST EDITED: JAN 31, 2001

DESCRIPTION: This field contains the pointer to the INSTITUTION file for the actual collection site. The ordering site is the MailMan location for the computer system. MailMan domain location and the collecting site may be different.

This field is used by LEDI.

63.05,.34 HOST UID ORU;4 FREE TEXT

INPUT TRANSFORM: K:\$L(X)>15!(\$L(X)<10) X

LAST EDITED: JAN 31, 2001

HELP-PROMPT: Answer must be 10-15 characters in length.

DESCRIPTION: Each order/accession is given a HOST UID. The UID is stored in this location. If LEDI software is used to accession specimens, usually the collecting sites UID is used to track specimens. If the collecting UID conflict is the HOST system number sequence, the HOST UID will be used instead of the collecting site's UID.

This field is used by LEDI software.

63.05,.342 ORDERING SITE UID ORU;5 FREE TEXT

INPUT TRANSFORM: K:\$L(X)>15!(\$L(X)<10) X

LAST EDITED: JAN 31, 2001

HELP-PROMPT: Answer must be 10-15 characters in length.

DESCRIPTION: This field contains the collecting sites UID for this specimen.

This field used by LEDI software.

63.05,.35 ORDERED TEST ORUT;0 Multiple #63.5
(Add New Entry without Asking)

63.5,.01 ORDERED TEST 0;1 FREE TEXT

INPUT TRANSFORM: K:\$L(X)>15!(\$L(X)<5) X

OUTPUT TRANSFORM:S ZZY=\$O(^LAM("C",Y_" ",0)) I ZZY,\$D(^LAM(ZZY,0))#2 S Y=\$P(^0,U)

LAST EDITED: SEP 29, 2005

HELP-PROMPT: Answer must be 5-15 characters in length.

DESCRIPTION: This field contains the ordered test NLT code requested by the clinical provider. If this test is a panel, all atomic tests within the panel will be associated with the ordered test using this NLT code.

CROSS-REFERENCE:63.5^B

1)= S ^LR(DA(2),"MI",DA(1),"ORUT","B",\$E(X,1,30),DA)=""

2)= K ^LR(DA(2),"MI",DA(1),"ORUT","B",\$E(X,1,30),DA)

File Name (Number)	Field Name (Number)	New/Modified/Deleted
-----	-----	-----
LABORATORY TEST (#60)	PRINT NAME (#60,51)	Modified
	SITE/SPECIMEN (#60.01,.01)	Modified

	DEFAULT VALUE (#60.01,9)	Modified
	LAB TEST (#60.02,.01)	Modified
	COLLECTION SAMPLE (#60.03,.01)	Modified
TOPOGRAPHY FIELD (#61)	NAME (.01)	Modified
	SNOMED CODE (#2)	Modified
	SNOMED CT ID(#20)	New
	SCT CODE STATUS (#21)	New
	SCT TOP CONCEPT (#22)	New
	SCT STATUS DATE (#61.023)	New
ETIOLOGY FIELD (#61.2)	NAME (#.01)	Modified
	SNOMED CODE (#2)	Modified
	IDENTIFIER (#4)	Modified
	SNOMED CT ID (#20)	New
	SCT CODE STATUS (#21)	New
	SCT TOP CONCEPT (#22)	New
	SCT STATUS DATE (#61.223)	New
ANTIMICROBIAL SUSCEPTIBILITY (#62.06)	DRUG NODE (#1)	Modified
	AFB DRUG NODE (#1.1)	New
	INTERNAL NAME (#5)	Modified
	AFB INTERNAL NAME (#5.1)	New
LAB DATA (#63)	LRDFN (#.01)	Modified
	RELEASING SITE (#14.91)	New
	PRODUCING LABORATORY (#63.00012)	New
	EXTERNAL PACKAGE REFERENCE (#63.00013)	New
	CODE SYSTEM REFERENCE (#63.00014)	New
	UID (#63.02,.31)	New
	ORDERING SITE (#63.02,.32)	New
	COLLECTING SITE (#63.02,.33)	New
	HOST UID (#63.02,.34)	New
	ORDERING SITE UID (#63.02,.342)	New
	RELEASING SITE (#63.02,.345)	New
	RELEASING SITE (#63.04,.345)	New
	UID (#63.05,.31)	New
	ORDERING SITE (#63.05,.32)	New
	COLLECTING SITE (#63.05,.33)	New
	HOST UID (#63.05,.34)	New
	ORDERING SITE UID (#63.05,.342)	New
	RELEASING SITE (#63.05,.345)	New
	ORDERED TEST (#63.07)	Modified
	UID (#63.08,.31)	New
	ORDERING SITE (#63.08,.32)	New
	COLLECTING SITE (#63.08,.33)	New
	HOST UID (#63.08,.34)	New
	ORDERING SITE UID (#63.08,.342)	New
	RELEASING SITE (#63.08,.345)	New
	UID (#63.09,.31)	New
	ORDERING SITE (#63.09,.32)	New
	COLLECTING SITE (#63.09,.33)	New
	HOST UID (#63.09,.34)	New
	ORDERING SITE UID (#63.09,.342)	New
	RELEASING SITE (#63.09,.345)	New
	SPECIMEN TOPOGRAPHY (#63.202,.06)	New
	COLLECTION SAMPLE (#63.202,.07)	New
	ORGANISM (#63.3,.01)	Modified
	ISOLATE ID (#63.3,.1)	New
	PARASITE (#63.34,.01)	Modified
	ISOLATE ID (#63.34,.1)	New
	FUNGUS/YEAST (#63.37,.01)	Modified
	ISOLATE ID (#63.37,.1)	New
	MYCOBACTERIUM (#63.39,.01)	Modified
	ISOLATE ID(#63.39,.1)	New
	VIRUS (#63.43,.01)	Modified
	ISOLATE ID (#63.43,.1)	New
	ORDERED TEST (#63.5)	New

ORDERED TEST (#63.51)	New
ORDERED TEST (#63.52)	New
ORDERED TEST (#63.53)	New
MICROBIOLOGY AUDIT (#63.539)	New
SPECIMEN TOPOGRAPHY (#63.812,.06)	New
COLLECTION SAMPLE (#63.812,.07)	New
SPECIMEN TOPOGRAPHY (#63.902,.06)	New
COLLECTION SAMPLE (#63.902,.07)	New
WKLD CODE (#64)	MI/AP DATABASE CODE (#63) New
LAB ELECTRONIC CODES FILE (#64.061)	Modified
LAB ELECTRONIC SUBTYPES (#64.062)	Modified
LAB REPORTS (#64.53)	PRINT TEST NAME (#64.53,2) Modified
LAB ORDER ENTRY (#69)	DATE/TIME RESULTS AVAILABLE (#63.01,21) Modified
	CANCELED BY (#69.03,10) Modified
LAB PENDING ORDERS ENTRY (#69.6)	Modified
LAB MAPPING TRANSPORT (#95.4)	New

3.2.1.30. Data Entries Affected by the Design

Field Name	Current Value	New Value
N/A	N/A	N/A

3.2.1.31. Unique Record(s) [Commonly the .01 field]

Unique Record ID		
Field Name(s)	Current Value	New Value
N/A	N/A	N/A

3.2.1.32. File/Global Size Changes

File/Global Name(s)	Estimated Increase	Estimated Decrease
N/A	N/A	N/A

3.2.1.33. Mail Groups

Mail Group Name	LAB MAPPING		
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
Related Options	N/A		
Related Routines	Routines "Called By"	Routines "Called"	

	N/A	N/A
Data Dictionary References	N/A	
Related Protocols	N/A	
Mail Group Description	Used for sending automated system messages to the recipients when certain fields of monitored files are added and/or modified.	
Self Enrollment Allowed	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Type	<input type="checkbox"/> Public <input type="checkbox"/> Private	

3.2.1.34. Security Keys

Security Key Name	N/A				
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete	<input type="checkbox"/> No Change	
Related Options	N/A				
Related Routines	Routines “Called By”			Routines “Called”	
	N/A			N/A	
Data Passing	<input type="checkbox"/> Input	<input type="checkbox"/> Output	<input type="checkbox"/> Both	<input type="checkbox"/> Global Reference	<input type="checkbox"/> Local Reference
Security Key Description	N/A				
Subordinate Keys	N/A				
Mutually Exclusive Keys	N/A				
Granting Condition Logic	N/A				
Current Logic					
N/A					
Modified Logic					
N/A					
Hierarchical Precedence	N/A				

3.2.1.35. Options

Option Name	LA7 REPROCESS HL7 MESSAGES
Enhancement Category	X New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Associated Menu Options, etc, that will invoke this reference	Lab Universal Interface Menu [LA7 MAIN MENU]
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output X <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
	N/A
Menu Text Description	Option to allow reprocessing of Lab HL7 Result messages. Messages must be in a status of 'X' (purgeable) or 'E' (error) and related to interface types:

	1 LAB UI 10 LEDI
Option Type	<input type="checkbox"/> Edit <input type="checkbox"/> Print <input type="checkbox"/> Menu <input type="checkbox"/> Inquire <input type="checkbox"/> Action <input checked="" type="checkbox"/> Run Routine <input type="checkbox"/> Other
Associated Routine	EN^LA7UTILB
Option Definition	Reprocess Lab HL7 Result Messages
Current Entry Action Logic	
N/A	
Modified Entry Action Logic	
N/A	
Current Exit Action Logic	
N/A	
Modified Exit Action Logic	
N/A	

Option Name	LA7S MGR MENU
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Associated Menu Options, etc, that will invoke this reference	Lab liaison menu [LRLIAISON]
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input checked="" type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
	N/A
Menu Text Description	The new Lab Shipping Management Menu contains all the workload related options available to the LIM.
Option Type	<input type="checkbox"/> Edit <input type="checkbox"/> Print <input checked="" type="checkbox"/> Menu <input type="checkbox"/> Inquire <input type="checkbox"/> Action <input type="checkbox"/> Run Routine <input type="checkbox"/> Other
Associated Routine	N/A
Option Definition	Main menu for manager of LEDI software
Current Entry Action Logic	
N/A	
Modified Entry Action Logic	
N/A	
Current Exit Action Logic	
N/A	
Modified Exit Action Logic	
N/A	

3.2.1.36. Protocols

Protocol Name	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Associated Protocols	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
Item Text Description	N/A
Protocol Type	<input type="checkbox"/> Action <input type="checkbox"/> Menu <input type="checkbox"/> Protocol <input type="checkbox"/> Protocol Menu <input type="checkbox"/> Limited Protocol <input type="checkbox"/> Extended Action <input type="checkbox"/> Dialog <input type="checkbox"/> Other
Associated Routine	N/A
Current Entry Action Logic	
N/A	
Modified Entry Action Logic	
N/A	
Current Exit Action Logic	
N/A	
Modified Exit Action Logic	
N/A	

3.2.1.37. Remote Procedure Call (RPC)

Name	N/A
TAG^RTN	N/A
Input Parameters	N/A
Results Array	<input type="checkbox"/> Single Value <input type="checkbox"/> Array <input type="checkbox"/> Word Processing <input type="checkbox"/> Global Array <input type="checkbox"/> Global Instance
Description	N/A

3.2.1.38. Constants Defined in Interface

Name	Description
N/A	N/A

3.2.1.39. Variables Defined in Interface

Name	Type	Description
N/A	N/A	N/A

3.2.1.40. Types Defined in Interface

Name	Type	Description
N/A	N/A	N/A

3.2.1.41. Graphic User Interface (GUI)

Unit Name	N/A
N/A	

3.2.1.42. GUI Classes Defined

Class Name	N/A
Derived From Class Name	N/A
Purpose	N/A

3.2.1.43. Current Form

N/A

3.2.1.44. Modified Form

N/A

3.2.1.45. N/A Components on Form

Name	Type	Description
N/A	N/A	N/A

3.2.1.46. Events

Name	Type	Description
N/A	N/A	N/A

3.2.1.47. Methods

Method Name	Procedure/Function	Description
N/A	N/A	N/A

3.2.1.48. Special References

Special References Name	Type	Description
N/A	N/A	N/A

3.2.1.49. Class Events

Name	Type	Description
N/A	N/A	N/A

3.2.1.50. Class Methods

Name	Procedure/Function	Description
N/A	N/A	N/A

3.2.1.51. Class Properties

Class Properties Name	Type	Visibility	Description
N/A	N/A	N/A	N/A

3.2.1.52. Uses Clause

Name	Type	Description
N/A	N/A	N/A

3.2.1.53. Form

Form Name	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Form Functionality	N/A
Current Form Layout	
N/A	
Modified Form Layout	
N/A	

3.2.1.54. Function

Function Name	N/A
Short Description	N/A

Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Related Options	N/A	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	N/A
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
N/A		
Modified Logic		
N/A		

3.2.1.55. Dialog

Dialog Message (Description)	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Dialog Message (Description) Condition	N/A
Current Dialog Message (Description)	N/A
Modified Dialog Message (Description)	N/A

3.2.1.56. Help Frame

Help Frame Text	LRCAPFF
Enhancement Category	<input checked="" type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Help Frame Text Calling Mechanism	N/A
Current Help Frame Text	
N/A	

Modified Help Frame Text
N/A

3.2.1.57. Health Level Seven (HL7) Application Parameter

HL7 Application Parameter Name	N/A		
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
	Current		Modified
Application Status	<input type="checkbox"/> Active	<input type="checkbox"/> Inactive	<input type="checkbox"/> Active <input type="checkbox"/> Inactive
Facility Name	N/A		
Country Code	N/A		
HL7 Field Separator	N/A		
HL7 Encoding Characters	N/A		
Mail Group	N/A		

3.2.1.58. Health Level Seven (HL7) Logical Link

HL7 Logical Link Parameter Name	N/A		
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
	Current		Modified
Node	N/A	N/A	
Institution	N/A	N/A	
Domain	N/A	N/A	
Autostart	N/A	N/A	
Queue Size	N/A	N/A	
LLP Type	N/A	N/A	

3.2.1.59. COTS Interface

Communication Method	N/A
Application Interface	N/A

3.2.2. Anatomic Pathology (AP) Section Requirements

3.2.2.1. Functional Requirement 25

The *VISTA* Laboratory AP application shall determine the test order number, type of specimen and collection sample code for an outgoing order message.

3.2.2.2. Functional Requirement 26

The *VISTA* Laboratory AP application shall use and apply the appropriate SNOMED CT mappings to be included in the HL7 segments.

3.2.2.3. Functional Requirement 27

The *VISTA* Laboratory AP application shall include SNOMED CT mappings in HL7 segments.

- File #61
- File #62

3.2.2.4. Functional Requirement 28

The *VISTA* Laboratory AP application shall support order/test codes for orderable procedures.

- File #60
- File #64

3.2.2.5. Functional Requirement 29

The *VISTA* Laboratory AP application shall accession outgoing orders using Log-in, anat path [LRAPLG] option, same as in-house work.

3.2.2.6. Functional Requirement 30

The *VISTA* Laboratory AP application shall modify the AP log-in software to create and store UID, ORU data, and order number in Files #63, #68 and #69.

3.2.2.7. Functional Requirement 31

The *VISTA* Laboratory AP application shall process and store actual result reports received via LEDI HL7 messaging for:

- SP section
- CY section
- EM section

3.2.2.8. Functional Requirement 32

The *VISTA* Laboratory AP application shall modify the AP Data Entry Options to continue processing incoming HL7 orders:

- Add link to file #69
- Store order # in file #68
- Any place where user is prompted to enter accession #, allow selection by UID, accession # or patient name
- Store UID in file #68

3.2.2.9. Functional Requirement 33

File #63 shall be modified by adding additional fields to include the AP data resulting from LEDI orders:

- #.35 ORDERED TEST (Multiple – 63.5)
- #.01 ORDERED TEST

- #2 ORDERED URGENCY
- #3 CPRS ORDER
- #4 LAB ORDER
- #5 ORDER
- #6 ORDERING PROVIDER LOCAL
- #7 ORDERING PROVIDER REMOTE
- #8 SPECIMEN TOPOGRAPHY
- #9 COLLECTION SAMPLE
- #10 DISPOSITION
- #11 DISPOSITION DATE/TIME
- #12 DISPOSITION BY
- #13 LAB TEST ORDERED
- #14 PARENT TEST
- #15 PARENT NLT

3.2.2.10. Functional Requirement 34

The *VISTA* Laboratory Surgical Pathology and EM log-in process shall be modified to copy the logic of test code selection from the Cytopathology log-in process. (Program Office guidance).

3.2.2.11. Functional Requirement 35

The *VISTA* Laboratory AP application shall add SPECIMEN TYPE prompt to the AP log-in process. The SPECIMEN TYPE shall have a pointer to the File 61 - Topography.

3.2.2.12 Functional Requirement 36

The *VISTA* Laboratory AP application shall add the following new fields to the #63.02 – EM sub-file, #63.08 SP sub-file, and the #63.09 CY sub-file:

- #.06 SPECIMEN TOPOGRAPHY
- #.07 COLLECTION SAMPLE – New field: Can be any entry in File #62.

3.2.2.13. Functional Requirement 37

The *VISTA* Laboratory AP application shall determine the data elements that are required to be captured via the “backdoor method” and stored in Files #63, 68, and 69.

3.2.2.14. Functional Requirement 38

The *VISTA* Laboratory AP application shall store the incoming HL7 result (ORU) messages in the intermediate LAH global for the following AP sections:

- (1) Surgical Pathology - “SP”
- (2) Cytology - “CY”
- (3) Electron Microscopy - “EM”

3.2.2.15. Functional Requirement 39

The *VISTA* Laboratory application shall store the results related to the 7 word processing fields along with their LOINC/NLT performing lab information. The 7 word processing fields are:

- | | |
|----------------------|---------------------------|
| • PREOP DIAGNOSIS | SP Preoperative Diagnosis |
| • OPERATIVE FINDINGS | SP Operative Findings |

• POST-OP DIAGNOSIS	SP Postoperative Diagnosis
• GROSS DESCRIPTION	SP Gross Description
• MICROSCOPIC DESCRIPTION	SP Microscopic Description
• FROZEN SECTION	SP Frozen Section
• SURGICAL PATH DIAGNOSIS	SP Surgical Path Diagnosis

3.2.2.16. Functional Requirement 40

The *VISTA* Laboratory AP application shall allow the user to review the incoming results that are stored in the intermediate NLT global in order to accept or rejects the result reports.

3.2.2.17. Functional Requirement 41

The *VISTA* Laboratory AP application shall add a prompt to select the performing Laboratory prior to “accepting” the incoming results. This prompt shall use API SELPL^ LRVERA.

3.2.2.18. Functional Requirement 42

The *VISTA* Laboratory AP application shall store incoming results that have been accepted into File #63.

3.2.2.19. Functional Requirement 43

The *VISTA* Laboratory AP application shall modify the prompt, Select Accession Number/Pt Name:, to accept UIDs as part of the accession selection criteria.

3.2.2.20. Functional Requirement 44

The *VISTA* Laboratory AP application for SP, CY, and EM shall modify the prompt, Select Accession Number/Pt Name:, to accept UIDs as part of the accession selection criteria. The option names are as follows:

- SNOMED Coding, anat path [LRAPX]
- ICD9CM Coding, anat path [LRAPICD]
- Clinical HX/Gross Description/FS [LRAPDGD]
- FS/Gross/Micro/Dx [LRAPDGM]
- FS/Gross/Micro/DX/SNOMED Coding [LRAPDGS]
- FS/Gross/Micro/Dx/ICD9CM Coding [LRAPDGI]
- Supplementary Report, Anat Path [LRAPDSR]
- Spec Studies-EM; Immuno; Consult; Pic, Anat Path [LRAPDSS]
- Verify/release report, anat path [LRAPR]
- Supplementary report release, anat path [LRAPRS]
- Send an AP Alert [LRAP ALERT]

3.2.2.21. Functional Requirement 45

The *VISTA* Laboratory AP application shall determine the appropriate urgency (routine, ASAP, STAT) to be applied to outgoing orders.

3.2.2.22. Functional Requirement 46

The *VISTA* Laboratory AP application shall generate a collection sample (one sample per AP section, CY, EM, SP) to be applied to outgoing orders.

3.2.2.23. Functional Requirement 47

The *VISTA* Laboratory AP application shall modify the AP verification process to manage electronic signature for incoming results which were processed by personnel outside the VA.

3.2.2.24. Functional Requirement 48

The *VISTA* HL7 Messaging application shall generate exceptions for incomplete LEDI orders located in File #69.6.

- Missing/invalid topography
- Missing/invalid collection sample
- Missing/invalid test order code

3.2.2.25. Functional Requirement 49

The *VISTA* HL7 Messaging application shall generate exceptions for LEDI results that cannot be processed.

- Missing/invalid specimen id
- Incorrect topography

3.2.2.26. Functional Requirement 50

The *VISTA* Laboratory AP application shall process messages and store the orders in File #69.6 – Laboratory Pending Order File.

- .01 NAME (RF), [0;1]
- .02 SEX (S), [0;2]
- .03 DOB (D), [0;3]
- .06 RACE (F), [1;1]
- .09 PAT ID (F), [0;9]
- ORDERING SITE (P4'), [0;4]
- COLLECTING SITE (P4'), [0;5]
- ORDERING SITE UID (F), [0;6]
- ORDERING SITE ACC # (F), [0;12]
- SPECIMEN (P61'), [0;7]
- COLLECTION SAMPLE (P62'), [0;8]
- SPECIMEN STATUS (*P64.061'), [0;10]
- FILE REF (P67'), [0;11]
- VISIT NUMBER (NJ8,0), [0;13]
- ORDERED DATE/TIME (D), [1;1]
- COLLECTED DATE/TIME (D), [1;2]
- 11.1 COLLECTION END DATE/TIME (D), [1;9]
- SHIPPED DATE/TIME (D), [1;3]
- RECD DATE/TIME (D), [1;4]
- TRANS DATE/TIME (D), [1;5]
- DATA ACCEPT DATE/TIME (D), [1;6]
- COMPLETE DATE/TIME (D), [1;7]
- INCOMING MESS # (F), [1;8]
- SHIPPING MANIFEST (F), [0;14]
- 20 ORDERED TESTS (Multiple-69.64), [2;0]

- .01 NLT TEST (F), [0;1]
- NLT CODE (F), [0;2]
- REMOTE TEST NAME (F), [0;3]
- REMOTE TEST # (F), [0;4]
- REMOTE URGENCY (F), [0;5]
- TEST STATUS (*P64.061'), [0;6]
- OUT GOING MESS # (F), [0;8]
- ACCESSION D/T (D), [0;7]
- HOST UID (F), [0;9]
- COMPLETE D/T (D), [0;10]
- HOST TEST (P60'), [0;11]
- HOST URGENCY (*P62.05'), [0;12]
- ORDERING PROVIDER (F), [1;1]
- 700.04HL OBR-4 (F), [700.04;E1,200]
- 700.18HL OBR-18 (F), [700.18;E1,60]
- 700.19HL OBR-19 (F), [700.19;E1,60]
- 99 COMMENTS (Multiple-69.699), [99;0]
- .01 COMMENTS (W), [0;1]
- 700 HL ENCODING CHARACTERS (F), [700;E1,5]
- 700.02 HL PID-2 (F), [700.02;E1,250]
- 700.04 HL PID-4 (F), [700.04;E1,250]

3.2.2.27. Functional Requirement 51

The *VISTA* Laboratory AP application shall modify the Referral Patient Multi-purpose Accession [LRLEDI] option to process incoming HL7 orders for AP.

The *VISTA* Laboratory AP application shall use Referral Patient Multi-purpose Accession [LRLEDI] option to capture the same data elements that are captured in Log-in, anat path [LRAPLG] option.

The data elements that are captured and stored in File 69:

- Patient Name – pointer to #2 or #67
- PATIENT LOCATION – stored in file #63 and #68
- Accession # - created – “ file #63 and 68
- DATE/TIME SPECIMEN TAKEN– 63
- PHYSICIAN - #63
- SPECIMEN SUBMITTED BY - #63
- SPECIMEN - #63
- WORKLOAD PROFILE (CY only) - #63, pointer to file 60
- DATE/TIME SPECIMEN RECEIVED - #63
- PATHOLOGIST - #63
- COMMENT - #63
- FROZEN SECTION – #63 - free text entry for SP only
- GROSS DESCRIPTION - #63 – free text entry for CY only
- RESIDENT OR EM TECH - #63 – EM only.

3.2.2.28. Functional Requirement 52

VISTA Laboratory application shall build HL7 result (ORU) messages with AP results that are triggered by normal laboratory verification/release event processes.

3.2.2.29. Functional Requirement 53

The *VISTA* Laboratory when releasing AP results via the Verify/release reports, anat path [LRAPR] option shall, when the accession was received via LEDI, trigger transmission of the report to the facility submitting the request.

3.2.2.30. Functional Requirement 54

The following modifications shall be required:

- Modify LRAPR and the LRARS option to call LA7VMSG when releasing LEDI AP reports which will build the outgoing HL7 message,
- Send the correct type of report or results that are associated: (1) original (or final), 2) modified, or 3) supplemental.

3.2.2.31. Functional Requirement 55

The *VISTA* Laboratory AP application shall use existing LEDI functionality to send LEDI result (ORU) messages via LA7VMSG API.

The *VISTA* Laboratory application shall trigger an event to check for a LEDI order by calling the LA7VMSG internal API.

3.2.2.32. Functional Requirement 56

The *VISTA* Laboratory AP application shall trigger an event to recall and review original, modified, and supplemental changes.

3.2.2.33. Functional Requirement 57

The *VISTA* Laboratory File #63 – Test Results shall be modified by adding the fields for LEDI “ORU” node for the “SP”, “CY”, and “EM” subscripts. Test result storage shall be enhanced to support recording the accessioning division of the order.

The *VISTA* Laboratory File #63 – Test Results shall be modified by adding the fields to support/use accession UIDs (unique identifiers) as specimen/accession identifier.

- #.31 UID
- #.32 Ordering site
- #.33 Collection site
- #.34 Host UID
- #.342 Order Site UID
- #.35 Ordered Test

3.2.2.34. Functional Requirement 58

The *VISTA* Laboratory File #63 – Test Results shall be modified by adding the fields to support accessioning division.

3.2.2.35. Functional Requirement 59

The *VISTA* Laboratory AP application shall build corresponding orders in File #69 with the [LRAPLG] AP log in option.

3.2.2.36. Functional Requirement 60

The *VISTA* Laboratory application shall store the performing laboratory reported by the reference laboratory. Support recoding the performing laboratory for the various components of microbiology and anatomic pathology reports. The *VISTA* Laboratory application shall be able to record and display reports wherein various components of a given report are performed by multiple/discrete laboratories.

The following fields in File #63 - LAB DATA, field .12 – PRODUCING LABORATORY field (multiple) shall be added to support this functionality:

- .01 LAB DATA REFERENCE (F), [0;1]
- .02 INSTITUTION (P4'), [0;2]

3.2.2.37. Functional Requirement 61

LEDI IV added new functionality so that if users have the LRDATA key and enter a tilde at the lab report result prompt, they can change the units/reference ranges that display for lab tests.

3.2.2.38. Functional Requirement 62

The *VISTA* Laboratory application shall, when the pathologist is releasing the case and it is within the Laboratory software, generate CPRS AP alerts/notifications to the following mandatory recipients:

The recipients should include:

1. Ordering provider
2. If patient inpatient as of specimen date/time then
3. Inpatient primary care provider
4. Inpatient attending
5. Outpatient primary and associate care providers
6. Any additional recipients specified by the user
7. If related surgery case then
8. Current surgeon if different from surgeon used as ordering provider when specimen logged in.
9. Attending surgeon

The pathologist during release of the case can specify additional users/recipients or mail groups to receive the CPRS notification. The list of recipients will be displayed to the releasing pathologist/user.

3.2.2.39. Design Element Tables - SRS reqs. are in Section 4

3.2.2.39.1.

(Entry Points)

Routine Name	LRAP	
Enhancement Category	<input type="checkbox"/> New X Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability	SRS 3.2.2.1, 3.2.2.4, 3.2.2.11	
Related Options	N/A	
Related Routines	Routines “Called By” LRAP	Routines that “Call” LRAP
	EN [^] DDIOL,DIC,DIE,V [^] LRU ,LRUTL,\$\$GET [^] XPAR	LRAPA LRAPB LRAPC LRAPD LRAPDEL LRAPDPT LRAPED LRAPEDC LRAPFICH LRAPH LRAPJNC LRAPL LRAPLG LRAPLG1 LRAPMOD LRAPMRL LRAPMV LRAPP LRAPPA LRAPPF LRAPQ LRAPQC LRAPQCD LRAPQCN LRAPQAFS LRAPQAM LRAPQAR LRAPQOR LRAPR LRAPSE LRAPSL LRAPST LRAPV LRAPWE

Routine Name	LRAP			
		LRAPWR LRAPX		
Data Dictionary References	N/A			
Related Protocols	N/A			
Related Integration Agreements	N/A			
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference X Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local			
Input Attribute Name and Definition	Name: N/A Definition: N/A			
Output Attribute Name and Definition	Name: N/A Definition: N/A			
Current Logic: Line Tags CY^LRAP, EM^LRAP, SP^LRAP perform continuation of capturing login information after Accession # and Date/Time Specimen taken are entered. The following information is currently captured and stored into DR: Physician, Specimen Submitted by, Specimen, Workload Profile (CY only), Date/Time Specimen Received, Pathologist (or Cytotechnologist for CY only), Comment, Gross Description (CY only), Frozen Section (SP only), Resident or EM Tech (EM only).				
N/A				
Modified Logic				
The following new fields shall be added to the DR string: SPECIMEN TYPE (or TOPOGRAPHY) – prompt for user input shall be added after Specimen prompt				
<ul style="list-style-type: none">ORDERED TEST – prompt for user input shall be added after the last current login prompt: CY – after Date/time Specimen(s) Processed EM – after Comment SP – after Frozen SectionCOLLECTION SAMPLE – default value per accession area (CY, EM, SP) shall be stored into this field				

Routine Name	LRAPALRT	
Enhancement Category	<input type="checkbox"/> New X Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability	SRS 3.2.2.38 Functional Requirement 62 SRS reqs are Section 4	
Related Options	N/A	
Related Routines	Routines “Called By”	Routines that “Call”
	EN^DDIOL \$\$GET1^DIQ ^DIR ACCYR^LRAPRES END^LRAPRES SECTION^LRAPRES ALERT^LRAPRES1 CHELP^LRAPRES1	

Routine Name	LRAPALRT	
	LOOKUP^LRAPRES1 MORE^LRAPRES1 GETDOCS^LRAPUTL LOOKUP^LRAPUTL	
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input checked="" type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
Alerts not sent to all the necessary persons.		
Modified Logic		
<p>When the pathologist is releasing the case a CPRS AP alerts/notifications is sent to the following mandatory recipients:</p> <p>The recipients include:</p> <ol style="list-style-type: none"> 1. Ordering provider 2. If patient inpatient as of specimen date/time then 3. Inpatient primary care provider 4. Inpatient attending 5. Outpatient primary and associate care providers 6. Any additional recipients specified by the user 7. If related surgery case then 8. Current surgeon if different from surgeon used as ordering provider when specimen logged in. 9. Attending surgeon <p>The pathologist during release of the case can specify additional users/recipients or mail groups to receive the CPRS notification. The list of recipients will be displayed to the releasing pathologist/user.</p>		

	LRAPBK
Enhancement Category	New X Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
SRS Traceability	N/A

	LRAPBK			
Related Options	Print Log Book [LRAPBK]			
Related Routines	Routines “Called By”	Routines that “Call”		
	\$\$GET1^DID,DIR,LRAP,LRAPBK1,AU^LRAPBK1,D^LRAUAW,D^LRU,F^LRU L^LRU,M^LRU,S^LRU,V^LRU,XR^LRU,GETDATA^LRUEPR,BEG^LRUTL END^LRUTL,IO^LRWU,ENA^LRWU4,PT^LRX,GETCPT^PXAPIOE,\$\$FMTE^XLFDT \$\$GET^XPAR	LRAPBK1		
Data Dictionary References	N/A			
Related Protocols	N/A			
Related Integration Agreements	N/A			
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local			
Input Attribute Name and Definition	Name: N/A Definition: N/A			
Output Attribute Name and Definition	Name: N/A Definition: N/A			
Current Logic				
Related surgery cases not printed in AP log book.				
Modified Logic				
Routine modified to print related surgery info in AP log book.				

	LRAPBK1		
Enhancement Category	New	X Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
SRS Traceability	N/A		
Related Options	Print Log Book [LRAPBK]		
Related Routines	Routines “Called By”	Routines that “Call”	
	\$\$IEN2SCT^LA7VHLU6,H1^LRAPBK	LRAPBK	
Data Dictionary References	N/A		
Related Protocols	N/A		

	LRAPBK1
Related Integration Agreements	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
Related surgery info not printed in AP log book.	
Modified Logic	
Routine modified to print related surgery info in AP log book.	

	LRAPBR	
Enhancement Category	New X Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability	N/A	
Related Options	N/A	
Related Routines	Routines “Called By”	Routines that “Call”
	BROWSE ^DDBR,\$\$GET1 ^DID ,\$\$GET1 ^DIQ,DIWP,ENTER ^LRAPBR1 ESIGLN ^LRAPBR1,FOOTER ^ LRAPBR1,GLENTY ^LRAPBR 1,PPL ^LRAPBR1 LRAPBR2,ENTER ^LRAPBR4, LRAPBR5,LRAPBRPW,\$\$INS ^LRU,EN ^LRUA SET ^LRUA,LRUP	LRAPRES
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input x <input type="checkbox"/> Output Reference Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	

	LRAPBR
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
Pathologist signature prints before performing lab.	
Modified Logic	
Pathologist signature prints after performing lab.	

	LRAPBR1	
Enhancement Category	New X Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability	N/A	
Related Options	N/A	
Related Routines	Routines "Called By"	Routines that "Call"
	\$\$GET1^DID WP^DIE \$\$GET1^DIQ ^DIWP ^LRAPBR3 GETPCP^LRAPUTL GLBWRT^LRAPUTL NEWLN^LRAPUTL PFAC^LRRP1 RL^LRRP1 RETLST^LRRPL D^LRU ^LRUA GETDATA^LRUEPR SRCASE^LRUEPR SRCASERR^LRUEPR \$\$FMTE^XLFDT \$\$CJ^XLFSTR \$\$GET^XPAR \$\$NAME^XUAF4 \$\$NAME^XUSER	LRAPBR LRAPBR4
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input x <input type="checkbox"/> Output Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	

Routine Name	LRAPBS				
Requirement Traceability Matrix	NA				
Related Options	Blocks, Stains, Procedures, anat path [LRAPSPDAT]				
Related Routines	Routines “Called By”		Routines “Called”		
	LRAP,LRAPBS1,AU^LRAPBS1,SP^LRAPBS1,S^LRAPST,A^LRAPWU,V^LRU,X^LRU WK		N/A		
Data Dictionary (DD) References	N/A				
Related Protocols	N/A				
Related Integration Control Registrations (ICRs)	N/A				
Data Passing	x <input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local				
Input Attribute Name and Definition	Name: N/A Definition: N/A				
Output Attribute Name and Definition	Name: N/A Definition: N/A				
Current Logic					
N/A					
Modified Logic					
Bug fix					

Routine Name	LRAPCUM	
Enhancement Category	<input type="checkbox"/> New x <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	NA	
Related Options	NA	
Related Routines	Routines “Called By”	Routines “Called”
	%ZIS, DIWP, DIWW, LRAPCUM1, LRDPA, SUPA^LRSPRPT, LRSRPTM, D^LRU, L^LRU, YN^LRU, D^LRUA, SET^LRUA	LRAPCUM1 LRAPDS LRAPPA
Data Dictionary (DD) References	NA	
Related Protocols	NA	
Related Integration Control	NA	

Routine Name	LRAPCUM
Registrations (ICRs)	
Data Passing	<input type="checkbox"/> Input x <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
N/A	
Modified Logic	
Bug fix	

Routine Name	LRAPDI	
Enhancement Category	<input type="checkbox"/> New X <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	3.2.2.8	
Related Options	Data entry, anat path [LRAPD]	
Related Routines	Routines “Called By”	Routines “Called”
	EN^DDIOL	LRAPD LRAPDA
Data Dictionary (DD) References	NA	
Related Protocols	NA	
Related Integration Control Registrations (ICRs)	NA	
Data Passing	X <input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
Not storing UID and order #.		
Modified Logic		
<ul style="list-style-type: none"> • Add link to file #69 • Store order # in file #68 • Any place where user is prompted to enter accession #, allow selection by UID, accession # or patient name 		

Routine Name	LRAPD1
<ul style="list-style-type: none"> • Store UID in file #68 	

Routine Name	LRAPDA			
Enhancement Category	<input type="checkbox"/> New X <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change			
Requirement Traceability Matrix	NA			
Related Options	Data entry, anat path [LRAPD]			
Related Routines	Routines “Called By”		Routines “Called”	
	%DT,EN^DDIOL,DIE,\$\$GET 1^DIQ,DIR,OERR^LR7OB63 D,LRAPDSR,S^LRAPR,AC CCOMP^LRAPRES,MAIN^LRA PRES1,C^LRAPSWK,C1^LRA PSWK LOOKUP^LRAPUTL,PROVIDR ^LRAPUTL,BDR^LRAUDA,\$\$ ES^LRCAPES,CLEAN^LRC APES,CPT^LRCAPES,ES^LR CAPES,DPA1^LRDPA LABKEY^LRPARAM UPDATE^LRPXRM,EDIT^LRR PLU,AU^LRSPGD,EN^LRSPG D,CK^LRU,FRE^LRU,V^L RU,YN^LRU,LRUP,I^LRUPS ,SETRL^LRVERA		LRAPD LRAPM LRAPQACD LRAPR LRAPUTL LRAPX	
Data Dictionary (DD) References	NA			
Related Protocols	NA			
Related Integration Control Registrations (ICRs)	NA			
Data Passing	X <input type="checkbox"/> <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Input			
Input Attribute Name and Definition	Name: N/A Definition: N/A			
Output Attribute Name and Definition	Name: N/A Definition: N/A			
Current Logic				
No prompt to enter performing laboratory.				

Routine Name	LRAPDA
Modified Logic	
Enhancement to prompt to select the performing Laboratory for results. This prompt shall use API SELPL^ LRVERA	

Routine Name	LRAPDSR				
Enhancement Category	<input type="checkbox"/> New X <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change				
Requirement Traceability Matrix	3.2.2.20				
Related Options	Supplementary Report, Anat Path [LRAPDSR]				
Related Routines	Routines “Called By”		Routines “Called”		
	%DT,EN^DDIOL,FILE^DICN ,DIE,UPDATE^DIE,WP^DIE ,\$\$EXTERNAL^DILFD,GETS^DIQ,DIR,GETDATA^LRAPESON,UPDATE^LRPXRM EDIT^LRRPLU,\$\$FMTE^XLFD DT		LRAPDA LRAPMRL D		
Data Dictionary (DD) References	NA				
Related Protocols	NA				
Related Integration Control Registrations (ICRs)	NA				
Data Passing	X <input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local				
Input Attribute Name and Definition	Name: N/A Definition: N/A				
Output Attribute Name and Definition	Name: N/A Definition: N/A				
Current Logic					
Cannot enter UID for accession selection.					
Modified Logic					
Select Accession Number/Pt Name:, to accept UIDs as part of the accession selection criteria					

Routine Name	LRAPED
Enhancement Category	<input type="checkbox"/> New X <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Requirement Traceability Matrix	3.2.2.12
Related Options	Edit log-in & clinical hx, anat path [LRAPED]

Routine Name	LRAPED				
Related Routines	Routines “Called By”		Routines “Called”		
	%DT,EN^DDIOL,\$\$GET1^DI D,DIE,\$\$GET1^DIQ,LRAP, C^LRAPSWK,C1^LRAPSWK ,D^LRAUAW,CK^LRU,D^LRU ,FRE^LRU,V^LRU,XR^LRU, YN^LRU K^LRUDEL,LRUP		LRAPSWK		
Data Dictionary (DD) References	NA				
Related Protocols	NA				
Related Integration Control Registrations (ICRs)	NA				
Data Passing	X <input type="checkbox"/>	<input type="checkbox"/> Output Reference	<input type="checkbox"/> Both	<input type="checkbox"/> Global Reference	<input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A				
Output Attribute Name and Definition	Name: N/A Definition: N/A				
Current Logic					
Cannot enter specimen, topography and collection sample.					
Modified Logic					
Anatomic Path log in enhanced to include new fields, specimen, topography, and collection sample.					

Routine Name	LRAPPF	
Enhancement Category	<input type="checkbox"/> New X <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	NA	
Related Options	Cum path data summaries [LRAPT]	
Related Routines	Routines “Called By”	Routines “Called”
	DIR,PFAC^LRRP1,RL^LRRP 1,\$\$GET^XPAR	LRAPPF1 LRAPPOW LRAPT1 LRAPT2
Data Dictionary (DD) References	NA	
Related Protocols	NA	
Related Integration Control Registrations (ICRs)	NA	

Routine Name	LRAPF
Data Passing	<input type="checkbox"/> Input <input checked="" type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
N/A	
Modified Logic	
Bug fix	

Routine Name	LRAPFICH	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	NA	
Related Options	Print final path reports by accession # [LRAPFICH]	
Related Routines	Routines “Called By”	Routines “Called”
	%DT,%ZIS,HOME^%ZIS,%ZISC,%ZTLOAD,DIR,LRAP,MA IN^LRAPTIUP,TIUCHK^LRAPUTL,EN^LRSPRPT,FOC^LRSPRPT,L^LRU,L1^LRU,S^LRU V^LRU,XR^LRU,EN2^LRUA,SET^LRUA	NONE
Data Dictionary (DD) References	NA	
Related Protocols	NA	
Related Integration Control Registrations (ICRs)	NA	
Data Passing	<input type="checkbox"/> Input <input checked="" type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
N/A		

Routine Name	LRAPFICH
Modified Logic	
Bug fix	

Routine Name	LRAPLG1	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	3.2.2.5,3.2.2.6	
Related Options	Log-in, anat path[LRAPLG]	
Related Routines	Routines “Called By”	Routines “Called”
	EN^DDIOL,DIE,UPDATE^DIE,WP^DIE,DIK,LOCK^DILF,\$\$GET1^DIQ,EN^DIQ,D IR,OERR^LR70B63D,EN^LR70FA0,ZSN^LR70FA0,LRAP LRAPCWK,CK^LRAPCWK,LRA PLG2,LRAPSWK,LRAUAW,LR SPGD,V^LRU,XR^LRU,YN ^LRU,SETREF^LRUEPR,EN1 ^LRUPS,LRUTELL,LRUWLF CHECK68^LRWLST1 ORUT^LRWLST11,SLRSS^LR WLST11,MAILALRT^LRWLST 12,DISP^SROSPLG,KVA^ VADPT,\$\$FMADD^XLFD,\$\$ NOW^XLFD,\$\$GET^XPAR	LRAPLG LRAPL62
Data Dictionary (DD) References	NA	
Related Protocols	NA	
Related Integration Control Registrations (ICRs)	NA	
Data Passing	<input checked="" type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
Did not create and store UID, ORU data and order # in file #63, #68, and #69.		
Modified Logic		

Routine Name	LRAPLG1
Modified to create and store UID, ORU data and order # in file #63, #68, and #69.	

Routine Name	LRAPLG2			
Enhancement Category	<input type="checkbox"/> New X <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change			
Requirement Traceability Matrix	3.2.2.5,3.2.2.6			
Related Options	Log-in, anat path[LRAPLG]			
Related Routines	Routines “Called By”		Routines “Called”	
	\$\$\$GET1^DID,CRE868^LRAPLG1,END^LRAPLG1,D^LRAUAW,D^LRU,SSN^LRU,YN^LRU,EN^LRUWLF		LRAPLG LRAPLG1	
Data Dictionary (DD) References	NA			
Related Protocols	NA			
Related Integration Control Registrations (ICRs)	NA			
Data Passing	X <input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local			
Input Attribute Name and Definition	Name: N/A Definition: N/A			
Output Attribute Name and Definition	Name: N/A Definition: N/A			
Current Logic				
Did not create and store UID, ORU data and order # in file #63, #68, and #69.				
Modified Logic				
Modified to create and store UId, ORU data and order # in file #63, #68, and #69.				

Routine Name	LRAPM	
Enhancement Category	<input type="checkbox"/> New X <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	3.2.2.15	
Related Options	Data entry, anat path [LRAPD]	
Related Routines	Routines “Called By”	Routines “Called”
	%DT,%XY^%RCR,EN^DDIOL,DIE,A^LRAPD,PNAME^LRAPDA,C^LRAPSWK,C1^LRAPSWK,UPDATE^LRPXR,M,V^LRU,YN^LRU,LRUP,DEL^LRWOMEN	LRAPSWK

Routine Name	LRAPM	
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input checked="" type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
Performing lab and LOINC/NLT information is not stored.		
Modified Logic		
<p>The results are stored related to the 7 word processing fields along with their LOINC/NLT performing lab information. The 7 word processing fields are:</p> <ul style="list-style-type: none"> • PREOP DIAGNOSIS SP Preoperative Diagnosis • OPERATIVE FINDINGS SP Operative Findings • POST-OP DIAGNOSIS SP Postoperative Diagnosis • GROSS DESCRIPTION SP Gross Description • MICROSCOPIC DESCRIPTION SP Microscopic Description • FROZEN SECTION SP Frozen Section • SURGICAL PATH DIAGNOSIS SP Surgical Path Diagnosis 		

Routine Name	LRAPMRL	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	3.2.2.19	
Related Options	Modify released pathology report [LRAPMRL]	
Related Routines	Routines "Called By"	Routines "Called"
	NOW^%DTC,EN^DDIOL,\$\$GET1^DID,FILE^DIE,UPDATE^DIE,WP^DIE,CLEAN^DILF,\$\$GET1^DIQ,DIR,LRAP,CK^LRAP,COMPARE^LRAPDSR COPY^LRAPDSR,GETRPT^LR	LRAPMOD

Routine Name	LRAPMRL				
	APDSR,RELEAS2^LRAPDSR, RPT^LRAPDSR,STORE^LR APDSR,UNRELEAS^LRAPDSR ,UPDATE^LRAPDSR CPTCODE^LRAPMRL1,EDIT^ LRAPMRL1 QUEUPD^LRAPMRL1,RELCHK ^LRAPMRL1,RELEASE^LRAP MRL1,SETDR^LRAPMRL1, C^LRAPSWK,ACCYR^LRAPUT L,LOOKUP^LRAPUTL,\$\$ES^ LRCAPES CLEAN^LRCAPES,ES^LRCAP ES,UPDATE^LRPXRM,V^LRU ,DEL^LRWOMEN,\$\$CJ^XL FSTR				
Data Dictionary (DD) References	N/A				
Related Protocols	N/A				
Related Integration Control Registrations (ICRs)	N/A				
Data Passing	X <input type="checkbox"/> <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Input				
Input Attribute Name and Definition	Name: N/A Definition: N/A				
Output Attribute Name and Definition	Name: N/A Definition: N/A				
Current Logic					
Cannot select accession by uid.					
Modified Logic					
Select Accession Number/Pt Name:, to accept UIDs as part of the accession selection criteria.					

Routine Name	LRAPMRL1	
Enhancement Category	<input type="checkbox"/> New X <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	3.2.2.8	
Related Options	Modify released pathology report [LRAPMRL]qq	
Related Routines	Routines "Called By"	Routines "Called"

Routine Name	LRAPMRL1	
	DD^%DT,NOW^%DTC,EN^DDI OL,DIE,FILE^DIE,UPDATE ^DIE,\$\$GET1^DIQ,DIR, PROVIDR^LRAPUTL,RELEAS E^LRAPUTL,CPT^LRCAPES	LRAPMRL
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	X <input type="checkbox"/> <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Input	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
Modify a released anatomic pathology report.		
Modified Logic		
<p>The new fields are added to modify a released report.</p> <ul style="list-style-type: none"> • Add link to file #69 • Store order # in file #68 • Any place where user is prompted to enter accession #, allow selection by UID, accession # or patient name • Store UID in file #68 		

Routine Name	LRAPP	
Enhancement Category	<input type="checkbox"/> New X <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	Print, Anat Path [LRAPP]	
Related Routines	Routines “Called By”	Routines “Called”
	DIR,LRAP,V^LRU,LRUPA,L RUPAD	None
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	

Routine Name	LRAPP
Data Passing	<input type="checkbox"/> Input <input checked="" type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
Does not print performing laboratory information.	
Modified Logic	
Prints performing laboratory information.	

Routine Name	LRAPPF1	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	Entries by dates, patient & accession # [LRAPF]	
Related Routines	Routines “Called By”	Routines “Called”
	\$\$EXTERNAL^DILFD,LRAPF ,F^LRAPF,LRAPPF2,H^LRA PT1,EN^LRAPT2,D^LRAU AW,H^LRSPT,D^LRU,F^LRU ,M^LRU,SSN^LRU,\$\$Y2K^L RX	LRAPPF LRAPQACN LRAPT1
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input type="checkbox"/> Input <input checked="" type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
Did not print new fields.		
Modified Logic		
Modified to print new fields.		

	LRAPPOW		
Enhancement Category	New X Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change		
SRS Traceability	N/A		
Related Options	N/A		
Related Routines	Routines “Called By”	Routines that “Call”	
	LRAPF , F ^ LRAPF , \$\$CJ ^ XLF STR	LRAPLG	
Data Dictionary References	NA		
Related Protocols	NA		
Related Integration Agreements	NA		
Data Passing	<input type="checkbox"/> Input x <input type="checkbox"/> Output Reference Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local		
Input Attribute Name and Definition	Name: N/A Definition: N/A		
Output Attribute Name and Definition	Name: N/A Definition: N/A		
Current Logic			
Print POW data.			
Modified Logic			
The Joint Pathology Center (JPC) has replaced the Armed Forces Institute of Pathology (AFIP). Any references to the AFIP is replaced with JPC.			

Routine Name	LRAPQAR		
Enhancement Category	<input type="checkbox"/> New X <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change		
Requirement Traceability Matrix	N/A		
Related Options	10% random case review, surg path [LRAPQAR]		
Related Routines	Routines “Called By”	Routines “Called”	
	LRAP,ASK ^ LRAPQAFS,L ^ LRAPQAMR,EN ^ LRSPRPT,B ^ LRU,F ^ LRU,L ^ LRU,L1 ^ LRU,M ^ LRU,S ^ LRU,V ^ LRU,XR ^ LRU,LRUA,EN2 ^ LRUA,SET ^ LRUA	None	

Routine Name	LRAPQAR				
	BEG^LRUTL,END^LRUTL				
Data Dictionary (DD) References	N/A				
Related Protocols	N/A				
Related Integration Control Registrations (ICRs)	N/A				
Data Passing	<input type="checkbox"/> Input X <input checked="" type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local				
Input Attribute Name and Definition	Name: N/A Definition: N/A				
Output Attribute Name and Definition	Name: N/A Definition: N/A				
Current Logic					
Does not print new fields.					
Modified Logic					
Modified to print new fields.					

Routine Name	LRAPR*	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability	SRS 3.2.2.7 Functional Requirement 32 SRS reqs are Section 4	
Related Options	Verify/release reports, anat path [LRAPR]	
Related Routines	Routines "Called By"	Routines that "Call"
	EN^DDIOL,DIC,\$\$GET1^DI D,FILE^DIE,\$\$GET1^DIQ, DIR,OERR^LR70B63D,LR AP,LRAPDA,GETDATA^LRAP ESON,CHKSUP^LRAPR1 CKSIGNR^LRAPR1,RELCHK^ LRAPR1,UNRLSE^LRAPR1,L RAPRES,RELEASE^LRAPR ES,SECTION^LRAPRES,STO RE^LRAPRES,TIUPREP^LRA PRES CLSSCHK^LRAPRES1 MAIN^LRAPRES1,LOOKUP^L RAPUTL,V^LRU,LRUP,X^LR UWK,LEDI^LRVR0,\$\$FMT E^XLFDI,\$\$NOW^XLFDI,SI G^XUSESIG	None

Routine Name	LRAPR*	
	N/A N/A	
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input checked="" type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
Does not allow selection by uid and does not allow entry of performing lab.		
Modified Logic		
1. Add prompt for Performing Lab – call to SELPL^LRVERA 1. Add prompt for UID to the Accession # / Pt name prompt – call to UID^LRVERA to retrieve UID		

Routine Name	LRAPR1	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	3.2.2.40, 3.2.2.41	
Related Options	Verify/release reports, anat path [LRAPR]	
Related Routines	Routines “Called By”	Routines “Called”
	EN^DDIOL,\$\$GET1^DID,FILE^DIE,\$\$GET1^DIQ,RELEASE^LRAPUTL,LEDI^LRVRO,\$\$NOW^XLFD	LRAPR
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and	Name: N/A	

Routine Name	LRAPR1
Definition	Definition: N/A
Current Logic	
LEDI reports are not sent.	
Modified Logic	
<p>When the accession is received via LEDI, trigger transmission of the report to the facility submitting the request.</p> <p>Modify to call LA7VMSG when releasing LEDI AP reports which will build the outgoing HL7 message, Send the correct type of report or results that are associated: (1) original (or final), 2) modified, or 3) supplemental.</p>	

Routine Name	LRAPRES	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	SRS 3.2.2.7	
Related Options	Verify/release reports, anat path [LRAPR]	
Related Routines	Routines “Called By”	Routines “Called”
	DD^%DT,\$\$TEST^DDBRT,EN ^DDIOL,DIE,UPDATE^DIE, \$\$GET1^DIQ,DIR,OERR^ LR7OB63D,LRAP,CK^LRAP, INIT^LRAPBR,SUPCHK^LRA PR1 CLSSCHK^LRAPRES1,MAIN^ LRAPRES1,RETRACT^LRAPR ES1,INIT^LRAPSNMD,C^ LRAPSWK,ACCYR^LRAPUTL, LOOKUP^LRAPUTL PROVIDR^LRAPUTL,REFRRL ^LRAPUTL \$\$ES^LRCAPES,CLEAN^LRC APES,CPT^LRCAPES,ES^LR CAPES,UPDATE^LRPXR, CK^LRU,FRE^LRU,V^LRU,X ^LRUWK,SETRL^LRVERA LEDI^LRVR0,\$\$DDEFIEN^T IUFLF7,SETPARM^TIULE,E XTRACT^TIULQ,NEW^TIU PNAPI,\$\$NOW^XLFD,\$\$CJ ^XLFSTR,SIG^XUSESIG \$\$CHKSUM^XUSESIG1	LRAPALRT LRAPDA LRAPR

Routine Name	LRAPRES
Data Dictionary (DD) References	N/A
Related Protocols	N/A
Related Integration Control Registrations (ICRs)	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
Performing Lab is not entered. Cannot select by uid.	
Modified Logic	
Add prompt for Performing Lab – call to SELPL^LRVERA Add prompt for UID to the Accession # / Pt name prompt – call to UID^LRVERA to retrieve UID	

Routine Name	LRAPRES1	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	SRS 3.2.2.38 Functional Requirement 62 SRS reqs are Section 4	
Related Options	Verify/release reports, anat path [LRAPR]	
Related Routines	Routines “Called By”	Routines “Called”
	EN^DDIOL,DIC,\$\$GET1^DIQ,DIR,GETDOCS^LRAPUTL,LAB^ORB3LAB,EXTRACT^TIULQ,FILE^TIUSRVP,\$\$UP^XLFSTR,\$\$GET^XPAR \$\$GET^XUA4A72,\$\$NAME^XUSER	LRAPALRT LRAPDA LRAPRES
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and	Name: N/A	

Routine Name	LRAPRES1
Definition	Definition:
Current Logic	
Alerts not sent to all the necessary people.	
Modified Logic	
<p>When the pathologist is releasing the case a CPRS AP alerts/notifications is sent to the following mandatory recipients:</p> <p>The recipients include:</p> <ul style="list-style-type: none"> Ordering provider If patient inpatient as of specimen date/time then <ul style="list-style-type: none"> Inpatient primary care provider Inpatient attending Outpatient primary and associate care providers Any additional recipients specified by the user If related surgery case then <ul style="list-style-type: none"> Current surgeon if different from surgeon used as ordering provider when specimen logged in. Attending surgeon <p>The pathologist during release of the case can specify additional users/recipients or mail groups to receive the CPRS notification. The list of recipients will be displayed to the releasing pathologist/user.</p>	

Routine Name	LRAPRES2	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input checked="" type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	N/A	
Related Routines	Routines "Called By"	Routines "Called"
	N/A	N/A
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	

Routine Name	LRAPRES2
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
N/A	
Modified Logic	
N/A	

Routine Name	LRAPSNMD			
Enhancement Category	<input type="checkbox"/> New X <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change			
Requirement Traceability Matrix	N/A			
Related Options	N/A			
Related Routines	Routines “Called By”	Routines “Called”		
	%ZIS,HOME^%ZIS,%ZISC,%ZTLOAD,\$\$GET1^DID,\$\$GET1^DIQ,DIR,\$\$IEN2SCT^LA7VHLU6,\$\$CJ^XLFSTR,\$\$LOW^XLFSTR,\$\$GET^XPAR	LRAPRES		
Data Dictionary (DD) References	N/A			
Related Protocols	N/A			
Related Integration Control Registrations (ICRs)	N/A			
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local			
Input Attribute Name and Definition	Name: N/A Definition: N/A			
Output Attribute Name and Definition	Name: N/A Definition: N/A			
Current Logic				
Displays SNOMED codes and their description for the given record in the LAB DATA (#63) file.				
Modified Logic N/A				
Modified to print topography.				

Routine Name	LRAPTIUP
Enhancement Category	<input type="checkbox"/> New X <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Requirement Traceability	N/A

Routine Name	LRAPTIUP		
Matrix			
Related Options	N/A		
Related Routines	Routines “Called By”	Routines “Called”	
	%ZIS,HOME^%ZIS,%ZISC,%ZTLOAD,\$\$GET1^DIQ,DIR,EXTRACT^TIULQ,\$\$CHKSUM^XUSESIG1,\$\$ENCRYP^XUSRB1	LRAPFICH LRAPMOD LRSPRPT	
Data Dictionary (DD) References	N/A		
Related Protocols	N/A		
Related Integration Control Registrations (ICRs)	N/A		
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local		
Input Attribute Name and Definition	Name: N/A Definition: N/A		
Output Attribute Name and Definition	Name: N/A Definition: N/A		
Current Logic			
Stores the AP report in TIU for electronic signature.			
Modified Logic			
Stores the AP report in TIU for electronic signature including performing laboratory.			

Routine Name	LRAPTT	
Enhancement Category	<input type="checkbox"/> New X <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	Anatomic pathology turnaround time [LRAPTT]	
Related Routines	Routines “Called By”	Routines “Called”
	%DTC,C^%DTC,H^%DTC,DIC,DIR,LRAP,LRAPTT1,F^LRAPTT1,B^LRU,L^LRU,S^LRU,V^LRU,XR^LRU,LRUP,BEG^LRUTL,END^LRUTL,\$\$Y2K^LRX \$\$LJ^XLFSTR,\$\$GET^XPAR %R	NONE
Data Dictionary (DD) References	NA	

Routine Name	LRAPTT
Related Protocols	NA
Related Integration Control Registrations (ICRs)	NA
Data Passing	<input type="checkbox"/> Input x <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
Prints turnaround report.	
Modified Logic	
A bug was fixed.	

Routine Name	LRAPUTL	
Enhancement Category	<input type="checkbox"/> New X <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	3.2.2.20	
Related Options	N/A	
Related Routines	Routines “Called By”	Routines “Called”
	%DT,EN^DDIOL,\$\$GET1^DI D,\$\$GET1^DIQ,GETS^DIQ, DIR,OE1^LR7OB63D,PNA ME^LRAPDA,END^LRCAPES, YN^LRU,GETDATA^LRUEPR SRCASE^LRUEPR,SRCASERR ^LRUEPR,LRUP,UID^LRVER A,\$\$OUTPTPR^SDUTL3,E XTRACT^TIULQ,INP^VADPT ,ADM^VADPT2,\$\$FMTE^XLF DT \$\$NAMEFMT^XLFNAME \$\$CJ^XLFSTR,\$\$GET^XPAR ,\$\$GET^XUA4A72,\$\$NAME^ XUSER	LRAPALRT LRAPBR1 LRAPBR2 LRAPBR3 LRAPBR4 LRAPBR5 LRAPBRPW LRAPBS1 LRAPD1 LRAPDA LRAPFICH LRAPMOD LRAPMRL LRAPMRL1 LRAPR LRAPR1 LRAPRES LRAPRES1 LRAPVRB1 LRAPX

Routine Name	LRAPUTL
Data Dictionary (DD) References	N/A
Related Protocols	N/A
Related Integration Control Registrations (ICRs)	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: N/A Definition: N/A
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
Prompt does not allow for UID to select accession.	
Modified Logic	
modify the prompt, Select Accession Number/Pt Name:, to accept UIDs as part of the accession selection criteria.	

	LRVRAP4	
Enhancement Category	X New Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability	SRS 3.2.2.7, 3.2.2.14, 3.2.2.16, 3.2.2.17, 3.2.2.18 SRS reqs are Section 4	
Related Options	AP LEDI Data Entry [LRAP VR]	
Related Routines	Routines “Called By”	Routines that “Call”
	%ZIS,HOME^%ZIS,%ZTLOA D,FILE^DIE,UPDATE^DIE,WP ^DIE,DIR,DIWP,DIWW UPDATE^LRPXRM,EDIT^LR RPLU,ROLLUPPL^LRRPLUA, SETRL^LRVERA LEDI^LRVR0,ZAP^LRVR0,PT ^LRX,\$\$FMTE^XLFDT,\$\$NO W^XLFDT	NONE
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference X Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: N/A Definition: N/A	

	LRVRAP4
Output Attribute Name and Definition	Name: N/A Definition: N/A
N/A	
Modified Logic	
<p>This routine shall include the following logic: Prompt for LOAD/WORK LIST NAME. Prompt for PROFILE.</p> <p>1. Prompt for Performing Lab – call to SELPL^LRVERA 2. Prompt for Accession Number or UID – call to UID^LRVERA to retrieve UID Upon successful entry of #1 and #2 above, the following actions will occur:</p> <ul style="list-style-type: none"> Retrieve results from intermediate LAH global – call to ^LRVR* series of routines Prompt to ask user to “Accept” or “Reject” the results. <p>3. If the results are accepted, they will be stored in file #63. If user indicates “No” at the Accept prompt, that means the results are rejected.</p>	

Routine Name	LRWLST1	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix	N/A	
Related Options	Referral Patient Multi-purpose Accession [LRLEDI]	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	N/A
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control Registrations (ICRs)	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and	Name: N/A	

Routine Name	LRWLST1
Definition	Definition: N/A
Output Attribute Name and Definition	Name: N/A Definition: N/A
Current Logic	
N/A	
Modified Logic (Changes are in bold)	
The routine was fixed from incorrectly referencing the LRAAX variable to correctly referencing variable LRAA0.	

3.2.2.40. Templates

Template Name	N/A			
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete	<input type="checkbox"/> No Change
SRS Traceability	N/A			
Template Type	<input type="checkbox"/> Sort	<input type="checkbox"/> Input	<input type="checkbox"/> Print	<input type="checkbox"/> Other
Related Options	N/A			
Related Routines	Routines “Called By”		Routines “Called”	
	N/A		N/A	
Data Dictionary References	N/A			
Global References	N/A			

3.2.2.41. Bulletins

Bulletin Name	N/A		
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
SRS Traceability	N/A		
Related Routines	Routines “Called By”	Routines “Called”	
	N/A	N/A	
Mail Subject	N/A		
Mail Group	N/A		
Parameters	N/A		
Data Dictionary References	N/A		

3.2.2.42. Data Dictionaries

File Name and Number	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
SRS Traceability	N/A
Related Options	N/A
Data Dictionary References	N/A
Related Protocols	N/A
Related Database Integration Agreements	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both Reference <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
File Documentation	N/A
File Auditing, Security, and Archiving	N/A

3.2.2.43. Field Definition Information

Field Name	N/A
Field Description	N/A
Field #	N/A
Node #	N/A
Piece #	N/A
New Field	<input type="checkbox"/> Yes <input type="checkbox"/> No
Data Type	<input type="checkbox"/> Date/Time <input type="checkbox"/> Numeric <input type="checkbox"/> Set of Codes <input type="checkbox"/> Free Text <input type="checkbox"/> Pointer to a File <input type="checkbox"/> Variable-Pointer
Identifier	<input type="checkbox"/> Yes <input type="checkbox"/> No
Uneditable Field	<input type="checkbox"/> Yes <input type="checkbox"/> No
Mandatory Field	<input type="checkbox"/> Yes <input type="checkbox"/> No
Field Documentation or Help Changes Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No
Field Definition	N/A
Input/Output Transform	N/A
Cross-Reference (id and type)	<input type="checkbox"/> Regular <input type="checkbox"/> Kwic <input type="checkbox"/> Mnemonic <input type="checkbox"/> Mumps <input type="checkbox"/> Soundex <input type="checkbox"/> Trigger <input type="checkbox"/> Bulletin

3.2.2.44. Data Entries Affected by the Design

Field Name	Current Value	New Value
N/A	N/A	N/A

3.2.2.45. Unique Record(s) [Commonly the .01 field]

Unique Record ID		
Field Name(s)	Current Value	New Value
N/A	N/A	N/A

3.2.2.46. File/Global Size Changes

File/Global Name(s)	Estimated Increase	Estimated Decrease
N/A	N/A	N/A

3.2.2.47. Mail Groups

Mail Group Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Related Options	N/A	
Related Routines	Routines "Called By"	Routines "Called"
	N/A	N/A
Data Dictionary References	N/A	
Related Protocols	N/A	
Mail Group Description	N/A	
Self Enrollment Allowed	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Type	<input type="checkbox"/> Public <input type="checkbox"/> Private	

3.2.2.48. Security Keys

Security Key Name	N/A			
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete	<input type="checkbox"/> No Change
Related Options	N/A			
Related Routines	Routines “Called By”		Routines “Called”	
	N/A			
Data Passing	<input type="checkbox"/> Input	<input type="checkbox"/> Output	<input type="checkbox"/> Both	<input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
Security Key Description	N/A			
Subordinate Keys	N/A			
Mutually Exclusive Keys	N/A			
Granting Condition Logic	N/A			
Current Logic				
N/A				

Modified Logic (Changes are in bold)	
N/A	
Hierarchical Precedence	N/A

3.2.2.49. Options

Option Name	Log-in, anat path
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Associated Menu Options, etc, that will invoke this reference	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input checked="" type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
Menu Text Description	Log-in, anat path
Option Type	<input type="checkbox"/> Edit <input type="checkbox"/> Print <input type="checkbox"/> Menu <input type="checkbox"/> Inquire <input type="checkbox"/> Action <input checked="" type="checkbox"/> Run Routine <input type="checkbox"/> Other
Associated Routine	N/A
Option Definition	This option is used to log-in accessions in anatomic pathology.
Current Entry Action Logic	
<p>The following data is accepted as input for AP sections CY, EM, SP:</p> <ul style="list-style-type: none"> Patient Name, Patient Location, Accession number, Date/time Specimen taken, Physician, Specimen submitted by, Specimen(s), Date/time Specimen received, Pathologist (or Cytotechnologist for CY), Comment, Date/time Specimen processed <p>The following information is accepted as input for CY section only:</p> <ul style="list-style-type: none"> Workload Profile, Gross Description <p>The following information is accepted as input for EM section only:</p> <ul style="list-style-type: none"> Resident or EM Tech <p>The following information is accepted as input for SP section only:</p> <ul style="list-style-type: none"> Frozen Section 	
Modified Entry Action Logic (Changes are in bold)	
<p>The following new prompts will be added for AP accession areas CY, EM, SP:</p> <p>Ordered Test Name (multiple), Specimen Type (multiple) – to be added within the Specimen multiple prompt</p> <ul style="list-style-type: none"> Ordered Test Name – pointer to file #60. SUBSCRIPT (#4) of file #60 must match the accession area of the entered accession. Specimen Type – pointer to file #61. Required entry, one specimen type per ordered test. <p>The following new data will be added automatically in the background for AP accession areas CY, EM, SP:</p> <p>Collection Sample, Ordering Provider, UID, Order #</p> <ul style="list-style-type: none"> Collection Sample – pointer to file #62. Generic default will be added. Ordering Provider – pointer to file #200. The same value that is entered for PHYSICIAN (#.07) of file #63 will be stored here. Urgency – pointer to file #62.05. Change value 50 - Workload to value 9 UID and Order # - both values will be created and stored in files #63, #68, #69 via API provided by Development. 	

The following data that is currently added– Routine. The following data will be displayed at the end of the login, after all data has been stored:
<ul style="list-style-type: none"> • UID and Order #
Current Exit Action Logic
N/A
Modified Exit Action Logic (Changes are in bold)
N/A

Option Name	Accept Incoming Results [AP LEDI Data Entry[LRAP VR]
Enhancement Category	X New Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Associated Menu Options, etc, that will invoke this reference	Data entry, Anat Path[LRAPD] [DATA ENTRY]
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output X Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
Menu Text Description	Accept Incoming Results
Option Type	<input type="checkbox"/> Edit <input type="checkbox"/> Print <input type="checkbox"/> Menu <input type="checkbox"/> Inquire <input type="checkbox"/> Action X Run Routine <input type="checkbox"/> Other
Associated Routine	LRVR
Option Definition	This option is used to accept incoming result messages. This option will perform initial verification on the results selected by the user, if the results pass initial verification, they will be displayed on the screen for the user to “Accept” or “Reject”. If the results are accepted, they will be stored in file #63. If user indicates “No” at the Accept prompt, that means the results are rejected. If rejected, they will remain in the intermediate LAH global.
Current Entry Action Logic	
N/A	
Modified Entry Action Logic	
This option shall be added as descendant menu item # to the Data entry, Anat Path[LRAPD],. It shall perform the following: Prompt for Performing Lab Prompt for Accession Number or UID Upon successful entry of the above data, the following actions will occur: <ul style="list-style-type: none"> • Results will undergo initial verification • If the results pass verification, they will display to the screen in report format; user will be asked to “Accept” or “Reject” the results • If the results are accepted, they will be stored in file #63. 	
Current Exit Action Logic	
N/A	

Modified Exit Action Logic
N/A

Option Name	Verify/release reports, anat path [LRAPR]
Enhancement Category	New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Associated Menu Options, etc, that will invoke this reference	Verify/release menu, anat path [LRAPVR]
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input checked="" type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
Menu Text Description	Verify/release reports, anat path
Option Type	<input type="checkbox"/> Edit <input type="checkbox"/> Print <input type="checkbox"/> Menu <input type="checkbox"/> Inquire <input type="checkbox"/> Action <input checked="" type="checkbox"/> Run Routine <input type="checkbox"/> Other
Associated Routine	N/A
Option Definition	This option is used to verify/release pathology reports.
Current Entry Action Logic	
<p>User is prompted to enter one of the following:</p> <ul style="list-style-type: none"> • CPT Coding • Electronically Sign Reports • View SNOMED Codes <p>If Electronically Sign Reports is selected, user will be prompted to enter the following:</p> <ul style="list-style-type: none"> • AP Section, Data Entry year, Accession Number / Patient Name <p>If a valid accession number or patient name is entered the following occurs:</p> <ul style="list-style-type: none"> • User is asked if they want to view the report before signing. If answer 'Yes', the report is displayed for review only. If answer 'No', proceeds to next prompt. • User is asked to enter their signature code. If a valid signature code is entered, the report is released, and a textual copy of the report, with electronic signature, is stored in TIU. 	
Modified Entry Action Logic	
<p>Upon selection of the Electronically Sign Reports, add prompt for Performing Lab. If the performing lab is an outside site, then one of the following three procedures must be added to the electronic signature process. Three possible options for electronic signature:</p> <ul style="list-style-type: none"> • Use a generic signature, such as LRLAB, as a proxy signature that will sign out/release all offsite reports. The offsite pathologist who produced the report will be identified as the one responsible for the report and will have their name appear in the appropriate location within the text of the report. • Require the performing lab to send the pathologist's name, who produced the report, in a specific location within the result message. This offsite pathologist's name will be stored in file #63 and will be used in place of the in-house pathologist when the report is released. The electronic signature will show a proxy signature with the one releasing the report signing for the offsite pathologist. • Combination of the two above. Use a generic signature, such as LRLAB, as a proxy signature that will sign out/release all offsite reports. Require the performing lab to send the pathologist's name, who produced the report, in a specific location within the result message. This offsite pathologist's name will be stored in file #63 and will be used in place of the in-house pathologist when the report is released. The electronic signature will show a proxy 	

Once the offsite report is successfully electronically signed, it will be released, and a textual copy of the report, with electronic signature, will be stored in TIU.
Current Exit Action Logic
N/A
Modified Exit Action Logic
N/A

3.2.2.50. Protocols

Protocol Name	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Associated Protocols	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
Item Text Description	N/A
Protocol Type	<input type="checkbox"/> Action <input type="checkbox"/> Menu <input type="checkbox"/> Protocol <input type="checkbox"/> Protocol Menu <input type="checkbox"/> Limited Protocol <input type="checkbox"/> Extended Action <input type="checkbox"/> Dialog <input type="checkbox"/> Other
Associated Routine	N/A
Current Entry Action Logic	
N/A	
Modified Entry Action Logic (Changes are in bold)	
N/A	
Current Exit Action Logic	
N/A	
Modified Exit Action Logic (Changes are in bold)	
N/A	

3.2.2.51. Remote Procedure Call (RPC)

Name	N/A
TAG^RTN	N/A
Input Parameters	N/A
Results Array	<input type="checkbox"/> Single Value <input type="checkbox"/> Array <input type="checkbox"/> Word Processing <input type="checkbox"/> Global Array <input type="checkbox"/> Global Instance
Description	N/A

3.2.2.52. Constants Defined in Interface

Name	Description
N/A	N/A

3.2.2.53. Variables Defined in Interface

Name	Type	Description
N/A	N/A	N/A

3.2.2.54. Types Defined in Interface

Name	Type	Description
N/A	N/A	N/A

3.2.2.55. Graphic User Interface (GUI)

Unit Name	N/A
N/A	

3.2.2.56. GUI Classes Defined

Class Name	N/A
Derived From Class Name	N/A
Purpose	N/A

3.2.2.57. Current Form

Name	Type	Description
N/A	N/A	N/A

3.2.2.58. Modified Form

Name	Type	Description
N/A	N/A	N/A

3.2.2.59. Components on Form

Name	Type	Description
N/A	N/A	N/A

3.2.2.60. Events

Name	Type	Description
N/A	N/A	N/A

3.2.2.61. Methods

Method Name	Procedure/Function	Description
N/A	N/A	N/A

3.2.2.62. Special References

Special References Name	Type	Description
N/A	N/A	N/A

3.2.2.63. Class Events

Name	Type	Description
N/A	N/A	N/A

3.2.2.64. Class Methods

Name	Procedure/Function	Description
N/A	N/A	N/A

3.2.2.65. Class Properties

Class Properties Name	Type	Visibility	Description
N/A	N/A	N/A	N/A

3.2.2.66. Uses Clause

Name	Type	Description
N/A	N/A	N/A

3.2.2.67. Form

Form Name	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Form Functionality	N/A
Current Form Layout	
N/A	

Modified Form Layout
N/A

3.2.2.68. Function

Function Name	N/A	
Short Description		
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Related Options		
Related Routines	Routines “Called By”	Routines “Called”
	N/A	
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference	
Input Attribute Name and Definition	Name: N/A Definition: N/A	
Output Attribute Name and Definition	Name: N/A Definition: N/A	
Current Logic		
N/A		
Modified Logic (Changes are in bold)		
N/A		

3.2.2.69. Dialog

Dialog Message (Description)	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Dialog Message (Description) Condition	N/A
Current Dialog Message (Description)	N/A
Modified Dialog Message (Description) (Changes are in bold)	N/A

3.2.2.70. Help Frame

Help Frame Text	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Help Frame Text Calling Mechanism	N/A
Current Help Frame Text	
N/A	
Modified Help Frame Text (Changes are in bold)	
N/A	

3.2.2.71. Health Level Seven (HL7) Application Parameter

HL7 Application Parameter Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
	Current	Modified
Application Status	<input type="checkbox"/> Active <input type="checkbox"/> Inactive	<input type="checkbox"/> Active <input type="checkbox"/> Inactive
Facility Name	N/A	
Country Code	N/A	
HL7 Field Separator	N/A	
HL7 Encoding Characters	N/A	
Mail Group	N/A	

3.2.2.72. Health Level Seven (HL7) Logical Link

HL7 Logical Link Parameter Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
	Current	Modified
Node	N/A	
Institution	N/A	
Domain	N/A	
Autostart	N/A	
Queue Size	N/A	
LLP Type	N/A	

3.2.2.73. COTS Interface

Communication Method	N/A
----------------------	-----

Application Interface	N/A
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3.2.3. SNOMED CT Requirements

Listed here are the SNOMED CT requirements that are required for LEDI IV.

3.2.3.1. Functional Requirement 63

Data shall be retrieved from the following *VISTA* Laboratory files and submitted to Health Data Repository (HDR) for data standardization of the SNOMED codes for the Microbiology data:

- 1) File 61 - Topography Field
- 2) File 61.2 - Etiology Field
- 3) File 62 - Collection Sample
- 4) File 62.06 - Antimicrobial Susceptibility

3.2.3.2. Functional Requirement 64

Data shall be retrieved from the following *VISTA* Laboratory files and submitted to Health Data Repository (HDR) for data standardization of the SNOMED codes for the general lab and AP data:

- 1) File 61 - Topography Field
- 2) File 61.2 - Etiology Field
- 3) File 62 - Collection Sample
- 4) File 62.06 - Antimicrobial Susceptibility

NOTE: ERT shall be responsible for providing software utilities to access SNOMED data (SNOMED versions I and II) provided by the Laboratory development team and mapping these codes to the current SNOMED CT version.

3.2.3.3. Functional Requirement 65

Depending upon the utilities that shall be provided by the Lexicon Utility, new reports of mapped and unmapped SNOMED codes shall be available through the *VISTA* Laboratory application.

AEL Add/Edit Local Identifier [LA7V 62.47 LOCAL IDENTIFIER]
 CMC Clone a Message Configuration [LA7V 62.47 CLONE MSG CONFIG]
 CSM Code/Set Mismatches [LA7V 62.47 PRINT CS MISMATCHES]
 ECH Error Code Help [LA7V 62.47 ERROR CODE HELP]
 FI Find Identifier [LA7V 62.47 FIND IDENTIFIER]
 PL Print Local Codes [LA7V 62.47 PRINT LOCAL]
 PMC Print by Message Configuration [LA7V 62.47 PRINT BY MSG CONFIG]
 PS Print Susceptibilities [LA7V 62.47 PRINT SUSC]

3.2.3.4. Functional Requirement 66

When the *VISTA* Laboratory application receives a patient care term from a non-VA information system and the clinical term is not known to the VA clinical Lexicon;

The receiving *VISTA* application shall store the clinical term and display the term in a report to the provider. It shall also notify STS via supported API of the new term to be mediated and repositioned.

NOTE: In the Lexicon, the unknown term could be one of the following types:

- Valid national term that has not been represented in the Lexicon due to sequencing or database update lag. These unknown terms may originate within VA or a clinical partner.
- New valid clinical terms that are not yet modeled and issued by the national code set provider.
- Term is a local term originating with the clinical data provider partner that may or may not eventually be included in the national code set.

3.2.3.5. Functional Requirement 67

The *VISTA* application shall use the established hierarchy to retrieve SNOMED CT codes for organisms. The entries in LAB ELECTRONIC CODES file (#64.061) shall be created to map LAB DATA file (#63) data fields to respective SCT hierarchy for organisms.

NAME	SCT TOP CONCEPT

MI Fungus/Yeast	SCT Organism
MI Mycobacterium	SCT Organism
MI Organism Db	SCT Organism
MI Parasite	SCT Organism
MI Virus	SCT Organism

3.2.3.6. Functional Requirement 68

The *VISTA* application shall return a SNOMED CT code for normal flora results.

The software shall map SNOMED CT term as follows:

- 264868006 to “no growth”
- 47492008 to “none seen”
- 23506009 to “normal flora”

3.2.3.7. Functional Requirement 69

The *VISTA* application shall notify at least the Laboratory Information Manager (LIM) for exception handling instances. The *VISTA* application shall send an exception handling notification to the LAB – MESSAGING mailman group via the Kernel Alert system using Kernel action alerts that will display the exception and the related HL7 message using the standard Lab Messaging message display functionality provided by option Display Lab Universal Interface Message [LA7 PRINT LAB UI MESSAGE].

3.2.3.8. Functional Requirement 70

The *VISTA* Laboratory application shall restrict the modification to the SNOMED CT .01 field in all the above mentioned SNOMED-related files by personnel within the local *VISTA* Laboratory package. When someone enters a new term STS shall receive an alert message.

3.2.3.9. Functional Requirement 71

The *VISTA* Laboratory application shall remove LAYGO in field COLLECTION SAMPLE field (#.01) of the COLLECTION SAMPLE sub-field (#60.03) of the LABORATORY TEST file (#60) so that sites are unable to add collection samples. This is to prevent accidental additions to COLLECTION SAMPLE file #62 when adding a collection sample to a laboratory test configuration. Additions to file #62 are now monitored and tracked by STS for data standardization and avoiding accidental triggering.

3.2.3.10. Functional Requirement 72

The *VISTA* Laboratory application shall load the mapped SNOMED CT codes at each site. After the *VISTA* Laboratory loads the mapped SNOMED CT codes at each site, the *VISTA* Laboratory shall send a notification message via the “LAB MAPPING” mail group. It is a “canned” message that goes out to each site and reads as follows:

“Initial seeding of SNOMED CT assignments for terms in the following files complete effective (date of initial SNOMED CT Code Load):

TOPOGRAPHY FIELD

ETIOLOGY FIELD

COLLECTION SAMPLE

For interoperability purposes, SNOMED CT fields have been added to your Topography, Etiology, and Collection Sample Files and where appropriate the fields have been populated with a SNOMED CT code. No changes have been made to data in existing fields within these files. These codes will only be utilized during transmission of verified lab results as part of the LEDI IV-LDSI software and for HDR/CHDR projects. Questions regarding a particular SNOMED CT assignment should be directed to “VA OIT VHIT HDS STS LAB QA” outlook mail group. Sites who wish to review SNOMED CT assignments may send an e-mail message to S.LRLABSERVER@domain name, Subject: SNOMED, to review the SNOMED LRLABSERVER report.”

3.2.3.11. Functional Requirement 73

The *VISTA* Laboratory application shall create a SNOMED CT Exception Handling event when one of the following three triggers occur:

1. Event encountered while loading STS mapped SNOMED CT code into the

- target database files
- 2. Loading new or additional SNOMED CT terms received from another system via HL7 messaging
- 3. New terms are entered or existing terms updated locally

The three *VISTA* Laboratory files that are designated for SNOMED CT Exception Handling triggering events are:

- (1) File 61 - Topography Field
- (2) File 61.2 - Etiology Field
- (3) File 62 - Collection Sample

3.2.3.12. Functional Requirement 74

The *VISTA* Laboratory application software shall identify and distinguish between the three types of SNOMED CT Exception Handling events was produced and coded them as follows:

- 1 = Load Exception Event
- 2 = Reference Laboratory Exception Event
- 3 = Add/Edit Exception Event.

The *VISTA* Laboratory application shall produce a temporary file for each Exception Handling event that occurs. Each temp file will meet with the following criteria:

- Provide a single transaction number and date/time stamp per Exception Handling event
- Use unique Transaction numbers for every Exception event and not recycle or reuse them, even if there is a change to the same entry in the *VISTA* Lab package
- Identify Exception Handling event type utilizing the code system (1=Load Exception, 2=Reference Lab Exception, 3=Add/Edit Exception)
- Identify *VISTA* Lab file origin (61=Etiology, 61.2=Topography, 62=Collection Sample)

3.2.3.13. Functional Requirement 75

The *VISTA* Laboratory application shall access the HDI*1*7 API, so that *VISTA* can send SNOMED CT Exception Handling event data.

The *VISTA* Laboratory application shall push the data to the HDI*1*7 API, the Lab software sends one transaction at a time to the HDI*1*7 API so STS can fix the issue and return a resolution.

3.2.3.14. Functional Requirement 76

The *VISTA* Laboratory application shall track all SNOMED CT Exception Handling event transactions sent to HDI*1*7 API. Integrated testing is required to confirm that messages are successfully passed to the HDI*1*7 API.

Once the event data is sent to the API, *VISTA* Lab updates the temp file mentioned earlier with the following data:

Date/time the Exception Handling event occurred
Exception Handling event code
Transaction Number

Tracking data is maintained only as long as the temporary file is available. It's not a permanent record.

3.2.3.15. Functional Requirement 77

The *VISTA* Laboratory application shall update the Term (Terminology) Status field with an "R" to indicate a SNOMED CT Exception Handling event has been sent to STS for resolution. This allows the Lab Information Manager to track that an Exception Handling event occurred by querying on the respective *VISTA* Lab file and viewing a status notation of "R" for referred. When a disposition is returned by STS it will be stored with the entry in the target file. *VISTA* Laboratory will support the following statuses/dispositions:

'P' FOR PREFERRED TERM;
'S' FOR SYNONYM;
'L' FOR LOCAL;
'R' FOR REFERRED;
'X' FOR NO APPLICABLE MAPPING;
'LN' FOR NEW TERM PENDING LEXICON UPDATE;
'RN' FOR STS REQUEST NEW CODE;
'E' FOR ERROR;

These are the statuses/dispositions of the entry indicated:

P = SNOMED Preferred term
S = SNOMED Synonym term
L = Local spelling of a SNOMED term (miss-spelled)
R = Referred to national coders to determine if acceptable
X = No applicable mapping
LN = New term pending LEXICON release/update.
RN = STS Request New Code
E = Error encountered when applying STS disposition to file entry

3.2.3.16. Functional Requirement 78

The *VISTA* Laboratory application shall process the text files for each of the following scenarios:

- (1) Multiple Exception Handling resolutions for multiple *VISTA* Laboratory sites
- (2) Multiple Exception Handling resolutions for a single *VISTA* Laboratory site
- (3) Single Exception Handling resolution for a single *VISTA* Laboratory site

3.2.3.17. Functional Requirement 79

STS shall send resolutions via FTP transfer to each site.

3.2.3.18. Functional Requirement 80

The *VISTA* Laboratory application shall query the SNOMED CT LEXICON to determine the appropriate status assignment if a resolution returns a SNOMED CT Code.

3.2.3.19. Functional Requirement 81

The *VISTA* Laboratory application shall build functionality so that the *VISTA* local lab servers take the resolution data and populate the SNOMED CT support fields within the Topography, Etiology, or Collection Sample files.

3.2.3.20. Functional Requirement 82

The *VISTA* Laboratory application shall create a new SNOMED CT Load Exception Handling event, if for some reason, the resolution is not able to be filed (such as the local site made a change between when the initial Exception was reported and resolved).

3.2.3.21. Design Element Tables

3.2.3.21.1. (Entry Points)

Routine Name	LRSCTF1			
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change			
Requirement Traceability Matrix	N/A			
Related Options	Check SNOMED CT Mappings Against the Lexicon [LA7TASK SCT MAPPINGS CHECK]			
Related Routines	Routines "Called By"	Routines "Called"		
	LRSCTF, LA7CHKF1	N/A		
Data Dictionary (DD) References	N/A			
Related Protocols	N/A			
Related Integration Control Registrations (ICRs)	N/A			
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local			
Input Attribute Name and	Name:			

Routine Name	LRSCF1
Definition	Definition:
Output Attribute Name and Definition	Name: Definition:
Current Logic	
Modified Logic (Changes are in bold)	
<p>This routine checks the SCT mappings against the Lexicon for exceptions. If it finds any exceptions:</p> <ul style="list-style-type: none"> a. The SCT CODE STATUS field (#21) for the entry will be updated to 'Error' b. A HDI exception alert will be sent to STS c. A MailMan message will be sent to the G.LMI and G.LAB MESSAGING Mail Groups with a list of the exceptions found. 	

Routine Name	LRSRVR6			
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change			
Requirement Traceability Matrix				
Related Options	LR LAB SERVER [LRLABSERVER]			
Related Routines	Routines "Called By"		Routines "Called"	
	LRSRVR		LRSCF	
Data Dictionary (DD) References	N/A			
Related Protocols	N/A			
Related Integration Control Registrations (ICRs)	N/A			
Data Passing	<input type="checkbox"/> Input	<input type="checkbox"/> Output Reference	<input type="checkbox"/> Both	<input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: Definition:			
Output Attribute Name and Definition	Name: Definition:			
Current Logic				
Modified Logic (Changes are in bold)				
Modified routine so that the date displayed is in a human-readable format instead of in FileMan format.				

Routine Name	LA7CHKF1		
Enhancement Category	<input checked="" type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change		
SRS Traceability			
Related Options	Check SNOMED CT Mappings Against the Lexicon [LA7TASK SCT MAPPINGS CHECK]		
Related Routines	Routines “Called By”	Routines “Called”	
	N/A	LRSCTF1	
Data Dictionary References	N/A		
Related Protocols	N/A		
Related Integration Agreements	N/A		
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local		
Input Attribute Name and Definition	Name: Definition:		
Output Attribute Name and Definition	Name: Definition:		
Current Logic			
Modified Logic (Changes are in bold)			
This routine checks the SCT mappings against the Lexicon for exceptions. If it finds any exceptions: <ul style="list-style-type: none"> a. The SCT CODE STATUS field (#21) for the entry will be updated to 'Error' b. A HDI exception alert will be sent to STS c. A MailMan message will be sent to the G.LMI and G.LAB MESSAGING Mail Groups with a list of the exceptions found. 			

Routine Name	LA7SMU2		
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change		
Requirement Traceability Matrix			
Related Options	N/A		
Related Routines	Routines “Called By”	Routines “Called”	
		LA7SMU2A	
Data Dictionary (DD) References	N/A		

Routine Name	LA7SMU2
Related Protocols	N/A
Related Integration Control Registrations (ICRs)	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: Definition:
Output Attribute Name and Definition	Name: Definition:
Current Logic	
<p>When an order is received by a host site via the LEDI interface, the system tries to find a matching entry in the host's shipping configuration based off the test and specimen codes that were sent across in the HL7 message. In a scenario where it found a matching test/specimen entry setup, but the specimen at the host site was mapped to a different SNOMED CT ID than the ordering site, then when creating the order, the system was not using the specimen that was configured on the shipping configuration, but instead, would use a specimen that matched the SNOMED CT ID from the message. If the host site did not have an existing entry that matched the SNOMED CT ID from the message, the system automatically created a new entry based off the SNOMED CT information from the message and used that new specimen for the order.</p>	
Modified Logic (Changes are in bold)	
<p>This routine has been modified that in the scenario outlined above, the host site rejects the order with an HL7 Application Error (AE).</p>	

Routine Name	LA7SMU2A	
Enhancement Category	<input type="checkbox"/> New <input checked="" type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Requirement Traceability Matrix		
Related Options	N/A	
Related Routines	Routines "Called By"	Routines "Called"
	LA7SMU2	
Data Dictionary (DD) References	N/A	
Related Protocols	N/A	
Related Integration Control	N/A	

Routine Name	LA7SMU2A
Registrations (ICRs)	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
Input Attribute Name and Definition	Name: Definition:
Output Attribute Name and Definition	Name: Definition:
Current Logic	
Modified Logic (Changes are in bold)	
Added a star (*) before the patch list to be compliant with SAC standards.	

3.2.3.22. Templates

Template Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability		
Template Type	<input type="checkbox"/> Sort <input type="checkbox"/> Input <input type="checkbox"/> Print <input type="checkbox"/> Other	
Related Options	N/A	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	
Data Dictionary References		
Global References		

3.2.3.23. Bulletins

Bulletin Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability		
Related Routines	Routines “Called By”	Routines “Called”
Mail Subject		
Mail Group		
Parameters		

Bulletin Name	N/A
Data Dictionary References	

3.2.3.24. Data Dictionaries

File Name and Number	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
SRS Traceability	
Related Options	
Data Dictionary References	
Related Protocols	
Related Database Integration Agreements	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both Reference <input type="checkbox"/> Global Reference <input type="checkbox"/> Local
File Documentation	
File Auditing, Security, and Archiving	

3.2.3.25. Field Definition Information

Field Name	N/A
Field Description	
Field #	
Node #	
Piece #	
New Field	<input type="checkbox"/> Yes <input type="checkbox"/> No
Data Type	<input type="checkbox"/> Date/Time <input type="checkbox"/> Numeric <input type="checkbox"/> Set of Codes <input type="checkbox"/> Free Text <input type="checkbox"/> Pointer to a File <input type="checkbox"/> Variable-Pointer
Identifier	<input type="checkbox"/> Yes <input type="checkbox"/> No
Uneditable Field	<input type="checkbox"/> Yes <input type="checkbox"/> No
Mandatory Field	<input type="checkbox"/> Yes <input type="checkbox"/> No
Field Documentation or Help Changes Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No
Field Definition	
Input/Output Transform	
Cross-Reference (id and type)	<input type="checkbox"/> Regular <input type="checkbox"/> Kwic <input type="checkbox"/> Mnemonic <input type="checkbox"/> Mumps <input type="checkbox"/> Soundex <input type="checkbox"/> Trigger <input type="checkbox"/> Bulletin

3.2.3.26. Data Entries Affected by the Design

Field Name	Current Value	New Value
N/A		

3.2.3.27. Unique Record(s) [Commonly the .01 field]

Unique Record ID		
Field Name(s)	Current Value	New Value
N/A		

3.2.3.28. File/Global Size Changes

File/Global Name(s)	Estimated Increase	Estimated Decrease
N/A		

3.2.3.29. Mail Groups

Mail Group Name	N/A		
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
Related Options	N/A		
Related Routines	Routines “Called By”	Routines “Called”	
	N/A		
Data Dictionary References	N/A		
Related Protocols	N/A		
Mail Group Description			
Self Enrollment Allowed	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Type	<input type="checkbox"/> Public	<input type="checkbox"/> Private	

3.2.3.30. Security Keys

Security Key Name	N/A		
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
Related Options	N/A		
Related Routines	Routines “Called By”	Routines “Called”	
	N/A		
Data Passing	<input type="checkbox"/> Input	<input type="checkbox"/> Output	<input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
Security Key Description	N/A		

Subordinate Keys	N/A
Mutually Exclusive Keys	N/A
Granting Condition Logic	N/A
Current Logic	
Modified Logic (Changes are in bold)	
Hierarchical Precedence	N/A

3.2.3.31. Options

Option Name	LA7TASK SCT MAPPINGS CHECK
Enhancement Category	<input checked="" type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Associated Menu Options, etc, that will invoke this reference	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
Menu Text Description	<p>This option checks the SNOMED CT mappings against the Lexicon for exceptions (e.g., a code is inactive). It checks the following files:</p> <ul style="list-style-type: none"> - TOPOGRAPHY FIELD (#61) - ETIOLOGY FIELD (#61.2) - COLLECTION SAMPLE (#62) <p>If any exceptions are found:</p> <ul style="list-style-type: none"> - The SCT CODE STATUS field (#21) for the entry will be updated to 'Error'. - A HDI exception alert will be sent to Standards & Terminology Services. - A MailMan message will be sent to the G.LMI and G.LAB MESSAGING Mail Groups with a list of the exceptions found.
Option Type	<input type="checkbox"/> Edit <input type="checkbox"/> Print <input type="checkbox"/> Menu <input type="checkbox"/> Inquire <input type="checkbox"/> Action <input checked="" type="checkbox"/> Run Routine <input type="checkbox"/> Other
Associated Routine	LA7CHKF1
Option Definition	
Current Entry Action Logic	
N/A	
Modified Entry Action Logic (Changes are in bold)	
N/A	
Current Exit Action Logic	
N/A	
Modified Exit Action Logic (Changes are in bold)	

N/A

3.2.3.32. Protocols

Protocol Name	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Associated Protocols	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
Item Text Description	N/A
Protocol Type	<input type="checkbox"/> Action <input type="checkbox"/> Menu <input type="checkbox"/> Protocol <input type="checkbox"/> Protocol Menu <input type="checkbox"/> Limited Protocol <input type="checkbox"/> Extended Action <input type="checkbox"/> Dialog <input type="checkbox"/> Other
Associated Routine	N/A
Current Entry Action Logic	
Modified Entry Action Logic (Changes are in bold)	
Current Exit Action Logic	
Modified Exit Action Logic (Changes are in bold)	

3.2.3.33. Remote Procedure Call (RPC)

Name	N/A
TAG^RTN	
Input Parameters	
Results Array	<input type="checkbox"/> Single Value <input type="checkbox"/> Array <input type="checkbox"/> Word Processing <input type="checkbox"/> Global Array <input type="checkbox"/> Global Instance
Description	

3.2.3.34. Constants Defined in Interface

Name	Description
N/A	

3.2.3.35. Variables Defined in Interface

Name	Type	Description
N/A		

3.2.3.36. Types Defined in Interface

Name	Type	Description
N/A		

3.2.3.37. Graphic User Interface (GUI)

Unit Name	
N/A	

3.2.3.38. GUI Classes Defined

Class Name	N/A
Derived From Class Name	
Purpose	

3.2.3.39. Current Form

Name	Type	Description
N/A		

3.2.3.40. Modified Form

Name	Type	Description
N/A		

3.2.3.41. Components on Form

Name	Type	Description
N/A		

3.2.3.42. Events

Name	Type	Description
N/A		

3.2.3.43. Methods

Method Name	Procedure/Function	Description
N/A		

3.2.3.44. Special References

Special References Name	Type	Description
N/A		

3.2.3.45. Class Events

Name	Type	Description
N/A		

3.2.3.46. Class Methods

Name	Procedure/Function	Description
N/A		

3.2.3.47. Class Properties

Class Properties Name	Type	Visibility	Description
N/A			

3.2.3.48. Uses Clause

Name	Type	Description
N/A		

3.2.3.49. Form

Form Name	N/A			
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete	<input type="checkbox"/> No Change
Form Functionality				
Current Form Layout				
Modified Form Layout (Changes are in bold)				

3.2.3.50. Function

Function Name	N/A	
Short Description		
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Related Options		
Related Routines	Routines “Called By”	Routines “Called”
	N/A	
Data Dictionary References		
Related Protocols		
Related Integration Agreements		
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference	
Input Attribute Name and Definition	Name: Definition:	
Output Attribute Name and Definition	Name: Definition:	
Current Logic		
Modified Logic (Changes are in bold)		

3.2.3.51. Dialog

Dialog Message (Description)	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Dialog Message (Description) Condition	
Current Dialog Message (Description)	
Modified Dialog Message (Description) (Changes are in bold)	

3.2.3.52. Help Frame

Help Frame Text	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change

Help Frame Text Calling Mechanism	
Current Help Frame Text	
Modified Help Frame Text (Changes are in bold)	

3.2.3.53. Health Level Seven (HL7) Application Parameter

HL7 Application Parameter Name	N/A		
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
	Current		Modified
Application Status	<input type="checkbox"/> Active	<input type="checkbox"/> Inactive	<input type="checkbox"/> Active <input type="checkbox"/> Inactive
Facility Name			
Country Code			
HL7 Field Separator			
HL7 Encoding Characters			
Mail Group			

3.2.3.54. Health Level Seven (HL7) Logical Link

HL7 Logical Link Parameter Name	N/A		
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
	Current		Modified
Node			
Institution			
Domain			
Autostart			
Queue Size			
LLP Type			

3.2.3.55. COTS Interface

Communication Method	N/A
Application Interface	

3.2.4. LOINC Requirements

LOINC stands for Logical Observation Identifier Names and Codes. NOTE: The LOINC Requirements will be part of a future LEDI release. The date of the LOINC Code release is to be determined.

3.2.4.1. Functional Requirement 83

The *VISTA* Laboratory application shall provide the logic for mapping MICRO and AP tests to LOINC codes.

The following options shall provide the ability to map tests to the respective LOINC codes:

- Add/Edit Local Identifier [LA7V 62.47 LOCAL IDENTIFIER]
- Map Lab Tests to Default LOINC Code [LR LOINC MAP DEFAULT]
- Map Lab Tests to LOINC Codes [LR LOINC MAP]
- Map/Unmap Antimicrobial Default LOINC Code [LR LOINC MAP ANTIMICROBIAL]

3.2.4.2. Functional Requirement 84

The *VISTA* Laboratory application shall use standardized LOINC codes. Standardizing LOINC Codes is an HDR requirement.

Option Map All Susceptibilities [LA7V 62.47 MAP SUSCS] shall map local terms matching LOINC terms.

Option Edit Susceptibility [LA7V 62.47 EDIT SUSC] shall allow LIM to map local antibiotics to LOINC terms as specified by STS.

3.2.4.3. Functional Requirement 85

The *VISTA* Laboratory application shall add hierarchy codes to File #64.061. The hierarchy codes are as follows:

The *VISTA* Laboratory application shall add hierarchy codes to File #64.061. The hierarchy codes are as follows:

NAME: SCT Attribute	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy Top 3	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: ATT		STORAGE FILE: 61.2
NAME: SCT Disorder	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: DIS		STORAGE FILE: 61.2
NAME: SCT Environment	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: ENV		STORAGE FILE: 61.2
NAME: SCT Environment/Location	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: ENL		STORAGE FILE: 61.2
NAME: SCT Events	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: EVE		STORAGE FILE: 61.2
NAME: SCT Finding	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: FND		STORAGE FILE: 61.2
NAME: SCT Organism	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: ORG		STORAGE FILE: 61.2
NAME: SCT Physical Force	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: FOR		STORAGE FILE: 61.2
NAME: SCT Physical Object	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: OBJ		STORAGE FILE: 61.2
NAME: SCT Procedure	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: PRC		STORAGE FILE: 61.2
NAME: SCT Product	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: PRD		STORAGE FILE: 61.2
NAME: SCT Qualifier Value	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy Top 3	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: QUV		STORAGE FILE: 61.2
NAME: SCT Regime/Therapy	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: REG		STORAGE FILE: 61.2
NAME: SCT Substance	TYPE: GENERAL	
DESCRIPTION: SCT Hierarchy	SUBTYPE: SCT Heir	SCREEN: SCT
LEX ABBREV: SUB		STORAGE FILE: 61.2

3.2.4.4. Functional Requirement 86

The VISTA Laboratory application shall provide the support and awareness to successfully pass LOINC codes with MICRO and AP results.

3.2.4.5. Design Element Tables

3.2.4.5.1. (Entry Points)

Routine Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability		
Related Options	N/A	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	
Data Dictionary References	N/A	
Related Protocols	N/A	
Related Integration Agreements	N/A	
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output Reference <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local	
Input Attribute Name and Definition	Name: Definition:	
Output Attribute Name and Definition	Name: Definition:	
Current Logic		
Modified Logic (Changes are in bold)		

3.2.4.6. Templates

Template Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
SRS Traceability		
Template Type	<input type="checkbox"/> Sort <input type="checkbox"/> Input <input type="checkbox"/> Print <input type="checkbox"/> Other	
Related Options	N/A	
Related Routines	Routines “Called By”	Routines “Called”
	N/A	

Template Name	N/A
Data Dictionary References	
Global References	

3.2.4.7. Bulletins

Bulletin Name	N/A		
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change		
SRS Traceability			
Related Routines	Routines "Called By"	Routines "Called"	
Mail Subject			
Mail Group			
Parameters			
Data Dictionary References			

3.2.4.8. Data Dictionaries

File Name and Number	N/A				
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change				
SRS Traceability					
Related Options					
Data Dictionary References					
Related Protocols					
Related Database Integration Agreements					
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both Reference <input type="checkbox"/> Global Reference <input type="checkbox"/> Local				
File Documentation					
File Auditing, Security, and Archiving					

3.2.4.9. Field Definition Information

Field Name	N/A
Field Description	
Field #	
Node #	

Piece #	
New Field	<input type="checkbox"/> Yes <input type="checkbox"/> No
Data Type	<input type="checkbox"/> Date/Time <input type="checkbox"/> Numeric <input type="checkbox"/> Set of Codes <input type="checkbox"/> Free Text <input type="checkbox"/> Pointer to a File <input type="checkbox"/> Variable-Pointer
Identifier	<input type="checkbox"/> Yes <input type="checkbox"/> No
Uneditable Field	<input type="checkbox"/> Yes <input type="checkbox"/> No
Mandatory Field	<input type="checkbox"/> Yes <input type="checkbox"/> No
Field Documentation or Help Changes Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No
Field Definition	
Input/Output Transform	
Cross-Reference (id and type)	<input type="checkbox"/> Regular <input type="checkbox"/> Kwic <input type="checkbox"/> Mnemonic <input type="checkbox"/> Mumps <input type="checkbox"/> Soundex <input type="checkbox"/> Trigger <input type="checkbox"/> Bulletin

3.2.4.10. Data Entries Affected by the Design

Field Name	Current Value	New Value
N/A		

3.2.4.11. Unique Record(s) [Commonly the .01 field]

Unique Record ID		
Field Name(s)	Current Value	New Value
N/A		

3.2.4.12. File/Global Size Changes

File/Global Name(s)	Estimated Increase	Estimated Decrease
N/A		

3.2.4.13. Mail Groups

Mail Group Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Related Options	N/A	
Related Routines	Routines "Called By"	Routines "Called"
	N/A	
Data Dictionary References	N/A	
Related Protocols	N/A	

Mail Group Description	
Self Enrollment Allowed	<input type="checkbox"/> Yes <input type="checkbox"/> No
Type	<input type="checkbox"/> Public <input type="checkbox"/> Private

3.2.4.14. Security Keys

Security Key Name	N/A		
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change		
Related Options	N/A		
Related Routines	Routines "Called By"	Routines "Called"	
	N/A		
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference		
Security Key Description	N/A		
Subordinate Keys	N/A		
Mutually Exclusive Keys	N/A		
Granting Condition Logic	N/A		
Current Logic			
Modified Logic (Changes are in bold)			
Hierarchical Precedence	N/A		

3.2.4.15. Options

Option Name	N/A			
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change			
Associated Menu Options, etc, that will invoke this reference				
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference			
Menu Text Description				
Option Type	<input type="checkbox"/> Edit <input type="checkbox"/> Print <input type="checkbox"/> Menu <input type="checkbox"/> Inquire <input type="checkbox"/> Action <input type="checkbox"/> Run Routine <input type="checkbox"/> Other			
Associated Routine				
Option Definition				
Current Entry Action Logic				

Modified Entry Action Logic (Changes are in bold)
Current Exit Action Logic
Modified Exit Action Logic (Changes are in bold)

3.2.4.16. Protocols

Protocol Name	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Associated Protocols	N/A
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference
Item Text Description	N/A
Protocol Type	<input type="checkbox"/> Action <input type="checkbox"/> Menu <input type="checkbox"/> Protocol <input type="checkbox"/> Protocol Menu <input type="checkbox"/> Limited Protocol <input type="checkbox"/> Extended Action <input type="checkbox"/> Dialog <input type="checkbox"/> Other
Associated Routine	N/A
Current Entry Action Logic	
Modified Entry Action Logic (Changes are in bold)	
Current Exit Action Logic	
Modified Exit Action Logic (Changes are in bold)	

3.2.4.17. Remote Procedure Call (RPC)

Name	N/A
TAG^RTN	
Input Parameters	
Results Array	<input type="checkbox"/> Single Value <input type="checkbox"/> Array <input type="checkbox"/> Word Processing <input type="checkbox"/> Global Array <input type="checkbox"/> Global Instance
Description	

3.2.4.18. Constants Defined in Interface

Name	Description
N/A	

3.2.4.19. Variables Defined in Interface

Name	Type	Description
N/A		

3.2.4.20. Types Defined in Interface

Name	Type	Description
N/A		

3.2.4.21. Graphic User Interface (GUI)

Unit Name	N/A

3.2.4.22. GUI Classes Defined

Class Name	N/A
Derived From Class Name	
Purpose	

3.2.4.23. Current Form

Name	Type	Description
N/A		

3.2.4.24. Modified Form

NOTE: N/A

3.2.4.25. Components on Form

Name	Type	Description
N/A		

3.2.4.26. Events

Name	Type	Description
N/A		

3.2.4.27. Methods

Method Name	Procedure/Function	Description
N/A		

3.2.4.28. Special References

Special References Name	Type	Description
N/A		

3.2.4.29. Class Events

Name	Type	Description
N/A		

3.2.4.30. Class Methods

Name	Procedure/Function	Description
N/A		

3.2.4.31. Class Properties

Class Properties Name	Type	Visibility	Description
N/A			

3.2.4.32. Uses Clause

Name	Procedure/Function	Description
N/A		

3.2.4.33. Form

Form Name	N/A		
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete <input type="checkbox"/> No Change
Form Functionality			

Current Form Layout
Modified Form Layout (Changes are in bold)

3.2.4.34. Function

Function Name	N/A	
Short Description		
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
Related Options		
Related Routines	Routines “Called By”	Routines “Called”
	N/A	
Data Dictionary References		
Related Protocols		
Related Integration Agreements		
Data Passing	<input type="checkbox"/> Input <input type="checkbox"/> Output <input type="checkbox"/> Both <input type="checkbox"/> Global Reference <input type="checkbox"/> Local Reference	
Input Attribute Name and Definition	Name: Definition:	
Output Attribute Name and Definition	Name: Definition:	
Current Logic		
Modified Logic (Changes are in bold)		

3.2.4.35. Dialog

Dialog Message (Description)	N/A
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change
Dialog Message (Description) Condition	
Current Dialog Message (Description)	

Modified Dialog Message (Description) (Changes are in bold)	

3.2.4.36. Help Frame

Help Frame Text	N/A			
Enhancement Category	<input type="checkbox"/> New	<input type="checkbox"/> Modify	<input type="checkbox"/> Delete	<input type="checkbox"/> No Change
Help Frame Text Calling Mechanism				
Current Help Frame Text				
Modified Help Frame Text (Changes are in bold)				

3.2.4.37. Health Level Seven (HL7) Application Parameter

HL7 Application Parameter Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
	Current	Modified
Application Status	<input type="checkbox"/> Active <input type="checkbox"/> Inactive	<input type="checkbox"/> Active <input type="checkbox"/> Inactive
Facility Name		
Country Code		
HL7 Field Separator		
HL7 Encoding Characters		
Mail Group		

3.2.4.38. Health Level Seven (HL7) Logical Link

HL7 Logical Link Parameter Name	N/A	
Enhancement Category	<input type="checkbox"/> New <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> No Change	
	Current	Modified
Node		
Institution		
Domain		
Autostart		
Queue Size		
LLP Type		

3.2.4.39. COTS Interface

Communication Method	N/A
Application Interface	

Addendum: File 63 Remediation

4. Introduction

The *VistA* Laboratory package LDSI LAB DATA File (#63) Remediation functionality creates two remediation tools within Laboratory application that will analyze, identify, and correct the data dictionary configuration errors identified in the *VistA* Laboratory Package LAB DATA File (#63) with regards to the creation of fields that store:

- Tool #1: Antibiotic susceptibilities, associated interpretations and display screens
- Tool #2: Chemistry/Hematology laboratory results

Over time users at various *VistA* sites created fields that store test data through FileMan incorrectly or did not use the approved laboratory options. This led to database errors in LAB DATA File (#63).

4.1. Purpose of this Document

The purpose of this System Design Document (SDD) is to describe how the LDSI project LAB DATA File (# 63) Remediation is to be constructed. The SDD translates the Software Requirements Specification into a document from which the developers can code the *Vista* Laboratory functionality that creates the new software tool.

4.2. Identification

This document applies to the *VistA* Laboratory package LDSI LAB DATA File (#63) Remediation functionality. ANSI MUMPS and the Standards And Conventions (SAC) standards apply to the design document.

4.3. Scope

This functionality will analyze, identify, and correct the *VistA* Laboratory LAB DATA File (#63) database errors. The known errors from an analysis of the LEDI IV test sites are:

- Missing fields
- Fields are defined at the wrong global location
- Storing accompanying fields with wrong field numbers
- Incorrect data type input transforms (Transforms control how the data can be entered)
- Help text that provides the user with incorrect data entry instructions

The tools, when run in repair mode, will fix identified errors. The File 63 Remediation tools will also automatically run on a monthly basis in analyze only mode as part of the scheduled task (LRTASK NIGHTY) and notify a pre-defined mail group if an error is found.

Therefore, File 63 Remediation is now a part of the LDSI/LEDI 4 (HDI*1*7 LA*5.2*74/LR*5.2*350) patch.

The two functional areas of the lab package supported by this functionality are:

1. Microbiology organism antibiotic susceptibility storage
2. Chemistry lab results data storage

4.4. Relationship to Other Plans

This SDD implements the necessary modifications to the *VistA* Lab package as outlined in the Lab file (#63) Remediation portion of the LEDI IV SRS, and will be tested in accordance to the LAB DATA File (#63) Remediation Master and Detailed Test Plans.

4.5. Methodology, Tools, and Techniques

The SDD and the MUMPS coding will adhere to the ANSI MUMPS and Standards And Conventions (SAC). VA Propath methodology will be utilized throughout the development process.

4.6. Policies, Directives, and Procedures

Development will adhere to VHA *VistA* Policies and Procedures.

4.7. Constraints

N/A.

4.8. Design Trade-offs

There are no design trade-offs.

4.9. User Class Characteristics

4.9.1. User Problem Statement

Users currently work with a LAB DATA File (#63) that stores lab results for microbiology and chemistry in fields that are incorrectly defined. This causes the lab results to be stored incorrectly and affects the exchange of information between different environment and *VistA* databases.

4.9.2. User Objectives

The objective of this functionality and reports is to maintain CONSISTENT AND ACCURATE file information among all the *VistA* sites.

5. Background

LAB DATA File (#63) contains lab test results. This file was one of the first created within Decentralized Hospital Computer Program (DHCP) /*VistA*. Over time, medical centers have introduced configuration errors within LAB DATA File (#63). Medical centers' production LAB DATA File (#63) may optionally undergo analysis and remediation after the LDSI/LEDI IV installation.

5.1. Overview of the System

VistA Laboratory package LDSI LAB DATA File (#63) Remediation creates two remediation tools within Laboratory application that will analyze, identify, and correct the data dictionary configuration errors identified in the *VistA* Laboratory Package LAB DATA File (#63) with the regards to the creation of fields that store: Overview of the Business Process

- Tool #1: Antibiotic susceptibilities, associated interpretations and file display screens
- Tool #2: Chemistry/Hematology laboratory results

5.2. Overview of the Business Process

The business process is to correct errors in the LAB DATA file (#63) that affect the storage of Lab microbiology and chemistry results.

5.3. Business Benefits

LEDI IV/LDSI will benefit from a “clean” LAB DATA File (#63). A clean LAB DATA File (#63) ensures proper storage of lab results.

5.4. Assumptions and Constraints

N/A.

5.4.1. Design Assumptions

File 63 Remediation is now part of the LDSI/LEDI IV (HDI*1*7/LA*5.2*74/LR*5.2*350) patch.

5.4.2. Design Constraints

N/A

5.5. Overview of the Significant Requirements

The material in this section is not to replace either the existing functional and technical requirements documents, nor serve as the basis for the Requirements Traceability Matrix, but only to inform non-project personnel reading this document as to the basis for the design.

5.5.1. Overview of Significant Functional Requirements

The functional requirements are listed in the following table.

Requirement ID	Requirement Description
Functional Requirement 1	This utility is run automatically after install of LEDI IV as well as during the LR NIGHTY job on the first of the month.
Functional Requirement 2	This software utility can be run manually by users with <i>VistA</i> Programmer access at a time of their choosing after the LEDI IV install is complete to analyze and repair the lab data dictionary.
Functional Requirement 3	Detect incorrectly defined antibiotic fields within LAB DATA File (#63).
Functional Requirement 4	Report incorrectly defined antibiotic fields within LAB DATA File (#63) if found. Report a “negative” report if no errors are found when run in repair mode.
Functional Requirement 5	Generates and sends a report in a <i>VistA</i> MailMan e-mail and transmits it to the members of the site’s local <i>VistA</i> mail group LMI.
Functional Requirement 6	When run in repair mode, correct incorrectly defined antibiotic fields within LAB DATA File (#63) and any data instances related to the File (#63) errors. For instance , data that exists in an incorrect field location).

Requirement ID	Requirement Description
Functional Requirement 7	Detect incorrectly defined Clinical Chemistry (Chemistry and Hematology) data names in LABORATORY TEST File (#60) and LAB DATA File (#63).
Functional Requirement 8	Report incorrectly defined Clinical Chemistry (Chemistry and Hematology) data names in LAB DATA File (#63).
Functional Requirement 9	Generates a report of incorrectly defined Clinical Chemistry (Chemistry and Hematology) data names into a <i>VistA</i> MailMan e-mail and transmit it to the members of the <i>VistA</i> mail group LMI.
Functional Requirement 10	When run in repair mode, correct incorrectly defined Clinical Pathology (Chemistry and Hematology) data names in and LAB DATA File (#63) and any related result data.

5.5.2. Functional Workload and Functional Performance Requirements

The software tool will run monthly at non-peak hours in analyze and report mode.
The software tool will run in analyze and report mode only during the KIDS install.

5.5.3. Operational Requirements

None. There are no user accessible menus distributed with this functionality.

5.5.4. Overview of the Technical Requirements

None

5.5.5. Overview of the Security or Privacy Requirements

This is part of the larger *VistA* LEDI IV/LDSI patch. Therefore, normal *VistA* security procedures and privacy requirements apply.

5.5.6. System Criticality and High Availability Requirements

This functionality is critical to LEDI and not high availability. The tool runs automatically as well as manually.

5.5.7. Special Device Requirements

None

5.6. Legacy System Retirement

N/A

6. Conceptual Design

6.1. Conceptual Application Design

6.1.1. Application Context

This is a *Vista* software file repair tool.

6.1.2. Application Locations

The software will be located at all VA medical centers.

6.1.3. Application Users

N/A. The tool is automated.

6.2. Conceptual Data Design

6.2.1. Project Conceptual Data Model

N/A

6.2.2. Database Information

N/A

6.3. Conceptual Infrastructure Design

N/A

6.3.1. System Criticality and High Availability

N/A

6.3.2. Special Technology

N/A

6.3.3. Technology Locations

File 63 remediation will be installed at all VA Medical Centers.

6.3.4. Conceptual Infrastructure Diagram

6.3.4.1. Location of Environments and External Interfaces

N/A

6.3.4.2. Conceptual Production String Diagram

N/A

7. System Architecture

N/A

7.1. Hardware Architecture

N/A

7.2. Software Architecture

This is *Vista* software written in MUMPS code. It is a file repair tool. It analyzes and fixes Microbiology and Chemistry LAB DATA File (#63) errors. The errors involved include:

- Missing fields
- Fields are defined at the wrong global location
- Storing accompanying fields with wrong field numbers
- Incorrect data type input transforms. (Transforms control how the data can be entered.)
- Help text that provides the user with incorrect data entry instructions.

7.3. Communications Architecture

N/A

8. Data Design

N/A

8.1. Database Management System Files

N/A

8.2. Non-Database Management System Files

N/A

9. Detailed Design

This chapter describes the proposed design in detail. Provide the necessary information for the development team to write the software code, so that the software components will provide a functional product. There are no hardware components.

9.1. Hardware Detailed Design

N/A

9.2. Software Detailed Design

9.2.1. Module [Microbiology]

This software will analyze, identify and fix the *VistA* Laboratory LAB DATA File (#63) database configuration errors in microbiology sub-file.

Processing

File 63 Cleanup is an automated tool that will detect errors that occurred when an antibiotic was improperly added to the LAB DATA File (#63). This process will check the Organism Sub-file (#63.3) of the LAB DATA File (#63) looking for possible discrepancies in the Data Dictionary.

The tool will automatically run in analyze mode each month (as part of the scheduled task LRTASK NIGHTY) and only send an error report if an error is found in a Mailman message to the LMI mail group.

The File 63 cleanup tool will run in analyze mode during the post install and a report of the error(s) identified will also be sent to the person who installed File 63 in a Mailman message.

The File 63 cleanup tool may be run in repair mode at a time of the user's choosing. If an error is found, the tool generates an email message to the person who manually started the tool and to other users chosen by the person who selects to start the repair.

The cleanup tool will be implemented in routines LRWU8 and LRWU8A.

Local Data Structures

N/A

9.2.2. Module [Chemistry]

This software will analyze, identify and fix the *VistA* Laboratory LAB DATA File (#63) database configuration errors in chemistry sub-file.

Processing

File 63 Cleanup is a tool that will detect errors in the CHEM, HEM, TOX, RIA, SER, etc. Sub-file (#63.04) of the LAB DATA File (#63).

The errors are: Incorrect global location, incorrect subscript, and/or subscript is not in proper location.

The data dictionary is checked for bad data names. The subscript should be equal to the field number. It should be in first piece or both errors might be present. Every test with lab results should have a data name.

Example of DD global containing data names:

```
^DD(63.04,2,0)=GLUCOSE^NXJ4,0^2;1^S Q9="0,2500,0" D ^LRNUM (Highlighted subscript
and field # should be equal.)
^DD(63.04,3,0)=UREA NITROGEN^NXJ8,2^3;1^S Q9="0,10000,2" D ^LRNUM
^DD(63.04,4,0)=CREATININE^NXJ6,2^4;1^S Q9="0,999,2" D ^LRNUM
^DD(63.04,5,0)=SODIUM^F^5;1^K:$L(X)>7!($L(X)<0) X
```

Example of ^LAB(60,"C" cross-reference:

```
^LAB(60,"C","CH;2;1",175)=""
```

Example of Laboratory Test file (#60) global:

```
, ^LAB(60,175,0)=GLUCOSE^1^B^CH^CH;2;1^0^0^55^^.37^DD(63.04,2,^1^^1^1^^18^
(highlighted data name in fourth piece of LABORATORY TEST file (#60)
```

If errors are found in the data dictionary, then the program will check the LAB DATA File (#63) chemistry results for the tests incorrectly defined and fix the error if needed.

The cleanup tool will be implemented in routine LRWU9.

Local Data Structures

N/A

9.3. Communications Detailed Design

N/A

10. External Interface Design

N/A

10.1. Interface Architecture

N/A

10.2. Interface Detailed Design

N/A

11. Human-Machine Interface

There are no user accessible menus distributed with this software.

11.1. Interface Design Rules

This is part of the larger *VistA* LEDI IV/LDSI patch. Therefore, normal *VistA* conventions and standards apply to designing of the user interface.

11.2. Inputs

N/A

11.3. Outputs

Microbiology Report Output Examples:

ANALYZE EMAIL OUTPUT REPORT:

Subj: LAB DATA file (#63) Microbiology Antibiotic Fields Cleanup [#136334]
06/23/10@08:17 93 lines
From: LRUSER,ONE In 'IN' basket. Page 1

The LAB DATA file (#63) cleanup process has completed.

Tool run in ANALYZE MODE for: [REDACTED]

This process checked the Organism Sub-field (#63.3) of the LAB DATA file (#63) to locate potential Data Dictionary discrepancies related to the definition and setup of fields for reporting antibiotic sensitivities.

The following report will list any discrepancies found:

ANALYZE - INCORRECT INPUT TRANSFORMS (IT)

ANTIBIOTIC NAME (FIELD NUMBER)	CURRENT INPUT TRANSFORM	PROPOSED INPUT TRANSFORM
AMPICILLIN B (2.00442799)	D ^XYZDEF	D ^LRMISR
TRIMETH/SULF2 B INTERP (121212)	D ^LRMISR	D INT^LRMISR

TOTAL: 2

ANALYZE - INCORRECT HELP TEXT

ANTIBIOTIC NAME (FIELD NUMBER)	CURRENT HELP	PROPOSED HELP
AMPICILLIN B (2.00442799)	D ZEN^ZLRMISR	D EN^LRMISR
TRIMETH/SULF2 B INTERP (121212)	D EN^LRMISR	D HINT^LRMISR

TOTAL: 2

ANALYZE - INCORRECT KEYS

ANTIBIOTIC NAME (FIELD NUMBER)	CURRENT SET OF CODES	PROPOSED SET OF CODES
AMPICILLIN X SCREEN (2.00602)	M:MAYBE;N:NEVER;	A:ALWAYS DISPLAY;N:NEVER

TOTAL: 1

ANALYZE - MISSING INTERP and/or SCREEN

ANTIBIOTIC NAME (FIELD NUMBER)	INTERP FIELD NEEDED	SCREEN FIELD NEEDED
AMPICILLIN C (2.00442599)	2.004425991	2.004425992

TOTAL: 1

ANALYZE - BAD FIELD NUMBER and DEFINITION, LAB DATA NOT UPDATED

ANTIBIOTIC NAME (FIELD NUMBER)	NEW FIELD #	NEW INTERP	NEW SCREEN	OCCURRENCES FOUND
CEFPODOXIME (2.0046)	TBD	TBD	TBD	0
TRIMETH/SULF2 (199)	TBD	TBD	TBD	1

TOTAL: 2

ANALYZE - ANTIBIOTICS NEEDING MANUAL REVIEW/UPDATE

ANTIBIOTIC	FIELD NUMBER
TRIMETH/SULF2 B INTERP	121212

TOTAL: 1

 *** END OF REPORT ***

REPAIR EMAIL OUTPUT REPORT:

Subj: LAB DATA file (#63) Microbiology Antibiotic Fields Cleanup [#136335]
 06/23/10@08:20 98 lines
 From: LRUSER,ONE In 'IN' basket. Page 1

The LAB DATA file (#63) cleanup process has completed.

Tool run in ANALYZE/REPAIR MODE for: [REDACTED]

This process checked the Organism Sub-field (#63.3) of the LAB DATA file (#63) to locate potential Data Dictionary discrepancies related to the definition and setup of fields for reporting antibiotic sensitivities.

The following report will list any discrepancies found:

ANALYZE/REPAIR - INCORRECT INPUT TRANSFORMS (IT)

ANTIBIOTIC NAME (FIELD NUMBER)	FORMER INPUT TRANSFORM	NEW INPUT TRANSFORM
-----------------------------------	---------------------------	------------------------

AMPICILLIN B (2.00442799)	D ^XYZDEF	D ^LRMISR
TRIMETH/SULF2 B INTERP (121212)	D ^LRMISR	D INT^LRMISR

TOTAL: 2

ANALYZE/REPAIR - INCORRECT HELP TEXT

ANTIBIOTIC NAME (FIELD NUMBER)	FORMER HELP	NEW HELP
AMPICILLIN B (2.00442799)	D ZEN^ZLRMISR	D EN^LRMISR
TRIMETH/SULF2 B INTERP (121212)	D EN^LRMISR	D HINT^LRMISR

TOTAL: 2

ANALYZE/REPAIR - INCORRECT KEYS

ANTIBIOTIC NAME (FIELD NUMBER)	CURRENT SET OF CODES	NEW SET OF CODES
AMPICILLIN X SCREEN (2.00602)	M:MAYBE;N:NEVER;	A:ALWAYS DISPLAY;N:NEVER

TOTAL: 1

ANALYZE/REPAIR - MISSING INTERP and/or SCREEN

ANTIBIOTIC NAME (FIELD NUMBER)	INTERP FIELD ADDED	SCREEN FIELD ADDED
AMPICILLIN C (2.00442599)	2.004425991	2.004425992

TOTAL: 1

ANALYZE/REPAIR - BAD FIELD NUMBER and DEFINITION, LAB DATA UPDATED

ANTIBIOTIC NAME (FIELD NUMBER)	FIELD ADDED	INTERP ADDED	SCRN ADDED	OCCURRENCES FOUND
CEFPODOXIME (2.0046)	2.00442062	2.004420621	2.004420622	0
TRIMETH/SULF2 (199)	2.00442061	2.004420611	2.004420612	1

TOTAL: 2

Note: Due to the added antibiotics, updates may
need to be made to input (edit) templates
in the LAB DATA file that correspond to the

old fields and update the new fields.

*** END OF REPORT ***

Chemistry Report Output Example:

Subj: DATA DICTIONARY ^DD(63.04 CHECK REPORTJul 02, 2009@17:42:21 [#45900]

07/02/09@17:42 25 lines

From: LRUSER,ONE In 'IN' basket. Page 1

VA BOSTON HEALTHCARE SYSTEM - BOSTON DIVISION Jul 02, 2009

Data Name Location SPERM COUNT CH;523071;1 should be CH;423071;1

Data Name Location NOT IN USE CH;523071;2 should be CH;523071;1

Data Name Location LEU M5 CH;523075;2 should be CH;523076;1

Data Name Location VOID CH;524140;1 should be CH;523141;1

Data Name Location SOMATOSTATIN CH;523569;2 should be CH;523569;1

Data Name Location SALIVARY ISOAMYLASE CH;5523591;1 should be CH;523591;1

Data Name Location TRIHYDROXY BILE ACIDS CH;523638;2 should be CH;523638;1

Data Name Location ZAM CORTISOL CH;49;3 should be CH;660006;1

Data Name Location ZZLEAD CH;49;2 should be CH;660007;1

Data Name Location ZGLUCOSE CH;49;4 should be CH;660008;1

Data Name Location OXAZEPAM CH;5231334;1 should be CH;5131334;1

Data Name Location HISTOPLASMA AG CH;5231334;2 should be CH;5231334;1

Data Name Location HEXAGONAL PHOSPHO NEUT CH;5231452;1 should be CH;5231451;1

Data Name Location RUSSELL VIPER VENOM CH;5231452;2 should be CH;5231452;1

Data Name Location ACTIVATED PROTEIN C RESISTANCE CH;5231259;2 should be CH;523
1459;1

Data Name Location COPPER (QUEST) CH;49;2 should be CH;5231507;1

Data Name Location EPINEPHRINE (QUEST) CH;49;3 should be CH;5231512;1

Data Name Location METHYLAMALONIC ACID (QUEST) CH;49;4 should be CH;5231530;1

Data Name Location MICROGLOBULIN BETA 2 (QUEST) CH;49;5 should be CH;5231531;1

Data Name Location MYELIN BASIC PROTEIN (QUEST) CH;50;1 should be CH;5231532;1

Data Name Location RUBELLA (QUEST) CH;55;2 should be CH;5231535;1

Data Name Location ANTI GLIADIN AB IGA CH;5231644;1 should be CH;5231643;1

Data Name Location ANTI ENDOMYSIAL AB (Q) CH;5231644;2 should be CH;5231644;1

Data Name Location ZZACETALDEHYDE (Q) CH;5231872;1 should be CH;5231782;1

Enter message action (in IN basket): Ignore//

11.4. Navigation Hierarchy

N/A

12. System Integrity Controls

There are no user accessible menus distributed with this software.

13. Appendix

Analysis of *Vista* Laboratory LAB DATA file (#63) microbiology organism antibiotic database issues identified at sample LEDI IV test sites.

The testing of LEDI IV combined patches (HDI*1*7, LA*5.2*74/LR*5.2*350) identified database issues when attempting to store microbiology results that contain antimicrobial susceptibility testing. Antimicrobial susceptibility testing results are stored in three fields unique for each antibiotic being tested. These three fields record the actual susceptibility testing, the interpretation of the result and screen which determines if the result is displayed and under what conditions.

Examples of the fields distributed with the Laboratory package are fields #5 thru #160.2 with a global location 2.0001 thru 2.004

```
^LR(D0,"MI",D1,3,D2,2.0001)= (#5) NEOMYCIN [1F] ^ (#5.1) NEOMYCIN INTERP [2F] ^
(#5.2) NEOMYCIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0002)= (#10) BACITRACIN [1F] ^ (#10.1) BACITRACIN INTERP [2F]
^ (#10.2) BACITRACIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0003)= (#15) PENICILLIN [1F] ^ (#15.1) PENICILLIN INTERP [2F]
^ (#15.2) PENICILLIN SCREEN [3S] ^
...
^LR(D0,"MI",D1,3,D2,2.0038)= (#158) CEFTIZOXIME [1F] ^ (#158.1) CEFTIZOXIME INTERP
[2F] ^ (#158.2) CEFTIZOXIME SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0039)= (#159) SPECTINOMYCIN [1F] ^ (#159.1) SPECTINOMYCIN
INTERP [2F] ^ (#159.2) SPECTINOMYCIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.004)= (#160) TRIMETHOPRIM [1F] ^ (#160.1) TRIMETHOPRIM INTERP
[2F] ^ (#160.2) TRIMETHOPRIM SCREEN [3S] ^
```

Prior to the release of wizard Add a new internal name for an antibiotic [LRWU7] the guidance indicated that new local fields be created using the following rules:

Field # 2.00XXXNNN where XXX = Your site's station number and NNN = Unique consecutive numbers beginning with 001

Global storage location to be the value of the field number in #1

The additional two fields to be numbered based on field # of #1 above incremented by 1.

Example

```
LR(D0,"MI",D1,3,D2,2.00695001)= (#2.00695001) IMIPENUM [1F] ^ (#2.006950011)
IMIPENUM INTERP [2F] ^ (#2.006950012) IMIPENUM SCREEN [3S] ^
```

Based on a sampling of the current LEDI IV test sites several variations from the expected practice have been observed which can cause failure of processing of microbiology antibacterial susceptibility results. Example sites with sample errors are listed below:

Site #1 – North Chicago:

Missing two accompanying fields for both these antibiotics.

```
^LR(D0,"MI",D1,3,D2,2.0055601)= (#2.0055601) CINOXACIN [1F] ^
^LR(D0,"MI",D1,3,D2,2.0055602)= (#2.0055602) TICARCILLIN/K CLAVULANATE [1F] ^
```

Site #2 – Biloxi:

Occurrence of storing accompanying fields at wrong global location – two fields correct, one field incorrect.

```
^LR(D0,"MI",D1,3,D2,2.00520013)= (#2.00520013) AMIPICILLIN/SULFBACTAM [1F] ^
(#2.005200131) AMIPICILLIN/SULFBACTAM INTERP [2F] ^
```



```
^LR(D0,"MI",D1,3,D2,2.005200132)= ^ ^ (#2.005200132) AMIPICILLIN/SULFBACTAM
SCREEN [3S] ^
```

Multiple occurrences of storing accompanying fields at wrong global location – primary field correct, two accompanying fields incorrect.

```
^LR(D0,"MI",D1,3,D2,2.00520026)= (#2.00520026) NITROFURANTOIN-GRAM POS [1F] ^
^LR(D0,"MI",D1,3,D2,2.005200261)= ^ (#2.005200261) NITROFURANTOIN-GRAM POS INTERP
[2F] ^
^LR(D0,"MI",D1,3,D2,2.00500262)= ^ ^ (#2.005200262) NITROFURANTOIN-GRAM POS
SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.00520027)= (#2.00520027) VANCOMYCIN-ENTEROCOCCI [1F] ^
^LR(D0,"MI",D1,3,D2,2.005200271)= ^ (#2.005200271) VANCOMYCIN-ENTEROCOCCI INTERP
[2F] ^
^LR(D0,"MI",D1,3,D2,2.005200272)= ^ ^ (#2.005200272) VANCOMYCIN-ENTEROCOCCI
SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.00520028)= (#2.00520028) GENTAMICIN 500 SYN [1F] ^
^LR(D0,"MI",D1,3,D2,2.005200281)= ^ (#2.005200281) GENTAMICIN 500 SYN INTERP [2F]
^
^LR(D0,"MI",D1,3,D2,2.005200282)= ^ ^ (#2.005200282) GENTAMICIN 500 SYN SCREEN
[3S] ^
^LR(D0,"MI",D1,3,D2,2.00520029)= (#2.00520029) STREPTOMYCIN 2000 SYN [1F] ^
^LR(D0,"MI",D1,3,D2,2.005200291)= ^ (#2.005200291) STREPTOMYCIN 2000 SYN INTERP
[2F] ^
^LR(D0,"MI",D1,3,D2,2.005200292)= ^ ^ (#2.005200292) STREPTOMYCIN 2000 SYN SCREEN
[3S] ^
^LR(D0,"MI",D1,3,D2,2.00520031)= (#2.00520031) AMPICILLIN-OTHER [1F] ^
^LR(D0,"MI",D1,3,D2,2.005200311)= ^ (#2.005200311) AMPICILLIN-OTHER INTERP [2F] ^
^LR(D0,"MI",D1,3,D2,2.005200312)= ^ ^ (#2.005200312) AMPICILLIN-OTHER SCREEN [3S]
^
^LR(D0,"MI",D1,3,D2,2.00520032)= (#2.00520032) PENICILLIN-OTHER [1F] ^
^LR(D0,"MI",D1,3,D2,2.005200321)= ^ (#2.005200321) PENICILLIN-OTHER INTERP [2F] ^
^LR(D0,"MI",D1,3,D2,2.005200322)= ^ ^ (#2.005200322) PENICILLIN-OTHER SCREEN [3S]
^
^LR(D0,"MI",D1,3,D2,2.00520033)= (#2.00520033) VANCOMYCIN-OTHER [1F] ^
^LR(D0,"MI",D1,3,D2,2.005200331)= ^ (#2.005200331) VANCOMYCIN-OTHER INTERP [2F] ^
^LR(D0,"MI",D1,3,D2,2.005200332)= ^ ^ (#2.005200332) VANCOMYCIN-OTHER SCREEN [3S]
^
^LR(D0,"MI",D1,3,D2,2.00520034)= (#2.00520034) TICARCILLIN-PSEUDOMONAS [1F] ^
^LR(D0,"MI",D1,3,D2,2.005200341)= ^ (#2.005200341) TICARCILLIN-PSEUDOMONAS INTERP
[2F] ^
^LR(D0,"MI",D1,3,D2,2.005200342)= ^ ^ (#2.005200342) TICARCILLIN-PSEUDOMONAS
SCREEN [3S] ^
```

Site #3 – Milwaukee: No issues identified.

Site #4 - San Antonio: No issues identified.

The option:

NAME: LRWU7	MENU TEXT: Add a new internal name for an
antibiotic	
TYPE: run routine	CREATOR: POSTMASTER
LOCK: LRLIASON	
PACKAGE: LAB SERVICE	
DESCRIPTION: Allows you to add a new internal name for an antibiotic.	
ROUTINE: LRWU7	UPPERCASE MENU TEXT: ADD A NEW INTERNAL
NAME FOR AN	

This option prompts the user for information and then creates the new fields. It post-dates the previous practice of sites manually adding these new fields via FileMan.

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GLOBAL MAP DATA DICTIONARY #63.3 -- ORGANISM SUB-
FILE
APR 1,2009@15:03:29 PAGE 1
STORED IN ^LR(D0,"MI",D1,3, SITE: MHC DEVELOPMENT ACCOUNT UCI: MHCVSS,MHCVSS
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These are the organisms reported on this specimen.

CROSS
REFERENCED BY: ORGANISM(AC), ORGANISM(B), ISOLATE ID(C)

INDEXED BY: ORGANISM (AD)

^LR(D0,"MI",D1,3,D2,0)= (#.01) ORGANISM [1P:61.2] ^ (#1) QUANTITY [2F] ^ (#1.3) SIT
#1 [3F] ^ (#1.4) SBT #1 [4F] ^ (#1.5) DRAW
==>TIME #1 (SIT,SBT) [5S] ^ (#1.6) SIT #2 [6F] ^ (#1.7) SBT #2
[7F] ^ (#1.8) DRAW TIME #2 (SIT,SBT) [8S] ^
^LR(D0,"MI",D1,3,D2,.1)= (#.1) ISOLATE ID [1F] ^
^LR(D0,"MI",D1,3,D2,1,0)=^63.31A^^ (#2) COMMENT
^LR(D0,"MI",D1,3,D2,1,D3,0)= (#.01) COMMENT [1F] ^
^LR(D0,"MI",D1,3,D2,2.0001)= (#5) NEOMYCIN [1F] ^ (#5.1) NEOMYCIN INTERP [2F] ^
(#5.2) NEOMYCIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0002)= (#10) BACITRACIN [1F] ^ (#10.1) BACITRACIN INTERP [2F]
^ (#10.2) BACITRACIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0003)= (#15) PENICILLIN [1F] ^ (#15.1) PENICILLIN INTERP [2F]
^ (#15.2) PENICILLIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0004)= (#20) CLINDAMYCIN [1F] ^ (#20.1) CLINDAMYCIN INTERP
[2F] ^ (#20.2) CLINDAMYCIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0005)= (#25) METHICILLIN [1F] ^ (#25.1) METHICILLIN INTERP
[2F] ^ (#25.2) METHICILLIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0006)= (#30) VANCOMYCIN [1F] ^ (#30.1) VANCOMYCIN INTERP [2F]
^ (#30.2) VANCOMYCIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0007)= (#35) GENTAMICIN [1F] ^ (#35.1) GENTAMICIN INTERP [2F]
^ (#35.2) GENTAMICIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0008)= (#40) CHLORAMPHENICOL [1F] ^ (#40.1) CHLORAMPHENICOL
INTERP [2F] ^ (#40.2) CHLORAMPHENICOL SCREEN
==>[3S] ^
^LR(D0,"MI",D1,3,D2,2.0009)= (#45) KANAMYCIN [1F] ^ (#45.1) KANAMYCIN INTERP [2F] ^
(#45.2) KANAMYCIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.001)= (#50) CEFAZOLIN [1F] ^ (#50.1) CEFAZOLIN INTERP [2F] ^
(#50.2) CEFAZOLIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0011)= (#55) TETRACYCLINE [1F] ^ (#55.1) TETRACYCLINE INTERP
[2F] ^ (#55.2) TETRACYCLINE SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0012)= (#60) AMPICILLIN [1F] ^ (#60.1) AMPICILLIN INTERP [2F]
^ (#60.2) AMPICILLIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.001201001)= (#2.001201001) DRUGY [1F] ^ (#2.0012010011) DRUGY
INTERP [2F] ^ (#2.0012010012) DRUGY SCREEN
==>[3S] ^
^LR(D0,"MI",D1,3,D2,2.0013)= (#65) CARBENICILLIN [1F] ^ (#65.1) CARBENICILLIN
INTERP [2F] ^ (#65.2) CARBENICILLIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0014)= (#70) TOBRAMYCIN [1F] ^ (#70.1) TOBRAMYCIN INTERP [2F]
^ (#70.2) TOBRAMYCIN SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.0015)= (#75) TRIMETHAPRIM/SULFAMETHOXAZOLE [1F] ^ (#75.1)
TRIMETHAPRIM/SULFA INTERP [2F] ^ (#75.2) TRIMETHAPRIM/SULFA SCREEN [3S] ^
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^LR(D0,"MI",D1,3,D2,2.0016)= (#80) AMIKACIN [1F] ^ (#80.1) AMIKACIN INTERP [2F] ^
 (#80.2) AMIKACIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0017)= (#85) CEFAMANDOLE [1F] ^ (#85.1) CEFAMANDOLE INTERP
 [2F] ^ (#85.2) CEFAMANDOLE SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.00170001)= (#2.00170001) NEWBIOTIC [1F] ^
 ^LR(D0,"MI",D1,3,D2,2.00170002)= (#2.00170002) CEFTRIAZONE [1F] ^ (#2.001700021)
 CEFTRIAZONE INTERP [2F] ^ (#2.001700022) CEFTRIAZONE SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.00170003)= (#2.00170003) atreonam [1F] ^ (#2.001700031)
 atreonam INTERP [2F] ^ (#2.001700032) atreonam SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.00170004)= (#2.00170004) CEFOTETAN [1F] ^ (#2.001700041)
 CEFOTETAN INTERP [2F] ^ (#2.001700042) CEFOTETAN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.00170005)= (#2.00170005) STREPTOMYCIN 15.0 [1F] ^
 (#2.001700051) STREPTOMYCIN 15.0 INTERP [2F] ^ (#2.001700052) STREPTOMYCIN 15.0
 SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.00170006)= (#2.00170006) AMK [1F] ^ (#2.001700061) AMK INTERP
 [2F] ^ (#2.001700062) AMK SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0018)= (#90) CEFOXITIN [1F] ^ (#90.1) CEFOXITIN INTERP [2F] ^
 (#90.2) CEFOXITIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0019)= (#110) ERYTHROMYCIN [1F] ^ (#110.1) ERYTHROMYCIN
 INTERP [2F] ^ (#110.2) ERYTHROMYCIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.002)= (#145) PIPERACILLIN [1F] ^ (#145.1) PIPERACILLIN INTERP
 [2F] ^ (#145.2) PIPERACILLIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0021)= (#95) CEFOTAXIME [1F] ^ (#95.1) CEFOTAXIME INTERP [2F]
 ^ (#95.2) CEFOTAXIME SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0022)= (#100) NITROFURANTOIN [1F] ^ (#100.1) NITROFURANTOIN
 INTERP [2F] ^ (#100.2) NITROFURANTOIN SCREEN[3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0023)= (#105) POLYMYXIN B [1F] ^ (#105.1) POLYMYXIN B INTERP
 [2F] ^ (#105.2) POLYMYXIN B SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0024)= (#115) RIFAMPIN [1F] ^ (#115.1) RIFAMPIN INTERP [2F] ^
 (#115.2) RIFAMPIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0025)= (#120) NOVOBIOCIN [1F] ^ (#120.1) NOVOBIOCIN INTERP
 [2F] ^ (#120.2) NOVOBIOCIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0026)= (#125) CEFOPERAZONE [1F] ^ (#125.1) CEFOPERAZONE
 INTERP [2F] ^ (#125.2) CEFOPERAZONE SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0027)= (#130) MEZLOCILLIN [1F] ^ (#130.1) MEZLOCILLIN INTERP
 [2F] ^ (#130.2) MEZLOCILLIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0028)= (#135) MOXALACTAM [1F] ^ (#135.1) MOXALACTAM INTERP
 [2F] ^ (#135.2) MOXALACTAM SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0029)= (#140) NETILMICIN [1F] ^ (#140.1) NETILMICIN INTERP
 [2F] ^ (#140.2) NETILMICIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.003)= (#150) OXACILLIN [1F] ^ (#150.1) OXACILLIN INTERP [2F]
 ^ (#150.2) OXACILLIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0031)= (#151) SULFISOXAZOLE [1F] ^ (#151.1) SULFISOXAZOLE
 INTERP [2F] ^ (#151.2) SULFISOXAZOLE SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0032)= (#152) NAFCILLIN [1F] ^ (#152.1) NAFCILLIN INTERP [2F]
 ^ (#152.2) NAFCILLIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0033)= (#153) NALIDIXIC ACID [1F] ^ (#153.1) NALIDIXIC ACID
 INTERP [2F] ^ (#153.2) NALIDIXIC ACID SCREEN[3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0034)= (#154) CEPHALOTHIN [1F] ^ (#154.1) CEPHALOTHIN INTERP
 [2F] ^ (#154.2) CEPHALOTHIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0035)= (#155) COLISTIN [1F] ^ (#155.1) COLISTIN INTERP [2F] ^
 (#155.2) COLISTIN SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0036)= (#156) METRONIDAZOLE [1F] ^ (#156.1) METRONIDAZOLE
 INTERP [2F] ^ (#156.2) METRONIDAZOLE SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0037)= (#157) CEFUROXIME [1F] ^ (#157.1) CEFUROXIME INTERP
 [2F] ^ (#157.2) CEFUROXIME SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0038)= (#158) CEFTIZOXIME [1F] ^ (#158.1) CEFTIZOXIME INTERP
 [2F] ^ (#158.2) CEFTIZOXIME SCREEN [3S] ^
 ^LR(D0,"MI",D1,3,D2,2.0039)= (#159) SPECTINOMYCIN [1F] ^ (#159.1) SPECTINOMYCIN

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INTERP [2F] ^ (#159.2) SPECTINOMYCIN SCREEN [3S]^
^LR(D0,"MI",D1,3,D2,2.004)= (#160) TRIMETHOPRIM [1F] ^ (#160.1) TRIMETHOPRIM INTERP
[2F] ^ (#160.2) TRIMETHOPRIM SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.00522001)= (#2.00522001) IMIPENUM [1F] ^ (#2.005220011)
IMIPENUM INTERP [2F] ^ (#2.005220012) IMIPENUM SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,2.00522002)= (#2.00522002) JM TEST [1F] ^ (#2.005220021) JM
TEST INTERP [2F] ^ (#2.005220022) JM TEST SCREEN [3S] ^
^LR(D0,"MI",D1,3,D2,3,0)=^63.32^^ (#200) ANTIBIOTIC
^LR(D0,"MI",D1,3,D2,3,D3,0)= (#.01) ANTIBIOTIC [1F] ^ (#1) MIC(ug/ml) [2N] ^ (#2)
MBC(ug/ml) [3N] ^

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13.1. Packaging and Installation

The LAB DATA File (#63) Remediation software is part of the LEDI IV/LDSI patch. It will be distributed by the FORUM patch module in a KIDS build.

13.2. Design Matrix

N/A

13.3. Required Technical Documents

N/A

