March 2008

This distribution contains change pages for patch MD*1.0*14 of the Clinical Procedures 1.0 Technical Manual and Package Security Guide.

The following documentation change pages should be inserted before these replacement pages:

File Name:	Patch:
MD_1_P2_TM.PDF	MD*1.0*2

Patch MD*1.0*14 pages:

Replace Pages:	With Pages:
Title page	Title page
Revision History	Revision History
Table of Contents	Table of Contents
Chapter 3 to 8	Chapter 3 to 8
Chapter 10	Chapter 10
Chapter 14 to 16	Chapter 14 to 16

CLINICAL PROCEDURES

TECHNICAL MANUAL AND PACKAGE SECURITY GUIDE

Version 1.0

April 2004

Revised March 2008

Department of Veterans Affairs
Health Systems Design and Development
Provider Systems

Revision History

Description	Date	Author
Originally released.	April 2004	
[1]Patch MD*1.0*1 released.	July 2004	
Patch MD*1.0*2 released.	August 2006	
[2]Patch MD*1.0*5 released August 2006. Updated File List, Package Default Definition, Parameter Definitions, and menu options.	Documented March 2008	REDACTED
[3]Patch MD*1.0*14 released. Updated Routine Descriptions, File List, Parameter Definitions, Protocols, menu options, and Cross References. Deleted bad references to Sample Reports in Ch. 15.	March 2008	REDACTED

[1] Patch MD*1.0*1 and MD*1.0*2 July 2004 Patch 2 release added.

[2] Patch MD*1.0*5 August 2006 Patch 5 release added.

[3] Patch MD*1.0*14 March 2008 Patch 14 release added.

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3. Clinical Instrument Interface Specifications

Refer to Chapter 10 of the Clinical Procedures Implementation Guide for information on Setting up HL7 Parameters.

[1]Refer to the Clinical Instrument Bi-Directional Interface Specifications document for information on Clinical Procedures instrument interface specifications. Directions for locating the document follow:

1. Access the Clinical Procedures website: http://vista.med.va.gov/clinicalspecialties/clinproc/
2. On the navigation bar found on the left-hand side of the page, hover your mouse pointer over **Clinical Procedures Project**, then click **Documentation.**
3. Click **Clinical Procedures Documents.**
4. Click the **Clinical Procedures Bi-Directional Communication Specification** link to view the document or save a copy.

[1] Patch MD*1.0*14 March 2008 Bad link removed and replaced with directions to document.

4. Routine Descriptions

```
[1]MDAPI     ; HOIFO/DP/NCA - CP API Calls ; [05-05-2003 10:28]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDAPI1    ; HOIFO/NCA - Electrocardiogram Data Extraction ;12/4/02  12:32
          ;;1.0;CLINICAL PROCEDURES;**1**;Apr 01, 2004
MDARP3    ; HOIFO/NCA - Get Procedures for Medicine ;1/13/04  14:35
          ;;1.0;CLINICAL PROCEDURES;**10,13**;Apr 01, 2004;Build 19
MDCVT     ; HOIFO/DP/NCA - Medicine Package Conversion ;10/20/04  12:49
          ;;1.0;CLINICAL PROCEDURES;**5**;Apr 01, 2004;Build 1
MDCVT1    ; HOIFO/NCA - Medicine Package Conversion (Cont.) ;1/6/05  15:12
          ;;1.0;CLINICAL PROCEDURES;**5**;Apr 01, 2004;Build 1
MDCVTU    ; HOIFO/NCA - Medicine Conversion Verification Utility ; [08-28-2003
            11:34];;1.0;CLINICAL PROCEDURES;**5**;Apr 01, 2004;Build 1
MDESPRT   ;HOIFO/NCA - ELECTRONIC SIGNATURE PRINT ;12/21/04  09:24
          ;;1.0;CLINICAL PROCEDURES;**5**;Apr 01, 2004;Build 1
MDHL7A    ; HOIFO/WAA - Routine to Decode HL7 for CP ; [05-07-2001 10:38]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7B    ; HOIFO/WAA -Bi-directional interface routine ;7/23/01  11:41
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7BH   ; HOIFO/WAA -Bi-directional interface (HL7) routine ;7/23/01  11:41
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7E    ; HOIFO/WAA -Olympus/CMore/Pentax Endoscopy ; 06/08/00
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7K2   ; HOIFO/WAA -HP EnConcert Echo ; 06/08/00
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7M1   ; HOIFO/WAA - Muse EKG ; [02-06-2002 16:13]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7MCA  ; HIRMFO/REL-Routine to Decode HL7 for MEDICINE ; [05-07-2001 10:38]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7MCX  ; HIRMFO/WAA - Generate HL7 Error Message for MEDICINE ; [05-07-2001
            10:38]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7P1   ; HOIFO/WAA-Sensormedics,Jaeger Pulmonary ; 06/08/00
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7R1   ; HOIFO/WAA -Clinivision Resporatory ; 06/13/02
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7U    ; HOIFO/WAA -Routine utilities for CP ;7/23/01  11:41
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7U1   ; HOIFO/WAA -Routine utilities for CP PROCESSING OBX ; 7/26/00
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7U2   ; HOIFO/WAA -Utilities for CP PROCESSING OBX text  ; 7/26/00
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7U3   ; HOIFO/WAA -Utilities for CP to process HL7 messages  ; 7/26/00
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
```

[1] Patch MD*1.0*14 March 2008 Updated Routine Description with routines exported with patch.

```
MDHL7X    ; HOIFO/WAA -Generate HL7 Error Message ; 06/08/00
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDHL7XXX  ; HOIFO/DP - Loopback device for CP ; 22-MAY-2003 13:37:41
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDKUTL    ; HOIFO/DP - Renal Utilities ;11/29/07  14:45
          ;;1.0;CLINICAL PROCEDURES;**14**;Apr 01, 2004;Build 20
MDOUTOR   ; HOIFO/NCA - Post Conversion Routine ; [04-14-2003 10:51]
          ;;1.0;CLINICAL PROCEDURES;**5**;Apr 01, 2004;Build 1
MDPCE     ; HIRMFO/NCA - Routine For Data Extract ; [05-28-2002 12:55]
          ;;1.0;CLINICAL PROCEDURES;**5**;Apr 01, 2004;Build 1
MDPFTP1   ;HOIFO/NCA - PFT REPORT-DEMO INFO ;3/15/04  11:55
          ;;1.0;CLINICAL PROCEDURES;**2**;Apr 01, 2004
MDPFTP2   ; HOIFO/NCA - PFT REPORT-VOLUMES ;3/15/04  10:00
          ;;1.0;CLINICAL PROCEDURES;**2**;Apr 01, 2004
MDPFTP2A  ; HOIFO/NCA - PFT REPORT-FLOWS ;3/17/04  08:22
          ;;1.0;CLINICAL PROCEDURES;**2**;Apr 01, 2004
MDPFTP3   ; HOIFO/NCA - PFT REPORT-SPECIAL STUDIES (PT 2) ;3/17/04  12:48
          ;;1.0;CLINICAL PROCEDURES;**2**;Apr 01, 2004
MDPOST    ; HOIFO/DP - Post Init ;2/18/04  11:39
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDPOST04  ; HOIFO/DP - Post Init ; 2/18/04  11:39
          ;;1.0;CLINICAL PROCEDURES;**4**;Apr 01, 2004;Build 3
MDPOST1   ; HOIFO/NCA/DP - Build CP DEFINITION file (#702.01) - Optional Post
           Init ; [12-04-2002 13:06];;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDPS1     ; HOIFO/NCA - CP/Medicine Report Generator ;5/18/04  09:48
          ;;1.0;CLINICAL PROCEDURES;**2,10,13**;Apr 01, 2004;Build 19
MDPS2     ; HOIFO/NCA - CP/Medicine Report Generator (Cont.) ;5/18/04  09:41
          ;;1.0;CLINICAL PROCEDURES;**2**;Apr 01, 2004
MDPS3     ; HOIFO/NCA - Remote Data View Data Retriever for CP ;8/26/05  14:37
          ;;1.0;CLINICAL PROCEDURES;**2,5,13**;Apr 01, 2004;Build 19
MDPS4     ; HOIFO/NCA - Retrieve List of Consult Procedures ;1/26/06  12:45
          ;;1.0;CLINICAL PROCEDURES;**13**;Apr 01, 2004;Build 19
MDPS5     ; HOIFO/NCA - Retrieve List of Consult Procedures for RDV ;3/4/05  1
           3:29;;1.0;CLINICAL PROCEDURES;**13**;Apr 01, 2004;Build 19
MDRPCOD   ; HOIFO/DP - Object RPCs (TMDProcedureDef) ; [01-09-2003 15:20]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDRPCOG   ; HOIFO/DP - CP Gateway ; [01-09-2003 15:20]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDRPCOL   ; HOIFO/DP - Object RPCs (Logfile) ; [02-11-2002 13:41]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDRPCOO   ; HOIFO/DP - Object RPCs (TMDOutput) ; [03-24-2003 15:44]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDRPCOP   ; HOIFO/DP - Object RPCs (TMDPatient) ; [01-09-2003 15:21]
          ;;1.0;CLINICAL PROCEDURES;**4**;Apr 01, 2004;Build 3
MDRPCOR   ; HOIFO/DP - Object RPCs (TMDRecordId) ; [01-10-2003 09:14]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDRPCOT   ; HOIFO/DP/NCA - Object RPCs (TMDTransaction) ;12/5/02  15:33
          ;;1.0;CLINICAL PROCEDURES;**5**;Apr 01, 2004;Build 1
MDRPCOT1  ; HOIFO/NCA/DP - Object RPCs (TMDTransaction) - Continued ; [08-02-2
           002 12:55];;1.0;CLINICAL PROCEDURES;**5**;Apr 01, 2004;Build 1
```

```
MDRPCOU   ; HOIFO/DP - Object RPCs (TMDUser) ; [01-09-2003 15:21]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDRPCOV   ; HOIFO/DP - Object RPCs (TMDParameter) ; [04-15-2003 12:42]
          ;;1.0;CLINICAL PROCEDURES;;Apr 01, 2004
MDRPCU    ; HOIFO/DP - Object RPC Utilities ; [05-23-2003 10:16]
          ;;1.0;CLINICAL PROCEDURES;**4**;Apr 01, 2004;Build 3
MDSTATU   ; HOIFO/NCA - Print List of Document Titles Needed ;10/21/04  13:44
          ;;1.0;CLINICAL PROCEDURES;**5**;Apr 01, 2004;Build 1
MDWCHK    ; HOIFO/NCA - Create CP Studies for Existing Procedures ;9/24/07
          15:04;;1.0;CLINICAL PROCEDURES;**14**;Apr 01,2004;Build 20
MDWOR     ; HOIFO/NCA - Main Routine to Decode HL7 ;5/23/07  10:49
          ;;1.0;CLINICAL PROCEDURES;**14**;Apr 01,2004;Build 20
MDWORC    ; HOIFO/NCA - Main Routine to Decode HL7 from Consult ;3/9/00  15:45
          ;;1.0;CLINICAL PROCEDURES;**14**;Apr 01,2004;Build 20
MDWORSR   ; HOIFO/NCA - Daily Schedule Studies;7/2/04  12:39 ;5/17/07  16:09
          ;;1.0;CLINICAL PROCEDURES;**14**;Apr 01,2004;Build 20
MDWSETUP  ; HOIFO/NCA - Auto Study Check-In Setup ;9/10/07  15:43
          ;;1.0;CLINICAL PROCEDURES;**14**;Apr 01, 2004;Build 20
```

5. File List and Related Information

File and Field Descriptions

CP Transaction File - #702

This file contains the studies between the instruments and user generated data as it is matched to a consult order and a TIU document is created for the results. It also manages the interface between the images and the Imaging RAID.

Field Name	Field Number	Format	Description
Patient	702,.01	Pointer to Patient (#2) file	This field contains a pointer to the Patient (#2) file for this study.
SSN	702,.011	Computed	This field contains the computed value of the patient's SSN from the Patient (#2) file.
DOB	702,.012	Computed	This field contains the computed value of the patient's date of birth from the Patient (#2) file.
Created Date/Time	702,.02	Date	This field contains the date/time the study was created within the CP User executable.
Created By	702,.03	Pointer to New Person (#200) file	This field contains the DUZ of the user that created this study.
CP Definition	702,.04	Pointer to CP Definition (#702.01) file	This field contains a pointer to the CP Definition (#702.01) file of the procedure definition that this study represents.
Consult Number	702,.05	Free Text 1-20 characters in length	This field contains an IEN of the Consult (#123) file representing the Consult order that is matched up to this study.
TIU Note	702,.06	Pointer to TIU Document (#8925) file	This field contains a pointer to the TIU Document (#8925) file representing the note that contains the interpretation of this study as well as the links to the associated images.
Vstring	702,.07	Free Text 1-50 characters in length	This field contains This field contains the vstring. The vstring is in the following format: Visit Type_";"_Visit Date/Time_";"_Hospital Location (internal entry number of the visit).

Field Name	Field Number	Format	Description
Transaction Message	702,.08	Free Text 1-80 characters in length	Contains the message returned from the VistA Imaging API's for storing the images on the server.
Transaction Status	702,.09	Set: 0 - New 1 - Submitted 2 - Error 3 - Complete	This field contains the status of this study.
Error Messages (multiple)	702.091,.01	Number between 1-9999, 0 decimal digits	Error message number.
Date Received	702.091,.02	Date	Date and time this error message was generated.
Received From	702.091,.03	Free Text 1-30 characters in length	Where the error was generated.
Message	702.091,.09	Free Text 1-150 characters in length	Text of the error message.
Image (multiple)	702.1,.01	Number between 1-999, 0 decimal digits	Index of attached image for this study.
Type	702.1,.02	Set: I - Instrument data U - User supplied file	Type of attachment to be processed.
Result Report	702.1,.03	Pointer to CP Result Report (#703.1) file	Pointer to the CP Result Report (#703.1) file containing the attachment from the instrument.
Status	702.1,.09	Set: 0 - Submitted to server 1 - Error in submission 2 - Error in filing 3 - Copied to server	Status of this image.
UNC	702.1,.1	Free Text 1-245 characters in length	Contains the Universal naming Convention (UNC) for this attachment.
Submitted to Instrument	702,.11	Pointer to CP Instrument (#702.09) file	Points to the instrument definition that this study was submitted to at the time of check-in.

Field Name	Field Number	Format	Description
Instrument Order Number	702,.12	Free Text 1-22 characters in length	Contains the unique order number for this study that is sent to the bi-directional instrument.
[1]Scheduled Date/Time	702,.14	Date	This field contains the date/time when the HL7 message should be sent by CP to the device for this CP transaction.
[2]Conversion ID Reference	702,.3	Free text 1-30 characters in length.	This field is the Reference Conversion ID. It is a variable Pointer to the Medicine files. It indicates which converted Medicine report record is associated with the CP Transaction study. This field helps to keep track which CP Transaction study was created for the Medicine report conversion.
Image Count	702,.991	Computed	Computed field to return the number of images associated with this study.

[1] Patch MD*1.0*14 March 2008 Field added to support the auto study check-in with scheduled appointment date/time.

[2] Patch MD*1.0*5 August 2006 Field added.

CP Definition File - #702.01

This file defines all the procedures used by the Clinical Procedures package. All elements that define a procedure are in this file. This file is exported with data, but entries may be added by the site.

Field Name	Field Number	Format	Description
Name	702.01,.01	Free Text 3-30 characters in length	This field contains the name of the procedure. It should be descriptive of the procedure and contain 3-30 alphanumeric characters. The first character MUST be a letter. To maintain consistency it is recommended that all procedures be entered in UPPERCASE letters as well.
Treating Specialty	702.01,.02	Pointer to Facility Treating Specialty (#45.7) file	This field defines the specialty that this procedure falls under.
Require External Data	702.01,.03	Set: 0 - No 1 - Yes	Setting this field to Yes will force a consult for this procedure to be processed via the CP User executable for matching whether or not there are instruments associated with it.
Default TIU Note	702.01,.04	Pointer to TIU Document Definition (#8925.1) file	This field contains a TIU Note Title to use as the default when CP creates a note for interpretation for this procedure.
Hospital Location	702.01,.05	Pointer to Hospital Location (#44) file	This is the location that will be used when creating the TIU Note for interpretation.
Auto Submit	702.01,.07	Set: 0 - No 1 - Yes	This field only applies to bi-directional instruments. It is used to indicate whether or not the image attachment should be automatically submitted to VistA Imaging once the procedure is performed and the result is passed to CP.
External Data Directory	702.01,.08	Free Text 3-150 characters in length	This field contains a reference to a network share where user supplied attachments are located for this procedure.

Field Name	Field Number	Format	Description
Active	702.01,.09	Set: 0 - No 1 - Yes	Yes/No to indicate active procedures that can be linked to Consults.
Instrument (multiple)	702.011,.01	Pointer to CP Instrument (#702.09) file	Contains a pointer to an instrument that generates results for this procedure.

CP Instrument File - #702.09

This file contains the list of instruments used by the Clinical Procedures package. This file is exported with data.

Field Name	Field Number	Format	Description
Name	702.09,.01	Free Text 3-30 characters in length	Name or mnemonic of instrument. Used by vendor in HL7 message header.
Notification Mailgroup	702.09,.02	Pointer to Mail Group (#3.8) file	Mail group that will receive error messages and other notifications dealing with this device from the interface routines.
Description	702.09,.03	Free Text 1-50 characters in length	This field contains a short informational description for the instrument.
Delete when Submitted	702.09,.05	Set: 0 - No 1 - Yes	Select Yes if you want files created by this instrument deleted once they are successfully copied to the VistA Imaging RAID. Deletion will be performed by the VistA Imaging application.
Printable Name	702.09,.06	Free Text 3-30 characters in length	Name of instrument that is printed on the reports, etc.
Default File Ext	702.09,.07	Free Text (e.g., .txt)	Default file extension for vendor instrument reports (e.g., .doc, .pdf).
Serial Number	702.09,.08	Free Text 1-50 characters in length	Vendor serial number of the instrument (for reference only).
Active	702.09,.09	Set: 0 - No 1 - Yes	Whether or not the instrument is active on the network.
Processing Routine	702.09,.11	Free Text 1-8 characters in length	MUMPS routine used to process interface information.
Processing Code	702.09,.12	Set: M - Medicine C - CP V. 1.0 B - Both	Where data is to be processed: M - Medicine C - Clinical Procedures B - Both
Bi-directional	702.09,.13	Set: 0 - No 1 - Yes	This field indicates whether or not this device can accept HL7 messages from VistA.
IP Address	702.09,.14	Free Text 7-15 characters in length	This field contains the IP address of this instrument.

Field Name	Field Number	Format	Description
Port	702.09,.15	Number between 1000-99999, 0 decimal digits	This field contains the port number for this instrument.
HL7 Instrument ID	702.09,.16	Free Text 3-30 characters in length	This is the name of the actual device where the device name can be '"SMC St Louis".
HL7 Universal Service ID	702.09,.17	Free Text 1-48 characters in length	This field defines what type of procedure the device can perform if the device can perform multiple types of procedures.
HL7 Logical Link	702.09,.18	Pointer to the HL Logical Link (#870) file	This field contains the HL7 logical link.
Server Name	702.09,.21	Free Text 1-30 characters in length	Network name of instrument server where the report is stored.
Server Share	702.09,.22	Free Text 1-30 characters in length	Share folder/drive of the instrument server where the report is stored.
Server Path	702.09,.23	Free Text 1-150 characters in length	Path on the network where the report is stored.
Server Executable	702.09,.24	Free Text 1-30 characters in length	Name of server program that is run to create the report for the interface.
Process UNC	702.09,.301	Set: 0 - No 1 - Yes	Enter Yes if this instrument produces UNC type data.
Process Text	702.09,.302	Set: 0 - No 1 - Yes	Enter Yes if this instrument produces text type data.
Process URL	702.09,.303	Set: 0 - No 1 - Yes	Enter Yes if this instrument produces URL type data.
Process DLL	702.09,.304	Set: 0 - No 1 - Yes	Enter Yes if this instrument produces DLL type data.
Process UUEncode	702.09,.305	Set: 0 - No 1 - Yes	Enter Yes if this instrument produces UUEncode type data.

Field Name	Field Number	Format	Description
Process XML	702.09,.306	Set: 0 - No 1 - Yes	Enter Yes if this instrument produces XML type data.
Process XMS	702.09,.307	Set: 0 - No 1 - Yes	Enter Yes if this instrument produces XMS type data.

CP Result Report File - #703.1

This file contains the information for the results uploaded from the medical instruments used by Clinical Procedures. It is distributed without any data. All fields are automatically stuffed by Clinical Procedures. There is no user input.

Field Name	Field Number	Format	Description
Upload ID	703.1,.01	Free Text 1-30 characters in length	Unique identifier assigned for each upload.
Patient	703.1,.02	Pointer to Patient (#2) file	Pointer to the Patient (#2) file of the patient uploaded from the result of the instrument.
Date/Time Performed	703.1,.03	Date	Date/time the procedure was performed on the instrument.
Instrument	703.1,.04	Pointer to CP Instrument (#702.09) file	Pointer to the CP Instrument (#702.09) file of the instrument that produced these reports.
Study Reference Number	703.1,.05	Free Text 1-12 characters in length	This field is used as a reference to the transaction.
HL7 Reference Number	703.1,.06	Free Text 1-30 characters in length	This field is used to keep the IEN of the HL7 message. It serves as a reference to the message that will be purged once the data has been successfully moved to the VistA Imaging server.
Status	703.1,.09	Set: U - Unmatched M - Matched	Status of the results: U - Unmatched M - Matched
Upload Item (multiple)	703.11,.01	Set: 1 - Impression Text 2 - Report Text 3 - Attachment UNC 4 - Attachment URL 5 - UUEncoded Data 6 - DLL 7 - XML Data 8 - XML Style Sheet	This field contains the type of data element that was uploaded from the instrument.
Attachment UNC	703.11,.02	Free Text 1-240 characters in length	This field contains the Universal Naming Convention (UNC) for this attachment. This indicates where the attachment is located.

Field Name	Field Number	Format	Description
Item Value	703.11,.1	Free Text 1-245 characters in length	If the uploaded item is a single string value, it is stored here.
Item Text	703.11,.2	Word-Processing	If the uploaded data is multi-lined, it is stored here.

[1]CP Conversion File- #703.9

This file is used for storing the site parameters needed and used to convert Medicine reports to CP Text reports. This file also stores the status of the conversion process for each converted Medicine report.

Field Name	Field Number	Format	Description
Name	703.9,.01	Free Text (Required)	This field contains the name of the CP conversion. It is only accessible by the CP conversion routine. It is exported with one "DEFAULT" entry.
Mode	703.9,.02	Set: 0 - test 1 - real	This field indicates if the CP conversion is in test or real mode.
Administrative Closure User	703.9,.03	Pointer to new person file (#200)	This field points to the New Person file (#200). It is used to indicate the Administrative Closure person used to close the TIU documents for the CP conversion.
Scratch HFS Directory	703.9,.1	Free Text	This field stores the scratch HFS directory used for the CP conversion. CP conversion program will use this directory to convert Medicine reports.
Medicine File Parameters	703.91,.01	Pointer to File file (#1)	This field points to the File file (#1). It is used to store the Medicine file number that this parameter is pertaining to. (Reference IA #4507)
CP Definition	703.91,.02	Point to CP Definition File (#702.01)	This field contains the CP Definition to which the Medicine Report will be mapped.
Convert Y/N	703.91,.03	Set: 0 - No 1 - Yes	This field is used as a flag to mark the Medicine Report. Enter 0 for 'to not convert' or 1 for 'to convert'.
Convert if No Status	703.91,.04	Set: 0 - No 1 - Yes	This field is used as a flag to indicate whether the Medicine report should be converted or not be converted, if there is no status for the report. The field is 0 for 'not to convert' or 1 for 'to convert'.
Use TIU Note Title	703.91,.05	Pointer to TIU Document Definition File (#8925.1)	This field stores the Historical TIU note title used for the conversion of the Medicine reports to CP reports. (Reference IA #3377 and 3568)
Conversion ID	703.92,.01	Free Text	This field is the Conversion ID. It is a

[1] Patch MD*1.0*5 August 2006 CP Conversion File #703.9 added.

			variable pointer to the Medicine files. This field will store an entry for each Medicine file record converted. This field is a variable pointer to the following files: 691 ECHO 691.1 CARDIAC CATHETERIZATION 691.5 ELECTROCARDIOGRAM (EKG) 691.6 HOLTER 691.7 EXERCISE TOLERANCE TEST 691.8 ELECTROPHYSIOLOGY (EP) 694 HEMATOLOGY 694.5 CARDIAC SURGERY RISK ASSESSMENT 698 GENERATOR IMPLANT 698.1 V LEAD IMPLANT 698.2 A LEAD IMPLANT 698.3 PACEMAKER SURVEILLANCE 699 ENDOSCOPY/CONSULT 699.5 GENERALIZED PROCEDURE/CONSULT 700 PULMONARY FUNCTION TESTS 701 RHEUMATOLOGY
Status	703.92,.02	Set: CR - Converted Real Mode CT - Converted Test Mode E – Error S - Skipped R - Ready to Convert	This is the status field of the conversion log. There are five set of codes: CR - Converted Real Mode CT - Converted Test Mode E - Error S - Skipped R - Ready to Convert
New TIU Document IEN	703.92,.03	Free Text	This field contains a pointer to the TIU Document file (#8925). (Reference IA #4796). This will hold the internal entry number of the document of the converted medicine report.
Lines	703.92,.04	Number	This field contains the line count of the Medicine report that was converted.
Bytes	703.92,.05	Number	This field contains the number of bytes of the Medicine report that was converted.
Error Msg	703.92,.1	Free Text	This field stores the error message during the conversion of the Medicine report.

Package Default Definition

FILE #	NAME	UP DATE DD	SEND SEC. CODE	DATA COMES W/FILE	SITE DATA	RSLV PTS	USER OVER RIDE
702	CP TRANSACTION	YES	YES	NO			
702.01	CP DEFINITION	YES	YES	NO			
702.09	CP INSTRUMENT	YES	YES	YES	MERG	NO	NO
703.1	CP RESULT REPORT	YES	YES	NO			
[1]703.9	CP CONVERSION	YES	YES	NO			

[1] Patch MD*1.0*5 August 2006 Default definitions added for 703.9.

6. Exported Options

Delphi Components

Clinical Procedures uses RPC Broker and custom Delphi Components in the display and navigation of screens. Below is a list of the Delphi components this application currently uses along with a short description.

TMDRecordSource = class(TComponent)

This is the primary component that all others interact with. This component represents a record within FileMan via the Data Dictionary Number and the IEN. In the event that the record is a sub-file then this component will point to another TMDRecordSource that represents the parent record of the sub-record. There is no limit to the number of sub-records that can be linked together.

TMDEdit = Class(TEdit)

This component is designed to manage FileMan Free-Text and Numeric type fields. Other types may be used here with the exception of word-processing but they will require exact data input (i.e. non-ambiguous entries must be entered in the case of pointers or set of codes types). All input and output transforms are applied to the field on validation.

TMDEditPointer = Class(TComboBox)

This component is designed to manage FileMan Pointer types. This component currently handles screens via hard coded screens on the server side in routine MDRPCOR.

TMDLabel = Class(TLabel)

This component is a static component that can display one of three data elements for a FileMan field. These are 1) Data value 2) Field Title or 3) Field Help Text. There is no server update associated with this component.

TMDMemo = Class(TMemo)

This component manages FileMan word-processing data types only. It will validate the data upon leaving the component.

TMDComboBox = Class(TComboBox)

This component was designed for either set of codes or pointer type fields. If using a pointer type field the developer must be aware that the entire pointed to file will be retrieved so large files such as the Patient file (#2) is not possible to represent with this component. Files such as the State file (#5) are handled quite well if there are approximately 100 or less entries and the pointed to file does not have complex output transforms on the .01 field.

TMDRadioGroup = Class(TRadioGroup)

This field was designed specifically for the FileMan set of codes field. It loads the appropriate codes into the radio group and displays the 'Stands For' portion of the codes while storing to the database the internal value of the code.

TMDCheckBox = Class(TCheckBox)

This component was designed for a set of codes that are restricted to only two codes (i.e. Yes/No, True/False, On/Off).

Remote Procedure Calls (RPC)

```
NAME: MD GATEWAY                          TAG: RPC
  ROUTINE: MDRPCOG                        RETURN VALUE TYPE: GLOBAL ARRAY
  AVAILABILITY: RESTRICTED                WORD WRAP ON: TRUE
  VERSION: 1


NAME: MD TMDOUTPUT                        TAG: RPC
  ROUTINE: MDRPCOO                        RETURN VALUE TYPE: GLOBAL ARRAY
  AVAILABILITY: RESTRICTED                WORD WRAP ON: TRUE
 DESCRIPTION:
 Manages the output of VistA data to the client via the default HFS device.
INPUT PARAMETER: OPTION                   PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 30                 REQUIRED: YES
  SEQUENCE NUMBER: 1
 DESCRIPTION:
 Currently set to EXECUTE as the only option.
INPUT PARAMETER: RTN                      PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 30                 REQUIRED: YES
  SEQUENCE NUMBER: 2
 DESCRIPTION:
 Contains the routine to produce the output.  Currently to client produces
 this parameter in the form of TAG^ROUTINE(needed parameters) to simplify
 the calling process.
 RETURN PARAMETER DESCRIPTION:
 Text of the requested report.


NAME: MD TMDPARAMETER                     TAG: RPC
  ROUTINE: MDRPCOV                        RETURN VALUE TYPE: GLOBAL ARRAY
  AVAILABILITY: RESTRICTED                WORD WRAP ON: TRUE
 DESCRIPTION:
 Used to set/retrieve/modify parameters in the Kernel ToolKit PARAMETERS
 (XPAR) files.

 RPC is called as follows:

 Param[0] := OPTION
 Param[1] := Entity
 Param[2] := Parameter name
 Param[3] := Instance
 Param[4] := Value
INPUT PARAMETER: OPTION                   PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 10                 REQUIRED: YES
  SEQUENCE NUMBER: 1
 DESCRIPTION:
 Contains the option for the RPC.  RPC is called as shown:
```

```
 Options and other required parameters include:

 ENTVAL    ENT
 GETPAR    ENT,PAR,INST
 GETLST    ENT,PAR
 GETWP     ENT,PAR,INST
 SETPAR    ENT,PAR,INST,VAL
 SETLST    ENT,PAR,,.VAL  (Uses instance 0-n)
 SETWP     ENT,PAR,INST,.VAL
 DELPAR    ENT,PAR,INST
 DELLST    ENT,PAR
INPUT PARAMETER: ENTITY                 PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 20               REQUIRED: NO
  SEQUENCE NUMBER: 2
 DESCRIPTION:
 An entity is a level at which you can define a parameter.  The entities
 allowed are stored in the Parameter Entity file (#8989.518).  The list of
 allowable entities at the time this utility was released were:

 Prefix  Message       Points to File
 PKG     Package       Package (9.4)
 SYS     System        Domain (4.2)
 DIV     Division      Institution (4)
 SRV     Service       Service/Section (49)
 LOC     Location      Hospital Location (44)
 TEA     Team          Team (404.51)
 CLS     Class         Usr Class (8930)
 USR     User          New Person (200)
 BED     Room-Bed      Room-Bed (405.4)
 OTL     Team (OE/RR)  OE/RR List (101.21)

 The entity may be referenced as follows:
 1) The internal variable pointer (nnn;GLO(123,)
 2) The external format of the variable pointer using the 3 character
    prefix (prefix.entryname)
 3) The prefix alone to set the parameter based on current entity selected.
    (prefix)

 Method 3 uses the following values for the following entities:
 USR     Current value of DUZ
 DIV     Current value of DUZ(2)
 SYS     System (domain)
 PKG     Package to which the parameter belongs
INPUT PARAMETER: PAR                    PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 30               REQUIRED: NO
  SEQUENCE NUMBER: 3
 DESCRIPTION:
 A parameter is the actual name which values are stored under.  The name of
 the parameter must be namespaced and it must be unique.  Parameters can be
```

defined to store the typical package parameter data (e.g. the default add order screen), but they can also be used to store GUI application screen settings a user has selected (e.g. font or window width). When a parameter is defined, the entities, which may set that parameter, are also defined. The definition of parameters is stored in the PARAMETER DEFINITION file (#8989.51).

NOTE: This utility restricts the parameter name to those in the Clinical Procedures namespace (MD*).

INPUT PARAMETER: INST PARAMETER TYPE: LITERAL
MAXIMUM DATA LENGTH: 30 REQUIRED: NO
SEQUENCE NUMBER: 4
DESCRIPTION:
Most parameters will set instance to 1. Instances are used when more than one value may be assigned to a given entity/parameter combination. An example of this would be lab collection times at a division. A single division may have multiple collection times. Each collection time would be assigned a unique instance.

INPUT PARAMETER: VAL PARAMETER TYPE: LITERAL
MAXIMUM DATA LENGTH: 80 REQUIRED: NO
SEQUENCE NUMBER: 5
DESCRIPTION:
A value may be assigned to every parameter for the entities allowed in the parameter definition. Values are stored in the PARAMETERS file (#8989.5). VAL may be passed in external or internal format. If using internal format for a pointer type parameter, VAL must be preceded with the grave (`) character. If VAL is being assigned to a word processing parameter, the text is passed in the subordinate nodes of VAL (e.g. VAL(0-n)=Text).
RETURN PARAMETER DESCRIPTION:
Returns requested data from the specified option.

NAME: **MD TMDPATIENT** TAG: RPC
ROUTINE: MDRPCOP RETURN VALUE TYPE: GLOBAL ARRAY
AVAILABILITY: RESTRICTED WORD WRAP ON: TRUE

NAME: **MD TMDPROCEDURE** TAG: RPC
ROUTINE: MDRPCOD RETURN VALUE TYPE: GLOBAL ARRAY
AVAILABILITY: RESTRICTED WORD WRAP ON: TRUE

NAME: **MD TMDRECORDID** TAG: RPC
ROUTINE: MDRPCOR RETURN VALUE TYPE: GLOBAL ARRAY
AVAILABILITY: RESTRICTED WORD WRAP ON: TRUE
DESCRIPTION:
General RPC for VA Fileman functions.

Param 1 is passed in as the function to perform and includes the following:

```
 LOOKUP:   Performs very generic file lookup functionality
 VALIDATE: Validates input to a fileman field and saves to FDA
 DELREC:   Validates ability to delete and if able deletes a record
 SETFDA:   Validates input and stores in FDA
 SAVEFDA:  Saves any data stored in FDA
 CLEARFDA: Clears any data in the FDA without saving
 GETDATA:  Retrieves a single field value
 GETCODES: Retrieves the set of codes for a field
 GETLABEL: Retrieves a fields TITLE or LABEL if no Title
 GETIDS:   Returns required identifiers for a DD Number
 GETHELP:  Returns Fileman help for a field
 RENAME:   Validates and renames .01 field if valid
 NEWREC:   Creates a new record
 CHANGES:  Returns 0/1 if changes exist in FDA
 CHKVER:   Version check Client <-> Server
 LOCK:     Locks a record by DD and IENS
 UNLOCK:   Unlocks record locked by LOCK option
INPUT PARAMETER: OPTION                 PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 30               REQUIRED: YES
  SEQUENCE NUMBER: 1
 DESCRIPTION:
 See description of RPC.
INPUT PARAMETER: DDNUM                  PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 10               REQUIRED: NO
  SEQUENCE NUMBER: 2
 DESCRIPTION:
 Contains the Data Dictionary number of the item being manipulated.
INPUT PARAMETER: IENS                   PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 20               REQUIRED: NO
  SEQUENCE NUMBER: 3
 DESCRIPTION:
 Contains the IENS of the record being manipulated.
INPUT PARAMETER: FLD                    PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 10               REQUIRED: NO
  SEQUENCE NUMBER: 4
 DESCRIPTION:
 Contains field specifications for the record.
INPUT PARAMETER: DATA                   PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 30               REQUIRED: NO
  SEQUENCE NUMBER: 5
 DESCRIPTION:
 Contains any other needed information for the call.
 RETURN PARAMETER DESCRIPTION:
 Returns global array of requested data or status.


NAME: MD TMDTRANSACTION                 TAG: RPC
  ROUTINE: MDRPCOT                      RETURN VALUE TYPE: GLOBAL ARRAY
  AVAILABILITY: RESTRICTED              WORD WRAP ON: TRUE
```

```
NAME: MD TMDUSER                          TAG: RPC
  ROUTINE: MDRPCOU                        RETURN VALUE TYPE: GLOBAL ARRAY
  AVAILABILITY: RESTRICTED                WORD WRAP ON: TRUE
 DESCRIPTION:
 Manages the VistA interface to the TMDUser object.

 Available options:
   SIGNON     Connects session to the server and attempts signon.
   ESIG       Verifies passed e-sig.
   CHKVER     Verifies client version is compatible with server.
INPUT PARAMETER: OPTION                   PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 30                 REQUIRED: YES
  SEQUENCE NUMBER: 1
 DESCRIPTION:
 See RPC description.
INPUT PARAMETER: DATA                     PARAMETER TYPE: LITERAL
  MAXIMUM DATA LENGTH: 250                REQUIRED: NO
  SEQUENCE NUMBER: 2
 DESCRIPTION:
 Required data for selected option.
 RETURN PARAMETER DESCRIPTION:
 Returns global array of status or requested data.


NAME: MD UTILITIES                        TAG: RPC
  ROUTINE: MDRPCU                         RETURN VALUE TYPE: GLOBAL ARRAY
  AVAILABILITY: RESTRICTED                WORD WRAP ON: TRUE
  VERSION: 1
```

Parameter Definitions

NAME: **MD ALLOW EXTERNAL ATTACHMENTS**
  DISPLAY TEXT: Allow non-instrument attachments
  MULTIPLE VALUED: No VALUE TERM: Allowed
  VALUE DATA TYPE: yes/no
 DESCRIPTION:
 Set this value to Yes to allow users of CPUser.exe to attach documents to
 the transaction that are not created by an instrument.
PRECEDENCE: 1 ENTITY FILE: SYSTEM

[1]NAME: **MD CHECK-IN PROCEDURE LIST** DISPLAY TEXT: Check-in Procedure List
  MULTIPLE VALUED: Yes INSTANCE TERM: Procedure
  VALUE TERM: Schedule Appointment? VALUE DATA TYPE: set of codes
  VALUE DOMAIN: 0:None;1:Outpatient;2:Inpatient;3:Both
  VALUE HELP: Enter 0 for None, 1 for Outpatient, 2 for Inpatient, or 3 for
both.
  INSTANCE DATA TYPE: pointer
  INSTANCE DOMAIN: 702.01
  INSTANCE HELP: Enter procedures that needs the study to be auto checked-in.
  INSTANCE SCREEN CODE: I +$P(^MDS(702.01,+Y,0),"^",9)>0
 DESCRIPTION:
 This parameter contains a list of procedures that will be used
 to auto check-in the CP studies during the procedures request in CPRS
 and whether appointments are scheduled for the procedure.
PRECEDENCE: 1 ENTITY FILE: SYSTEM

NAME: **MD CLINIC QUICK LIST** DISPLAY TEXT: Clinic Quick List For CP
  MULTIPLE VALUED: Yes INSTANCE TERM: Clinic
  VALUE TERM: Procedure VALUE DATA TYPE: pointer
  VALUE DOMAIN: 702.01
  VALUE HELP: Select a procedure for the clinic.
  INSTANCE DATA TYPE: pointer INSTANCE DOMAIN: 44
  INSTANCE HELP: Enter clinics that need CP studies to be checked-in.
 DESCRIPTION:
 List of clinics used as a source to get a list of patients
 that need to have CP studies checked-in. This only applies
 to studies with procedures that have multiple results such
 as Hemodialysis, Respiratory Therapy, and sleep studies.
PRECEDENCE: 1 ENTITY FILE: SYSTEM

NAME: **MD CLINICS WITH MULT PROC**

[1] Patch MD*1.0*14 March 2008 Parameter Definitions added.

```
  DISPLAY TEXT: Clinics With Multiple Procedures
  MULTIPLE VALUED: Yes                    INSTANCE TERM: Procedure
  VALUE TERM: Clinic                      VALUE DATA TYPE: pointer
  VALUE DOMAIN: 44
  VALUE HELP: Enter a clinic for the procedure.
  INSTANCE DATA TYPE: pointer             INSTANCE DOMAIN: 702.01
  INSTANCE HELP: Enter a procedure.
  INSTANCE SCREEN CODE: I +$P(^MDS(702.01,+Y,0),"^",9)>0
 DESCRIPTION:
 If you have a clinic for multiple procedures, populate this
 parameter with the procedure and associate it to a clinic.
PRECEDENCE: 1                             ENTITY FILE: SYSTEM


NAME: MD CRC BYPASS                       DISPLAY TEXT: Bypass CRC Checking
  MULTIPLE VALUED: No                     VALUE TERM: Bypass CRC Checking
  VALUE DATA TYPE: yes/no
 DESCRIPTION:
 Set this value to 'Yes' to prevent the client application from verifying
 its CRC Value at startup.
PRECEDENCE: 1                             ENTITY FILE: SYSTEM


NAME: MD CRC VALUES
  DISPLAY TEXT: Clinical Procedures CRC Values
  MULTIPLE VALUED: Yes
  INSTANCE TERM: Executable or Library Name
  VALUE TERM: CRC Value                   PROHIBIT EDITING: No
  VALUE DATA TYPE: free text              VALUE DOMAIN: 1:15
  INSTANCE DATA TYPE: free text           INSTANCE DOMAIN: 1:30
 DESCRIPTION:
 This parameter is used to store the CRC values for the most recent
 versions of executable and libraries.  Use the Tools menu on the CPManager
 program to calculate the needed CRC Values of the current versions.
PRECEDENCE: 1                             ENTITY FILE: SYSTEM


NAME: MD DAYS FOR INSTRUMENT DATA
  DISPLAY TEXT: Temporary instrument data life (Days)
  MULTIPLE VALUED: No                     VALUE TERM: Days
  PROHIBIT EDITING: No                    VALUE DATA TYPE: numeric
  VALUE DOMAIN: 0:365
 DESCRIPTION:
 The number of days to keep data from the auto-instruments after
 the data has been associated with a Clinical Procedures report.
PRECEDENCE: 1                             ENTITY FILE: SYSTEM


NAME: MD FILE EXTENSIONS                  DISPLAY TEXT: Imaging File Types
  MULTIPLE VALUED: Yes                    INSTANCE TERM: Extension
```

```
  VALUE TERM: File type                 PROHIBIT EDITING: No
  VALUE DATA TYPE: free text            VALUE DOMAIN: 1:80
  VALUE HELP: Enter a description of this file type
  INSTANCE DATA TYPE: free text         INSTANCE DOMAIN: 2:10
  INSTANCE HELP: Enter the extension of the file type with a '.'
  INSTANCE VALIDATION CODE: K:X'?1".".9ULN X
 DESCRIPTION:
 This parameter stores a list of valid file types and the associated
 extensions of these files.
PRECEDENCE: 1                           ENTITY FILE: SYSTEM


NAME: MD GATEWAY                        DISPLAY TEXT: CP Gateway Parameters
  MULTIPLE VALUED: Yes                  INSTANCE TERM: Parameter Name
  VALUE TERM: Parameter Value           VALUE DATA TYPE: free text
  VALUE DOMAIN: 1:255                   INSTANCE DATA TYPE: free text
  INSTANCE DOMAIN: 1:255
PRECEDENCE: 1                           ENTITY FILE: SYSTEM


NAME: MD HFS SCRATCH
  DISPLAY TEXT: VistA Scratch HFS Directory
  MULTIPLE VALUED: No                   VALUE TERM: Directory name
  VALUE DATA TYPE: free text            VALUE DOMAIN: 1:250
  VALUE HELP: Enter in an OS level directory
 DESCRIPTION:
 Contains the directory specification for the Kernel OPEN^%ZISH call.  This
 directory should be accessible for read/write operations by all CP users.
PRECEDENCE: 1                           ENTITY FILE: SYSTEM


NAME: MD IMAGING XFER                   DISPLAY TEXT: Imaging Network Share
  MULTIPLE VALUED: No                   VALUE TERM: Imaging Network Share
  VALUE DATA TYPE: free text            VALUE DOMAIN: 1:250
 DESCRIPTION:
 This parameter contains the name of a network server, share, and path
 (UNC) to a location where Clinical Procedures can put files for pick-up by
 the Imaging background processor for archiving.
PRECEDENCE: 1                           ENTITY FILE: SYSTEM


[1]NAME: MD MEDICINE CONVERTED          DISPLAY TEXT: Medicine Package
Converted
  MULTIPLE VALUED: No                   VALUE TERM: Yes/No
  PROHIBIT EDITING: No                  VALUE DATA TYPE: yes/no
 DESCRIPTION:
 Used to determine if the Medicine Package has been converted.
```

[1] Patch MD*1.0*5 August 2006 Parameter Definition added.

PRECEDENCE: 1 ENTITY FILE: SYSTEM

NAME: **MD OFFLINE MESSAGE** DISPLAY TEXT: Offline message
MULTIPLE VALUED: No VALUE TERM: Offline Message
VALUE DATA TYPE: word processing
DESCRIPTION:
This parameter contains a message to display to the users when the Clinical Procedures application is offline.
PRECEDENCE: 1 ENTITY FILE: SYSTEM

NAME: **MD ONLINE**
DISPLAY TEXT: Clinical Procedure Online/Offline
MULTIPLE VALUED: No
VALUE TERM: Is Clinical Procedures Online
PROHIBIT EDITING: No VALUE DATA TYPE: yes/no
VALUE HELP: Enter 'Yes' to allow access to CP
DESCRIPTION:
This parameter controls access to the Clinical Procedures package.
PRECEDENCE: 1 ENTITY FILE: SYSTEM

[1]NAME: **MD USE APPT WITH PROCEDURE**
DISPLAY TEXT: Use Appointment With Procedure
MULTIPLE VALUED: No
VALUE TERM: Use appointment with procedure
PROHIBIT EDITING: No VALUE DATA TYPE: yes/no
DESCRIPTION:
Enter "Y" or "N" for Yes/No on whether your site selects the appointment scheduled for outpatients during the procedure request in CPRS.
PRECEDENCE: 1 ENTITY FILE: SYSTEM

NAME: **MD USER DEFAULTS** DISPLAY TEXT: CP User Defaults
MULTIPLE VALUED: Yes INSTANCE TERM: Parameter setting
VALUE TERM: Parameter value PROHIBIT EDITING: No
VALUE DATA TYPE: free text VALUE DOMAIN: 1:250
INSTANCE DATA TYPE: free text INSTANCE DOMAIN: 1:250
DESCRIPTION:
This parameter is used to store a users default parameter settings. Each setting is defined on the client.
PRECEDENCE: 1 ENTITY FILE: USER

NAME: **MD VERSION CHK** DISPLAY TEXT: Version Compatibility
MULTIPLE VALUED: Yes INSTANCE TERM: Application:Version
VALUE TERM: Compatible with current server version

[1] Patch MD*1.0*14 March 2008 Parameter Definition added.

```
  PROHIBIT EDITING: No                  VALUE DATA TYPE: yes/no
  INSTANCE DATA TYPE: free text         INSTANCE DOMAIN: 1:30
 DESCRIPTION:
 This parameter is used to store the application:versions that are compatible
 with the current server version of Clinical Procedures.  Instance format
 of APPLICATION:VERSION  (example: CPMANAGER.EXE:0.0.0.0).
PRECEDENCE: 1                           ENTITY FILE: SYSTEM


NAME: MD WEBLINK
  DISPLAY TEXT: Clinical Procedures Home Page
  MULTIPLE VALUED: No                   VALUE TERM: Web Address
  VALUE DATA TYPE: free text            VALUE DOMAIN: 1:250
 DESCRIPTION:
 This parameter contains the web address for the Clinical Procedures home
 page.  This can be modified to a local address in the event that the pages
 are downloaded to be displayed from a local server location.
PRECEDENCE: 1                           ENTITY FILE: SYSTEM
```

Protocols

NAME: **MCAR Device Client** ITEM TEXT: Instrument Device Client
TYPE: subscriber CREATOR: REDACTED
PACKAGE: MEDICINE
DESCRIPTION: Subscriber protocol for sending data to Vista from clinical instruments.
TIMESTAMP: 59276,54156 RECEIVING APPLICATION: MCAR-INST
TRANSACTION MESSAGE TYPE: ORU EVENT TYPE: R01
PROCESSING ID: P LOGICAL LINK: MCAR INST
VERSION ID: 2.3 RESPONSE MESSAGE TYPE: ACK
PROCESSING ROUTINE: D ^MDHL7A SENDING FACILITY REQUIRED?: NO
RECEIVING FACILITY REQUIRED?: NO

NAME: **MCAR Device Server** ITEM TEXT: Instrument HL7 Event Driver
TYPE: event driver CREATOR: REDACTED
PACKAGE: MEDICINE
DESCRIPTION: This protocol is used by the HL7 package to send results to Vista from various clinical instrumentation.
TIMESTAMP: 59276,54156 SENDING APPLICATION: INST-MCAR
TRANSACTION MESSAGE TYPE: ORU EVENT TYPE: R01
PROCESSING ID: P VERSION ID: 2.3
SENDING FACILITY REQUIRED?: NO RECEIVING FACILITY REQUIRED?: NO
SUBSCRIBERS: MCAR Device Client

NAME: **MCAR ORM CLIENT** TYPE: subscriber
CREATOR: REDACTED RECEIVING APPLICATION: INST-MCAR
EVENT TYPE: O02 RESPONSE MESSAGE TYPE: ORR
SENDING FACILITY REQUIRED?: NO RECEIVING FACILITY REQUIRED?: NO
SECURITY REQUIRED?: NO ROUTING LOGIC: Q

NAME: **MCAR ORM SERVER**
ITEM TEXT: Clinical Procedures ORM Protocol Server
TYPE: event driver CREATOR: REDACTED
TIMESTAMP: 59276,54156 SENDING APPLICATION: MCAR-INST
TRANSACTION MESSAGE TYPE: ORM EVENT TYPE: O01
VERSION ID: 2.3
SUBSCRIBERS: MCAR ORM CLIENT

[1]NAME: **MD RECEIVE GMRC**
ITEM TEXT: Clinical Procedures receives messages from Consult
TYPE: action CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES
DESCRIPTION: This protocol receives messages from Consult. (IA 3140)
ENTRY ACTION: D EN^MDWORC(.XQORMSG) TIMESTAMP: 60934,38793

NAME: **MD RECEIVE OR**
ITEM TEXT: Clinical Procedures receives order msgs from CPRS
TYPE: action CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES
DESCRIPTION: This protocol receives order messages from CPRS. (IA 3135)
ENTRY ACTION: D EN^MDWOR(.XQORMSG) TIMESTAMP: 60934,38793

HL7 Application Parameters

NAME: **INST-MCAR** ACTIVE/INACTIVE: ACTIVE
COUNTRY CODE: US HL7 ENCODING CHARACTERS: ^~\&
HL7 FIELD SEPARATOR: |

NAME: **MCAR-INST** ACTIVE/INACTIVE: ACTIVE
FACILITY NAME: VISTA MAIL GROUP: POSTMASTER
COUNTRY CODE: US HL7 ENCODING CHARACTERS: ^~\&
HL7 FIELD SEPARATOR: |

[1] Patch MD*1.0*14 March 2008 Protocols added to support the auto study check-in.

HL Logical Links

NODE: **MCAR INST**
DEVICE TYPE: Single-threaded Server
AUTOSTART: Enabled
TASK NUMBER: 526320
QUEUE SIZE: 100
RE-TRANSMISSION ATTEMPTS: 3
ACK TIMEOUT: 60
TCP/IP PORT: 9026
PERSISTENT: NO
IN QUEUE BACK POINTER: 331
OUT QUEUE BACK POINTER: 220
LLP TYPE: TCP
STATE: Reading
TIME STARTED: MAR 04, 2004@06:46:17
SHUTDOWN LLP ?: NO
READ TIMEOUT: 60
EXCEED RE-TRANSMIT ACTION: ignore
TCP/IP SERVICE TYPE: SINGLE LISTENER
STARTUP NODE: DEV:ISC4A1
IN QUEUE FRONT POINTER: 331
OUT QUEUE FRONT POINTER: 210

NODE: **MCAR OUT**
DEVICE TYPE: Non-Persistent Client
AUTOSTART: Enabled
TASK NUMBER: 529066
QUEUE SIZE: 100
READ TIMEOUT: 60
EXCEED RE-TRANSMIT ACTION: ignore
TCP/IP PORT: 9028
PERSISTENT: NO
IN QUEUE BACK POINTER: 202
OUT QUEUE BACK POINTER: 206
LLP TYPE: TCP
STATE: Openfail
TIME STARTED: MAR 04, 2004@06:45:47
SHUTDOWN LLP ?: NO
RE-TRANSMISSION ATTEMPTS: 3
ACK TIMEOUT: 60
TCP/IP ADDRESS: 10.3.17.157
TCP/IP SERVICE TYPE: CLIENT (SENDER)
STARTUP NODE: DEV:ISC4A1
IN QUEUE FRONT POINTER: 202
OUT QUEUE FRONT POINTER: 202

Menu Options by Name

NAME: **MD GUI USER**
TYPE: Broker (Client/Server)
MENU TEXT: MD GUI USER
CREATOR: REDACTED
TIMESTAMP OF PRIMARY MENU: 59331,44145
RPC: MD TMDOUTPUT
RPC: MD TMDPARAMETER
RPC: MD TMDPATIENT
RPC: MD TMDPROCEDURE
RPC: MD TMDRECORDID
RPC: MD TMDTRANSACTION
RPC: MD TMDUSER
RPC: MD UTILITIES
UPPERCASE MENU TEXT: MD GUI USER

NAME: **MD GUI MANAGER**
TYPE: Broker (Client/Server)
MENU TEXT: MD GUI MANAGER
CREATOR: REDACTED
TIMESTAMP OF PRIMARY MENU: 59385,45622

RPC: MD TMDOUTPUT
RPC: MD TMDPARAMETER
RPC: MD TMDPATIENT
RPC: MD TMDPROCEDURE
RPC: MD TMDRECORDID
RPC: MD TMDTRANSACTION
RPC: MD TMDUSER
RPC: MD UTILITIES
RPC: MD GATEWAY
UPPERCASE MENU TEXT: MD GUI MANAGER

[1]NAME: **MD AUTO CHECK-IN SETUP** MENU TEXT: Auto Study Check-In Setup
TYPE: run routine CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES
DESCRIPTION: This option is used to populate the XPAR parameters MD USE APPT WITH PROCEDURE, MD CHECK-IN PROCEDURE LIST, MD CLINIC QUICK LIST, and MD CLINICS WITH MULT PROC. The four XPAR parameters are used for the auto study check-in. Users can use the option to indicate whether their site use and schedule appointments. They can populate a list of procedures and associated clinics that need a CP study checked-in.
ROUTINE: EN1^MDWSETUP
UPPERCASE MENU TEXT: AUTO STUDY CHECK-IN SETUP

NAME: **MD SCHEDULED STUDIES** MENU TEXT: Scheduled Studies
TYPE: run routine CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES
DESCRIPTION: This option is tasked to run daily. It will process the HL7 messages that need to be sent to the device on a daily basis for CP studies.
ROUTINE: EN1^MDWORSR SCHEDULING RECOMMENDED: YES
UPPERCASE MENU TEXT: SCHEDULED STUDIES

NAME: **MD STUDY CHECK-IN** MENU TEXT: Study Check-in
TYPE: run routine CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES
DESCRIPTION: This option is tasked to run daily. It checks-in CP studies for procedures that require multiple encounters such as Hemodialysis, Respiratory Therapy, and Sleep Studies.
ROUTINE: CLINICPT^MDWORSR SCHEDULING RECOMMENDED: YES
UPPERCASE MENU TEXT: STUDY CHECK-IN

[2]NAME: **MDCVT MANAGER**
MENU TEXT: Medicine to CP Conversion Manager
TYPE: menu CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES
DESCRIPTION: This is the Medicine to CP Manager menu option. This menu

[1] Patch MD*1.0*14 March 2008 Options added to support the auto study check-in.
[2] Patch MD*1.0*5 August 2006 Patch 5 menu options added.

```
 option consists of options to assist the site in converting the Medicine
 reports to Clinical Procedures text reports.
ITEM: MDCVT SETUP                          SYNONYM: 1
  DISPLAY ORDER: 1
ITEM: MDCVT RUN                            SYNONYM: 3
  DISPLAY ORDER: 3
ITEM: MDCVT SUMMARY                        SYNONYM: 4
  DISPLAY ORDER: 4
ITEM: MDCVT DISK SPACE                     SYNONYM: 5
  DISPLAY ORDER: 5
ITEM: MDCVT LIST OF TIU TITLES             SYNONYM: 6
  DISPLAY ORDER: 6
ITEM: MDCVT TOTALS                         SYNONYM: 7
  DISPLAY ORDER: 7
ITEM: MDCVT ERROR LOG                      SYNONYM: 8
  DISPLAY ORDER: 8
ITEM: MDCVT CONVERSION LOCKOUT             SYNONYM: 9
  DISPLAY ORDER: 9
ITEM: MDCVT BUILD CONVERSION LIST          SYNONYM: 2
  DISPLAY ORDER: 2
  TIMESTAMP: 60459,53192                   TIMESTAMP OF PRIMARY MENU: 59904,24363
  UPPERCASE MENU TEXT: MEDICINE TO CP CONVERSION MANA


NAME: MDCVT SETUP                          MENU TEXT: Conversion Setup
  TYPE: run routine                        CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES X ACTION PRESENT: YES
 DESCRIPTION:   This option will bring up a setup screen for the site to setup
 the Medicine Report Conversion parameter setup.  This parameter setup allows
 the site to control which Medicine reports will be converted and which CP
 Definition and TIU title to link to.
  EXIT ACTION: K DDSFILE,DR,DA             ROUTINE: SETUP^MDCVT
  UPPERCASE MENU TEXT: CONVERSION SETUP


NAME: MDCVT RUN                            MENU TEXT: Run the Conversion Process
  TYPE: run routine                        CREATOR: REDACTED
  PACKAGE: CLINICAL PROCEDURES
 DESCRIPTION:   This option will start the Medicine Report conversion to
 Clinical Procedures.  This option will only convert reports for procedures
 that have the "CONVERT Y/N" field set to "Yes" under the MEDICINE FILE
 PARAMETERS in the CP CONVERSION file (#703.9).
  ROUTINE: EN^MDCVT
  UPPERCASE MENU TEXT: RUN THE CONVERSION PROCESS


NAME: MDCVT SUMMARY                        MENU TEXT: Summary of Conversion
Process
  TYPE: print                              CREATOR: REDACTED
  PACKAGE: CLINICAL PROCEDURES
```

DESCRIPTION: This option will generate a Medicine Report Conversion report. This report consists of a listing of all Medicine records that were processed in the conversion in variable pointer format and the status of the conversion whether the record was converted, skipped, or errored. If the record was converted, the total number of lines and bytes that the record was converted to in a TIU document will be displayed. If the record errored, the reason why it errored will be displayed. If the record was skipped, the reason why it was skipped will be displayed.

DIC {DIP}: MDD(703.9, L.: 0
FLDS: [MD CONVERSION SUMMARY] BY: [MD CONVERSION SUMMARY]
UPPERCASE MENU TEXT: SUMMARY OF CONVERSION PROCESS

NAME: **MDCVT DISK SPACE** MENU TEXT: Disk Space Requirements
TYPE: run routine CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES

DESCRIPTION: This option will generate a summary of the Medicine report conversion. This summary consists of a list of the files converted to Clinical Procedures, the count of records converted, the total lines and Bytes the records were converted in each file.

ROUTINE: SUMMARY^MDCVT
UPPERCASE MENU TEXT: DISK SPACE REQUIREMENTS

NAME: **MDCVT LIST OF TIU TITLES** MENU TEXT: List of TIU Titles Needed
TYPE: run routine CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES

DESCRIPTION: This option will allow the user to generate a list of Medicine procedures and the TIU titles needed to be created for the procedures that will be used for the Medicine report conversion. The PRINT NAME of the procedures in the PROCEDURE/SUBSPECIALTY file (#697.2) will be used in the display. This list will list the procedures and titles for a Medicine Package Procedure, if the "Convert Y/N" parameter is set to "Yes" and the "Use TIU Note Title" parameter is blank in the Conversion Setup option.

ROUTINE: DISP^MDSTATU
UPPERCASE MENU TEXT: LIST OF TIU TITLES NEEDED

NAME: **MDCVT TOTALS** MENU TEXT: Conversion Totals By Status
TYPE: run routine CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES

DESCRIPTION: This option will verify that the Medicine reports conversion is complete and are in appropriate statuses.

ROUTINE: TOTALS^MDCVT
UPPERCASE MENU TEXT: CONVERSION TOTALS BY STATUS

NAME: **MDCVT ERROR LOG** MENU TEXT: Error Log
TYPE: print CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES
DESCRIPTION: This option generates a log of all the errors that occurred with each Medicine report during the conversion. The listing consists of the CONVERSION ID and ERROR MESSAGE. The CONVERSION ID consists of the record # concatenated with a ";" and the global location (e.g.,"345;MCAR(699,").
DIC {DIP}: MDD(703.9, L.: 0
FLDS: [MD CONVERSION ERRORS] BY: [MD CONVERSION ERRORS]
UPPERCASE MENU TEXT: ERROR LOG

NAME: **MDCVT CONVERSION LOCKOUT** MENU TEXT: Conversion Lockout
TYPE: run routine CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES
DESCRIPTION: This option will let the user place a specialty/procedure or ALL specialty/procedures Enter/Edit and Report options 'OUT OF SERVICE' in the Medicine package. It will also set Kernel site parameter MD MEDICINE CONVERTED to "YES" when all specialties/procedures enter/edit and report options are disabled or when the user indicated that all Medicine reports has been converted.
ROUTINE: LOCKOUT^MDCVT UPPERCASE MENU TEXT: CONVERSION LOCKOUT

NAME: **MDCVT BUILD CONVERSION LIST** MENU TEXT: Build Conversion List
TYPE: action CREATOR: REDACTED
PACKAGE: CLINICAL PROCEDURES E ACTION PRESENT: YES
X ACTION PRESENT: YES
DESCRIPTION: The user will need to run this option before using the [MDCVT RUN], Run the Conversion Process, option. This option will let the user build the conversion list of the Medicine file records for the CP CONVERSION file (#703.9). It will populate the CONVERSION LOG sub-file (#703.92) with all entries in the "AC" cross reference in the MEDICAL PATIENT file (#690) and set the STATUS field as "Ready to Convert" for each entry. This option can be queued. Once the conversion list is built, this option can also be used to add new additional entries in the Medicine file into the conversion list. This option will not overwrite the existing entries in the CONVERSION LOG but add to the list.
EXIT ACTION: K MDS ENTRY ACTION: S MDS=$$BLD^MDCVT1()
UPPERCASE MENU TEXT: BUILD CONVERSION LIST

7. Cross-References

Included in this section is the information about the cross-references of the application.

FILE NUMBER	FIELD NUMBER	CROSS REFERENCE	DESCRIPTION
702	.05	ACON	Used for searches when the user knows the Consult order number.
	.3	ACONV	This cross reference is used to keep track of which CP transaction study was created during the Medicine report conversion and which Medicine record it is associated with.
	.06	ATIU	Used for searches when the user knows the TIU Note title.
	.01	B	Regular B Cross Reference of the .01 field, the patient name.
	.04	ACP	Used for searches when the user knows the CP definition.
	.11	AINST	Used for searches when the user knows if the study was submitted to Imaging.
	.12	AION	Used to quickly retrieve the study ien from the instrument order number.
	.14	ASD	This cross reference contains the scheduled sending HL7 message. This cross reference contains the scheduled date/time as to when the HL7 message should be sent to the device for the CP transaction. It is used for easy look up to

			process the study.
Subfile 702.091	.01	B	Regular B Cross Reference of the .01 field, error messages.
Subfile 702.1	.01	B	Regular B Cross Reference of the .01 field, image.
702.01	.02	ASPEC	Used for searches when the user knows the Treating Specialty.
	.01	B	Regular B Cross Reference of the .01 field, name of the procedure.
	.01	UC	Used to validate a new entry as unique without case sensitivity.
Subfile 702.011	.01	AINST	Used for searches when the user knows the name of the instrument.
	.01	B	Regular B Cross Reference of the .01 field, instrument.

FILE NUMBER	FIELD NUMBER	CROSS REFERENCE	DESCRIPTION
702.09	.01	B	Regular B Cross Reference of the .01 field, name of the instrument.
	.01	UC	Used to validate a new entry as unique without case sensitivity.
703.1	.02	ADFN	Used for searches when the user knows the patient name.
	.03	ADTP	Used for searches when the user knows the date/time performed.
	.04	AINST	Used for searches when the user knows the name of the instrument.
	.09	ASTATUS	Sets the status for the Gateway to find studies to process.
	.01	B	Regular B Cross Reference of the .01 field, the upload ID.
Subfile 703.11	.01	B	Regular B Cross Reference of the .01 field, upload item.
703.9	.01	B	Regular B Cross Reference of the .01 field, Name.
Subfile 703.91	.01	B	Regular B Cross Reference of the .01 field, Medicine File Parameters.
Subfile 703.92	.01	B	Regular B Cross Reference of the .01 field, Conversion ID.
	.02	AS	Used for lookup by conversion status.

8. Archiving and Purging

There is no archiving capability at this time. Purging is available in the CPGateway through the Set Maximum Log Entries option. See description below.

Set Maximum Log Entries allows the user to adjust the number of entries that are displayed in the log file. Once this value is reached, entries will be purged from the beginning of the log to keep the log file from growing too large. This value will take effect after the next polling operation so if the current poll value is 300 seconds it may take up to 5 minutes for the new value to be used. Allowable values are 100 to 10000 entries. When the CP Gateway is shut down, all entries are purged from the log file.

Note: Purging is also done daily while the CP Gateway is running. This purge deletes the raw data that comes across from the instrument. The CP Gateway keeps data for a specified number of days based on the entry in the system parameter "Days to keep Instrument Data". Data older than this will be purged. The data to be deleted is already matched with a study. The fields purged are the Item Value field (#.1) and Item Text field (#.2) of the Upload Item multiple in the CP Results file (#703.1).

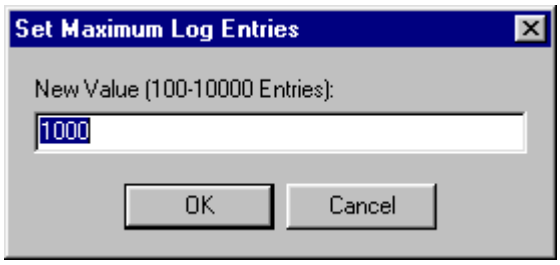


Figure 8-1

10. External Relations

1. The following describes the installation environment for Version 1.0 of the Clinical Procedures package on the VistA server:
    1. VA FileMan V. 22 or greater
    2. Kernel V. 8.0 or greater
    3. Kernel Toolkit V. 7.3 or greater
    4. Kernel RPC Broker V. 1.1 or greater
    5. PIMS (Patient Information Management System) V. 5.3 or greater (including):
        a. Registration V. 5.3
        b. Scheduling V. 5.3
    6. Health Summary V. 2.7 or greater
    7. HL7 (Health Level 7) V. 1.6 or greater
    8. Consults/Request Tracking V. 3.0
    9. TIU (Text Integration Utility) V. 1.0
    10. Order Entry V. 3.0 (CPRS (Computerized Patient Record System) V. 1.0 (GUI V. 18.8)) or greater
    11. PCE (Patient Care Encounter) V. 1.0 or greater
    12. VistA Imaging V. 3.0 or greater (includes installation of background processor and jukebox)
    13. Medicine V. 2.3 (optional)

    These packages must be patched up through and including the following patches before Clinical Procedures is installed:
    1. Patch 17 of Consults/Request Tracking V. 3.0 (GMRC*3.0*17)
    2. Patch 112 of Order Entry V. 3.0 (OR*3.0*112)
    3. Patch 109 of Text Integration Utility V. 1.0 (TIU*1.0*109)
    4. Patch 7 of Imaging V. 3.0 (MAG*3.0*7)
    5. Patch 93 of HL7 V. 1.6 (HL*1.6*93)
    6. Patch 98 of HL7 V. 1.6 (HL*1.6*98)
    7. If Medicine V. 2.3 is installed, you must install Patch 24 of Medicine (MC*2.3*24), and Patch 146 of Kernel (XU*8.0*146).

2. [1]Interface Control Registrations (formerly known as Integration Agreements) between the Clinical Procedures software and other VistA applications exist. Database Interface Control Registrations (DICR) are available on the DBA menu on Forum. For complete information regarding the DICRs for Clinical Procedures V. 1.0, please refer to the *Integration Control*

[1] Patch MD*1.0*14 March 2008 External Relations list removed. Integration Agreements renamed Interface Control Registrations.

Registrations (Agreements) Menu [DBA IA ISC] option under the *DBA* [DBA] option on FORUM.

[1]The following screen capture shows one way to access the DBA option in FORUM:

```
Select Software Services Primary Menu Option: DBA

Select DBA Option: IA  Integration Control Registrations (Agreements)

Select Integration Control Registrations (Agreements) Option: CUST
Custodial Package Menu



Select Custodial Package Menu Option: ?

   1      ACTIVE ICRs by Custodial Package
   2      Print ALL ICRs by Custodial Package
   3      Supported References Print All

Enter ?? for more options, ??? for brief descriptions, ?OPTION for help
text.

Select Custodial Package Menu Option: 1  ACTIVE ICRs by Custodial Package
Select PACKAGE NAME: MD  CLINICAL PROCEDURES     MD
DEVICE: HOME//
```

[1] Patch MD*1.0*14 March 2008 Screen capture added.

14. Software Product Security

Security Management

No additional security measures are to be applied other than those implemented through Menu Manager and the package routines. Clinical Procedures uses the standard RPC broker log-in procedure to validate the user and allow access to the system.

No additional licenses are necessary to run the software.

Confidentiality of staff and patient data and the monitoring of this confidentiality is no different than with any other paper reference.

Security Features

1. Mail groups and alerts.

   There is one mailgroup associated with this software. This mailgroup is called MD DEVICE ERRORS. The purpose of this mailgroup is to store a list of people who will be notified if a problem arises with an automated instrument. There is one alert in the software that occurs on the VistA server if the package installation does not finish. This alert is sent to the IRMS staff member who ran the installation.

2. Remote systems.

   The application does not transmit data to any remote system/facility database.

3. Archiving/Purging.

   Refer to the chapter on Archiving and Purging, in this manual. Purging is available in the CPGateway, refer to the Clinical Procedures Gateway chapter in the Clinical Procedures Implementation Guide for more information.

4. Contingency Planning.

   It is the responsibility of the using service to develop a local contingency plan to be used in the event of application problems. It is recommended that the CP Gateway be installed on a second machine as a backup in case the initial workstation containing the CP Gateway fails.

5. Interfacing.

No specialized (non VA) interfaces are used or required by the application.

6. Electronic signatures.

   Electronic signatures are not used in the Clinical Procedures package.

7. Menus.

   There are no options of special note for the Information Security Officers (ISO's) to view.

8. Security Keys.

   The MD MANAGER key controls access to the 'Update Study Status' and the 'Delete Study' options. A user holding this key will be able to use the 'Update Study Status' option on any study currently displayed on the screen. Holders of this key will also be taken directly to the 'Update Study Status' option when opening a study marked in status 'Error'. The 'Update Study Status' option does not do any validation on the new status assigned to the study. The 'Delete Study' option will attempt to delete the study after checking the business rules on the VistA server for the study given its current status and state on the server. This key should be given only with extreme care and only to those users that fully understand the status structure, and the ramifications of changing the status or deletion of a study.

9. File Security.

NUMBER	NAME	GLOBAL NAME	DD ACC	RD ACC	WR ACC	DEL ACC	LAY ACC	AUD ACC
702	CP TRANSACTION	^MDD(702,	@			@		@
702.01	CP DEFINITION	^MDS(702.01,	@		#	#	#	
702.09	CP INSTRUMENT	^MDS(702.09,	@		#	#	#	@
703.1	CP RESULT REPORT	^MDD(703.1,	@		@	@	@	@
[1]703.9	CP CONVERSION	^MDD(703.9,	@	#	#	#	#	#

10. References.

    There are no special reference materials for this package.

11. Official Policies.

    There are no special official policies for this package.

[1] Patch MD*1.0*5 August 2006 Files added.

15. [19]Vendor Interfaces

List of Vendor Interfaces

[20]The Puritan Bennett Clinivision, Olympus Endoworks, GE Healthcare Muse and Cardinal Health Sensormedics V-max automated device interfaces are exported with CP. Many other device interfaces are also available and you can view the complete list by visiting the Clinical Procedures website (http://vista.med.va.gov/ClinicalSpecialties/clinproc). [21]From the Home page, select **Find a Device** and then search for devices by manufacturer, by type, or by name.

Visit the Clinical Procedures website to view specific information for a particular device. Click the **vendor** name to view the web page.

Device	Vendor	Type of Procedure Performed	Type of report with Discrete data included
[22]Clinivision	Puritan Bennett	Respiratory	Text
Endoworks	Olympus	Bronchoscopy, Colonoscopy, EGD, EGDPEG, Endoscopy, ERCP, Endo Ultrasound, Enteroscopy, Liver Biopsy, Paracentesis, Sigmoidoscopy	Text, GIF, JPG
Muse	GE Healthcare	ECG, Exercise, Holter, Pacemaker ECG	PDF
Sensormedics V-max	Cardinal Health (formerly Viasys/Sensormedics)	PFT	PDF

For the latest vendor information, please see the Clinical Procedures website (http://vista.med.va.gov/ClinicalSpecialties/clinproc).

[19] Patch MD*1.0*14 March 2008 Deleted vendor contact information for individual contacts.
[20] Patch MD*1.0*14 March 2008 Updated vendor name list.
[21] Patch MD*1.0*14 March 2008 Directions for finding a device on the CP website changed.
[22] Patch MD*1.0*14 March 2008 Device names unlinked due to unavailable links.

Device Setup Instructions

Here are the setup instructions and vendor contact for each device.

Clinivision

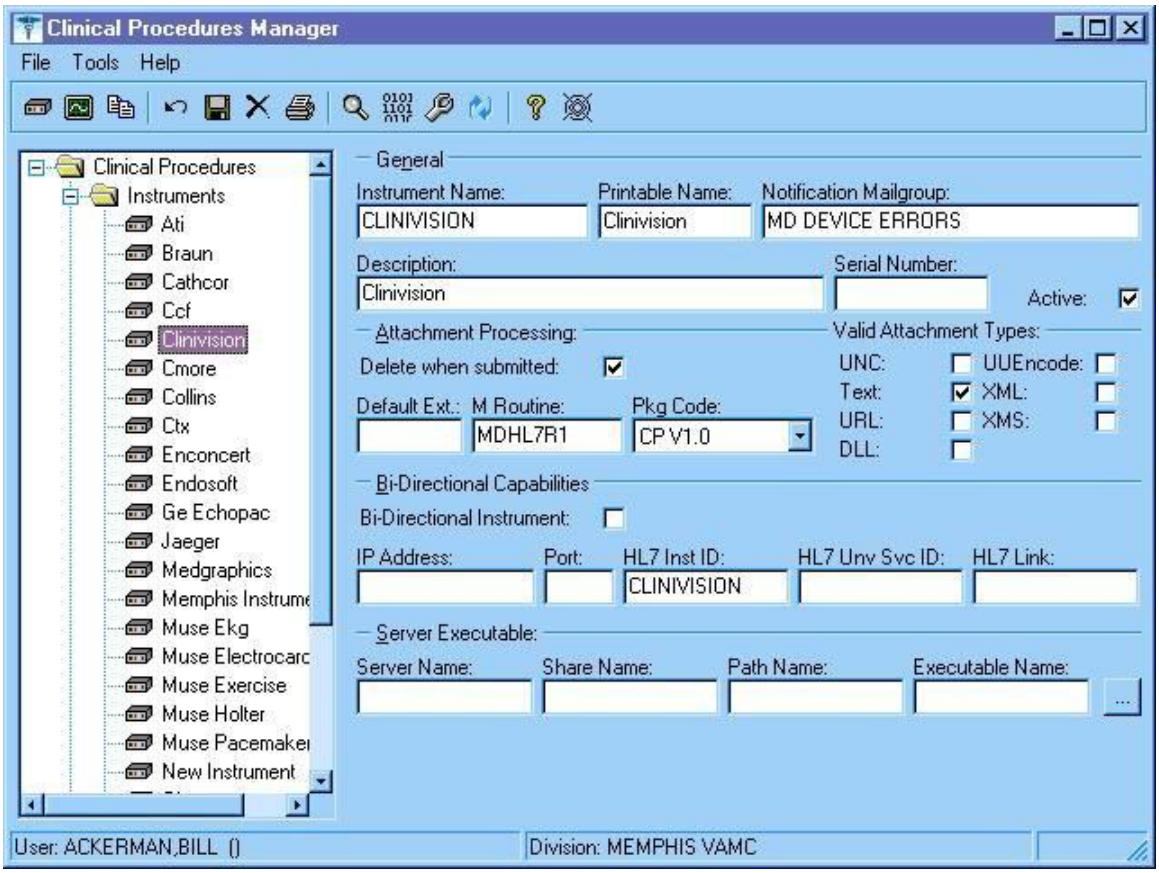
Vendor: Puritan Bennett **Type:** Respiratory

Description:
The uni-directional interface for this instrument is currently available.

Requirements:
This instrument requires a Clinivision vendor interface.

Setup Instructions:

This section describes the installation setup for the Clinivision system. Note that a new Protocol and HL Logical Link will need to be created for this device since it is a Persistent connected device.



(Fig. 1)

Figure 1 displays the settings for the Clinivision device in CP Manager.

NODE: MCAR3 INST LLP TYPE: TCP

DEVICE TYPE: Single-threaded Server STATE: Reading

TIME STARTED: SEP 18, 2002@11:45:27 TASK NUMBER: 321004

SHUTDOWN LLP ?: NO QUEUE SIZE: 100

RE-TRANSMISSION ATTEMPTS: 3 READ TIMEOUT: 60

ACK TIMEOUT: 60 EXCEED RE-TRANSMIT ACTION: ignore

TCP/IP PORT: 1030 TCP/IP SERVICE TYPE: SINGLE LISTENER

PERSISTENT: NO STARTUP NODE: ROU:614A01

IN QUEUE BACK POINTER: 1790 IN QUEUE FRONT POINTER: 1790

OUT QUEUE BACK POINTER: 1789 OUT QUEUE FRONT POINTER: 1789

(Fig. 2)

Figure 2 shows an entry in the HL Logical Link file for the Clinivision device.

NAME: MCAR3 Device Client ITEM TEXT: Instrument HL7 Event Driver

TYPE: subscriber CREATOR: ACKERMAN,BILL

PACKAGE: CLINICAL PROCEDURES

DESCRIPTION: This Protocol is used by the HL7 Package to send results to Vista from the Clinivision Instrument.

IDENTIFIER: E TIMESTAMP: 59039,32152

SENDING APPLICATION: INST-MCAR RECEIVING APPLICATION: MCAR-INST

TRANSACTION MESSAGE TYPE: ORU EVENT TYPE: R01

PROCESSING ID: P LOGICAL LINK: MCAR3 INST

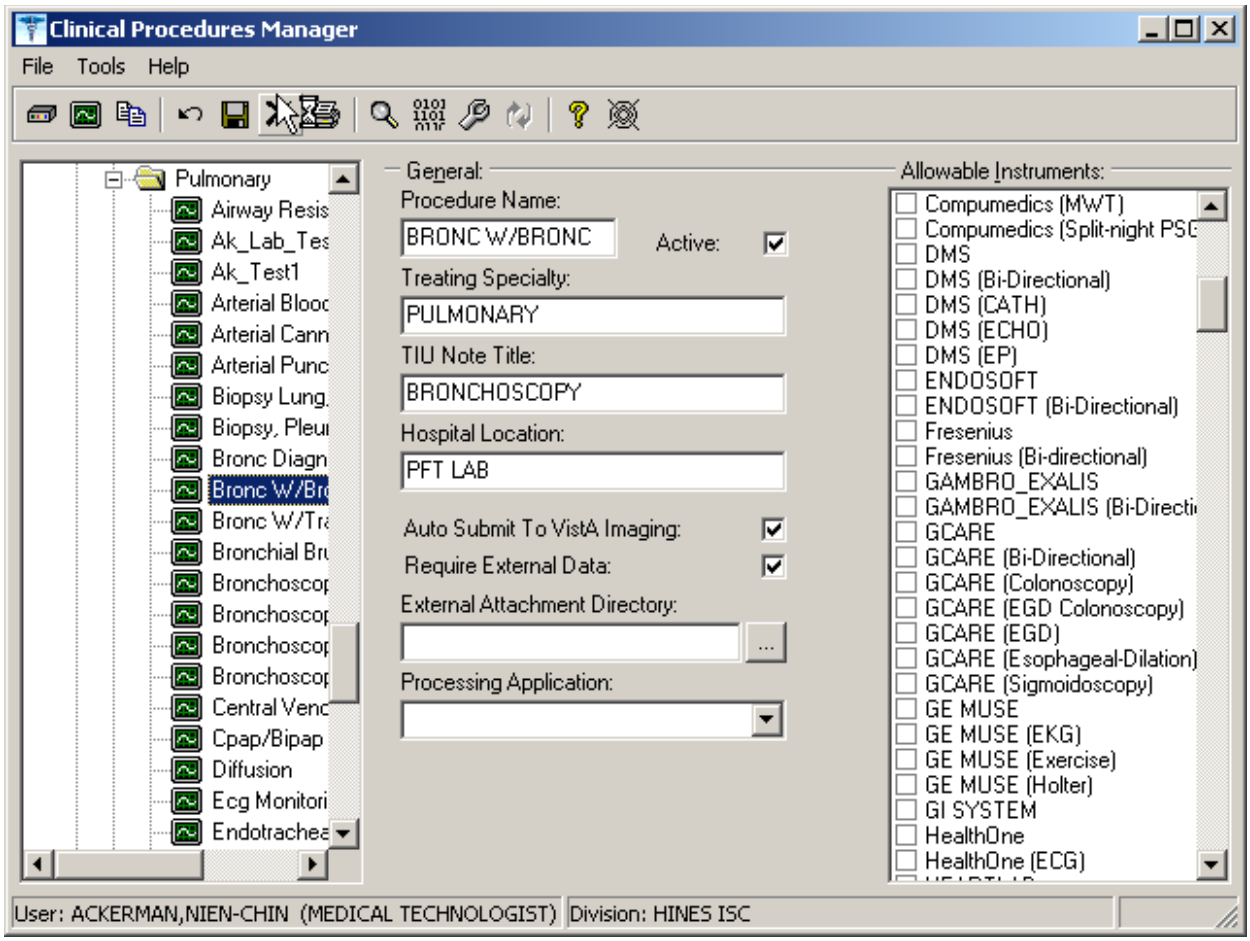
VERSION ID: 2.3 RESPONSE MESSAGE TYPE: ACK

PROCESSING ROUTINE: D ^MDHL7A SENDING FACILITY REQUIRED?: NO

RECEIVING FACILITY REQUIRED?: NO

(Fig. 3)

Fig. 3 shows the new Protocol that will need to be entered for the Link.



(Figure 4)

[23]Figure 4. The device will need to be linked to a procedure in CP Manager.

Contact Clinivision and ask the contact to report the device to the production account, port 1030.

Transmission Instructions:
No information available at this time.

Manuals:
No information available at this time.

Vendor Contacts:
http://www.clinivision.com/contact/

[23] Patch MD*1.0*6 March 2008 Screen capture updated to show new Processing Application field.

Trouble Shooting:
Is the machine plugged in?
Is the machine on?
Are all cables connected correctly?

Endoworks

Vendor: Olympus **Type:** Bronchoscopy, Colonoscopy, EGD, EGDPEG, Endoscopy, ERCP, Endo Ultrasound, Enteroscopy, Liver Biopsy, Paracentesis, Sigmoidoscopy

Description:
The bi-directional interface for this instrument is currently available.

Requirements:
This instrument requires an Advanced Gateway vendor interface.

Setup Instructions:

The Olympus Interface is a non-persistent interface and can share its TCP/IP port address with other non-persistent devices. To configure the Olympus (Endoworks) software, it is recommended that you consult Olympus. Olympus has the correct setting for the Endoworks software that is needed to interface with CP.

Transmission Instructions:
No information available at this time

Manuals:
No information available at this time.

Costs:
No information available at this time.

Trouble Shooting:

Is the machine plugged in?
Is the machine on?
Are all cables connected correctly?

Muse

Vendor: GE Healthcare **Type:** ECG

Description:
The bi-directional interface for this instrument is currently available.

Requirements:
This instrument requires a Muse HL7 vendor interface.

Setup Instructions:
The Muse Interface is a Persistent Interface and must have its own TCP/IP Port address. For configuring the Muse software, it is recommended that you consult with GE Healthcare. GE Healthcare has the correct setting for the Muse software that is needed to interface with CP.

Transmission Instructions:
To send data to Clinical Procedures once the results have been sent from the Cart to the MUSE server, follow these steps:

1. The MUSE generated hard copy is assigned to a cardiologist for over-reading (reviewing).
2. Changes are made on the interpretation, signed by the doctor and returned to the EKG Department.
3. EKG Tech logs on to the MUSE. (All users of the MUSE are assigned a number and password with certain levels of NECESSARY access.)
4. EKG Tech selects over reader (reviewing Cardiologist).
5. EKG Tech selects the patient.
6. EKG Tech selects and then edits the interpretation.
7. EKG Tech selects either Confirm and Print, or Confirm. If Confirm and Print is selected, the HL7 result is sent, and the report is printed. If only Confirm is selected, just the HL7 result is sent.

Manuals:
No information available at this time.

Costs:
No information available at this time.

Trouble Shooting:

1. Is the machine plugged in?

2. Is the machine on?
3. Are all cables connected correctly?

Sensormedics V-MAX

Vendor: Cardinal Health **Type:** PFT

Description:
The bi-directional interface for this instrument is currently available.

Requirements:
This instrument requires a Netlink vendor interface.

[24]Configuration Files:
This file contains the configuration parameters for the Vmax software. The vendor should already have a copy of this file.

Setup Instructions:
The Sensormedics Interface is a Non-Persistent Interface and can share TCP/IP ports with other Non-Persistent device interfaces. The Sensormedics V-MAX software must have a shared directory to hold the report document that is created. The directory might be on the PC or on a network share. The key point is that the directory must be accessible from the Sensormedics V-MAX software.

1. Start the Sensormedics V-MAX software.
2. Click on the Reports Button.
3. Select the Netlinks/IS menu from the menu bar.
4. Select TCP/IP from the File Menu on the menu bar.
5. Enter the TCP/IP and Port address to the listener that will be receiving the data from the Sensormedics V-MAX software.
6. Exit back to the Reports Screen.

[24] Patch MD*1.0*14 March 2008 References to Vmaxconfigfile.zip and sample reports were removed because they are no longer hosted on the Clinical Procedures website.

7. Select Setup from the File Menu and enter the Full NETWORK path to the Share directory where you want the PDF document to be stored.

Transmission Instructions:

A path must be setup where the PDF report will be stored prior to being transmitted to V*IST*A Imaging. This path is usually preset to C:\PDFFiles\ and should be changed to \\(PC Network name)\PDFFiles\. Also, the directory C:\PDFFiles should have Share enabled with Read, Write, Delete permissions for both Imaging and the PC on which the share directory exists.

The following instructions are for transmitting the final patient report to Clinical Procedures.

Note: If the patient whose results you wish to send is already being displayed on the monitor, you can start at step 5.

1. From the Vmax Program Manager screen click the Find Patient Button.

The Find Patient window opens. No patients are displayed.

2. Set search criteria (Last Name, ID, etc.) if any, and click on F1. A list of patients matching your search criteria appears.

3. Select the patient whose results you wish to send by clicking on their name. The selected patient's name is highlighted.

4. Click the F3 button to load the selected patients results data. The Vmax Program Manager screen reappears.

5. From the Vmax Program Manager screen click the Reports Button.

The Reports screen appears.

6. Select the report to process for this patient from the Reports selection box on the left side of the screen. The selected report appears in the upper left box as the Default Patient Report.
7. From the Menu bar click the PrintPDF button to compile the PDF report. A dialog box appears momentarily, indicating the progress of the PDF file creation.

8. From the Menu bar click Netlink/IS® to open the Netlink Transmission Manager.

The Transmission Manager screen appears

Files to be backed up:

You need to backup these files to preserve the operation of Vmax. These files should be backed up after the Vmax is working in production. This list was last updated on May 13, 2003.

Vision folder files used in Netlink communications.

(Depending on software version and configuration, not all files may be present) All files are located in the C:\Vision folder

The following files **always exist** and have **user-modifiable** content

• Id_text.dbf	• Invalid.dbf
• Text_cfg.dbf	• Xmit_cfg.dbf
• Xmitcom.dbf	• Xmithdft.dbf
• Xmithost.dbf	• Xmitparm.dbf
• Xmitpath.dbf	• Xmitxref.dbf

The following files **sometimes exist** and have **user-modifiable** content: They should be manually copied if needed.

• Except	• Replace
• User_1.dbf	• User_2.dbf
• User_3.dbf	• User_4.dbf
• User_5.dbf	• User_6.dbf
• User_7.dbf	•

The following files are shipped **standard** with the software and are **NOT user-modifiable**. They should only be loaded from the software install disk.

• Batchsnd.db1	• Ctrl_str.dbf
• Received.txt	• Response.txt
• Smascii.dbf	• Smhl7def.dbf
• Smvadef.dbf	• Xexcept.dbf
• Xmiticon.dbf	• Xmitprm.dbf
• Xreplace	

The following files are **modified by the software** during operation and **should NOT be user-modified**: They should only be generated by running the software.

• Batchsnd.dbf	• Fileout1.txt
• Fileout2.txt	• Text_rpt.dbf
• Text_rpt.fpt	• Usehost

Manuals:
No information available at this time.

Costs:
No information available at this time.

Trouble Shooting:
Is the machine plugged in?
Is the machine on?
Are all cables connected correctly?

16. Glossary

Access Code A unique sequence of characters known by and assigned only to the user, the system manager and/or designated alternate(s). The access code (in conjunction with the verify code) is used by the computer to identify authorized users.

Action A functional process that a clinician or clerk uses in the TIU computer program. For example, "Edit" and "Search" are actions. Protocol is another name for Action.

ADP Coordinator/ADPAC/Application Coordinator Automated Data Processing Application Coordinator. The person responsible for implementing a set of computer programs (application package) developed to support a specific functional area such as clinical procedures, PIMS, etc.

Application A system of computer programs and files that have been specifically developed to meet the requirements of a user or group of users.

Archive The process of moving data to some other storage medium, usually a magnetic tape, and deleting the information from active storage in order to free-up disk space on the system.

ASU Authorization/Subscription Utility, an application that allows sites to associate users with user classes, allowing them to specify the level of authorization needed to sign or order specific document types and orderables. ASU is distributed with TIU in this version; eventually it will probably become independent, to be used by many VistA packages.

Attachments Attachments are files or images stored on a network share that can be linked to the CP study. CP is able to accept data/final result report files from automated instruments. The file types that can be used as attachments are the following:

.txt	Text files
.rtf	Rich text files
.jpg	JPEG Images
.jpeg	JPEG Images
.bmp	Bitmap Images
.tiff	TIFF Graphics (group 3 and group 4 compressed and uncompressed types)
.pdf	Portable Document Format
.html	Hypertext Markup Language

.DOC (Microsoft Word files) are not supported. Be sure to convert .doc files to .rtf or to .pdf format.

Background Processing Simultaneous running of a "job" on a computer while working on another job. Examples would be printing of a document while working on another, or the software might do automatic saves while you are working on something else.

Backup Procedures The provisions made for the recovery of data files and program libraries and for restart or replacement of ADP equipment after the occurrence of a system failure.

Boilerplate Text A pre-defined TIU template that can be filled in for Titles, Speeding up the entry process. TIU exports several Titles with boilerplate text which can be modified to meet specific needs; sites can also create their own.

Browse Lookup the file folder for a file that you would like to select and attach to the study. (e.g., clicking the "..." button to start a lookup).

Bulletin A canned message that is automatically sent by MailMan to a user when something happens to the database.

Business Rule Part of ASU, Business Rules authorize specific users or groups of users to perform specified actions on documents in particular statuses (e.g., an unsigned CP note may be edited by a provider who is also the expected signer of the note).

Class Part of Document Definitions, Classes group documents. For example, "CLINICAL PROCEDURES" is a class with many kinds of Clinical Procedures notes under it. Classes may be subdivided into other Classes or Document Classes. Besides grouping documents, Classes also store behavior which is then inherited by lower level entries.

Consult Referral of a patient by the primary care physician to another hospital service/ specialty, to obtain a medical opinion based on patient evaluation and completion of any procedures, modalities, or treatments the consulting specialist deems necessary to render a medical opinion.

Contingency Plan A plan that assigns responsibility and defines procedures for use of the backup/restart/recovery and emergency preparedness procedures selected for the computer system based on risk analysis for that system.

CP Clinical Procedures.

CP Definition CP Definitions are procedures within Clinical Procedures.

CP Study A CP study is a process created to link the procedure result from the medical device or/and to link the attachments browsed from a network share to the procedure order.

CPRS Computerized Patient Record System. A comprehensive VistA program, which allows clinicians and others to enter and view orders, Progress Notes and Discharge Summaries (through a link with TIU), Problem List, view results, reports (including health summaries), etc.

Data Dictionary A description of file structure and data elements within a file.

Device A hardware input/output component of a computer system (e.g., CRT, printer).

Document Class Document Classes are categories that group documents (Titles) with similar characteristics together. For example, Cardiology notes might be a Document Class, with Echo notes, ECG notes, etc. as Titles under it. Or maybe the Document Class would be Endoscopy Notes, with Colonoscopy notes, etc. under that Document Class.

Document Definition Document Definition is a subset of TIU that provides the building blocks for TIU, by organizing the elements of documents into a hierarchy structure. This structure allows documents (Titles) to inherit characteristics (such as signature requirements and print characteristics) of the higher levels, Class and Document Class. It also allows the creation and use of boilerplate text and embedded objects.

Edit Used to change/modify data typically stored in a file.

Field A data element in a file.

File The M construct in which data is stored for retrieval at a later time. A computer record of related information.

File Manager or FileMan Within this manual, FileManager or FileMan is a reference to VA FileMan. FileMan is a set of M routines used to enter, edit, print, and sort/search related data in a file, a database.

File Server A machine where shared software is stored.

Gateway The software that performs background processing for Clinical Procedures.

Global An M term used when referring to a file stored on a storage medium, usually a magnetic disk.

GUI Graphical User Interface - a Windows-like screen that uses pull-down menus, icons, pointer devices, and other metaphor-type elements that can make a computer program more understandable, easier to use, allow multi-processing (more than one window or process available at once), etc.

Interpreter Interpreter is a user role exported with USR*1*19 to support the Clinical Procedures Class. The role of the Interpreter is to interpret the results of a clinical procedure. Users who are authorized to interpret the results of a clinical procedure are sent a notification when an instrument report and/or images for a CP request are available for interpretation. Business rules are used to determine what actions an interpreter can perform on a document of a specified class, but the interpreter themselves are defined by the Consults application. These individuals are 'clinical update users' for a given consult service.

IRMS Information Resource Management Service.

Kernel A set of software utilities. These utilities provide data processing support for the application packages developed within the VA. They are also tools used in configuring the local computer site to meet the particular needs of the hospital. The components of this operating system include: MenuMan, TaskMan, Device Handler, Log-on/Security, and other specialized routines.

LAYGO An acronym for Learn As You Go. A technique used by VA FileMan to acquire new information as it goes about its normal procedure. It permits a user to add new data to a file.

M Formerly known as MUMPS or the Massachusetts (General Hospital) Utility Multi-Programming System. This is the programming language used to write all VistA applications.

MailMan An electronic mail, teleconferencing, and networking system.

Menu A set of options or functions available to users for editing, formatting, generating reports, etc.

Module A component of a software application that covers a single topic or a small section of a broad topic.

Namespace A naming convention followed in the VA to identify various applications and to avoid duplication. It is used as a prefix for all routines and globals used by the application.

Network Server Share A machine that is located on the network where shared files are stored.

Notebook This term refers to a GUI screen containing several tabs or pages.

OI Office of Information, formerly known as Chief Information Office Field Office, Information Resource Management Field Office, and Information Systems Center.

Option A functionality that is invoked by the user. The information defined in the option is used to drive the menu system. Options are created, associated with others on menus, or given entry/exit actions.

Package Otherwise known as an application. A set of M routines, files, documentation and installation procedures that support a specific function within VistA.

Page This term refers to a tab on a GUI screen or notebook.

Password A protected word or string of characters that identifies or authenticates a user, a specific resource, or an access type (synonymous with Verify Code).

Pointer A special data type of VA FileMan that takes its value from another file. This is a method of joining files together and avoiding duplication of information.

Procedure Request Any procedure (EKG, Stress Test, etc.) which may be ordered from another service/specialty without first requiring formal consultation.

Program A set of M commands and arguments, created, stored, and retrieved as a single unit in M.

Queuing The scheduling of a process/task to occur at a later time. Queuing is normally done if a task uses up a lot of computer resources.

Result A consequence of an order. Refers to evaluation or status results. When you use the Complete Request (CT) action on a consult or request, you are transferred to TIU to enter the results.

<RET> Carriage return.

Routine A set of M commands and arguments, created, stored, and retrieved as a single unit in M.

Security Key A function which unlocks specific options and makes them accessible to an authorized user.

Sensitive Information Any information which requires a degree of protection and which should be made available only to authorized users.

Site Configurable A term used to refer to features in the system that can be modified to meet the needs of each site.

Software A generic term referring to a related set of computer programs. Generally, this refers to an operating system that enables user programs to run.

Status Symbols Codes used in order entry and Consults displays to designate the status of the order.

Task Manager or TaskMan A part of Kernel which allows programs or functions to begin at specified times or when devices become available. See Queuing.

Title Titles are definitions for documents. They store the behavior of the documents which use them.

TIU Text Integration Utilities.

User A person who enters and/or retrieves data in a system, usually utilizing a CRT.

User Class User Classes are the basic components of the User Class hierarchy of ASU (Authorization/Subscription Utility) which allows sites to designate who is authorized to do what to documents or other clinical entities.

User Role User Role identifies the role of the user with respect to the document in question (e.g., Author/Dictator, Expected Signer, Expected Cosigner, Attending Physician, etc.).

Utility An M program that assists in the development and/or maintenance of a computer system.

Verify Code A unique security code which serves as a second level of security access. Use of this code is site specific; sometimes used interchangeably with a password.

VistA Veterans Health Information Systems and Technology Architecture.

Workstation A personal computer running the Windows 9x or NT operating system.