



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **Text Integration Utilities**

(TIU)

## **Technical Manual**

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## 1.0 Introduction

This manual provides IHS site managers with a technical description of the Text Integration Utilities routines, files, menus, cross references, globals, and other necessary information required to effectively manage the system.

All routines, files, options, and keys are name spaced starting with the letters “TIU” or “BTIU.” The file number range for this package is 8925-8929.99 for VA files and 9003130-9003139 for IHS BTIU files.

TIU is released along with Authorization/Subscription Utility (ASU).

## 2.0 Implementation and Maintenance

See the Text Integration Utilities Implementation Guide for more detailed instructions about planning and setting up TIU.

### 2.1 System Requirements

- Kernel v8.0 or later
- FileMan v22
- Cache v 4.1 or later
- Visit Tracking Suite v2.0
- VA Health Summary v2.7
- VA Lexicon v2.0
- PIMS v5.3

### 2.2 Package-wide Variables

None

### 2.3 Pre-Implementation Considerations

The TIU package contains many site-configurable features which should be considered before implementing it at your site. We recommend that each site consult a multidisciplinary committee composed of MAS and clinical service representatives, as well as individual services or product lines to define site parameters which reflect hospital-wide and service policies and practices. Some of the site-configurable features which must be addressed before implementation are:

- Document definition hierarchy
- User Class definition
- Document upload specifications
- Interdisciplinary Notes
- Signature, signature block, and electronic signature considerations
- Purging specifications
- Printer and printing definitions
- Clinician, MAS, and transcriptionist review/release issues

## 2.4 Setting Up TIU

Options on the TIU Maintenance Menu let IRM Staff set and modify the various parameters controlling the behavior of the Text Integration Utilities Package, as well as the definition of TIU documents. These options are described in the following pages of this section.

### TIU Maintenance Menu {BTIU MENU MGR}

DDM	Document Definitions (Manager) ... [BTIU MENU DOC DEF MGR]
DDM1	Edit Document Definitions [TIUFH EDIT DDEFS MGR]
DDM2	Sort Document Definitions [TIUFA SORT DDEFS MGR]
DDM3	Create Document Definitions [TIUFC CREATE DDEFS MGR]
DDM4	Create Objects [TIUFJ CREATE OBJECTS MGR]
DDM5	List Object Descriptions [BTIU OBJECT DESCRIPTIONS]
DDM6	Create TIU/Health Summary Objects [TIUHS LIST MANAGER]
TAT	TIU Alert Tools [TIU ALERT TOOLS]
TPM	TIU Parameters Menu ... [BTIU MENU PARAMETERS]
TPM1	Basic TIU Parameters [TIU BASIC PARAMETER EDIT]
TPM2	Modify Upload Parameters [TIU UPLOAD PARAMETER EDIT]
TPM3	Document Parameter Edit [TIU DOCUMENT PARAMETER EDIT]
TPM4	Progress Notes Batch Print Locations [TIU PRINT PN LOC PARAMS]
TPM5	Division - Progress Notes Print Params [TIU PRINT PN DIV PARAMS]
TTM	TIU Template Mgmt Functions ... [TIU IRM TEMPLATE MGMT]
1	Delete TIU templates for selected user. [TIU TEMPLATE CAC USER DELETE]
2	Edit auto template cleanup parameter. [TIU TEMPLATE USER DELETE PARAM]
3	Delete templates for ALL terminated users. [TIU TEMPLATE DELETE TERM ALL]
UCM	User Class Management Menu ... [BTIU MENU USER CLASS]
UCM1	User Class Definition [USR CLASS DEFINITION]
UCM2	List Membership by User [USR LIST MEMBERSHIP BY USER]
UCM3	List Membership by Class [USR LIST MEMBERSHIP BY CLASS]
UCM4	Manage Business Rules [USR BUSINESS RULE MANAGEMENT]

Figure 2-1: TIU Maintenance menu

## 2.5 Setting TIU Parameters

### 2.5.1 TIU Parameters Menu [TIU SET-UP MENU]

This menu contains options for setting up the basic parameters and upload parameters.

Option	Option Name	Description
Basic TIU Parameters	TIU BASIC PARAMETER EDIT	This option allows you to enter the basic or general parameters that govern the behavior of the Text Integration Utilities.
Modify Upload Parameters	TIU UPLOAD PARAMETER EDIT	This option allows the definition and modification of parameters for the batch upload of documents into <b>VISTA</b> .
Document Parameter Edit	TIU DOCUMENT PARAMETER EDIT	This option lets you enter the parameters which apply to specific documents (i.e., Titles), or groups of documents (i.e., Classes, or Document Classes).
Division - Progress Notes Print Parameters	TIU PRINT PN DIV PARAM	These parameters are used by the [TIU PRINT PN BATCH INTERACTIVE] and [TIU PRINT PN BATCH SCHEDULED] options. If the site desires a header other than what is returned by \$\$SITE^ VASITE the .02 field of the 1st entry in this file will be used. For example, Waco-Temple-Marlin can have the institution of their progress notes as "CENTRAL TEXAS HCF."
Progress Notes Batch Print Locations	TIU PRINT PN LOC PARAMS	Option for entering hospital locations used for [TIU PRINT PN OUTPT LOC] and [TIU PRINT PN WARD] options. If locations are not entered in this file they will not be selectable from these options.

## 2.5.2 Basic TIU Parameters

This option allows you to enter the basic or general parameters which govern the behavior of the Text Integration Utilities.

### Example:

```
Select TIU Maintenance Menu Option: 1  TIU Parameters Menu

  1      Basic TIU Parameters
  2      Modify Upload Parameters
  3      Document Parameter Edit
  4      Progress Notes Batch Print Locations
  5      Division - Progress Notes Print Params

Select TIU PARAMETERS Menu Option: BASIC TIU PARAMETERS Basic TIU ARAMETERS
First edit Division-wide parameters:

Select INSTITUTION:   <YOUR INSTITUTION NAME>
ENABLE ELECTRONIC SIGNATURE: YES// ??
  When set to 1, electronic signature will be enabled.  Prior to enabling
  electronic signature, it will be assumed that signatures are to be
  written on the chart copy of VAF 10-1000.
  Choose from:
    1      YES
```

```

0          NO
ENABLE ELECTRONIC SIGNATURE: YES// <Enter>
ENABLE NOTIFICATIONS DATE:OCT 1, 1996// ??
  Examples of Valid Dates:
    JAN 20 1957 or 20 JAN 57 or 1/20/57 or 012057
    T   (for TODAY), T+1 (for TOMORROW), T+2, T+7, etc.
    T-1 (for YESTERDAY), T-3W (for 3 WEEKS AGO), etc.
  If the year is omitted, the computer uses the CURRENT YEAR.
  When set to a valid date, notifications of Documents which
  are available or overdue for signature will be sent to the user whose
  signature is missing (i.e., either author or attending physician).

ENABLE NOTIFICATIONS DATE: OCT 1, 1996// <Enter>
GRACE PERIOD FOR SIGNATURE: 7// ??
  This is the number of days following transcription before an author or
  Attending Physician will be notified of a deficiency.
GRACE PERIOD FOR SIGNATURE: 7// <Enter>
GRACE PERIOD FOR PURGE: 100//??
  This is the number of days following transcription for which a report
  will be kept, prior to purge.
GRACE PERIOD FOR PURGE: 100//<Enter>
CHARACTERS PER LINE: 60// ??
  This value (default 60) will be divided into the total number of
  'actual' characters in a given Documents to derive the line
  count for that document. By 'actual' characters, we mean all
  printable ASCII characters, with multiple white space characters
  stripped.
CHARACTERS PER LINE: 60// <Enter>

OPTIMIZE LIST BUILDING FOR: performance// ??
  This parameter specifies for the institution in question whether the
  list building functions of TIU should invoke Authorization/
  Subscription to determine whether documents which the user is not yet
  authorized to see should be excluded from the list (i.e., whether the
  list building should be optimized for security). This is the default
  behavior of TIU. If the impact of this "filtering" becomes
  unacceptable to users at your site, you may wish to set this parameter
  to optimize for Performance, which will bypass the record-wise
  evaluation of view privilege, and allow all records satisfying the
  search criteria to be included in the list. Of course, when the user
  attempts to view documents from the resulting lists before he is
  authorized to do so, he will be prevented from doing so, with an
  explanatory message that looks like this:

  Reviewing Item #1

  You may not VIEW this UNSIGNED NURSE'S NOTE.

  RETURN to continue...<Enter>

  This feature is offered as a means of balancing the demands for rapid
  response with the concerns of many facilities for control of access to
  confidential information.
  Choose from:
    P      performance
    S      security
OPTIMIZE LIST BUILDING FOR: performance//<Enter>
SUPPRESS REVIEW NOTES PROMPT: YES// ??
  If this parameter is set to yes, TIU will suppress the prompt
  indicating how many notes are available to the user, when entering a
  indicating Progress Note.

```

```

Choose from:
  1      YES
  0      NO
SUPPRESS REVIEW NOTES PROMPT: YES//<Enter>
ENABLE CHART COPY PROMPT: ??
  This parameter is used to enable Medical Record Technicians and MIS
  managers to be prompted whether prints of summaries are chart copies
  or not. If not enabled, when MR Techs and MIS Mgr print summaries,
  they will be chart copies.
Choose from:
  1      YES
  0      NO
ENABLE CHART COPY PROMPT: <Enter>
BLANK CHARACTER STRING: ??
  This is a special string of characters which should be used by the
  transcriptionist to represent a "blank." i.e., a word or phrase in
  the dictation which could not be understood and included in the
  transcription.
BLANK CHARACTER STRING: @@@
Press RETURN to continue...<Enter>

  1      Basic TIU Parameters
  2      Modify Upload Parameters
  3      Document Parameter Edit
  4      Progress Notes Batch Print Locations
  5      Division - Progress Notes Print Params

You have PENDING ALERTS
      Enter "VA VIEW ALERTS" to review alerts

Select TIU Parameters Menu Option:

```

### 2.5.3 Implement Upload Utility

There are three steps to enable uploading of reports into VISTA.

1. Set up your Terminal Emulator
2. Enter Upload Utility Parameters
3. Queue Upload Option to Run in Background

Examples of these three steps are given on the following pages. Two examples are shown for entering upload parameters—ASCII and Kermit. If you are using a commercial word-processing program, documents must be saved to ASCII format.

#### Host File Server:

If the ASCII upload source is defined as (H)ost, data will be an ASCII host file such as VMS or DOS.

**Remote Computer:**

If the ASCII upload source is defined as (R)emote, data will be read from an ASCII stream coming to VISTA from a terminal emulator. You may select either a Kermit or RAW ASCII transfer protocol for your station. However, we strongly recommend that you use Kermit, as it provides for error correction and handles line noise much more effectively than the RAW ASCII.

**Note:** If your site has chosen to have clinicians enter the documents directly into VISTA, then you needn't implement the upload utility.

**2.5.3.1 Step 1: Set up a Terminal Emulator**

Determine which type of terminal emulator your site plans to use.

**2.5.3.1.1 Raw ASCII file transfer protocol**

This example shows possible combinations of terminal and ASCII transfer options using the appropriate configuration utilities provided by your terminal emulation software.

**TERMINAL OPTIONS**

```

A - Terminal emulation . . . . . VT100 K - EGA/VGA true underline . . . ON
B - Duplex . . . . . FULL L - Terminal width . . . . . 80
C - Soft flow control (XON/XOFF) ON M - ANSI 7 or 8 bit commands . . 8 BIT
D - Hard flow control (RTS/CTS). OFF
E - Line wrap. . . . . ON
F - Screen Scroll. . . . . ON
G - CR translation . . . . . CR
H - BS translation . . . . . .DESTRUCTIVE
I - Break length (milliseconds). 2000
J - Enquiry (ENQ). . . . . OFF
A - Echo locally . . . . . NO K - CR translation (download). . NONE
B - Expand blank lines . . . . . YES L - LF translation (download). . NONE
C - Expand tabs. . . . . YES
D - Character pacing (millisec). 0
E - Line pacing (1/10 sec) . . . . 0
F - Pace character . . . . . .62 [NOTE: This MUST correspond to the
    PACE CHARACTER defined in the upload
    utility parameter edit dialog below]
G - Strip 8th bit. . . . . NO
H - ASCII download timeout . . . . 60 seconds
I - CR translation (upload). . . . NONE
J - LF translation (upload). . . . OFF

```

Also, be sure that the ASCII transfer option to “abort transfer if carrier detect (CD) is lost” is set to “NO.”

Because of the significantly greater reliability of the Kermit file transfer protocol, we recommend that you use it rather than the Raw ASCII protocol. Try using the default settings for packet size, timeout, start and end of packet characters, and checksum size, as provided by your terminal emulation software. The VISTA Kermit server should work properly with these settings.

### 2.5.3.2 Step 2 Enter Upload Utility Parameters

Use the Modify Upload Parameters option located on the TIU Parameters menu to enter the upload utility's parameters.

#### 2.5.3.2.1 *Modify Upload Parameters—ASCII Protocol Example*

In this example, the ASCII upload source is a remote computer and the upload protocol is defined as an ASCII Protocol. To optimize reliability and functionality when using the ASCII Protocol, we recommend a direct line rather than a modem for transfer of data.

```
Select TIU Maintenance Menu Option: 1  TIU Parameters Menu

1      Basic TIU Parameters
2      Modify Upload Parameters
3      Document Parameter Edit
4      Progress Notes Batch Print Locations
5      Division - Progress Notes Print Params

Select TIU Parameters Menu Option: 2  Modify Upload Parameters
First edit Institution-wide upload parameters:

Select INSTITUTION: YOUR HOSPITAL
ASCII UPLOAD SOURCE: remote computer// <Enter>
UPLOAD PROTOCOL:  ??
    This is the preferred upload protocol.
    Choose from:
        a      ASCII
        k      KERMIT
UPLOAD PROTOCOL: ASCII <Enter>
PACE CHARACTER:  ??
    This is the ASCII value of the character which VISTA will send to the
    remote computer to acknowledge receipt of the last text line transmitted
    and to prompt the remote to transmit another line.  If you are using the
    same remote to upload both MailMan messages and textual reports, then we
PACE CHARACTER: 62
END OF MESSAGE SIGNAL:  ??
    This is the free text signal to the upload process that the entire
    transmission is successfully finished, and no more lines of data need to
    be read from the input stream.
END OF MESSAGE SIGNAL: $END
UPLOAD HEADER FORMAT:  ??
    This field determines whether the ASCII protocol upload/router/filer will
    expect delimited string or captioned formats for the header of each
    report.

    Choose from:
        C      captioned
        D      delimited string
```

```

UPLOAD HEADER FORMAT: captioned
RECORD HEADER SIGNAL: ??
  This is a free text signal to the upload process that a new report record
  header has been encountered. It may be as simple as the three-character
  string "MSH" or as complex as "HEADERBEGIN". The signal used by the
  Surgery Package option to transmit operative notes (i.e., "@@@" ) will
  also
RECORD HEADER SIGNAL: MSH
BEGIN REPORT TEXT SIGNAL: ??
  This is the signal to the upload processor that the fixed-field header
  for a given report record has been fully read, and that the body of the
  narrative report follows.
BEGIN REPORT TEXT SIGNAL: $TXT
RUN UPLOAD FILER IN FOREGROUND: ??
  This parameter specifies whether the filer for the upload process should
  be run in the foreground, rather than in the background (i.e., as a
  Task).
  If no preference is specified the default will be to run the filer as a
  BACKGROUND task.
  Choose from:
    1      YES
    0      NO
RUN UPLOAD FILER IN FOREGROUND: NO

Now Select upload error alert recipients:
Select ALERT RECIPIENT: RUELL,JOE
  Are you adding 'RUELL,JOE' as a new UPLOAD ERROR ALERT RECIPIENT (the
  1ST for this TIU PARAMETERS)? Y (Yes)
Select ALERT RECIPIENT: <Enter>

IHS UPLOAD PARAMETERS

```

Enter the path and file name of the file the upload process should look for.

```

UPLOAD FILE DIRECTORY: C:\UPLOAD\// ??

```

Enter the directory for the upload process to store the files once done with them.

```

ARCHIVE FILE DIRECTORY: C:\UPLOAD\ARCHIVE\// ??

```

Answer must be 3-15 characters in length

```

UPLOAD FILE NAME: DATA// ?

Now edit the DOCUMENT DEFINITION file:
Now edit the DOCUMENT DEFINITION file:
Select DOCUMENT DEFINITION: Discharge Summary
    1  Discharge Summary  DISCHARGE SUMMARY          TITLE
    2  Discharge Summary  DISCHARGE SUMMARY          DOCUMENT CLASS
CHOOSE 1-2: 1 DISCHARGE SUMMARY
ABBREVIATION: DCS
LAYGO ALLOWED?: ??
  This Boolean field indicates whether or not a new entry can be created in
  the TARGET FILE for this document type.
  Choose from:
    0      NO
    1      YES
LAYGO ALLOWED?: YES

```

```

UPLOAD TARGET FILE: ??
  nter the VA FileMan file in which the fixed-field header information and
  associated text will be stored.
NOTE: Only files which include the TIU Application Group may be
  selected.
NOTE: Upload fields (fields 1.01, 1.02, 1.03, 1.04, 4, 4.5, 4.6, 4.7,
  4.8 and multiple fields 1 and 2) apply to Document Definitions of Type
  Class, Document Class, and Title.
Choose from:
  70             RAD/NUC MED PATIENT
  74             RAD/NUC MED REPORTS
  8925          TIU DOCUMENT
  8925.1        TIU DOCUMENT DEFINITION
  8925.97       TIU CONVERSIONS
UPLOAD TARGET FILE: TIU DOCUMENT 8925  TIU DOCUMENT

```

### Modify Upload Parameters—ASCII Protocol Example continued

```

Select TARGET TEXT FIELD: ??
Choose from:

```

These are field #s, which is why there is not a #1.

```

  2             REPORT TEXT
  3             EDIT TEXT BUFFER
Select TARGET TEXT FIELD: REPORT TEXT
UPLOAD LOOK-UP METHOD: D LOOKUP^TIUPUTU// <Enter>

```

**Note:** Some of these prompts and defaults only appear if you have programmer access.

```

UPLOAD POST-FILING CODE: D FOLLOWUP^TIUPUTU(TIUREC("#"))
  Replace <Enter>
UPLOAD FILING ERROR CODE: D GETPAT^TIUCHLP// <Enter>
Select CAPTION: ??

Choose from:
  ATTENDING PHYSICIAN
  DATE OF ADMISSION
  DICTATED BY
  DICTATION DATE
  PATIENT SSN
  TRANSCRIPTIONIST
  URGENCY
  This is the caption to be associated with a given field in the message
  header and the target file (e.g., Patient Name:).
Select CAPTION: PATIENT SSN
CAPTION: PATIENT SSN// <Enter>
ITEM NAME: SSN
FIELD NUMBER: .02// <Enter>
LOOKUP LOCAL VARIABLE NAME: ??
  This field specifies the local variable name required by the lookup
  routine into which this item will be set.
  Enter the required local variable into which this item will be set.
LOOKUP LOCAL VARIABLE NAME:
TRANSFORM CODE: S:X?3N1P2N1P4N.E X=$TR(X,"-/", "")
  Replace <Enter>

```

```

EXAMPLE ENTRY: PRIORITY// <Enter>
CLINICIAN MUST DICTATE: YES// <Enter>
REQUIRED FIELD?: YES// ??
  This field is used to determine whether a given header item is required
  by the application (e.g., Author and Attending Physician may be
  required for the ongoing processing of a Discharge Summary). Records
  lacking required fields WILL be entered into the target file, if
  possible, but will generate Missing Field Error Alerts.
  Choose from:
    1      YES
    0      NO

Select CAPTION: <Enter> CAPTION: DATE OF ADMISSION// <Enter>
ITEM NAME: ADMISSION DATE// <Enter>
FIELD NUMBER: .07// <Enter>
LOOKUP LOCAL VARIABLE NAME: TIUADT// <Enter>
EXAMPLE ENTRY: 03/30/97// <Enter>
CLINICIAN MUST DICTATE: YES// <Enter>
REQUIRED FIELD?: YES// <Enter>

```

### Modify Upload Parameters—ASCII Protocol Example continued

```

Select CAPTION: DATE OF DISCHARGE
ITEM NAME: DISCHARGE DATE
FIELD NUMBER: .08
LOOKUP LOCAL VARIABLE NAME: <Enter>
TRANSFORM CODE: <Enter>
EXAMPLE ENTRY: <Enter>
CLINICIAN MUST DICTATE: Y YES
REQUIRED FIELD?: Y YES
Select CAPTION: DICTATED BY
CAPTION: DICTATED BY// <Enter>
ITEM NAME: DICTATING PROVIDER// <Enter>
FIELD NUMBER: 1202// <Enter>
LOOKUP LOCAL VARIABLE NAME: <Enter>
TRANSFORM CODE: <Enter>
EXAMPLE ENTRY: DOOGEY P. HOWSER, M.D. Replace <Enter>
CLINICIAN MUST DICTATE: YES// <Enter>
REQUIRED FIELD?: Y YES
Select CAPTION: DICTATION DATE
CAPTION: DICTATION DATE// <Enter>
ITEM NAME: DICTATION DATE// <Enter>
FIELD NUMBER: 1307// <Enter>
LOOKUP LOCAL VARIABLE NAME: TIUDICDT// <Enter>
TRANSFORM CODE: <Enter>
EXAMPLE ENTRY: 04/03/97// <Enter>
CLINICIAN MUST DICTATE: YES// <Enter>
REQUIRED FIELD?: Y YES
Select CAPTION: ATTENDING PHYSICIAN
CAPTION: ATTENDING PHYSICIAN// <Enter>
ITEM NAME: ATTENDING PHYSICIAN// <Enter>
FIELD NUMBER: 1209// <Enter>
LOOKUP LOCAL VARIABLE NAME: <Enter>
TRANSFORM CODE: <Enter>
EXAMPLE ENTRY: MARCUS C. WELBY, M.D. Replace <Enter>
CLINICIAN MUST DICTATE: YES// <Enter>
REQUIRED FIELD?: Y YES
Select CAPTION: TRANSCRIPTIONIST
CAPTION: TRANSCRIPTIONIST// <Enter>
ITEM NAME: TRANSCRIPTIONIST ID/ <Enter>/

```

```

FIELD NUMBER: 1302// <Enter>
LOOKUP LOCAL VARIABLE NAME: <Enter>
TRANSFORM CODE: <Enter>
EXAMPLE ENTRY: T1212// <Enter>
CLINICIAN MUST DICTATE: NO// <Enter>
REQUIRED FIELD?: NO NO
Select CAPTION: <Enter>
The header for the Discharge Summary Document Definition is now defined as:
$HDR:                               DISCHARGE SUMMARY
SOCIAL SECURITY NUMBER:              555-12-1234
DATE OF ADMISSION:                  03/30/97
DICTATED BY:                        DOOGY P. HOWSER, M.D.
DICTATION DATE:                     04/03/97
ATTENDING PHYSICIAN:                MARCUS C. WELBY, M.D.
TRANSCRIPTIONIST:                   T1212
URGENCY:                             PRIORITY
$TXT
  DISCHARGE SUMMARY Text
*** File should be ASCII with width no greater than 80 columns.
*** Use "@@" for "BLANKS" (word or phrase in dictation that isn't
*** understood).

```

### 2.5.3.2.2 *Modify Upload Parameters—Kermit Protocol Example*

This example demonstrates the ASCII upload source as a remote computer and the upload protocol is defined as a Kermit Protocol. Experience at sites suggests that the Kermit Protocol is the preferred protocol to transfer data because of its simple set-up and reliable functionality.

```

Select TIU Parameters Menu Option: 2  Modify Upload Parameters
First edit Institution-wide upload parameters:

Select INSTITUTION: 660
   1  660  SALT LAKE CITY      UT      660
   2  660AA SALT LAKE DOM     UT      VAMC   660AA
CHOOSE 1-2: 1  SALT LAKE CITY
   ...OK? Yes// <Enter> (Yes)

ASCII UPLOAD SOURCE: r  remote computer
UPLOAD PROTOCOL: k  KERMIT
UPLOAD HEADER FORMAT: c  captioned
RECORD HEADER SIGNAL: $HDR
BEGIN REPORT TEXT SIGNAL: $TXT
RUN UPLOAD FILER IN FOREGROUND: NO// NO

Now Select upload error alert recipients:

Select ALERT RECIPIENT: FAN,TAN
Are you adding 'FAN,TAN' as a new UPLOAD ERROR ALERT RECIPIENT (the 1ST for
this TIU PARAMETERS)? Y (Yes)
Select ALERT RECIPIENT: SCHLAMENA,PAMELA
Are you adding 'SCHLAMENA,PAMELA' as a new UPLOAD ERROR ALERT RECIPIENT
(the
2ND for this TIU PARAMETERS)? Y (Yes)
Select ALERT RECIPIENT: <Enter>

```

In this example we assume that you define upload captions for specific document types elsewhere. See the TIU Implementation Guide

```
Now edit the DOCUMENT DEFINITION file:
DOCUMENT DEFINITION: ^
```

Modify Upload Parameters continued.

When configured this way, report text with the following format can be successfully uploaded and routed to the appropriate records in the TIU DOCUMENT File (#8625):

```
$HDR:          DISCHARGE SUMMARY
NAME OF PATIENT:    DOE, JOHN D.
SOCIAL SECURITY NUMBER:  555-12-1212
DATE OF ADMISSION:    01/15/93
DATE OF DISCHARGE:    02/23/93
ATTENDING PHYSICIAN:  HAR GOOD, M.D.
$TXT
DISCHARGE DIAGNOSIS:
    1. Acute Ischemic Heart Disease.
    2. Congestive Heart Failure.
    3. Tachycardia.
PROCEDURES:        Cardiac Catheterization, Echocardiogram,
                    12-lead EKG.
.
.
$HDR:          DISCHARGE SUMMARY
NAME OF PATIENT:    ANON, AMOS A.
SOCIAL SECURITY NUMBER:  555-12-1212
DATE OF ADMISSION:    01/27/93
DATE OF DISCHARGE:    02/23/93
ATTENDING PHYSICIAN:  HAR GOOD, M.D.
URGENCY:          PRIORITY
$TXT
DISCHARGE DIAGNOSIS:
    1. Acute abdominal pain of unknown etiology.
    2. Diabetes mellitus type II.
    3. Tachycardia.
PROCEDURES:        There were no invasive procedures done
                    during this hospitalization.

$END
```

### 2.5.3.3 Step 3: Queue Upload Option to Run in Background

If your site wishes to have documents uploaded automatically every 15 or 30 minutes, simply queue the Upload Documents (Queued) option {BTIU UPLOAD DOCUMENTS QUEUED}. Make sure you have answered the IHS Upload parameters under the Modify Upload Parameters option.

### 2.5.4 Applying the Upload Utility to New Document Types

With the emergence of new types of documents, TIU from time to time extends the TIU Upload Utility for use in uploading new types of documents. This section describes some of the steps involved in extending the TIU Upload Utility.

There are two main parts to the process. The first part is determining what header data should be included in transcribed reports of the given document type and defining the upload header accordingly. The second involves writing new code for several parts of the upload process, namely, for document lookup, and for filing error resolution.

Lookup Method code identifies the record the report should be uploaded into, in the target file, or perhaps creates a new record. Upload Filing Error code gathers information from users alerted when a report fails to file, and attempts to re-file the report, after corrections are made. A new, document type-specific Lookup Method is required for new document types. New Upload Filing Error Code is recommended but not required.

#### **2.5.4.1 Lookup Methods**

In the absence of a document type-specific Lookup Method, the TIU Upload Utility performs a generic lookup, using just the document internal file number. Experience has shown that this generic lookup is not reliable: a single error in dictation or transcription of header data can cause the report to upload into the wrong record. New types of documents therefore *must have* their own, document type-specific Lookup Method code, rather than relying on the generic lookup.

Lookup Methods are written in conjunction with an upload header definition for the given document type. They must be tested prior to use to make sure they deal adequately with potential user errors in dictation and transcription by cross-checking data for consistency and completeness. They should also deal with the possibility of sites erroneously setting field numbers in upload header definitions, for captions which should not have field numbers. Routine TIUPUTSX is well documented and provides a model for writing upload Lookup Methods when uploading into files other than the TIU Document file [#8925]. See routine TIUPUTCN for an example of a lookup method for documents uploaded into the TIU Document file.

#### **2.5.4.2 Upload Filing Error Code**

In the absence of custom filing error resolution code, the TIU Upload Utility attempts to resolve filing errors by permitting the user to edit the temporary buffer record. The user is then asked if they wish to re-file the record. If the user chooses to re-file, the same process used to attempt to file the document in the first place is called again.

Custom filing error resolution code, in contrast to the utility's generic process, generally prompts the user for all the information necessary to file the record, and then proceeds automatically to file the record, without further user activity. If the document still fails to file, the user is given the opportunity to revert to the generic filing error resolution process. Since custom filing error resolution code generally does its own filing, it requires the writing of new filing code for the particular type of document, with checks for data consistency similar to those performed in the Lookup Method. Although the generic error resolution process can be considered technically reliable, custom filing error resolution code is generally written as a convenience for users, who may not otherwise have access to the information needed to correct the buffer record.

Experience has shown that it is not advisable to call Filing Error Upload code written for a different document type. If new code cannot be written, the generic process should be used, rather than calling code for a different document type. For an example of the serious problems caused by using Filing Error Upload Code written for a different document type, see patch TIU\*1\*131, on FORUM. If the generic process is used, care must be exercised to ensure that the document type does not inherit custom error resolution code from an ancestor in the document definition hierarchy.

Routines TIUPNFIK and TIUCNFIK contain filing error resolution code for Progress Notes and for Consults. They are well documented and may serve as models when writing filing error resolution code for other document types. Further information on those routines is provided, below.

An alternative, intermediate approach to filing error resolution code is modeled in routine TIUPUTSX. This approach prompts the user for necessary information, redisplay the selected data, but then relies on the user to make the necessary corrections and to re-file the document. Such code is simpler to write than the usual full-blown filing error resolution code, and still provides the user with the information needed to correct the document.

### 2.5.4.3 Models for TIU Upload Filing Error Code

With patch TIU\*1\*131, the Upload Filing Error Code for Progress Notes and for Consults has been restructured to permit cross-checks on transcribed data. This new code can be used as a model when writing filing error resolution code for other types of documents.

The new filing error resolution code subroutines for Progress Notes and for Consults, PNFIX^TIUPNFIK, and CNFIK^TIUCNFIK have the same basic structure. They:

- Call generic\* module LOADHDR^TIUFIX2 to load header data from the upload buffer record into an array, TIUFLDS.

- Call document-type specific module GETCHECK (GETCHECK^TIUPNFI for Progress Notes or GETCHECK^TIUCNFI for Consults). This module prompts the user for data and validates that the data is consistent and complete.
- Call generic\* module MAKE^TIUFI1, which creates a document (or uses an existing stub) and uploads into the document.

In more detail:

### **LOADHDR^TIUFI2**

Header data from the transcribed buffer record are loaded at the beginning of the filing error resolution process so that they can be used as default values when prompting the user for data in GETCHECK, and so that the header data array TIUFLDS can be updated in GETCHECK before its data are filed in MAKE^TIUFI1. If a caption has no transcribed data, and the caption is listed in the upload header definition as REQUIRED, the corresponding node of TIUFLDS is loaded with the value, \*\* REQUIRED FIELD MISSING FROM UPLOAD\*\*, so that it (along with any other invalid data) will fail to file later in MAKE^TIUFI1, thus generating a missing field error. LOADHDR is intended to apply generically\* to document types beyond Progress Notes and Consults; the target file need not be the TIU DOCUMENT file (#8925).

### **GETCHECK—GETCHECK^TIUPNFI for Progress Notes or GETCHECK^TIUCNFI for Consults**

GETCHECK prompts the user for all data needed to look up or create a document of the given type. GETCHECK also prompts for any additional data which must be checked before being filed in the document. User-supplied data are either collected in a manner which enforces consistency, or cross-checked for consistency. GETCHECK modules must be written specifically for each type of document.

### **MAKE^TIUFI1:**

MAKE^TIUFI1 receives all data needed to either look up or create a TIU document. That is, it either receives the internal file number (IFN) for an existing stub document, or it receives the document title, patient DFN, and a visit array TIU. If no stub IFN is received, title, patient, and visit data are used to create a new TIU document. A newly created document is then stuffed with data derived from the visit, and with other data already known, such as Method of Capture. For both newly created documents and for existing stubs, all received nodes of array TIUFLDS are then filed, and all fields which fail to file create missing field errors. The text is then uploaded from the buffer record into the document.

**Note:** The error resolution process essentially ignores those data from the buffer record which are used in the initial upload process to create or look up a document. Since the document failed to file, one or more of these data elements must be faulty. Therefore, for filing error resolution, these data are taken directly from the user, and the document is created with user-supplied data rather than with transcribed, buffer data. Those nodes of buffer array TIUFLDS which contain document creation/lookup data are killed before TIUFLDS is passed to MAKE^TIUFIX1, to prevent transcribed data from overwriting fields filed during the document creation process. Any nodes of TIUFLDS which contain fields not filed during the document creation process, but which are supplied by the user (so they can be checked in GETCHECK), are updated. Remaining nodes of TIUFLDS are then filed after the document is created, in MAKE^TIUFIX1. Lastly, the buffer record is used to file the text of the report.

MAKE is intended to apply generically\* to document types beyond Progress Notes and Consults, but only to types which upload into the TIU DOCUMENT file (#8925).

Routines TIUFIX, TIUFIX1, and TIUFIX2 also contain other sub-modules intended for generic\* use in resolving filing errors.

#### 2.5.4.4 \*Generic modules:

These modules are intended to apply to document types other than just Progress Notes and Consults. Some will be useful only for documents uploaded into the

TIU DOCUMENT file (#8925). Others may be used regardless of target file. None of these generic modules have been tested against document types other than Progress Notes and Consults; further use requires further testing.

**Note:** The generic modules are subject to change by the TIU development staff without notice. Use these routines with caution.

### 2.5.5 TIU Upload Menu

The Upload Menu contains sub-options that allow the transcriptionist to upload a batch of documents or get help about the header formats expected for each document type, by the upload process, as defined for your site.

Option	Option Name	Description
Upload Documents	TIU UPLOAD DOCUMENTS	***Use ONLY if not queuing upload!*** This option lets transcriptionists upload transcribed ASCII documents in batch mode, either from remote microcomputers, using ASCII or KERMIT protocol upload, or from Host Files (i.e., DOS or VMS ASCII files) on the host system. Your site may define the preferred file transfer protocol and the destination within <b>VISTA</b> to which each report type (e.g., discharge summary, progress notes, Operative Report, etc.) should be routed.
Help for Upload Utility	TIU UPLOAD HELP	This option displays information on the formats of headers for dictated documents that are transcribed off-line and uploaded into <b>VISTA</b> . It also displays "blank" character, major delimiter, and end of message signal as defined by your site.
Display Upload Status	BTIU UPLOAD DISPLAY	Displays last file uploaded and last attempt to find file for uploading. Can also show if upload stopped for a known reason.
Reset Upload to Restart	BTIU UPLOAD RESET	Used if "Upload Running?" field still has date AND problem has been solved.

The upload utility permits mixed report types within a single batch. This allows the transcriptionist to enter each report in arrival sequence into a single ASCII file on the remote computer (e.g., using a proprietary word-processing program), and to transmit the text to the VISTA host system as a one-step process. As this ASCII data arrives at the VISTA host, it is read into a "buffer" file, and stored for subsequent "filing" by a special background process, called the "Router/filer."

## 2.5.6 Router/Filer Notes

Each record in the batch file is preceded by a captioned header, the first line of which **MUST** begin with the MESSAGE HEADER SIGNAL as defined for your site (in this case \$HDR), followed by a colon, followed by the document type name.

All other captioned fields may appear in any sequence, provided that the captions are appropriately spelled, followed by colons, followed by the values of the corresponding fields. Tabs may be used (they will be stripped), but *all other non-ASCII characters (including formatting commands) must be omitted (i.e., the batch file MUST be saved as TEXT ONLY WITH LINE FEEDS, with no boldface or underlining, and NO PAGE BREAKS, PAGE HEADERS, or PAGE FOOTERS).*

Notice that the first record lacked an URGENCY value, and that the format defined in file 8925.1 excludes captions for TYPE OF RELEASE and WARD NUMBER. The upload utility will simply ignore such missing or irrelevant data (i.e., the release type and ward at discharge are already known to VISTA and will be displayed on the 10-1000, whether the author dictates them, and the transcriptionist includes them or not).

The Router/filer is queued upon completion of transmission of a given batch of reports, and will proceed to “read” each line of the buffer file, looking for a header. When a header is encountered, the filer will determine whether the record corresponds to a known document type, as defined by your site, and if so, it will attempt to direct the record to the appropriate file and fields in VISTA.

On occasion, the Router/filer will not be able to identify the appropriate record in the target file, and will therefore be unable to file the record. When this happens, the process will leave the record in the buffer file and send an alert to a group of users identified by the site as being able to respond to such filing errors.

When any of the alert recipients chooses to act on one of these alerts (by entering “VA” at any menu prompt, and choosing the alert on which they wish to act), they will be shown the header of the failed report, and offered an opportunity to inquire to the patient record. They will then be presented with their preferred VISTA editor, and will then be allowed to edit the buffer (e.g., correct a bad social security number, admission date, etc.) and retry the filer.

With each attempt to correct the buffered data and retry the filer, all alerts associated with that record will be deleted (and if the condition remains uncorrected, re-sent), until all records are successfully filed.

You may also use the Review Upload Filing Events option on the MRT menu to correct such filing errors.

## 2.5.7 Batch Upload Reports

### 2.5.7.1 Kermit Protocol Upload

If your site is using the upload option to transfer batches of discharge summaries from a remote computer using the Kermit transfer protocol, start the upload process by following the sequence below:

1. Choose UP from your Upload Menu.

```
UP      Batch upload reports
HLP      Display upload help

You have PENDING ALERTS
        Enter "VA VIEW ALERTS      to review alerts

Select Upload menu Option: UP Batch upload reports
```

```

                K E R M I T   U P L O A D
Now start a KERMIT send from your system.
Starting KERMIT receive.
#N3

```

- When you see the #N3 prompt, initiate the Kermit file transfer from your computer.

Try the default settings for the Kermit protocol as provided by your terminal emulation software. If you have problems, consult your terminal emulator user manual or contact your local IRM Service.

- When the transfer is complete, you'll see this message:

```

File transfer was successful. (1515 bytes)
Filer/Router Queued!

Press RETURN to continue...<Enter>
  UP      Batch upload reports
  HLP     Display upload help
Select Upload menu Option: <Enter>

```

### 2.5.7.2 ASCII Protocol Upload

If your site is using the upload option to transfer batches of discharge summaries from a remote computer using the ASCII transfer protocol, start the upload process by following the example shown below:

Choose UP from your Upload Menu.

```

  UP      Batch upload reports
  HLP     Display upload help

Select Upload menu Option: UP Batch upload reports

A S C I I   U P L O A D

```

When the "Initiate upload procedure:" prompt appears, initiate the ASCII file transfer from your computer.

**Note:** If you have problems, consult your local IRM Service to see if the Terminal and Protocol Set-up parameters have been set up as shown earlier in this section, or check the user manual for your terminal emulator.

```

Initiate upload procedure:
$HDR:                               DISCHARGE SUMMARY
>PATIENT NAME:                      DOE,JOHN A.
>SOC SEC NUMBER:                    555-12-1212
>ADMISSION DATE:                    02/20/97

```

```

>DISCHARGE DATE:                02/25/97
>DICTATED BY:                   BENJAMIN P. CASEY, M.D.
>DICTATION DATE:                02/26/97
>ATTENDING PHYSICIAN:           MARCUS C. WELBY, M.D.
>TRANSCRIPTIONIST ID:           T1212
>URGENCY:                       PRIORITY
>DIAGNOSIS:
>1.  Acute pericarditis.
>2.  Status post transtetatarsal amputation, left foot.
>3.  Diabetes mellitus requiring insulin.
>4.  Diabetic neuropathy.
>
>Operations/Procedures performed during current admission:
>1.  Status post transtetatarsal amputation of left foot on 3/17/93.
>2.  Echocardiogram done 3/17/93.
.
.
.
$END
Filer/Router Queued!

Press RETURN to continue...<Enter>

```

## 2.5.8 Handling upload errors

### 2.5.8.1 ASCII protocol upload / with alert

```

--- Transcriptionist Menu ---

1      Enter/Edit Discharge Summary
2      Enter/Edit Document
3      Upload Menu ...

DOE,W C (D6572): 07/22/91 DISCHARGE SUMMARY is missing fields.
Enter "VA VIEW ALERTS" to review alerts

Select Text Integration Utilities (Transcriptionist) Option: VA

1.FILING ERROR: DIABETES EDUCATION Record could not be found or created
2.FILING ERROR: ~3 DISCHARGE SUMMARY Invalid Report Type encountered.
3.FILING ERROR: PROGRESS NOTES Record could not be found or created.
4.DOE,W C (D6572): 07/22/91 DISCHARGE SUMMARY is missing fields.
5.ANDERSON,H C (A3456): 08/14/95 ADVERSE REACTION/ALLERGY is missing fie
Select from 1 to 5
or enter ?, A I, F, P, M, R, or ^ to exit: 1

The header of the failed record looks like this:

$HDR: PROGRESS NOTES
TITLE: DIABETES EDUCATION
PATIENT: DOE,WILLIAM
SSN: 243236572
VISIT/EVENT DATE: 04/18/96@10:00
AUTHOR: HOWSER,DOOGEY
TRANSCRIBER: SCRIPTION
DATE/TIME OF DICT: T
LOCATION: NUCLEAR MED
$TXT

```

```
Inquire to patient record? YES// <Enter>
Select PATIENT NAME: DOE,WILLIAM C.      09-12-44      243236572      YES
SC VETERAN
      (7 notes) C: 05/20/97 17:01
      (1 note ) W: 02/21/97 09:19
      A: Known allergies
      (3 notes) D: 03/26/97 10:52
```

This patient is not currently admitted to the facility...

```
Is this note for INPATIENT or OUTPATIENT care? OUTPATIENT// <Enter>
The following VISITS are available:
```

```
1> MAY 21, 1997@08:30      PULMONARY CLINIC
2> APR 11, 1997@08:00      DIABETIC EDUCATION-INDIV-MOD B
3> APR 18, 1996@10:00      GENERAL MEDICINE
4> FEB 21, 1996@08:40      PULMONARY CLINIC
5> FEB 20, 1996@10:00      NO-SHOW      ONCOLOGY
```

CHOOSE 1-5

<RETURN> TO CONTINUE

OR '^' TO QUIT: 3 APR 18 1996@10:00

Progress Note Identifiers...

```
      Patient Name:  DOE,WILLIAM C.
      Patient SSN:   243-23-6572
      Patient Location: GENERAL MEDICINE
      Date/time of Visit: 04/18/96 10:00
```

...OK? YES// <Enter>

TITLE: **ADV**

```
1  ADVANCE DIRECTIVE      TITLE
2  ADVERSE REACTION/ALLERGY  TITLE
```

CHOOSE 1-2: 2

Filing Record/Resolving Error...Done.

Opening Adverse React/Allergy record for review...

```
Browse Document      Jun 13, 1997 15:56:18  Page: 1 of 1
                        Adverse React/Allergy
DOE,W C      243-23-6572  GENERAL MEDICINE Visit Date: 04/18/96@10:00

DATE OF NOTE: JUN 13, 1997      ENTRY DATE: JUN 13, 1997@15:56:16
AUTHOR: HOWSER,DOOGEY      EXP COSIGNER:
URGENCY:      STATUS: UNVERIFIED
```

The new antihistamine is working.

```
+ Next Screen  - Prev Screen  ?? More actions
Find           Edit           Copy
Verify/Unverify  Send Back      Print
On Chart       Reassign       Quit
```

Select Action: Quit// V Verify/Unverify

Do you want to edit this Adverse React/Allergy? NO// <Enter>

VERIFY this Adverse React/Allergy? NO// **YES**

Adverse React/Allergy VERIFIED.

1. FILING ERROR: ~3 DISCHARGE SUMMARY Invalid Report Type encountered.
2. FILING ERROR: PROGRESS NOTES Record could not be found or created.
3. DOE,W C (D6572): 07/22/91 DISCHARGE SUMMARY is missing fields.

```

4.  ANDERSON,H C (A3456): 08/14/95 ADVERSE REACTION/ALLERGY is missing fields.
    Select from 1 to 4
    or enter ?, A I, F, P, M, R, or ^ to exit: 3

```

You may now enter the correct information:

```
DOE,W C (D6572): 07/22/91 DISCHARGE SUMMARY is missing fields.
```

```
Diplay ENTIRE existing record? NO// YES
```

```
DOCUMENT TYPE: Discharge Summary          PATIENT: DOE,WILLIAM C.
VISIT: JUL 22, 1991@11:06
PARENT DOCUMENT TYPE: DISCHARGE SUMMARIES
STATUS: UNVERIFIED
EPISODE BEGIN DATE/TIME: JUL 22, 1991@11:06
EPISODE END DATE/TIME: FEB 12, 1996@13:56:50
LINE COUNT: 73                          VISIT TYPE: H
ENTRY DATE/TIME: JUN 13, 1997@15:55:31
AUTHOR/DICTATOR: HOWSER,DOOGEY          EXPECTED SIGNER: HOWSER,DOOGEY
HOSPITAL LOCATION: 1A                   EXPECTED COSIGNER: RUSSELL,JOEL
ATTENDING PHYSICIAN: RUSSELL,JOEL      VISIT LOCATION: 1A
REFERENCE DATE: FEB 12, 1996@13:56:50  ENTERED BY: BS
CAPTURE METHOD: upload                   RELEASE DATE/TIME: JUN 13, 1997@15:55:40
DICTATION DATE: JUN 10, 1997
PATIENT MOVEMENT RECORD: JUL 22, 1991@11:06
TREATING SPECIALTY: SURGERY             COSIGNATURE NEEDED: YES
VISIT ID: 11HR-TEST
REPORT TEXT:
```

```
Enter RETURN to continue or '^' to exit: <Enter>
```

```
DIAGNOSIS:
```

1. Status post head trauma with brain contusion.
2. Status postcerebrovascular accident.
3. End stage renal disease on hemodialysis.
4. Coronary artery disease.
5. Congestive heart failure.
6. Hypertension.
7. Non insulin dependent diabetes mellitus.
8. Peripheral vascular disease, status post thrombectomies.
9. Diabetic retinopathy.
10. Below knee amputation.
11. Chronic anemia.

```
OPERATIONS/PROCEDURES:
```

1. MRI.
2. CT SCAN OF HEAD.

```
HISTORY OF PRESENT ILLNESS: Patient is a 49-year-old, white male with past
medical history of end stage renal disease, peripheral vascular disease,
status post BKA, coronary artery disease, hypertension, non insulin
dependent diabetes mellitus, diabetic retinopathy, congestive heart failure,
status post CVA, status post thrombectomy admitted from Anytown VA after a
fall from his wheelchair in the hospital. He had questionable short lasting
loss of consciousness but patient is not very sure what has happened. He
denies headache, vomiting, vertigo. On admission patient had CT scan which
showed a small area of parenchymal hemorrhage in the right temporal lobe
which is most likely consistent with hemorrhagic contusion without mid line
shift or incoordination.
```

```
ACTIVE MEDICATIONS: Isordil 20 mgs p.o. t.i.d., Coumadin 2.5 mgs p.o. qd,
ferrous sulfate 325 mgs p.o. b.i.d., Ativan 0.5 mgs p.o. b.i.d., Lactulose
15 ccs p.o. b.i.d., Calcium carbonate 650 mgs p.o. b.i.d. with food,
Betoptic 0.5% ophthalmologic solution gtt OU b.i.d., Nephrocaps 1 tablet
p.o. qd, Pilocarpine 4% solution 1 gtt OU b.i.d., Compazine 10 mgs p.o.
```

t.i.d. prn nausea, Tylenol 650 mgs p.o. q4 hours prn.  
 Patient is on hemodialysis, no known drug allergies.  
 PHYSICAL EXAMINATION: Patient had stable vital signs, his blood pressure was 160/85, pulse 84, respiratory rate 20, temperature 98 degrees. Patient was alert, oriented times three, cooperative. His speech was fluent, understanding of spoken language was good. Attention span was good. He had moderate memory impairment, no apraxia noted. Cranial nerves patient was blind, pupils are not reactive to light, face was asymmetric, tongue and palate are mid line. Motor examination showed muscle tone and bulk without significant changes. Muscle strength in upper extremities 5/5 bilaterally,  
 sensory examination revealed intact light touch, pinprick and vibratory sensation. Reflexes 1+ in upper extremities, coordination finger to nose test within normal limits bilaterally. Alternating movements without significant changes bilaterally. Neck was supple.  
 LABORATORY: Showed sodium level 135, potassium 4.6, chloride 96, CO2 26, BUN 39, creatinine 5.3, glucose level 138. White blood cell count was 7, hemoglobin 11, hematocrit 34, platelet count 77.  
 HOSPITAL COURSE: Patient was admitted after head trauma with multiple

Enter RETURN to continue or '^' to exit: <Enter>

medical problems. His coumadin was held. Patient had cervical spine x-rays which showed definite narrowing of C5, C6 interspace, slight retrolisthesis at this level, prominent spurs at this level as well as above and below. CT scan on admission showed a moderate amount of scalp thinning with subcutaneous air overlying the left frontal lobe. A small area of left parenchymal hemorrhage adjacent to the right petros bone in the temporal lobe which most likely represents a hemorrhagic contusion. The basal cisterns are patent and there is no mid line shift or uncal herniation. Patient has also a remote left posterior border zone infarct with hydrocephalus ex vacuo of the left occipital horn, a rather large remote infarct in the inferior portion of the left cerebellar hemisphere. Repeated CT scan on 5/13/94 didn't show any progressive changes. Patient remained in stable condition. He had hemodialysis q.o.d. He restarted treatment with Coumadin. His last PT was 11.9, PTT 31. Patient refused before hemodialysis new blood tests. His condition remained stable.  
 DISCHARGE MEDICATIONS: Isordil 20 mgs p.o. t.i.d., Ferrous sulfate 325 mgs p.o. b.i.d., Ativan 0.5 mgs p.o. b.i.d., Lactulose 15 ccs p.o. b.i.d., Calcium carbonate 650 mgs p.o. b.i.d., Compazine 10 mgs p.o. t.i.d. prn nausea, Betoptic 0.5% OU b.i.d., Nephrocaps 1 p.o. qd, Pilocarpine 4% solution 1 gtt OU b.i.d., Coumadin 2.5 mgs p.o. qd, Tylenol 650 mgs p.o. q6 hours prn pain.  
 DISPOSITION/FOLLOW-UP: Recommend follow PT/PTT. Patient is on coumadin and CBC with differential because patient has chronic anemia and thrombocytopenia.

Patient will be transferred to Anytown VA in stable condition on 5/19/94.

URGENCY: ~0 PRIORITY// P priority

1. FILING ERROR: ~3 DISCHARGE SUMMARY Invalid Report Type encountered.
2. FILING ERROR: PROGRESS NOTES Record could not be found or created.
3. ANDERSON,H C (A3456): 08/14/95 ADVERSE REACTION/ALLERGY is missing file  
 Select from 1 to 3  
 or enter ?, A I, F, P, M, R, or ^ to exit: <Enter>

--- Transcriptionist Menu ---

- 1 Enter/Edit Discharge Summary
- 2 Enter/Edit Document
- 3 Upload Menu ...

```

Enter "VA VIEW ALERTS to review alerts
Select Text Integration Utilities (Transcriptionist) Option: <Enter>

```

In the example above, notice that patient John Doe had no admission on 11/17/96, and so the filer could not create a record in the target file for this discharge summary record. The user acts on the alert to correct the admission date as 11/16/96, and retries the filer, which is now able to file the record appropriately, and the alerts are removed for all recipients.

## 2.5.9 Display Upload Help

Transcriptionists may select this sub-option in the Upload Menu to display the formats expected by the upload process for the report types defined at your site.

The captioned headers may be captured as ASCII data and used to build macros using commercial word-processors (e.g., Word Perfect or Microsoft Word), and thereby avoid retyping the captioned headers, while minimizing the risk of spelling errors or inconsistencies with the formats expected by the host system.

```

UP      Batch upload reports
HLP      Display upload help

You have PENDING ALERTS
Enter "VA VIEW ALERTS to review alerts
Select Upload menu Option: HLP Display upload help
Select REPORT TYPE: DISCHARGE SUMMARY// <Enter> Discharge Summary

$HDR:                                     DISCHARGE SUMMARY
SOC SEC NUMBER:                           555-12-1212
ADMISSION DATE:                           02/21/96
DISCHARGE DATE:                           02/25/96
DICTATED BY:                              BENJAMIN P. CASEY, M.D.
DICTATION DATE:                           02/26/96
ATTENDING:                                MARCUS C. WELBY, M.D.
TRANSCRIPTIONIST ID:                       T1212
URGENCY:                                   PRIORITY
$TXT
DISCHARGE SUMMARY Text
$END

*** File should be ASCII with width no greater than 80 columns.
*** Use "___" for "BLANKS" (word or phrase in dictation that isn't
understood).
Press RETURN to continue...<Enter>

```

## 2.5.10 Document Parameter Edit

### 2.5.10.1 [TIU DOCUMENT PARAMETER EDIT]

This option allows the definition and modification of parameters for the batch upload of documents into VISTA.

**Example:**

```
Select TIU Maintenance Menu Option: 1  TIU Parameters Menu

1      Basic TIU Parameters
2      Modify Upload Parameters
3      Document Parameter Edit
4      Progress Notes Batch Print Locations
5      Division - Progress Notes Print Params

You have PENDING ALERTS
      Enter "VA  VIEW ALERTS      to review alerts

Select TIU Parameters Menu Option: 3      Document Parameter Edit
First edit Institution-wide parameters:

Select DOCUMENT: PROGRESS NOTES      CLASS
      ...OK? Yes// <Enter> (Yes)

DOCUMENT NAME: PROGRESS NOTES//<Enter>
REQUIRE RELEASE: NO// ??
      This parameter determines whether the person entering the
      document will be required (and prompted) to release
      the document from a draft state, upon exit from the
      entry/editing process.

      Though designed for Discharge Summaries, release may be used for any
      kind of TIU document.

Choose from:
1      YES
0      NO
REQUIRE RELEASE: NO// <Enter>
REQUIRE MAS VERIFICATION: UPLOAD ONLY // ??
      This parameter determines whether verification by MAS is
      required, prior to public access, and signature of the
      document.

      Though designed for Discharge Summaries, verification may be used for any
      kind of TIU document, and is particularly helpful for documents that are
      uploaded from a transcription service.

Allowable values are:  0      NO
                      1      YES, ALWAYS
                      2      UPLOAD ONLY
                      3      DIRECT ENTRY ONLY

where 1 indicates that these documents require verification regardless of
how they originate; 2 indicates that verification is required only when
only when documents are entered directly into VISTA.
```

Choose from:

- 1 YES, ALWAYS
- 0 NO
- 2 UPLOAD ONLY
- 3 DIRECT ENTRY ONLY

REQUIRE MAS VERIFICATION: UPLOAD ONLY// <Enter>

REQUIRE AUTHOR TO SIGN: YES// ??

Currently applies only to Discharge Summaries. This field indicates whether or not the author should sign the document before the expected cosigner (attending).

If parameter is set to NO, only the expected cosigner is alerted for signature. Although the unsigned document appears in the author's unsigned list, and he is ALLOWED to sign it, his signature is not REQUIRED.

If set to YES, then the author is alerted for signature, and if the expected cosigner should attempt to sign the document first, he is informed that the author has not yet signed.

Choose from:

- 1 YES
- 0 NO

REQUIRE AUTHOR TO SIGN: YES//<Enter>

ROUTINE PRINT EVENT(S): ??

A document of the given type, and of ROUTINE urgency, is automatically printed whenever one of these events occurs.

For example, a site may specify that ROUTINE documents print only upon Completion (i.e., signature or cosignature), while STAT documents print upon Release from Transcription, MAS Verification, or both, in addition to printing upon completion.

If print events are not specified, and a CHART COPY DEVICE is defined for the Medical Center Division, then the document will be auto-printed only upon completion.

If field MANUAL PRINT AFTER ENTRY is set to YES, then auto-print is ignored entirely.

If urgency is not specified for some document, then its urgency is considered to be routine, and the document prints when a routine print event occurs.

Choose from:

- R release
- V verification
- B both

ROUTINE PRINT EVENT(S): <Enter>

STAT PRINT EVENT(S): ??

This field is identical to ROUTINE PRINT EVENT(S), except that it applies to documents of STAT urgency rather than ROUTINE urgency.

Choose from:

- R release
- V verification
- B both

STAT PRINT EVENT(S): <Enter>

MANUAL PRINT AFTER ENTRY: YES// ??

This parameter is used for documents where a manually-printed hard copy is desired following document entry. If the parameter is set to YES, the user is prompted to print a copy on exit from their preferred editor, and auto-printing (as described in fields ROUTINE/STAT PRINT EVENT(S)) is ignored.

```

Choose from:
  1      YES
  0      NO
MANUAL PRINT AFTER ENTRY: YES// <Enter>
ALLOW CHART PRINT OUTSIDE MAS: YES// ??
  This field determines whether non-MAS users (for example, providers) are
  asked if they want WORK copies or CHART copies when they print a document.
  If the field is NOT set to YES, they are not asked, and the printout is a
  WORK copy.

  Generally, this is set to YES for PROGRESS NOTES, which are likely to be
  printed on the Ward or in the Clinic for immediate inclusion in the chart.
  For DISCHARGE SUMMARIES, which are typically printed centrally, it is
  usually set to NO, since duplicate CHART COPIES are a particular problem.
Choose from:
  1      YES
  0      NO
ALLOW CHART PRINT OUTSIDE MAS: YES// <Enter>
ALLOW >1 RECORDS PER VISIT: YES// ??
  For example, it is often appropriate to enter
  multiple PROGRESS NOTES for a single HOSPITALIZATION or CLINIC VISIT, whereas
  only one DISCHARGE SUMMARY is usually entered per HOSPITALIZATION.
Choose from:
  1      YES
  0      NO
ALLOW >1 RECORDS PER VISIT: YES//<Enter>
ENABLE IRT INTERFACE: ??
  This enables TIU's interface with Incomplete Record Tracking, (IRT)
  which updates IRT's deficiencies when transcription, signature,
  or cosignature (review) events are registered for a given
  document.

  NOTE: IRT is designed for DISCHARGE SUMMARIES, and is appropriate only for
  types of documents where only one document is expected per patient
  movement. We therefore ask you to leave this parameter undefined (or set
  it to NO) for PROGRESS NOTES.
Choose from:
  0      NO
  1      YES
ENABLE IRT INTERFACE: <Enter>
SUPPRESS DX/CPT ON NEW VISIT: NO// ??
  This parameter applies only to documents for outpatient care. Together
  with parameter ASK DX/CPT ON ALL OPT VISITS, it determines whether or not
  a user is prompted for diagnoses and procedures after signing or editing a
  document.

  If this parameter is set to YES (for suppress), the user is not prompted
  for this information.

  If this parameter is set to NO or is blank, the user may or may not be
  prompted, depending on the type of visit and on parameter ASK DX/CPT ON
  ALL OPT VISITS.

  If a site elects to suppress diagnoses and procedures, the site must
  capture this information by some other means (such as an AICS encounter
  form), in order to receive workload credit for these visits.
Choose from:
  1      YES
  0      NO
SUPPRESS DX/CPT ON NEW VISIT: NO// <Enter>
FORCE RESPONSE TO EXPOSURES: ??

```

When set to YES, this parameter forces the user to respond when asked to specify a veteran's Service Connection Classification (AO, IR, or EC), when creating a standalone visit.

Choose from:

1 YES  
0 NO

FORCE RESPONSE TO EXPOSURES: **<Enter>**

ASK DX/CPT ON ALL OPT VISITS: ??

This parameter applies only to documents for outpatient care, and is IGNORED if SUPPRESS DX/CPT ON ENTRY is set to YES.

If DX/CPT prompts are NOT suppressed, and ASK DX/CPT ON ALL OPT VISITS is set to YES, the user is prompted for DX/CPT information for scheduled as well as unscheduled (stand-alone) visits.

If DX/CPT prompts are NOT suppressed, and ASK DX/CPT ON ALL OPT VISITS is set to NO, the user is prompted for DX/CPT information for unscheduled visits ONLY.

Choose from:

1 YES  
0 NO

ASK DX/CPT ON ALL OPT VISITS: **<Enter>**

SEND ALERTS ON ADDENDA: ??

This parameter determines whether AUTHORS and COSIGNERS of a document of this kind (and any of its descendent types) will receive an informational alert when addenda are added by other persons. Like all document parameters, it may be overridden at descendent levels of the Document Definition Hierarchy. DEFAULT is NO.

Choose from:

1 YES  
0 NO

SEND ALERTS ON ADDENDA: **<Enter>**

ORDER ID ENTRIES BY TITLE: ??

This prompt applies only to notes with interdisciplinary entries Under them.

When an ID note is displayed or printed, the child entries are Normally ordered by reference date under the parent entry. In some cases it may be preferable to order them alphabetically by title. If this parameter is set to YES, child entries are displayed by title rather than by date.

The default order is by date.

Choose from:

1 YES  
0 NO

ORDER ID ENTRIES BY TITLE: **<Enter>**

SEND ALERTS ON NEW ID ENTRY: YES// ??

This parameter applies only to interdisciplinary parent notes.

If this parameter is set to YES, the signer (cosigner) of an interdisciplinary parent note is alerted when a new entry is added to the note.

The default is NO.

Choose from:

```

1      YES
0      NO
SEND ALERTS ON NEW ID ENTRY: YES// <Enter>
EDITOR SET-UP CODE: ??
    This is M code which is executed prior to invoking the user's preferred
    editor.  It ordinarily sets local variables, which are then used in the
    editor's header, etc.

    For example, code written at Boston VAMC sets a local array containing
    patient demographics.  An M-based editor used at the site can then display
    demographic information in a fixed header when a user edits a document.

EDITOR SET-UP CODE: <Enter>

If document is to be uploaded, specify Filing Alert Recipients:
Select FILING ERROR ALERT RECIPIENTS: RUELL,JOE
    // ??
RUELL,JOE

    You may enter a new FILING ERROR ALERT RECIPIENTS, if you wish
    These persons receive alerts from the upload filer process when a document
    of the given type cannot be filed/located, or has a missing field.

    If a document being uploaded has a missing/bad title, then alert
    recipients defined at the title level cannot be found.  In this case,
    recipients named at the class level are alerted.  For example, if a
    Progress Note is being uploaded and has a missing/bad title, then Progress
    Note-level recipients are alerted.

    If recipients are not specified, then alert recipients named in parameter
    UPLOAD ERROR ALERT RECIPIENTS in the TIU PARAMETER file are alerted as
    defaults.

Choose from:
    ANDERS,CURTISY      CLA      PHYSICIAN
    ARUS,DUSTY          RA
    ARC,CHAS            CA
    .
    .
    .
    i^ TO STOP: ^
Select FILING ERROR ALERT RECIPIENTS: RUELL,JOE
    // <Enter>

Now enter the USER CLASSES for which cosignature will be required:

Select USERS REQUIRING COSIGNATURE: INTERN// ??

Choose from:
    INTERN
    PAYROLL TECHNICIAN
    STUDENT

    You may enter a new USERS REQUIRING COSIGNATURE, if you wish
    Applies to all types of documents EXCEPT DISCHARGE SUMMARIES.

    Please indicate which groups of users (i.e., User Classes) require
    cosignature for the type of document in question.  For example, STUDENTS,
    INTERNS, LPNs, and other user classes may be identified as requiring a
    cosignature for PROGRESS NOTES.

    NOTE: Independent of this parameter, DISCHARGE SUMMARIES ALWAYS require
    cosignature by the ATTENDING PHYSICIAN, EXCEPT when the ATTENDING

```

```

        PHYSICIAN dictates the summary himself.

Choose from:
    ACCOUNTANT
    ACCOUNTS PAYABLE EMPLOYEE
    .
    .
    .
    '^' TO STOP: ^
Select USERS REQUIRING COSIGNATURE: INTERN// <Enter>

Now enter the DIVISIONAL parameters:
Select DIVISION: SALT LAKE CITY// ?
Answer with DIVISION:
    SALT LAKE CITY

        You may enter a new DIVISION, if you wish
        Please indicate the Medical Center Division
Answer with MEDICAL CENTER DIVISION NUM, or NAME, or FACILITY NUMBER:
    1                SALT LAKE CITY                660

Select DIVISION: SALT LAKE CITY// <Enter>
    CHART COPY PRINTER: ??
        This parameter is primarily useful for DISCHARGE SUMMARIES, or other
        documents where automatic central printing of chart copies on site-
        configurable events are most useful (e.g., INTERIM SUMMARIES or
        OPERATIVE REPORTS at some point in the future).

        When defined along with a STAT CHART COPY PRINTER, this is the device to
        which chart copies of documents with ROUTINE urgencies will be sent
        automatically.  If no STAT CHART COPY PRINTER is defined, then ALL
        documents of the current type will be sent to this device, regardless of
        their urgencies.

        Note: If field MANUAL PRINT AFTER ENTRY is set to YES, then auto-print
        is ignored.

Choose from:
    AFJX RESOURCE      IRM          AFJX RESOURCE
    BROKER DEVICE      SYSTEM        _BG
    HFS      Host File Server      DSA4:[MUMPS.OERMGR]
    HOME      HOME      _LTA:
    INTERMEC 4100      LABEL TABLE      _LTA370:
    S-DJ      Slaved Deskjet      0
    '^' TO STOP: ^
    CHART COPY PRINTER: <Enter>
    STAT CHART COPY PRINTER: ??
        This parameter is primarily useful for DISCHARGE SUMMARIES, or other
        documents where automatic central printing of chart copies on site-
        configurable events are most useful (e.g., INTERIM SUMMARIES or
        OPERATIVE REPORTS at some point in the future).

        When defined along with a CHART COPY PRINTER, this is the device to
        which chart copies of documents with STAT urgencies will be sent
        automatically.

        Note: If field MANUAL PRINT AFTER ENTRY is set to YES, then auto-print
        is ignored.

Choose from:
    AFJX RESOURCE      IRM          AFJX RESOURCE
    BROKER DEVICE      SYSTEM        _BG

```

```

HFS      Host File Server      DSA4:[MUMPS.OERMGR]
HOME     HOME      _LTA:
INTERMEC 4100      LABEL TABLE      _LTA370:
S-DJ     Slaved Deskjet      0
'^' TO STOP: ^

STAT CHART COPY PRINTER: <Enter>
Select DIVISION: <Enter>
Press RETURN to continue...<Enter>

1      Basic TIU Parameters
2      Modify Upload Parameters
3      Document Parameter Edit
4      Progress Notes Batch Print Locations
5      Division - Progress Notes Print Params
Select TIU Parameters Menu Option:<Enter>

```

## 2.5.11 Progress Notes Batch Print Locations

[TIU PRINT PN LOC PARAMS]

These parameters are used by the [TIU PRINT PN BATCH INTERACTIVE] and [TIU PRINT PN BATCH SCHEDULED] options. If the site wants a header other than what is returned by \$\$SITE^ VASITE the .02 field of the 1st entry in this file will be used. For example, Waco-Temple-Marlin can have the institution of their progress notes as “CENTRAL TEXAS HCF.”

```

Select TIU Maintenance Menu Option: 1  TIU Parameters Menu

1      Basic TIU Parameters
2      Modify Upload Parameters
3      Document Parameter Edit
4      Progress Notes Batch Print Locations
5      Division - Progress Notes Print Params

Select TIU Parameters Menu Option: 4  Progress Notes Batch Print Locations

Select Clinic or Ward: TELEPHONE TRIAGE - PSYCHIATRY
PROGRESS NOTES DEFAULT PRINTER: LASERJET 4SI// <Enter>
EXCLUDE FROM PN BATCH PRINT: ?
Set to '1' progress notes for this location will not be included
in the progress notes outpatient batch print job [TIU PRINT PN
BATCH].You would do this if you wanted to print the CHART copies
of the notes for this location in the clinic and not in the file
room.
Choose from:
1      YES

```

## 2.5.12 Division - Progress Notes Print Params

[TIU PRINT PN DIV PARAMS]

Use this option for entering hospital locations used for [TIU PRINT PN OUTPT LOC] and [TIU PRINT PN WARD] options. If locations are not entered in this file they will not be selectable from these options.

```
Select TIU Maintenance Menu Option: 1  TIU Parameters Menu

1      Basic TIU Parameters
2      Modify Upload Parameters
3      Document Parameter Edit
4      Progress Notes Batch Print Locations
5      Division - Progress Notes Print Params

Select TIU Parameters Menu Option: 5  Division - Progress Notes Print
Params

Select Division for PNs Outpatient Batch Print: ?
Answer with TIU DIVISION PRINT PARAMETERS, or NUMBER:
1              SALT LAKE CITY

        You may enter a new TIU DIVISION PRINT PARAMETERS, if you
        wish. Select the DIVISION these print parameters apply to.
Answer with MEDICAL CENTER DIVISION NUM, or NAME:
1              SALT LAKE CITY          660

Select Division for PNs Outpatient Batch Print: YOUR HOSPITAL
...OK? Yes// <Enter>  (Yes)

LOCATION TO PRINT ON FOOTER: ??
        The name of this division as it should appear in the footer
        of the progress notes and forms printed using the terminal
        outpatient sort. This is useful for sites that want
        digit something other than what the external value of
        this division returned by $$SITE^VASITE. For example, the
        Waco division of the Central Texas Health Care System may
        want Central Texas HCS- Waco to appear in the footer instead
        of WACO VAMC.
LOCATION TO PRINT ON FOOTER: CENTRAL ANYWHERE
PROGRESS NOTES BATCH PRINTER: WARD LASERJET 4SI
```

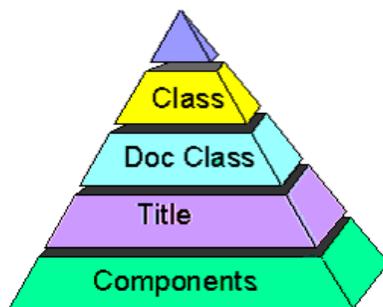
## 2.6 Document Definitions

[TIUF DOCUMENT DEFINITION MGR]

Whenever a provider enters a TIU document (such as a report, a progress note, a discharge summary, or other documentation), that document is linked to a Document Definition in the Document Definition hierarchy. This Document Definition stores the behavior of the document (for example, signature requirements) and is called a Title. It also stores boilerplate/ overprint text, if desired.

Plan the Document Definition Hierarchy your site or service will use before installing TIU and converting Progress Notes. Patch GMRP\*2.5\*44 helps you do this, by cleaning up and organizing your files before the conversion.

## 2.6.1 Document Definition Layers:



The layer linked to individual documents is the *Titles* layer, which is the lowest of the Hierarchy. Titles can be composed of Components (e.g., a SOAP note is composed of the components Subjective, Objective, Assessment, and Plan).

The two higher layers of definition are *Document Class* and *Class*. These layers group Document Definitions within a meaningful organization. These two layers also store some behaviors, which are inherited by associated Titles.

TIU permits nested levels of Class. TIU allows only one Document Class level beneath a Class level. This level, however, can contain as many Document Classes as necessary. TIU allows only one level of Titles beneath a Document Class. This level however, can contain as many Titles as necessary.

## 2.6.2 Document Definition Options

Option Text	Option Name	Description
Create Document Definitions	TIUFC CREATE DDEFS	The Create Document Definitions option lets you create new entries of any type (Class, Document Class, Title, Component) except Object, placing them where they belong in the hierarchy. Although entries can be created using the Edit and Sort options, the Create option streamlines the process. The Create option permits you to view, edit, and create entries ( if the entry is not marked National Standard). The Create Option doesn't let you copy an entry.
Edit Document Definitions	TIUFH EDIT DDEFS	The Edit Document Definitions Option lets you view and edit entries. Since Objects don't belong to the hierarchy, they can't be viewed or edited using the Edit Option.
Sort Document Definitions	TIUFA SORT DDEFS	The Sort Document Definitions option lets you view and edit entries by selected sort criteria (displayed in alphabetic order by name rather than in hierarchy order). Entries can include Objects.
Create Objects	TIUFJ CREATE OBJECTS MGR	This option lets you create new objects or edit existing objects. Existing objects are displayed for you within a selected alphabetical range.
View Objects	TIUFJ VIEW OBJECTS CLIN	This option lets you review existing objects within a selected alphabetical range.

### 2.6.3 Document Definition Terminology

Term	Definition
CLASS	A group of groups which may contain one or more CLASSES or DOCUMENT CLASSES. For example: Progress Notes, Discharge Summary, and History and Physical Examinations.
DOCUMENT CLASS	A grouping which may contain one or more TITLES; for example: Medical Service Notes, Nursing Service Notes, Surgical Service Notes,
TITLE	A single entity at the lowest level. For example: Endocrinology Note, OPC/Psychology, Primary Care Note, etc.
BOILERPLATE TEXT	Template-like blocks of text that use OBJECTS and embedded text to allow qui creation of notes.
COMPONENT	A reusable block of text that is predefined for a specific purpose, such as a SOAP components (Subjective, Objective, Assessment, Plan).
OBJECT	A predefined placeholder that allows patient-specific text to be inserted into a document when a user enters a TIU document. Objects are names representing executable M code, which may be "embedded" in the Default Text of either a component or a document, to produce an effect (e.g., the Object "Patient AGE" may be invoked to insert the value of the patient's age at an arbitrary location within a document).

### 2.6.4 Matrix of Actions allowed per Status and Ownership

#### User:

For Document Definition, IRM, Clinical Coordinators, or service managers authorized to maintain the Document Definition Hierarchy. Only programmers can create objects or edit Technical Fields.

#### Owner:

Either Personal Owner or Class Owner; the person who creates or is assigned responsibility for the document type being acted on. Items under the relevant type may have separate owners (that is, A may own the Document Class, but B could own a Title under the Document Class).

#### Status:

A=Active, I = Inactive, T=Test

Type	Status	User	Actions	Limitations
Class, Document Class	A	Any	Edit Status, Owner  Add new items to Class ( <i>Class or Document Class</i> ), or to Document Class ( <i>Titles</i> ).	Nat'l Standards can't be edited.  Must own the <i>items</i> .
	I	Any	Edit Basics and Upload Fields.	

	I	Owner	Delete as entry from file.	Entry can't be In Use.
Title	A, T	Any	Edit Status and the Owner.	
	I	Any	Add items ( <i>components</i> ). Edit Basics and Boilerplate Text .	Only owners can add non-Shared Components. Item can't already have a parent.
	I	Owner	Delete file entry.	If not In Use.
Component	A,T	Any	Edit the Owner.	
	I	Any	Add new items ( <i>components</i> ). Edit or delete its items. Edit Basics and Boilerplate Text.	Users must own items.
	I	Owner	Delete entry from file.	If not In Use.
Shared Component	N/A	Any	Add entry as an item to a Title or Component.	
		Owner	Edit Basics and Boilerplate Text.	All parents must be Inactive.
Object		Any	Embed Object in Boilerplate Text.	
	I	Any	Edit Owner.	Component or Title must be Inactive.
	I	Owner	Edit Object Basics and Technical Fields.	Only programmers can edit Technical Fields.

## 2.7 Creating Objects

Objects are predefined placeholders that allow patient-specific text to be inserted into a document when a user enters a TIU document.

Objects are names representing executable M code, which may be “embedded” in the Default Text of either a component or a document, to produce an effect (e.g., the Object “Patient AGE” may be invoked to insert the value of the patient’s age at an designated location within a document).

## General Information

Objects must always have uppercase names, abbreviations, and print names. When embedding objects in boilerplate text, users may embed any of these three (name, abbreviation, print name) in boilerplate text, enclosed by an “|” on both sides. Objects must always be embedded in uppercase.

Objects are stored in the Document Definition File, but are not part of the Hierarchy. They are accessible through the options Create Objects and Sort Document definitions (by selecting Sort by Type and selecting Type Object).

TIU exports a small library of Objects. Sites can also create their own. Future versions of TIU are expected to export a much more extensive library of nationally supported objects.

Only an owner can edit an object and should do so only after consulting with others who use it. The object must be Inactive for editing. It should be thoroughly tested. (See Object Status, under Status.)

Objects must initially be written by programmers. (See description in TIU Technical Manual.)

Once defined, Objects may be used any number of times within an unlimited number of different titles.

As sites develop their own Objects, they can be shared with other sites through a mailbox entitled TIU OBJECTS in SHOP,ALL (reached via FORUM).

<p><b>Note:</b> Object routines used from SHOP,ALL are not supported by the Field Offices. Use at your own risk!</p>
--

See Appendix A: in this manual for an example of creating an object.

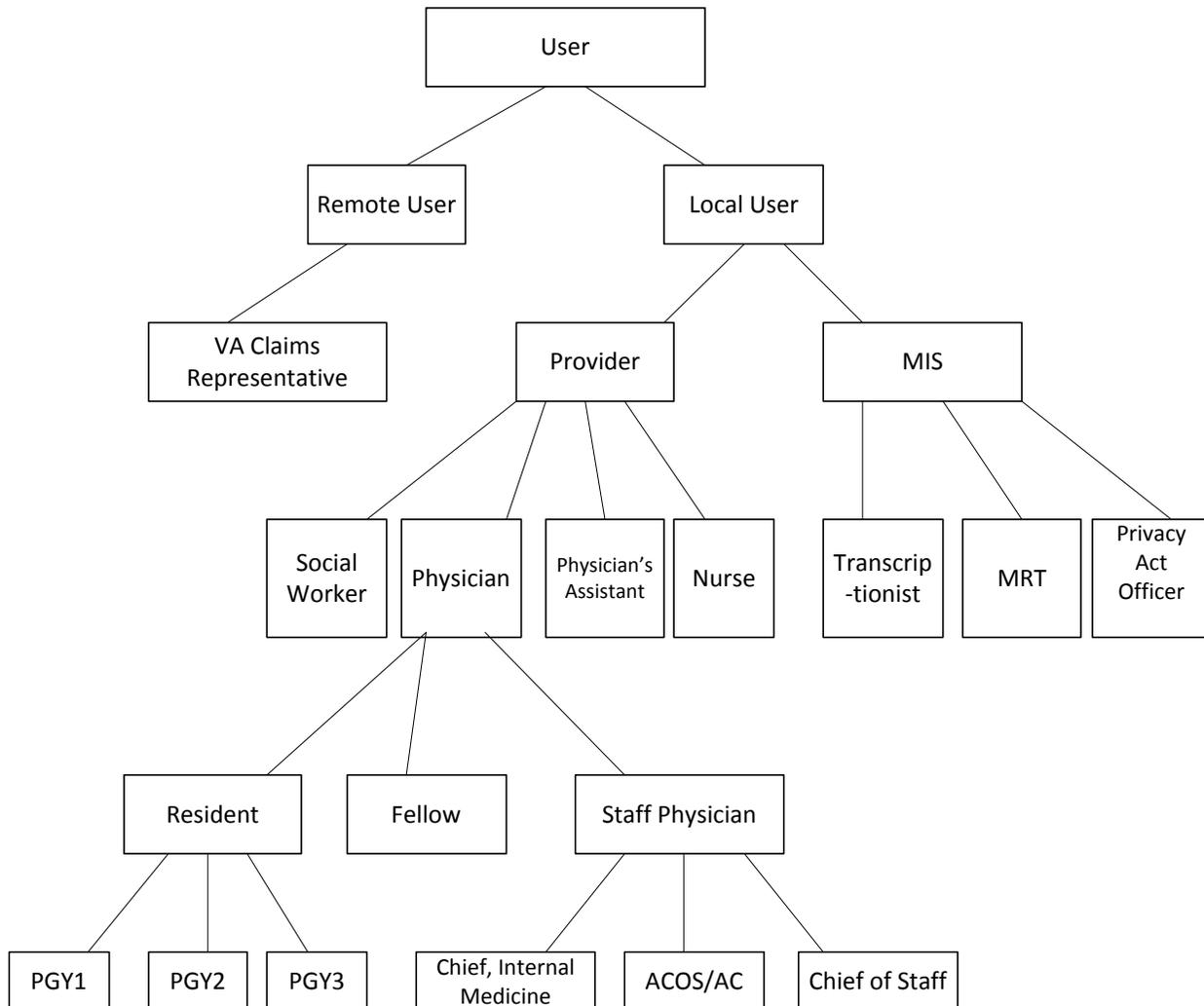
## 2.8 Authorization/Subscription Utility (ASU)

The Authorization/Subscription Utility (ASU) implements a User Class Hierarchy which is useful for identifying the roles that different users play within the hospital. It also provides tools for creating business rules that apply to documents used by members of such groups. ASU provides a method for identifying who is AUTHORIZED to do something (for example, sign and order). Future versions of ASU will provide tools for identifying a group of persons who SUBSCRIBE to receive something (for example, the Medical House Staff Officer may receive an alert to cosign all Schedule II narcotic orders, etc.).

ASU originated in response to the long recognized demand for a “Scope of Practice” model, which was first discussed during the analysis and design of OE/RR. The immediate driving force behind ASU’s development was the complexity of Text Integration Utilities’ (TIU’s) document definition needs. Current security key capabilities were unable to efficiently manage the needs of clinical documentation (Discharge Summaries, Progress Notes, etc.).

For more information on ASU please refer to Authorization/Subscription Utility Clinical Coordinator manual (asu\_010o.pdf).

### 2.8.1 Hierarchy Example:



### 2.8.2 User Class Management [USR CLASS MANAGEMENT MENU]

This is a menu of options for management of User Class Definition and Membership.

Option	Option Name	Description
User Class Definition	USR CLASS DEFINITION	This option allows review, addition, editing, and removal of User Classes.
List Membership by User	USR LIST MEMBERSHIP BY USER	This option allows review, addition, editing, and removal of individual members to and from User Classes.
List Membership by Class	USR LIST MEMBERSHIP BY CLASS	This option allows review, addition, editing, and removal of individual members to and from User Classes.
Edit Business Rules	USR EDIT BUSINESS RULES	This option allows the user to enter Business Rules authorizing specific users or groups of users to perform specified actions on documents in particular statuses (e.g, an UNSIGNED PROGRESS NOTE may be EDITED by a PROVIDER who is also the EXPECTED SIGNER of the note, etc.).
Manage Business Rule	USR BUSINESS RULE MANAGEMENT	This option allows you to list the Business rules defined by ASU, and to add, edit, or delete them, as appropriate.

### 2.8.3 Template Management [TIU IRM TEMPLATE MGMT]

When a user's access is terminated or deactivated, certain cleanup actions are desirable. If the terminated user possessed TIU templates, a site may wish to remove them upon termination, either automatically or manually. To allow flexibility at individual site locations, a new parameter will allow the site to specify that non-shared templates for a terminated user may be automatically removed - or the site may disable such automatic action and manually remove templates for the user.

Option	Option Name	Description
Delete TIU templates for selected user.	TIU TEMPLATE CAC USER DELETE	Removes all templates created by a selected user. This option performs the delete at the time the option is executed.

Option	Option Name	Description
Edit auto template cleanup parameter.	TIU TEMPLATE USER DELETE PARAM	Sets a parameter indicating whether or not a template cleanup should be automatically performed at the any user is deactivated.
Delete templates for ALL terminated users.	TIU TEMPLATE DELETE TERM ALL	Removes all templates created by deactivated users. This option performs the delete at the time the option is executed.

The three above options allow the CAC to delete non-shared templates for any individual user, to toggle automatic cleanup of non-shared templates for terminated users ON or OFF (based on Kernel's User terminate event [XU USER TERMINATE] option), and to delete all existing non-shared templates for users who have been terminated previous to the current date.

**Note:** The third option above traverses the TIU TEMPLATE (file# 8927) file's AROOT x-ref recursively and can take a while to complete. Before using the option, CAC's are advised to disable TIU template editing options and assure that the process is implemented at an off-peak time.

A new OPTION named Delete user's TIU templates. [TIU TEMPLATE USER DELETE] is installed, but is used to link the call KUSER^TIUSRVT3 to Kernel's Kernel's User terminate event [XU USER TERMINATE] event option, and hence the new option does not appear on any menus.

Note: Users terminated with future dates are not handled by Kernel or by this patch unless the Kernel Automatic Deactivation of Users [XUAUTODEACTIVATE] option is activated and scheduled at the local site. A related issue is that users terminated from the Edit a User's Options [EDIT A USER'S OPTIONS] option rather than the Deactivate a User [XUSERDEACT] option will also require the option [XUAUTODEACTIVATE] to be activated and scheduled. To assure reliable cleanup upon termination, sites should schedule the [XUAUTODEACTIVATE] option to run nightly, or should confirm that it is in fact already so scheduled.

A new Parameter, Y/N auto cleanup upon termination [TIU TEMPLATE USER AUTO DELETE], has been created for toggling the automatic TaskMan cleanup of non-shared templates for terminated users ON or OFF. Editing is provided at the SYSTEM, DIVISION, and PACKAGE levels via the new Edit auto template cleanup parameter. [TIU TEMPLATE USER DELETE PARAM] menu option as described above.

## 2.8.4 Progress Notes Print Options

Option	Option Name	Description
Author - Print Progress Notes	TIU PRINT PN AUTHOR	This option produces chart or work copies of progress notes for an author, for a selected date range.
Location - Print Progress Notes	TIU PRINT PN LOC	This option prints chart or work copies of progress notes for all patients who were at a specific location when the notes were written. The patients whose progress notes are printed on this report may not still be at that location. If chart is selected, each note will start on a new page.
Patient - Print Progress Notes	TIU PRINT PN PT	This option prints or displays progress notes for a selected patient by selected date range.
Ward - Print Progress Notes	TIU PRINT PN WARD	This option lets you print progress notes for all patients who are now on a ward for a selected date range. This option is only for ward locations.

### MAS Options to Print Progress Notes [TIU PRINT PN MAS MENU]

Option		Description
Admission- Prints all PNs for Current Admission	TIU PRINT PN ADMISSION	This option prints all progress notes for a selected patient for the current admission if patient is an inpatient or LAST admission if the patient has been discharged.

Option		Description
Batch Print Outpt PNs by Division	TIU PRINT PN BATCH INTERACTIVE	This option batch prints outpatient progress notes in terminal digit order by division. Sites can exclude Locations from this job by editing field #3 in file #8925.93. Locations not entered in file #8925.93 will be included in the batch print.
Outpatient Location- Print Progress Notes	TIU PRINT PN OUTPT LOC	This option is designed to be used primarily by MAS. It produces CHARTABLE notes and tracks the last note printed for the selected outpatient location. Output is sorted in alphabetical by patient order.
Ward- Print Progress Notes	TIU PRINT PN WARD	This option will allow the printing of Progress Notes for ALL patients on the ward at the time the job is queued to print. All of the notes for a selected date range (regardless of the location of the note) will print. This option is only for WARD locations and only prints to printers (not to your screen).

Clinical users can print progress notes, but the more complex printing is geared towards MAS and managing this function on a medical center level. The software also supports a hybrid approach.

- **LIST MANAGER** - Users may print all types of documents using a variety of methods from the List Manager interface for TIU, including Forms, Progress Notes, Discharge Summaries, Consults, etc. Work and Chart copies are possible. Chart copies are the recommended type of printed copy, but many sites still want to print Work copies. For example, you may want to print WORK copies of UNSIGNED notes.

Other than the above List Manager printing, all other print options are on print menus. Only SIGNED notes are available from these options.

- **[TIU PRINT PN USER MENU]** - All of the options on this menu support the printing of CHART or WORK copies. Patient, Author, and Location are the current choices. TITLE sorts will be added. It should be noted that this LOCATION print is an option that will print for any location there is a signed note entered for - it doesn't track anything.

## MAS Print Options

Two files drive the CHART printing process:

- TIU PRINT PARAMETERS FILE #8925.93
- TIU DIVISION PRINT PARAMETERS FILE #8925.94 (supports batch printing outpatient Progress Notes)

In order to use any of the MAS print options (except ADMISSION), the location will have to be entered in one (inpatient locations) or both (outpatient locations) of the above files.

File #8925.93 TIU PRINT PRAMETERS FILE is used for the [TIU PRINT PN WARD] and [TIU PRINT PN OUTPT LOC] options. Field #1.02 tracks the last note that was printed for a selected location. This will be presented as the default PRINT FROM THIS POINT ON: YES//. The user may select another date/time to initialize.

FUN FACTS: This field is in an interesting format. FileMan DATE/TIME ';' IEN of

<p><b>Note:</b> Although it is possible to reset this using FM, it is much easier to just pick the date/time you want to go forward from.</p>
---

The PROGRESS NOTES DEFAULT PRINTER field brings this device up as the default for the user when queuing notes for this location. At the present time these print options are not automated to queue up without user interaction.

Field #3 EXCLUDE FROM PN BATCH PRINT is a flag designed to be used for those outpatient locations the site doesn't want to auto-print in the batch print job.

Options keyed off file #8925.93:

[TIU PRINT PN WARD]: This option is usually used by the night ward clerk. The output is in RM/BED order to facilitate filing. It will print all notes after the last time they were printed. This option will print the notes for ALL current inpatients on the ward, regardless of whether the location of the note is that ward - a nice feature for transferred patients or patients with outpatient clinic appointment notes.

There is also an option [TIU PRINT PN ADMISSION] that will print the entire patient's note for the last admission; done on discharge, to consolidate the chart.

[TIU PRINT PN OUTPT LOC] - Unlike the user's LOC print, this option does track the last note printed. This option is designed for sites that have specific clinics on electronic progress notes (EPN) and don't want to batch print in the file room. The clerk can print all the notes and file them in the clinic. This would work best for mental health-type clinics where patients are seen frequently.

This option was intended to support the transition to electronic progress notes - it has a specific place. Remember to turn on field #3 if you want to take this approach with a clinic. It should be noted that if a patient is seen in other clinics and those other clinics are batch-printed, the notes from the flagged clinic will also be printed in that batch. This is to preclude gaps in sequence - clinical information overlooked because it fits in between two other notes.

## BATCH PRINTING OUTPATIENT PROGRESS NOTES

There are two new batch print options [TIU PRINT PN BATCH INTERACTIVE] and [TIU PRINT PN BATCH SCHEDULED]. These options are identical except the latter is set up in file 19.2 to run unaccompanied. The batch print is sorted in terminal digit order for the file room. It prints out a page of possible problems and what to check if no notes print. In theory, the MAS person would bring this to IRM to have them troubleshoot. You wouldn't want to do this every night—most test sites do it once a month. Inpatient notes will not print in this option. Inpatient and outpatient notes are supposed to be filed in different sections of the charts. Progress Notes V. 2.5 did not support this.

### Helpful Hints

**CHART vs. WORK copies** - There are certain situations when only a WORK copy is appropriate, such as when the document is not signed. The current version has an easy way of disallowing anyone other than MAS from printing progress notes. This is only feasible for those sites that are almost completely electronic. Otherwise, users will be asked if they want a WORK or a CHART copy. The WORK copy has the patient phone number on it and doesn't have a form number (a nifty little trick to keep MAS from filing them in the CHART!). The WORK copy is clearly marked as NOT FOR MEDICAL RECORD.

**CONTIGUOUS vs. SEPARATE PAGE** - This is where clairvoyant prowess comes into play. Users are sometimes mystified as to why they sometimes get asked the question and sometimes not. If users have selected a sort that will only produce CHART copies if the notes are on separate pages (location, title (when avail), author) there wouldn't be any point in asking them if that is how they want them. If they want WORK copies, they can only have them in CONTIGUOUS (save trees wherever possible) format. Also, if there is only one note, it wouldn't make sense to ask if they want it on a separate page.

**DUPLEXing** - It makes sense that you would want to print notes all through the patient's admission and then print them again upon discharge, duplexing them to save paper. Actually it does make the chart thinner.

### TECHNICAL TIDBITS

Avoid trying to change the paging of Progress Notes. Just for your information, TIUFLAG controls CHART/WORK and TIUSPG does CONTIGUOUS/SEPARATE. These variables are sometimes hard-set and passed in by the option. Other times it's an interactive thing.

Notes are not set in the print cross-references until they are signed. ALOCP, AAUP, and APTP give all the possible sorts. Soon we will need an ATITP for the TITLE print.

In order to run all the Progress Notes printing off the same print driver, there had to be some peculiar setting of ^TMP. The first subscript TIUI contains both a '\$' delimiter as well as a ';' delimiter. This gives you the print group and header in the '\$' piece and the terminal digit, alpha name or room/bed in the 1st semi-colon piece and the DFN in the second semicolon piece. This allows the paging to be controlled when a hodgepodge of Forms and notes is thrown at it. It is also how you get the form number and header on the FORMS.

### 3.0 Menu Diagram

```

TIU Menu for Clinicians (BTIU MENU1)
|__EED Enter/edit Document [TIU ENTER/EDIT]
|__EUV Edit/Update Visit [BTIU EDIT VISIT]
|__HLP TIU Help for Clinicians [BTIU MENU HELP CLINICIANS]
|__DDC Document Definitions(Clinician) [BTIU MENU DOC DEF CLIN]
|   |__DDC1 Edit Document Definitions [TIUFH EDIT DDEFS CLIN]
|   |__DDC2 Sort Document Definitions [TIUFA SORT DDEFS CLIN]
|   |__DDC3 View Objects [TIUFJ VIEW OBJECTS CLIN]
|   |__DDC4 List Membership by Class [USR LIST MEMBERSHIP BY CLASS]
|   |__DDC5 List Membership by User [USR LIST MEMBERSHIP BY USER]
|__FRD Fields Required for Dictation [BTIU HELP CLINICIANS]
|__LAD List of Active Document Titles [BTIU DOC LIST]
|__PPR Personal Preferences [BTIU PERSONAL PREFERENCES]
|__IPD Individual Patient's Documents [BTIU REVIEW BY PATIENT]
|__MPD Multiple Patient Documents [TIU REVIEW SCREEN CLINICIAN]
|__MYU All MY UNSIGNED Documents [TIU REVIEW UNSIGNED]
|__SPT Search by Patient AND Title [TIU SEARCH BY PATIENT/TITLE]
|__TRD Transcribe Document [TIU ENTER/EDIT TRANSCRIBER]
|__TRM TIU Reports Menu [BTIU MENU REPORTS]
|   |__IDS Individual Patient Discharge Summary [TIU BROWSE DS CLINICIAN]
|   |__MDS Multiple Patient Discharge Summaries [TIU REVIEW DS CLINICIAN]
|   |__LNT List Notes By Title [TIU LIST NOTES BY TITLE]
|   |__NAP Show Progress Notes Across Patients [TIU REVIEW PN CLINICIAN]
|   |__PNP Progress Notes Print Options[TIU PRINT PN USER MENU]
|       |__PNPA Author- Print Progress Notes [TIU PRINT PN AUTHOR]
|       |__PNPL Location- Print Progress Notes [TIU PRINT PN LOC]
|       |__PNPT Patient- Print Progress Notes [TIU PRINT PNPT]
|       |__PNPW Ward- Print Progress Notes [TIU PRINT PN WARD]
|   |__RPN Review Progress Notes by Patient [TIU BROWSE PN CLINICIAN]

```

Figure 3-1: TIU Clinician's Menu Diagram

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TIU Menu for Medical Records (BTIU MENU2)
|__IPD Individual Patient Document [BTIU BROWSE PAT BY MR]
|__LAD List of Active Document Titles [BTIU DOC LIST]
|__MPD Multiple Patient Documents [BTIU REVIEW SCREEN MR]
|__PDM Print Documents Menu [BTIU MENU PRINT DOCS]
|   |__PDM1 Discharge Summary Print [TIUP PRINT DISCHARGE SUMMARIES]
|   |__PDM2 Progress Note Print [TIUP PRINT PROGRESS NOTES]
|   |__PDM3 Clinical Document Print [TIUP PRINT DOCUMENTS]
|__SIG Awaiting Signature Listing [BTIU IC LISTING]
|__SSD Search for Selected Documents [BTIU SEARCH FOR MR]
|__STR Statistical Reports [BTIU MENU STATS REPORTS]
|   |__AUT AUTHOR Line Count Statistics [TIU DS LINE COUNT BY AUTHOR]
|   |__DTS Dictation Timeliness Statistics [BTIU DICT STATS]
|   |__SER SERVICE Line Count Statistics [TIU DS LINE COUNT BY SERVICE]
|   |__TRA TRANSCRIPTIONIST Line Count Statistics [TIU DS LINE COUNT BY
TRANSCR]
|__TMM TIU Maintenance Menu [BTIU MENU MGR]
|   |__DDM Document Definitions(Manager) [BTIU MENU DOC DEF MGR]
|       |__DDM1 Edit Document Definitions [TIUFH EDIT DDEFS MGR]
|       |__DDM2 Sort Document Definitions [TIUFA SORT DDEFS MGR]
|       |__DDM3 Create Document Definitions [TIUFC CREATE DDEFS MGR]
|       |__DDM4 Create Objects [TIUFJ CREATE OBJECTS MGR]
|       |__DDM5 List Object Descriptions [BTIU OBJECT DESCRIPTIONS] |__DDM6
Create TIU/Health Summary Objects [TIUHS LIST MANAGER]
|   |__TAT TIU Alert Tools [TIU ALERT TOOLS]

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|__TPM TIU Parameters Menu [BTIU MENU PARAMETERS]
|__TPM1 Basic TIU Parameters [TIU BASIC PARAMETER EDIT]
|__TPM2 Modify Upload Parameters [TIU UPLOAD PARAMETER EDIT]
|__TPM3 Document Parameter Edit [TIU DOCUMENT PARAMETER EDIT]
|__TPM4 Progress Notes Batch Print Locations [TIU PRINT PN LOCS
PARAMS]
|__TPM5 Division - Progress Notes Print Params [TIU PRINT PN
DIV PARAMS]
|__TTM TIU Template Mgmt Functions[TIU IRM TEMPLATE MGMT]
|__1 Delete TIU templates for selected user. [TIU TEMPLATE CAC
USER DELETE]
|__2 Edit auto template cleanup parameter. [TIU TEMPLATE USER DELETE
PARAM]
|__3 Delete templates for ALL terminated users. [TIU TEMPLATE DELETE
TERM ALL]
|__UCM User Class Management Menu[BTIU MENU USER CLASS]
|__UCM1 User Class Definition [USR CLASS DEFINITION]
|__UCM2 List Membership by User [USR LIST MEMBERSHIP BY USER]
|__UCM3 List Membership by Class [USR LIST MEMBERSHIP BY CLASS]
|__UCM4 Manage Business Rules [USR BUSINESS RULE MANAGEMENT]
|__UPL TIU Upload Menu [BTIU MENU UPLOAD]
|__UPL1 Upload Documents [TIU UPLOAD DOCUMENTS]
|__UPL2 Help for Upload Utility [TIU UPLOAD HELP]
|__UPL3 Display Upload Status [BTIU UPLOAD DISPLAY]
|__UPL4 Reset Upload to Restart [BTIU UPLOAD RESET]
|__VUA View a User's Alerts [BTIU VIEW USER ALERTS]

```

Figure 3-2: TIU Medical Records Menu Diagram

## 4.0 Routines

BTIUARC	BTIUBR	BTIUCD	BTIUCHLP	BTIUDDL	BTIUDOC	BTIUDSC	BTIUED
BTIUEDIT	BTIUH1	BTIUH2	BTIUHELP	BTIUICL	BTIUULD	BTIULINK	BTIULO
BTIULO1	BTIULO2	BTIULO3	BTIULO4	BTIULO5	BTIULO6	BTIUODL	BTIUPCC
BTIUPCC1	BTIUPST	BTIUPOS	BTIUPOS2	BTIUPRE	BTIUPREF	BTIUPUTP	BTIURB
BTIURPT	BTIURPT1	BTIURPT2	BTIURPT3	BTIURPT4	BTIURS	BTIUU	BTIUU1
BTIUUPL	BTIUVAR	BTIUVSIT	BTIUXREF	GMRPNCW	GMRPNOR1		
TIU144	TIUADD	TIUAL1	TIUALFUN	TIUALRT	TIUALRT1	TIUALSET	TIUAPIOK
TIUAUDIT	TIUBPEDT	TIUBR	TIUBR1	TIUBRWS	TIUCHLP	TIUCNFIX	TIUCNSLT
TIUCP	TIUCPCL	TIUCPFIX	TIUDD	TIUDD0	TIUDD01	TIUDD1	TIUDD8
TIUDD98	TIUDDT	TIUDEV	TIUDIRH	TIUDIRT	TIUDPEDT	TIUDSCN1	TIUDSCNV
TIUED1	TIUED2	TIUED3	TIUED4	TIUEDIM	TIUEDIT	TIUEDITR	TIUEDIU
TIUEDS	TIUEDS1	TIUEDS10	TIUEDS11	TIUEDS12	TIUEDS13	TIUEDS14	TIUEDS15
TIUEDS16	TIUEDS17	TIUEDS18	TIUEDS2	TIUEDS3	TIUEDS4	TIUEDS5	TIUEDS6
TIUEDS7	TIUEDS8	TIUEDS9	TIUELST	TIUEN6	TIUENV	TIUEPN	TIUEPN1
TIUEPN10	TIUEPN11	TIUEPN12	TIUEPN13	TIUEPN14	TIUEPN15	TIUEPN16	TIUEPN17
TIUEPN18	TIUEPN19	TIUEPN2	TIUEPN20	TIUEPN21	TIUEPN22	TIUEPN23	TIUEPN24
TIUEPN25	TIUEPN3	TIUEPN4	TIUEPN5	TIUEPN6	TIUEPN7	TIUEPN8	TIUEPN9
TIUEPRNT	TIUESFIX	TIUFA	TIUFA1	TIUFC	TIUFC1	TIUFD	TIUFD1
TIUFD2	TIUFD3	TIUFD4	TIUFH	TIUFH1	TIUFHA	TIUFHA1	TIUFHA2
TIUFHA3	TIUFHA4	TIUFHA5	TIUFHA6	TIUFHA7	TIUFHA8	TIUFHA9	TIUFHLP
TIUFHLP1	TIUFIX	TIUFIX1	TIUFIX2	TIUFJ	TIUFL	TIUFL1	TIUFLA
TIUFLA1	TIUFLD	TIUFLD1	TIUFLF	TIUFLF1	TIUFLF2	TIUFLF3	TIUFLF4
TIUFLF5	TIUFLF6	TIUFLF7	TIUFLF8	TIUFLJ	TIUFLJ1	TIUFLLM	TIUFLLM1
TIUFLLM2	TIUFLLM3	TIUFLT	TIUFLX	TIUFPR	TIUFT	TIUFT1	TIUFX
TIUFXHL1	TIUFXHLX	TIUFZZ43	TIUFZZ60	TIUFZZ8	TIUGBR	TIUGEDI1	TIUGEDIT
TIUGR	TIUGR1	TIUGR2	TIUHELP	TIUHSL	TIUHSOBJ	TIUHSOLM	TIUHSV
TIUIL	TIUIL1	TIUIL10	TIUIL2	TIUIL3	TIUIL4	TIUIL5	TIUIL6
TIUIL7	TIUIL8	TIUIL9	TIULA	TIULA1	TIULA2	TIULA3	TIULA4
TIULAB	TIULADR	TIULAPI	TIULAPIC	TIULAPIS	TIULC	TIULC1	TIULD
TIULE	TIULEXP	TIULF	TIULG	TIULIP	TIULM	TIULMED	TIULMED1
TIULO	TIULO1	TIULP	TIULP1	TIULQ	TIULQ2	TIULRR	TIULS
TIULS1	TIULV	TIULX	TIUMOVE	TIUNTEG	TIUNTEG0	TIUO38	TIUO70
TIUP146	TIUP146P	TIUP149	TIUP149P	TIUPD	TIUPEDSP	TIUPEFIX	TIUPEVN1
TIUPEVNT	TIUPL	TIUPLST	TIUPNAPI	TIUPNCV	TIUPNCV1	TIUPNCV2	TIUPNCV3
TIUPNCV4	TIUPNCV5	TIUPNCV6	TIUPNCV7	TIUPNCV8	TIUPNCVU	TIUPNCVX	TIUPNFIX
TIUPOST	TIUPP3	TIUPR96	TIUPRCN	TIUPRD	TIUPRDS	TIUPRDS1	TIUPRDS2
TIUPREF	TIUPREL	TIUPRPN	TIUPRPN1	TIUPRPN2	TIUPRPN3	TIUPRPN4	TIUPRPN5
TIUPRPN6	TIUPRPN7	TIUPRPN8	TIUPS100	TIUPS104	TIUPS109	TIUPS115	TIUPS120
TIUPS130	TIUPS139	TIUPS14	TIUPS148	TIUPS153	TIUPS155	TIUPS160	TIUPS17
TIUPS76	TIUPS79	TIUPS93	TIUPS96	TIUPS98	TIUPUTA	TIUPUTC	TIUPUTC1
TIUPUTCN	TIUPUTCPC	TIUPUTD	TIUPUTPN	TIUPUTSX	TIUPUTU	TIUPXAP1	TIUPXAP2
TIUPXAPC	TIUPXAPI	TIUPXAPM	TIUPXAPS	TIUQRY	TIUQRYL	TIUR	TIUR1
TIUR2	TIURA	TIURA1	TIURA2	TIURB	TIURB1	TIURB2	TIURC
TIURC1	TIURD	TIURD1	TIURD2	TIURD3	TIURD4	TIURE	TIURECL
TIURECL1	TIURECL2	TIURENDX	TIURH	TIURHX	TIURL	TIURL1	TIURM
TIURM1	TIURMH	TIUROR	TIUROR1	TIURORL	TIURP	TIURPN	TIURPT1
TIURPTTL	TIURS	TIURS1	TIURT	TIURTIT1	TIURTITH	TIURTITL	TIUSRV
TIUSRV1	TIUSRVA	TIUSRVD	TIUSRVE	TIUSRVF	TIUSRVF1	TIUSRVG	TIUSRVL

TIUSRVL1	TIUSRVLC	TIUSRVLI	TIUSRVLL	TIUSRVLO	TIUSRVLV	TIUSRVP	TIUSRVP1
TIUSRVPL	TIUSRVPT	TIUSRVR	TIUSRVR1	TIUSRVR2	TIUSRVR3	TIUSRVT	TIUSRVT1
TIUSRVT2	TIUSRVT3	TIUSRVT4	TIUSTA	TIUSTS	TIUSTT	TIUT	TIUTHLP
TIUTSK	TIUU	TIUUPEDT	TIUUPLD	TIUVISIT	TIUVSIT	TIUVSIT1	TIUVSITH
TIUXRC	TIUXRC1	TIUXRC2	TIUXRC3	TIUXRC4	TIUXRC5	TIUXRC6	TIUXRC7
TIUXRC8	TIUZZ65						

## 4.1 Routines w/ Descriptions

Routine	Description
BTIUARC	ARCHIVE UPLOADED FILE
BTIUBR	Browse Action Subroutines
BTIUCD	IHS CALL TO INCOM CHART EDITS
BTIUCHLP	Help for Clinician
BTIUDDL	LIST DOC DEFINITIONS
BTIUDOC	DICTATION OP REPORT COUNTS
BTIUDSC	DICTATION COUNTS
BTIUED	CALLS FROM TIUEDIT
BTIUEDIT	Enter/Edit a Document, patient/visit known
BTIUH1	INTRO TEXT
BTIUH2	MISC HELP TEXT
BTIUHELP	On-line help library
BTIUICL	AWAITING SIGNATURES REPORT
BTIULD	Admission related functions
BTIULINK	UPDATE TIU DOC UPON VISIT MERGE
BTIULO	CODE FOR IHS OBJECTS
BTIULO1	PHARMACY OBJECTS
BTIULO2	MORE TIU OBJECTS
BTIULO3	VISIT OBJECTS FOR EHR
BTIULO4	MORE VISIT OBJECTS FOR EHR
BTIULO5	STILL MORE OBJECTS FOR EHR
BTIULO6	INPT DATA OBJECT CALLS
BTIUODL	LIST OBJECT DESCRIPTIONS
BTIUPCC	IHS PCC LINKS WITH TIU
BTIUPCC1	IHS PCC OBJECTS
BTIUPLST	Enter/edit personal document pick-list
BTIUPOS	IHS post initialization actions
BTIUPOS2	More IHS post initialization actions
BTIUPRE	PRE-INSTALL ROUTINE FOR TIU

<b>Routine</b>	<b>Description</b>
BTIUPREF	Enter/edit personal preferences
BTIUPUTP	IHS calls from ^TIUPUTPN
BTIURB	IHS SUBRTNS FOR TIURB
BTIURPT	DRIVER TO VIEW PT'S DOCS
BTIURPT1	Review documents by Reference Date
BTIURPT2	Review documents by Visit Date
BTIURPT3	Review documents by Reference Date
BTIURPT4	Review documents by Reference Date
BTIURS	Electronic signature actions
BTIUU	IHS UTILITY CALLS
BTIUU1	MORE IHS UTILITY CALLS
BTIUUPL	ASCII Upload
BTIUVAR	MENU ENTRY & EXIT ACTIONS
BTIUVSIT	Visit File look-up
BTIUXREF	IHS XREFERENCE CODE
GMRPNCW	CWAD Utility
GMRPNOR1	Progress Note- OE/RR interface
TIU137D	Data for Post-Install for TIU*1*137
TIU144	Consults with Mismatched Patients
TIUADD	Enter/Edit an addendum online
TIUAL1	TIU Alerts List Manager
TIUALFUN	TIU Alert Functions
TIUALRT	Notify Author and Attending
TIUALRT1	More Alert Processing
TIUALSET	TIU Alerts
TIUAPIOK	Check out PUT API's
TIUAUDIT	Display Audit Trail
TIUBPEDT	Basic Parameter Edit
TIUBR	Browse Action Subroutines
TIUBR1	Enter TIU Browse with DFN and TIUDA
TIUBRWS	Single Patient Browse
TIUCHLP	Help for Clinician
TIUCNFI	Resolve Upload Filing Errors for Consults
TIUCNSLT	Patient Movement Look-Up
TIUCP	Clinical Procedures API(s) and RPC(s)
TIUCPCL	Clinical Procedure Class Action Entry Points

<b>Routine</b>	<b>Description</b>
TIUCPFIX	Resolve Filing errors for CP Documents
TIUDD	Build Menus In XUTL (file 8925.1)
TIUDD0	Cross-references on 8925
TIUDD01	KILL LOGIC for Cross-references on 8925
TIUDD1	XRefs for File 8925.1
TIUDD8	Build Menus in XUTL (file 8925.8)
TIUDD98	Build Menus in XUTL (file 8925.1)
TIUDDT	XRef & Input Transform Code for Template File 8927
TIUDEV	Device Handling Utilities
TIUDIRH	Help for DIR call (READ^GMRDU)
TIUDIRT	IRT Interface Routines
TIUDPEDT	Document Parameter Edit
TIUDSCN1	Discharge Summary Conversion routine
TIUDSCNV	Discharge Summary Conversion routine
TIUEDI1	Additional Edit Code
TIUEDI2	Additional Edit Code
TIUEDI3	Additional Edit Code
TIUEDI4	Enter/Edit a Document
TIUEDIM	Enter/Edit Multiple Document
TIUEDIT	Enter/Edit a Document
TIUEDITR	Enter/Edit a Document for Transcriber
TIUEDIU	Enter/Edit Utility Subroutines
TIUEDS	Generated From 'TIU Enter/Edit Ds' Input Template (#1841), File 8925
TIUEDS1	Compiled templates, same as TIUEDS
TIUEDS10	Compiled templates, same as TIUEDS
TIUEDS11	Compiled templates, same as TIUEDS
TIUEDS12	Compiled templates, same as TIUEDS
TIUEDS13	Compiled templates, same as TIUEDS
TIUEDS14	Compiled templates, same as TIUEDS
TIUEDS15	Compiled templates, same as TIUEDS
TIUEDS16	Compiled templates, same as TIUEDS
TIUEDS17	Compiled templates, same as TIUEDS
TIUEDS18	Compiled templates, same as TIUEDS
TIUEDS2	Compiled templates, same as TIUEDS
TIUEDS3	Compiled templates, same as TIUEDS

<b>Routine</b>	<b>Description</b>
TIUEDS4	Compiled templates, same as TIUEDS
TIUEDS5	Compiled templates, same as TIUEDS
TIUEDS6	Compiled templates, same as TIUEDS
TIUEDS7	Compiled templates, same as TIUEDS
TIUEDS8	Compiled templates, same as TIUEDS
TIUEDS9	Compiled templates, same as TIUEDS
TIUELST	Review Filer Events
TIUEN137	Environment Check Rtn for TIU*1*137;
TIUEN96	Environment Check for TIU*1*96
TIUENV	Environment Check Routine
TIUEPN	Generated From 'TIU Enter/Edit Progress Note' Input Template (#1843), File 8925
TIUEPN1	Compiled template, same as TIUEPN
TIUEPN10	Compiled template, same as TIUEPN
TIUEPN11	Compiled template, same as TIUEPN
TIUEPN12	Compiled template, same as TIUEPN
TIUEPN13	Compiled template, same as TIUEPN
TIUEPN14	Compiled template, same as TIUEPN
TIUEPN15	Compiled template, same as TIUEPN
TIUEPN16	Compiled template, same as TIUEPN
TIUEPN17	Compiled template, same as TIUEPN
TIUEPN18	Compiled template, same as TIUEPN
TIUEPN19	Compiled template, same as TIUEPN
TIUEPN2	Compiled template, same as TIUEPN
TIUEPN20	Compiled template, same as TIUEPN
TIUEPN21	Compiled template, same as TIUEPN
TIUEPN22	Compiled template, same as TIUEPN
TIUEPN23	Compiled template, same as TIUEPN
TIUEPN24	Compiled template, same as TIUEPN
TIUEPN25	Compiled template, same as TIUEPN
TIUEPN3	Compiled template, same as TIUEPN
TIUEPN4	Compiled template, same as TIUEPN
TIUEPN5	Compiled template, same as TIUEPN
TIUEPN6	Compiled template, same as TIUEPN
TIUEPN7	Compiled template, same as TIUEPN
TIUEPN8	Compiled template, same as TIUEPN

<b>Routine</b>	<b>Description</b>
TIUEPN9	Compiled template, same as TIUEPN
TIUEPRNT	Handle Print Following Entry/Edit
TIUESFIX	Find/Fix Entries W/O ES-Blocks
TIUFA	LM Template A (DDEFs By Attribute) INIT
TIUFA1	LM Template A (DDEFs by Attribute) Actions Add Entry, Change View
TIUFC	LM Template C (Create DDEF) INIT, Action NEXT LEVEL
TIUFC1	LM Template C (Create DDEF) Action Create
TIUFD	LM Screen D (Display) Init, DS/Basics, Items, Parnt, Boiltx, Tech (Lastlin)
TIUFD1	LM Template DSUPLOAD (LASTLIN), DSEMBED (LASTLIN)
TIUFD2	LM Template D (Display) Action Edit Basics
TIUFD3	LM Template D Actions Edit Items, Edit Boilerplate Text
TIUFD4	LM Template D Actions Edit Technical Fields, Edit Upload. LM Subtemplate DJ Action DELOBJ
TIUFH	LM Template H (DDEF Hierarchy) INIT
TIUFH1	LM Template H (DDEF Hierarchy) Actions Expand/Collapse, Jump to DDEF (EXPDEF (ASK, FILEDA)), EXPAND1 (EINFO), COLLAPSE (EINFO)
TIUFHA	LM Templates H, A, and C Action Detailed Display, Action Boilerplate Text
TIUFHA1	LM Templates H and A Action Delete. CANTDEL (FILEDA, USED), ASKOK (OLDLNO, IFLAG, USED)
TIUFHA2	LM Templates A and H Action Copy/Move (COPYMOVE), WHICHTL (CFILEDATA, PFILEDATA), COPY, OVERRIDE (XDIRA)
TIUFHA3	LM Templates H, A Action Edit Status, INACTIVE (TYPE, FILEDA, NODE0), WARNING, WARNOBJI (FILEDA)
TIUFHA4	LM Templates H and A action Edit Name/Owner/PrintName
TIUFHA5	COPYFDA (FILEDA, ITEMFLG, PFILEDATA, CFILEDATA, CNODE0, VCNTAJ), CREATE (NAME, FILEDA), CP0, etc.
TIUFHA6	Templates A H J C D X Action TRY
TIUFHA7	VALMBG (FILEDA, EFILEDA, EOLDLNO), UPDATE, MOVETL, REEXPAND (FILEDA, LINENO, UPDATE), WHICHDC (FILEDA, PFILEDATA, ACTION)
TIUFHA8	MOVEDOC, MDRPOINT (OLDTLDA, NEWTLDA, POLDTLDA, PNEWTLDA, NOLOCK), NEWTITLE (FILEDA, PFILEDATA), MTRPOINT (TITLEDATA, OLDCLASS)
TIUFHA9	CLXREF (DA, OLDCLASS)
TIUFHLP	On-Line Help Library: HELP
TIUFHLP1	On-Line Help Library: EDITVW, FIELD

<b>Routine</b>	<b>Description</b>
TIUFIX	Resolve Upload Filing Errors Library
TIUFIX1	Resolve Upload Filing Errors Library One
TIUFIX2	Resolve Upload Filing Errors Library Two
TIUFJ	LM Template J (Objects) INIT
TIUFL	Library of Modules and Functions: SETUP, RMSG, CENTER (X, N)
TIUFL1	Library of Modules and Functions: RIGHT, LEFT
TIUFLA	Library Template A Related: SELSTART, MATCH (FILEDA), TYPM ATCH (FILEDA, ATYPE), OWNMATCH (FILEDA, AOWN), STTMATCH (FILEDA, ASTAT), USEMATCH (FILE DA, AUSE), STRMATCH (FILEDA, NODE0), PARMATCH (FILEDA, APARE)
TIUFLA1	Library Template A, J (DDEFs by Attribute), (Objects) Related: AUPDATE (NODE0, FILEDA, CNTCHNG, NLINENO), SETENTYA (NODE0, FILEDA, FDALNO), IPOINT (NODE0), NOINUSE
TIUFLD	Lib Template D Related SETFLD (FILEDA, LASTLIN, FLDNO, SUBFDA, SUBFLDNO), INHERIT (FILEDA, PFILEDA, FLDNO, EIFORM, SUBFDA, SUBFLDNO, VALUE, AFILEDA), MULTILN (TIUREC, LASTLIN, FLDNAME)
TIUFLD1	Lib Template D Related SETBOIL (FIELD A, LASTLIN), EDBOIL (FILEDA), DEDBOIL (FILEDA), DSETSHAR (FILEDA)
TIUFLF	Library File 8925.1 Related: NODE0ARR (FILEDA, NODE0, PFILEDA), HASBOIL (FILEDA, NODE0), DDEFUSED (FILEDA), DESCUSED (FILEDA)
TIUFLF1	Library File 8925.1 Related: HASITEMS (FILEDA), ASKFLDS (FILEDA, FIELDS, PFILEDA, NEWSFLG, XFLG), BADNAP (NAP, FILEDA, OBJFLG)
TIUFLF2	Library File 8925.1 Related: PERSOWNS (FILEDA, PERSON), SELNAME (DEFLT), NAMSCRN (PFILEDA)
TIUFLF3	Library File 8925.1 Related: CHECK (FILEDA, PFILEDA, DETAILS, MSGARRAY), DESCCK (FILEDA), OBJECT
TIUFLF4	Lib ANCESTOR (FILEDA, NODE0, ANCESTOR, DOCFLAG), ORPHAN (FILEDA, NODE0, ANCESTOR), STUFFLDS (FILEDA, PFILEDA), ADDTEN (PFILEDA, FILEDA, NODE0, TENDA), NUMITEMS (FILEDA), MISSITEM (FILEDA)
TIUFLF5	Library File 8925.1 Related: STATSCRN (), STATLIST (FILEDA, PFILEDA, NEWSTAT, STATMSG, STATLIST), ANCSTAT (FILEDA), POSSSTAT (TYPE), STATOK (TYPE, NEWSTAT), SELSTAT (FILEDA, PFILEDA, DEFLT), STATWORD (PIECE7)
TIUFLF6	Library File 8925.1 Related: ASKSTAT (FILEDA, NODE0, PFILEDA, NEWFLAG, XFLG), AUTOSTAT (FILEDA, NODE0, STAT), DESCSTAT (FILEDA, NEWSTAT)

<b>Routine</b>	<b>Description</b>
TIUFLF7	Library File 8925.1: POSSTYPE (PFILEDA), TYPELIST (NAME, FILEDA, PFILEDA, TYPEMSG, TYPELIST), EDTYPE (FILEDA, NODE0, PFILEDA, XFLG, USED), DUPNAME (NAME, FILEDA), DUPITEM (NAME, PFILEDA, FILEDA)
TIUFLF8	Library File 8925.1 Related: SELTYPE (FILEDA, DEFLT), EDOWN (DA, XFLG)
TIUFLJ	NOTE, WARNOBJ (NAP, OBJECTDA, NODE0), HASIT (OBJECTDA, ONODE0, FILEDA, NAP, HASIT), DHASIT (OBJECTDA, ONODE0, FILEDA, NAP, DHASIT), EMBED (OBJECTDA, ONODE0, NAP, ALLSUB), OBJUSED (FILEDA)
TIUFLJ1	DOCUMENTATION, LOCKEMB (FILEDA, NAP, LUNLOCK), STATEMB (FILEDA, STATFLG, NAP), EDBTEXT (FILEDA, NAPNAME)
TIUFLLM	Library List Manager Related: RTSCROLL (TIUREC, TYPE), PARSE (INFO), NINFO (LINENO, FILEDA, INFO, PINFO, TENDA), PLUSUP (INFO, TIUREC)
TIUFLLM1	Library LM Related: LINEUP (INFO, TEMPLATE), UPDATE (TMPLATE, SHIFT, LASTLIN, PINFO), AINUSE (LINENO), INUSEUP (FILEDA, LINENO)
TIUFLLM2	Library LM Related: BUFENTRY (INFO, NODE0, CONTENT, PFILEDA), CONTENT params: 80,N, H, B, I, W
TIUFLLM3	Library LM Related: Documentation on Templs H, A, I, T, D, P, Arrays TIUF1/2/3/B, Variables TIUFTMPL, TIUFSTMP, TIUFWHO, TIUFACT, Variable CONTENT in BUFENTRY^TIUFLLM3
TIUFLT	Library Template T (Items) Related: BUFITEMS (CONTENT, EINFO, LASTLIN), ITEMS (FILEDA)
TIUFLX	Library Template X (Boilerplate Text) Related: XCHECK (FILEDA, SILENT, DETAILS, MSGARRAY), DCHECK (FILEDA, SILENT, DETAILS, MSGARRAY)
TIUFPR	Action Print List
TIUFT	LM Template T (Items) INIT, Action Add Items
TIUFT1	LM Template I (Items) Actions Delete, Edit/All, Mnemonic, Sequence, Menu Text, MTXTCHEC (DA, FILEDA, SILENT)
TIUFX	LMScreen X (Boilerplate Text) INIT, DS/BOILTX
TIUFXHL1	?? XQORM Help, ? COPY Help
TIUFXHLX	Xecutable Help PAUSE, RESET, FLDDESC (FLDNO)
TIUFZZ43	Post Patch TIU*1*43 Cleanup. Fixes entries in TIU DOCUMENT DEFINITION FILE whose Menu Text is bad
TIUFZZ60	Post Patch TIU*1*17 Cleanup.Scratch. Reindexes B xref in TIU DOCUMENT DEFINITION FILE
TIUFZZ8	Post Patch TIU*1*27 Cleanup.Scratch. Updates fld .04 for documents in TIU DOCUMENT FILE

<b>Routine</b>	<b>Description</b>
TIUGBR	ID Browse Action Subroutines: HASIDKID, HASIDDAD, DADORKID, IDTOP, LOADID, GETKIDS
TIUGEDI1	Enter New ID Document Code
TIUGEDIT	Add New ID Entry
TIUGR	ID Note Review Screen Actions IDNOTE
TIUGR1	More ID Note Review Screen Actions
TIUGR2	ID Note Review Screen Actions
TIUHELP	On-Line Help Library
TIUHSL	Main List Manager for TIUHS Routines
TIUHSOBJ	Health Summary to TIU Object
TIUHSOLM	Display Health Summary Object for TIU Objects
TIUHSV	Edit Menu for TIUHS Routines
TIUIL	List Template Exporter
TIUIL1	List Template Exporter
TIUIL10	List Template Exporter
TIUIL2	List Template Exporter
TIUIL3	List Template Exporter
TIUIL4	List Template Exporter
TIUIL5	List Template Exporter
TIUIL6	List Template Exporter
TIUIL7	List Template Exporter
TIUIL8	List Template Exporter
TIUIL9	List Template Exporter
TIULA	Interactive Library functions
TIULA1	More interactive functions
TIULA2	More interactive functions
TIULA3	Still more interactive functions
TIULA4	Check out PUT API's
TIULAB	Lab objects
TIULADR	Adverse Reactions/Allergies
TIULAPI	Extract Selected Documents from TIU
TIULAPIC	Extract Selected Classes from TIU
TIULAPIS	Extract Selected Documents from TIU
TIULC	Computational Functions
TIULC1	More Computational Functions
TIULD	Admission Related Functions

<b>Routine</b>	<b>Description</b>
TIULE	Environment Library Functions
TIULEXP	Repoint the TIU Problem Link file to ^LEX (
TIULF	More Computational Functions
TIULG	More Library Functions
TIULIP	Lipid Profile Loader
TIULM	List Manager Library: RESIZE, REMOVE Elmt, PICK List Elmt
TIULMED	Active/Recent Med Objects Routine
TIULMED1	Active/Recent Med Objects Routine
TIULO	Embedded Objects
TIULO1	More Embedded Objects
TIULP	Functions Determining Privilege
TIULP1	More Functions Determining Privilege
TIULQ	Record Extract Using FM Retriever
TIULQ2	Record Extract For Upload Event Display
TIULRR	Restricted Record Library Functions
TIULS	String Library Functions
TIULS1	Signature Block Procedures
TIULV	Visit/Movement Related Library
TIULX	Cross-Reference Library Functions
TIUMOVE	Patient Movement Look-Up
TIUNTEG	KERNEL - Package Check Sum Checker
TIUNTEG0	KERNEL - Package Check Sum Checker
TIUO38	TIU Object Export Routine
TIUO70	TIU Object Export Routine
TIUP134	Post-Install for TIU*1*134
TIUP134P	Post-Install for TIU*1*134 Cont.
TIUP146	Post-Install for TIU*1*146
TIUP146P	Post-Install for TIU*1*146 Cont.
TIUP149	Post-Install for TIU*1*149
TIUP149P	Post-Install for TIU*1*149 Cont.
TIUPD	Background Print Driver
TIUPEDSP	Display Filing Event
TIUPEFIX	Resolve Filing errors for TIU Documents
TIUPEVN1	Event Logger Cont'd
TIUPEVNT	Event Logger For Upload/Filer
TIUPL	Problem List Linker

<b>Routine</b>	<b>Description</b>
TIUPLST	Enter/Edit Personal Document Pick-List
TIUPNAPI	API to Replace GMRPAPI
TIUPNCV	Convert Progress Notes
TIUPNCV1	Convert Progress Notes, continued
TIUPNCV2	Convert Progress Notes, continued
TIUPNCV3	Convert Progress Notes, continued
TIUPNCV4	Convert Progress Notes, continued
TIUPNCV5	Convert Progress Notes, continued
TIUPNCV6	Convert Progress Notes, continued
TIUPNCV7	Convert Progress Notes, continued
TIUPNCV8	Convert Progress Notes, continued
TIUPNCVU	Final Pass Through ^GMR (121 for conversion)
TIUPNCVX	TIU conversion routines
TIUPNFIK	Resolve Upload Filing Errors for Progress Notes
TIUPOST	Post-init for TIU
TIUPP3	Patient Posting Cover Sheet API
TIUPR96	Pre-install for TIU*1*96
TIUPRCN	Driver to Print Form 513 Consult Reports
TIUPRD	Single Patient Print
TIUPRDS	Print Form 10-1000 Discharge Summaries
TIUPRDS1	Print DS Form 10-1000
TIUPRDS2	Header & Footer for Form 10-1000
TIUPREF	Enter/Edit Personal Preferences
TIUPREL	GENERATED FROM 'TIU RELEASED/UNVERIFIED PRINT' PRINT TEMPLATE (#1734
TIUPRPN	Print SF 509 Progress Notes
TIUPRPN1	Print SF 509-Progress Notes
TIUPRPN2	Header/Footer for Progress Notes
TIUPRPN3	Sort PNs for Prting
TIUPRPN4	Print Progress Notes for Inpt Location
TIUPRPN5	Sort PNs for Prting by Location
TIUPRPN6	Print PNs-Most Current Admission
TIUPRPN7	Progress Notes Outpt Batch Prt
TIUPRPN8	Print SF 509-Progress Notes, Cont
TIUPS100	Patch 100 Post-init
TIUPS104	Post-install TIU*1*104

<b>Routine</b>	<b>Description</b>
TIUPS109	Post-Install for TIU*1*109
TIUPS115	Post-install for TIU*1*115
TIUPS120	Post-install for TIU*1*120
TIUPS130	Post-Install for TIU*1*130
TIUPS137	After installing TIU*1*137
TIUPS139	Cleanup for TIU*1*138
TIUPS14	Post-Install for TIU*1*4
TIUPS148	Creates PATIENT ETHNICITY TIU Object
TIUPS153	Cleanup ACLAU/ACLEC
TIUPS155	Amended Consult Note Clean Up
TIUPS160	Post install to Register New RPCs
TIUPS17	Post-install for TIU*1*7 and TIU*1*51
TIUPS76	Post-install for TIU*1*76
TIUPS79	Post-install for TIU*1*79
TIUPS93	Post-install for TIU*1*93
TIUPS96	Post-Install for TIU*1*96
TIUPS98	Post-install TIU*1*98
TIUPUTA	Utilities for C & P Look-up, etc.
TIUPUTC	Document Filer - Captioned Header
TIUPUTC1	Document Filer Cont'd - Captioned Header
TIUPUTCN	Uploading Consult Results
TIUPUTCP	CP Look-up Method
TIUPUTD	Document Filer - Delimited Header
TIUPUTPN	PN Look-up Method
TIUPUTSX	Uploading Op Reports to SURGERY file #130
TIUPUTU	Utilities for Filer/Router
TIUPXAP1	Interface w/PCE/Visit Tracking
TIUPXAP2	More Code For The Workload Capture
TIUPXAPC	Get CPT Stuff
TIUPXAPI	Interface w/PCE/Visit Tracking
TIUPXAPM	CPT Modifier API(s)
TIUPXAPS	Ask Service Connection Question(s)
TIUQRY	Queries for Documents Across Patients
TIUQRYL	Library calls for Query
TIUR	Integrated Document Review
TIUR1	Integrated Document Review

<b>Routine</b>	<b>Description</b>
TIUR2	Integrated Document Review
TIURA	Review Screen actions
TIURA1	Review Screen actions
TIURA2	More Review Screen actions
TIURB	More Review Screen Actions
TIURB1	TIURB-associated Subroutines
TIURB2	More Review Screen Actions
TIURC	Additional Review Screen actions
TIURC1	Additional Review Screen actions
TIURD	Reassign Actions
TIURD1	Reassign Actions
TIURD2	Reassignment Following Signature
TIURD3	Reassign Actions
TIURD4	Reassign Actions
TIURE	Error Handler Actions
TIURECL	Expand/collapse LM views
TIURECL1	Expand/collapse LM views
TIURECL2	Expand/collapse LM views
TIURENDX	Reindex TIU X-Refs
TIURH	Review Screen Header
TIURHX	Display Reassignment History
TIURL	List Management Library
TIURL1	List Management Library
TIURM	MIS Document Review
TIURM1	MIS Document Review
TIURMH	MIS Review Screen Header
TIUROR	New PATIENT Review Screen
TIUROR1	New PATIENT Review Screen
TIURORL	List Management Library for OE Screen
TIURP	List Problems For Linking
TIURPN	QUICK Review BY PATIENT
TIURPTT1	Review Documents by PATIENT & TITLE
TIURPTTL	Review Documents by PATIENT & TITLE
TIURS	Electronic Signature Actions
TIURS1	Additional /ES/ Actions
TIURT	Sign On Chart, etc.

<b>Routine</b>	<b>Description</b>
TIURIT1	Review Documents by TITLE
TIURTITH	Review Screen Header
TIURTITL	Review Documents by TITLE
TIUSRV	Silent Server Functions
TIUSRV1	More Silent Server Functions
TIUSRVA	API's for Authorization
TIUSRVD	RPC's for Document Definition
TIUSRVE	Get Upload Events for Display
TIUSRVF	Server calls for Template Fields
TIUSRVF1	Server calls for Template Fields
TIUSRVG	Silent Server Calls
TIUSRVL	Server Functions For Lists
TIUSRVL1	Server Functions For Lists
TIUSRVLC	Server Functions For Lists
TIUSRVLI	Server fns - Lists for CPRS
TIUSRVLL	Server Functions for LOCAL Lists
TIUSRVLO	Server FNS - Lists for CPRS
TIUSRVLV	Server FNS for Lists by Visit
TIUSRVP	RPCs for CREATE & UPDATE
TIUSRVP1	More API's in Support of PUT
TIUSRVPL	RPC's Supporting Links
TIUSRVPT	Set Methods for Documents
TIUSRVR	Server FNS For Record Manipulation
TIUSRVR1	RPC for Record-Wise GET
TIUSRVR2	RPC for Record-Wise GET
TIUSRVR3	Load Signatures for Record-Wise GET
TIUSRVT	Server Functions For Templates
TIUSRVT1	Server Calls For Templates
TIUSRVT2	Server Functions For Templates
TIUSRVT3	Remove a User's Non-Shared Templates.
TIUSRVT4	Remove All Terminated User Templates.
TIUSTA	GENERATED FROM 'TIU PRINT AUTHORSTATS' PRINT TEMPLATE (#1735)
TIUSTS	GENERATED FROM 'TIU PRINTSERVICESTATS' PRINT TEMPLATE (#1737)
TIUSTT	GENERATED FROM 'TIU PRINT TRANSSTATS' PRINT TEMPLATE (#1736)

<b>Routine</b>	<b>Description</b>
TIUT	Release From Or Send Back To Transcription
TIUTHLP	Help for Transcription
TIUTSK	TIU's Nightly Daemon
TIUU	Utility Subroutines for Discharge Summary
TIUUPEDT	Upload Parameter Edit
TIUUPLD	ASCII Upload
TIUVISIT	Visit File Look-Up
TIUVSIT	Interactive Visit Look-Up DKM
TIUVSIT1	Visit Look-Up (Cont'd)
TIUVSITH	Help for Interactive Visit Look-Up
TIUXRC	DRIVER FOR COMPILED XREFS FOR FILE #8925
TIUXRC1	COMPILED XREF FOR FILE #8925
TIUXRC2	COMPILED XREF FOR FILE #8925
TIUXRC3	COMPILED XREF FOR FILE #8925
TIUXRC4	COMPILED XREF FOR FILE #8925
TIUXRC5	COMPILED XREF FOR FILE #8925
TIUXRC6	COMPILED XREF FOR FILE #8925
TIUXRC7	COMPILED XREF FOR FILE #8925
TIUXRC8	COMPILED XREF FOR FILE #8925
TIUZZ65	Cleanup Routine for AFTER TIU*1*65

## 5.0 Files and Tables

### 5.1 File List

File #	Filename	Description
8925	TIU DOCUMENT	This file stores textual information for the clinical record database. Although it is designed to initially accommodate Progress Notes, Consult Reports, and Discharge Summaries, it is intended to be sufficiently flexible to accommodate textual reports or provider narrative of any length or type, and to potentially accommodate such data transmitted from remote sites, which may be excluded from the corresponding local <i>VISTA</i> Package databases (e.g., Operative Reports, Radiology Reports, Pathology Reports, etc.) to avoid confusion with local workload.
8925.1	TIU DOCUMENT DEFINITION	<p>This file stores Document Definitions, which identify and define behavior for documents stored in the TIU DOCUMENTS FILE (#8925). For consistency with the V-file schema, it may be viewed as the "Attribute Dictionary" for the Text Integration Utilities.</p> <p>It also stores Objects, which can be embedded in a Document Definition's Boilerplate Text (Overprint). Objects contain M code which gets a piece of data and inserts it in the document's Boilerplate Text when a document is entered.</p> <p>Some entries in this file are developed Nationally and exported across the country. Others are created by local sites. Entries in the first category are marked National Standard and are not editable by sites.</p> <p>This file does <i>not</i> allow multiple entries <i>of the same type</i> with the same name. That is, within a given Type, there are no duplicate names. (This refers to the .01 field, the Technical name of the entry.)</p> <p>This file does not allow a parent to have items with the same name, even if the items have different internal file numbers (i.e. are different file entries). Again, this refers to the .01 Technical name of the entry.</p> <p>Because of ownership considerations, the file does <i>not</i> allow an entry to be an item under more than 1 parent. If the same item is desired under more than one parent, the item must be copied into a new entry. There is one exception: Document Definitions of Type Component that have been marked Shared may have more than one parent.</p>

File #	Filename	Description
8925.1	TIU DOCUMENT DEFINITION continued	<p>Users are expected to use the Document Definition Utility TIUF to enter, edit, and delete file entries. In fact, the file prohibits the deletion of entries through generic FileMan Options. It also prohibits the edit through generic FileMan of a few critical fields: Type, Status, Shared, and National Standard. Adding and Deleting (but not editing) Items is also prohibited through generic FileMan options.</p> <p>This does NOT imply that it is <i>safe</i> to use generic FileMan to edit other fields. Users are cautioned that edit through generic FileMan bypasses many safeguards built in to the Document Definition Utility and can create havoc unless the user <i>thoroughly understands</i> the File and its uses. If users find needs which are not met through TIUF, please communicate them to the TIU development team.</p>
8925.2	TIU UPLOAD BUFFER	This file buffers uploaded ASCII reports during the upload process, until they can be successfully routed to their respective destinations within VISTA. It will support the development of tools for responding to error messages (e.g., the correction of errors experienced during routing/filing) by the appropriate users, so as to avoid the necessity of making all edits on the client system and re-initiating the upload in response to an error condition.
8925.3	TIU UPLOAD ERROR DEFINITION	This file defines allowable error codes, and their corresponding names and textual messages for the error handler module of the ASCII upload process.
8925.4	TIU UPLOAD LOG	This file is used by the filer module of the upload process to log both successfully filed records and non-fatal errors which may occur during routing/ filing of one or more records in a given batch.
8925.5	TIU AUDIT TRAIL	This file maintains an audit trail of TIU transactions.
8925.6	TIU STATUS (including data)	This file contains the allowable statuses which may be applied to a TIU document during its path through the system.
8925.7	TIU MULTIPLE SIGNATURE	This file is intended to accommodate the case where multiple cosignatures are applied to a document (e.g., team or multidisciplinary notes, discharge planning check-lists, etc.). Rather than adding a multiple to the TIU Document file, this file supports a 3NF decomposition, allowing multiple cosignatures to be applied to the same document.
8925.8	TIU SEARCH CATEGORIES	This file stores parameters which modify the processing requirements of individual document types, and their descendants.
8925.9	TIU PROBLEM LINK	This file allows a many-to-many relationship between TIU Documents and Problems to be maintained.

File #	Filename	Description
8925.91	TIU EXTERNAL DATA LINK FILE	This file is intended to allow the definition of many-to-one linkages between TIU Documents and external data objects (i.e., non-MUMPS data) such as Images or BLOBs.
8925.93	TIU PRINT PARAMETERS	This file describes the parameters for controlling the Printing of Progress Notes.
8925.94	TIU DIVISION PRINT PARAMETERS	This file describes the parameters for the batch printing of progress notes for filing by Medical Center Division.
8925.95	TIU DOCUMENT PARAMETERS	This file stores parameters which modify the processing requirements of individual document types, and their descendants.
8925.97	TIU CONVERSIONS	This file contains information concerning the conversion of legacy files such as ^GMR(121, Generic Progress Note File, to ^TIU(8925, TIU Document File.
8925.98	TIU PERSONAL DOCUMENT TYPE LIST	This file is used to store "pick-lists" of documents (by class), for selection by users.
8925.99	TIU PARAMETERS	This file contains the site-configurable parameters for TIU. It will have one entry for each division, to support variable definition of package behavior at multidivisional facilities.
8926	TIU PERSONAL PREFERENCES	This file allows the definition of Personal Preferences with respect to a variety of TIU's functions (e.g., Review Screen sort field and order, Default cosigner, default locations, location by day-of-week, suppression of review notes prompt on Progress note entry, etc.).
9003130.1	BTIU OBJECT DESCRIPTION	
9003130.2	BTIU UPLOAD STATUS	

## 5.2 File Access

File #	Filename	GL	RD	WR	LYG	DD	DEL
8925 TIU DOCUME NT	^TIU(8925,	@	@	@	@	@	@
8925.1 TIU DOCUME NT DEFINITIO N	^TIU(8925.1,	@	@	@	@	@	@

File #	Filename	GL	RD	WR	LYG	DD	DEL
8925.2 TIU UPLOAD BUFFER	^TIU(8925.1,	@	@	@	@	@	@
^TIU(8925. 3,	^TIU(8925.3,	@	@	@	@	@	@
8925.3 TIU UPLOAD ERROR DEFINITIO N	^TIU(8925.3,	@	@	@	@	@	@
8925.4 TIU UPLOAD LOG	^TIU(8925.4,	@	@	@	@	@	@
8925.5 TIU AUDIT TRAIL	^TIU(8925.5,	@	@	@	@	@	@
8925.6 TIU STATUS	^TIU(8925.6,	@	@	@	@	@	@
8925.7 TIU MULTIPLE SIGNATU RE	^TIU(8925.7,	@	@	@	@	@	@
8925.8 TIU SEARCH CATEGOR IES	^TIU(8925.8,	@	@	@	@	@	@
8925.9 TIU PROBLEM LINK	^TIU(8925.9,	@	@	@	@	@	@
8925.91 TIU EXTERNA L DATA LINK	^TIU(8925.91,	@	@	@	@	@	@
8925.93 TIU PRINT PARAMET ERS	^TIU(8925.93,	@	@	@	@	@	@

File #	Filename	GL	RD	WR	LYG	DD	DEL
8925.94 TIU DIVISION PRINT PARAMET ERS	^TIU(8925.94,	@	@	@	@	@	@
8925.95 TIU DOCUME NT PARAMET ERS	^TIU(8925.95,	@	@	@	@	@	@
8925.97 TIU CONVERS IONS	^TIU(8925.97,	@	@	@	@	@	@
8925.98 TIU PERSONA L DOCUME NT TYPE LIST	^TIU(8925.98,	@	@	@	@	@	@
8925.99 TIU PARAMET ERS	^TIU(8925.99,	@	@	@	@	@	@
8926 TIU PERSONA L PREFERE NCES	^TIU(8926,	@	@	@	@	@	@
8927 TIU TEMPLAT E	^TIU(8927,	@	@	@	@	@	@
8927.1 TIU TEMPLAT E FIELD	^TIU(8927.1,	@	@	@	@	@	@
9003130.1 BTIU OBJECT DESCRIPT ION	^BTIUOD(	@	@	@	@	@	@

File #	Filename	GL	RD	WR	LYG	DD	DEL
9003130.2 BTIU UPLOAD STATUS	^BTIUZ(						

### 5.3 Cross References

The following cross-references are included in this package (listed here by file and field number).

#### Example: TIU DOCUMENT File (#8925)

Field #	Field Name	X-ref	Description
.01	DOCUMENT TYPE	B	Regular cross-reference
		APT	This MUMPS-type, multi-field cross-reference by PATIENT, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE facilitates look-ups by patient.
		AAU	This MUMPS-type, multi-field cross-reference by AUTHOR, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE facilitates look-ups by author.
		ASUP	This multi-field, MUMPS-type cross-reference by (EXPECTED COSIGNER), DOCUMENT TYPE, STATUS, INVERSE ENTRY/DICTATION DATE/TIME is used for look-ups and queries.
		AV	This MUMPS-type cross-reference by patient, document type, and visit number will allow for a candidate key to determine whether a given document exists for a particular patient visit.
		ATS	This multi-field, MUMPS-type cross-reference by DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/TIME facilitates look-ups by treating specialty.
		ATC	This multi-field, MUMPS-type cross-reference by TRANSCRIPTIONIST ID, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/TIME

Field #	Field Name	X-ref	Description
		ALL	will facilitate look-ups by transcriptionist.
		ASUB	This multi-field cross-reference is used for building the review screen across all categories (Author, Attending Physician, Patient, Transcriptionist, or treating specialty).  This MUMPS-style multi-field cross-reference is used for queries by subject.
.01	DOCUMENT TYPE	ASVC	This MUMPS-type, multi-field cross-reference by SERVICE, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE facilitates look-ups by service.
		AE	This multi-field, MUMPS-type cross-reference by Patient, inverse Date, and Report Type is to optimize searching by entity, time, and attribute.
		ALOC	This MUMPS-type, multi-field cross-reference is optimized for searching hospital location, document type, status, and date range.
		APRB	This multi-field, MUMPS-type cross-reference by Problem, Document Type, Status, and Inverse Reference Date facilitates query for documents by problem.
		AVSIT	This multi-field, MUMPS-type cross-reference by Patient, clinical document class, and inverse Reference Date facilitates look-up by Visit.
		ACLPT	This multi-field, MUMPS-type cross-reference by Patient, Root Class, and inverse Reference Date facilitates look-up by Patient.
		ACLAU	This MUMPS-Type, Multi-field cross-reference on Cosignature Date/time will assure that the cosigned notes are included in the ACLPT x-ref (completed, by patient) upon cosignature.
		ACLEC	
		ACLSB	This x-ref is used to extract lists based on

Field #	Field Name	X-ref	Description
		APTLDO	<p>context.</p> <p>This x-ref is used to extract lists based on context.</p> <p>This MUMPS-type, multi-field cross-reference by PT, TITLE, "LOC;VPT;VTYYP", DA is used for optimizing checks for documents for a particular visit.</p>
.02	PATIENT	AA	<p>This MUMPS-type, multi-field cross-reference by PATIENT, DOCUMENT TYPE, STATUS, and INVERSE VISIT/DATE will help to identify documents by patient and time.</p>
		APT	<p>This multi-field, MUMPS-type cross-reference by Patient, Document Type, Status, and Inverse Entry/Dictation Date will facilitate look-up by Patient.</p>
		AE	<p>This multi-field, MUMPS-type cross-reference by Patient, Inverse Visit Date, and Report Type is to optimize searching by entity, time, and attribute.</p>
.02	PATIENT	C	<p>This REGULAR FileMan type cross-reference is used for look-up by patient.</p>
		AV	<p>This MUMPS-type, multi-field cross-reference by patient, document type, and visit record number will serve as a candidate key to determine whether a given document exists for a particular patient visit.</p>
		APTP	<p>This MUMPS-type, multi-field cross-reference by Patient and REGULAR Signature Date/Time is used to maintain the daily print queue for batch printing of documents (currently, just Progress Notes) on signature.</p>
		ADCPT	<p>This MUMPS-type, multi-field cross-reference by PATIENT, DOCUMENT CLASS, STATUS, and INVERSE REFERENCE DATE facilitates look-ups by PATIENT and DOCUMENT CLASS (e.g., all SIGNED Violence Postings for patient John Doe).</p>
		APTCL	<p>This MUMPS-type, multi-field cross-reference by PATIENT, CLINICAL</p>

Field #	Field Name	X-ref	Description
		2270	DOCUMENT CLASS, and INVERSE REFERENCE DATE facilitates look-ups by patient.
		ACLAU	This x-ref is used to extract lists based on context.
		ACLSB	
		APTLD	This x-ref is used to extract lists based on context.  This x-ref is used to extract lists based on context.  This MUMPS-type Multi-field index by PT, TITLE, "LOC;VDT;VTYP" is used for optimizing checks for documents for a particular visit.
.03	VISIT	AA	This MUMPS-type, multi-field cross-reference by PATIENT, DOCUMENT TYPE, and INVERSE VISIT DATE is optimized for searches by entity, attribute, and time.
		AE	This MUMPS-type, multi-field cross-reference by PATIENT, DOCUMENT TYPE, and INVERSE VISIT DATE will optimizer searching by entity, attribute, and time.
		AV	This MUMPS-type, multi-field cross-reference by PATIENT, DOCUMENT TYPE, and Visit Record number serves as a candidate key to determine whether a given document exists for a particular patient visit.
03	VISIT	AVSIT	This MUMPS-type, multi-field cross-reference by PATIENT, DOCUMENT TYPE, STATUS, and INVERSE VISIT/DICTATION DATE facilitates look-ups by visit.
		V	This REGULAR FileMan Cross-reference by VISIT is used to help identify dependent entries.
		APTLD	This MUMPS-type Multifield cross-reference by PT, TITLE, "LOC;VDT;VTYP", DA is used for optimizing checks for documents for a particular visit.
.04	PARENT DOCUMENT TYPE	ADCPT	This MUMPS-type, multi-field cross-reference by PATIENT, DOCUMENT

Field #	Field Name	X-ref	Description
			CLASS, STATUS, and INVERSE REFERENCE DATE facilitates look-ups by PATIENT AND DOCUMENT CLASS (e.g., all SIGNED Violence Postings for patient John Doe).
.05	STATUS	ASUP	This MUMPS-type, multi-field cross-reference by (EXPECTED COSIGNER), DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME will be used for look-ups and queries.
		AAU	This MUMPS-type, multi-field cross-reference by AUTHOR/DICTATOR, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME will be used for look-ups and queries.
		APT	This MUMPS-type, multi-field cross-reference by AUTHOR/DICTATOR, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME will be used for look-ups and queries.
		ATC	This MUMPS-type, multi-field cross-reference by ENTERED BY, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME will be used for look-ups and queries.
		ATS	This MUMPS-type, multi-field cross-reference by TREATING SPECIALTY, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME will be used for look-ups and queries.
		ALL	This MUMPS-type, multi-field cross-reference by DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME will be used for look-ups and queries.
		ASUB	This MUMPS-type, multi-field cross-reference is used in queries by subject.
.05	STATUS	ASVC	This MUMPS-type, multi-field cross-reference by SERVICE, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME will be used for look-ups and queries.
		ALOC	This MUMPS-type, multi-field cross-

Field #	Field Name	X-ref	Description
		APRB	reference is optimized for searching hospital location, document type, status, and date range.
		AVSIT	This MUMPS-type, multi-field cross-reference by PROBLEM, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME facilitates queries by problem.
		ADCPT	This MUMPS-type, multi-field cross-reference by SERVICE, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME facilitates queries by visit
			This MUMPS-type, multi-field cross-reference by PATIENT, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME facilitates look-ups by PATIENT and DOCUMENT CLASS (e.g., all SIGNED violence Postings for patient John Doe).
.06	PARENT	DAD	Cross-Reference on parent to help find addenda.
.07	EPISODE BEGIN DATE/TIME	APTLD	This MUMPS-type Multifield cross-reference by PT, TITLE, "LOC;VDT;VTYP",DA is used for optimizing checks for documents for a particular visit.
.12	MARK DISCH DT FOR CORRECTION	FIX	This regular FileMan Cross-reference is used by the nightly daemon to identify those records which require evaluation/correction of their discharge dates.
.13	VISIT TYPE	APTLD	This MUMPS type Multi-field index by PT,TITLE,"LOC;VDT;VTYP",DA is used for optimizing checks for documents for a particular visit.
1201	ENTRY DATE/TIME	F	This regular FileMan Cross-reference on Entry Date/time supports the Nightly background task, by helping to identify the subset of records which is overdue for either signature or purging.
1202	AUTHOR/DICTATOR	CA	This REGULAR, whole-file cross-reference by Author/ Dictator will facilitate both look-ups and sorting by author.
		AAU	This MUMPS-type, multi-field cross-reference by AUTHOR, DOCUMENT TYPE, STATUS, and INVERSE DICTATION DATE/TIME is intended to facilitate look-up by author for the review process.

Field #	Field Name	X-ref	Description
		AAUP	This MUMPS-type, multi-field cross-reference by Author and REGULAR Signature Date/Time is used to maintain the daily print queue for batch printing of documents (currently, just Progress Notes) on signature.
		ACLAU	This x-ref is used to extract lists based on context.
1205	HOSPITAL LOCATION	ALOC	This MUMPS-type, multi-field cross-reference is optimized for searching hospital location, document type, status, and date range.
		ALOCP	This MUMPS-type, multi-field cross-reference by Hospital Location and REGULAR Signature Date/Time is used to maintain the daily print queue for batch printing of documents (currently, just Progress Notes) on signature.
1208	EXPECTED COSIGNER	CS	This REGULAR, FileMan type cross-reference by supervisor (expected cosigner) will be used to optimize FM Sorts and searches.
		ASUP	This MUMPS-type, multi-field cross-reference by (EXPECTED COSIGNER), DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/ TIME will be used for look-ups and queries.
1211	VISIT LOCATION	APTLD	This MUMPS-type, Multi-field index by PT,TITLE,"VLOC;VDT;VTYP",DA is used to optimize the check for documents of a given title for a particular visit.
1301	REFERENCE DATE	AAU	This MUMPS-type, multi-field cross-reference is used for look-ups by author, document type, status, and date range.
		ASUP	This MUMPS-type, multi-field cross-reference by EXPECTED COSIGNER), DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE/TIME will be used for look-ups and queries.
1301	REFERENCE DATE	APT	This MUMPS-type, multi-field cross-reference is used for look-ups by patient, document type, status, and date range.
		ATS	This MUMPS-type, multi-field cross-reference is used for look-ups by Treating Specialty, document type, status, and date range.

Field #	Field Name	X-ref	Description
		ATC	This MUMPS-type, multi-field cross-reference is used for look-ups by Entry person, document type, status, and date range.
		ALL	This MUMPS-type, multi-field cross-reference is used for look-ups by Entry person, document type, status, and date range.
		ASUB	This MULTI-fields, MUMPS-type cross-reference is used for queries by subject.
		ASVC	This MUMPS-type, multi-field cross-reference is used for look-ups by SERVICE, document type, status, and date
		APRB	This MUMPS-type, multi-field cross-reference by Problem, Document type, Status, and Inverse Reference Date/time is used to facilitate query by problem.
		AVSIT	This MUMPS-type, multi-field cross-reference by VISIT, DOCUMENT TYPE, STATUS, and INVERSE ENTRY/DICTATION DATE facilitates look-ups by visit.
		ADCPT	This MUMPS-type, multi-field cross-reference by PATIENT, DOCUMENT CLASS, STATUS, and INVERSE REFERENCE DATE facilitates look-ups by PATIENT AND DOCUMENT CLASS (e.g., all SIGNED Violence Postings for patient John Doe).
		D	This REGULAR FileMan Cross-reference by Reference Date/time is used for both look-ups and sorts.
		APTCL	This MUMPS-type, multi-field cross-reference by PATIENT, CLINICAL DOCUMENT CLASS, and INVERSE REFERENCE DATE facilitates look-ups by patient.
		ALOC	This MUMPS-type, multi-field cross-reference is used for look-ups LOCATION, document type, status, and date
		ACLPT	This MUMPS-Type, Multi-field cross-reference on Cosignature Date/time will assure that the cosigned notes are included in the ACLPT x-ref (completed, by patient) upon cosignature.
		ACLAU	
		ACLSB	This x-ref is used to extract lists based on context.

Field #	Field Name	X-ref	Description
			This x-ref is used to extract lists based on context.
1302	ENTERED BY	TC  ATC  ACLAU	This REGULAR FileMan type cross-reference is used for sorting by the person who entered the original document.  This MUMPS-type, multi-field cross-reference is used for searching by entry person, document type, status, and date range.  This x-ref is used to extract lists based on context.
1304	RELEASE DATE/TIME	E	This Regular, FileMan Cross-reference on Release Date/Time is used for sorting, and for the Released/unverified Report for the Verifying MRT.
1402	TREATING SPECIALTY	TS  ATS	This REGULAR FileMan type cross-reference is used for support both look-ups and sorts by Treating Specialty  This MUMPS-type, multi-field cross-reference is optimized for searching by treating specialty, document type, status, and date range.
1404	SERVICE	ASVC  SVC	This MUMPS-type, multi-field cross-reference is optimized for searching by treating specialty, document type, status, and date range.  This REGULAR FileMan Cross-reference by Service will facilitate look-ups, sorts, and reports.
1405	REQUEST-ING PACKAGE REFERENCE	G	This REGULAR FM cross-reference by REQUESTING PACKAGE REFERENCE is used to avoid multiple documents per request, and for look-ups.
1501	SIGNATURE DATE/TIME	ALOCP  AFTP	This MUMPS-type, multi-field cross-reference by Hospital Location and REGULAR Signature Date/Time is used to maintain the daily print queue for batch printing of documents (currently, just Progress Notes) on signature.  This MUMPS-type, multi-field cross-reference by Patient and REGULAR Signature Date/Time is used to maintain the daily print queue for batch printing of documents (currently, just Progress Notes) on signature.

Field #	Field Name	X-ref	Description
		AAUP	This MUMPS-type, multi-field cross-reference by Author and REGULAR Signature Date/Time is used to maintain the daily print queue for batch printing of documents (currently, just Progress Notes) on signature.
		ACLPT	This MUMPS-Type, Multi-field cross-reference on Cosignature Date/time will assure that the cosigned notes are included in the ACLPT x-ref (completed, by patient) upon cosignature.
		ACLEC ACLAU	This x-ref is used to extract lists based on context.
1502	SIGNED BY	ACLSB	This x-ref is used to extract lists based on context.
1507	COSIGNATURE DATE/TIME	ACLEC  ACLPT	This MUMPS-Type, Multi-field cross-reference on Cosignature Date/time will assure that the cosigned notes are included in the ACLPT x-ref (completed, by patient) upon cosignature.
1701	SUBJECT	ASUB	This MUMPS-type, multi-field cross-reference is used for queries by subject.
15001	VISIT ID	VID	REGULAR FM Cross-reference by Visit ID facilitates look-up by CIRN.

## 8925.1 - TIU DOCUMENT DEFINITION File

Field #	Field Name	X-ref	Description
.01	NAME	B	This KWIK cross-reference on document name will allow look-up based on sub-names, etc.
		C	This cross-reference will be used by the router/filer to identify a given report type
.03	PRINT NAME	AM1  D	This MUMPS-type cross-reference is used to update the TIMESTAMP on both the current document and its parents when its PRINT NAME changes.  This REGULAR FileMan cross-reference by PRINT NAME will facilitate look-up.
.04	TYPE	AT	This regular cross-reference is used for listing Document Definitions by Type.
.05	PERSONAL OWNER	AP	This regular cross-reference is used for listing Document Definitions by Personal Owner.

Field #	Field Name	X-ref	Description
.06	CLASS OWNER	AC	This regular cross reference is used to list Document Definitions by Class Owner.
.07	STATUS	AS	This regular cross-reference is used to list Document Definitions by Status.
1,.14	POSTING INDICATOR	APOST	This REGULAR FileMan Cross-reference by Posting Indicator will help to identify which Document Classes are associated with each of the currently supported Posting Types.
1,.01	HEADER PIECE	B	The REGULAR "B" cross-reference.
1,.02	ITEM NAME	C	This REGULAR FileMan cross-reference on the ITEM NAME is used in the look-up and edit process.
1,.03	FIELD NUMBER	D	This REGULAR FileMan cross-reference by field number is used by the filer-router to identify header-pieces with field numbers in the target file.
1,.04	LOOKUP LOCAL VARIABLE NAME	E	This cross-reference is used by the rounter/filer to determine which pieces of the header should be set into special variables which may be required by the lookup routine.
2,.01	CAPTION	B	The REGULAR "B" cross-reference.
2,.02	ITEM NAME	C	This REGULAR FileMan cross-reference on the ITEM NAME is used in the look-up and filing processes.
2,.03	FIELD NUMBER	D	This REGULAR FileMan cross-reference is used by the filer-router to identify header-fields with field numbers in the target file.
2,.04	LOOKUP LOCAL VARIABLE NAME	E	This REGULAR FileMan cross-reference is used by the router/filer-to determine which fields of the header should be set into special variables which may be required by the lookup routine.
4,.01	ITEM	B AD AMM	The REGULAR "B" cross-reference.  This cross-reference facilitates traversal from child to parent, up the class hierarchy.  This MUMPS-type cross-reference will update the timestamp on the parent document when the ITEM, MNEMONIC, or SEQUENCE changes.
4,2	MNEMONIC	AMM	This MUMPS-type cross-reference will update the timestamp on the parent document when the ITEM, MNEMONIC, or SEQUENCE changes.
4,3	SEQUENCE	AMM	This MUMPS-type cross-reference will update the timestamp on the parent document when the ITEM, MNEMONIC, or SEQUENCE changes.

Field #	Field Name	X-ref	Description
		AC	This REGULAR FileMan cross-reference is used to list items by sequence number.
4,4	MENU TEXT	AMM  C	This MUMPS-type cross-reference will update the timestamp on the parent document when the ITEM, MNEMONIC, or SEQUENCE changes.  This M cross-reference would be regular but it truncates to 40 characters instead of 30. It is used to display items with no sequence in alpha order by Menu Text.
11,.01	STAT AUTO PRINT EVENT	B	The REGULAR "B" cross-reference.
12,.01	ROUTINE AUTO PRINT EVENT	B	The REGULAR "B" cross-reference.
13,.01	PROCESSING STEP	B	The REGULAR "B" cross-reference.
14,.01	DIALOGUE PROMPT	B	The REGULAR "B" cross-reference.
14,.03	SEQUENCE	AS	This REGULAR FileMan Cross-reference on the sequence sub-field of the Dialog Multiple will facilitate appropriate serialization of prompts.
,99	TIMESTAMP	AM	This cross-reference invokes menu compilation in ^XUTL("XQORM", DA;TIU(8925.1, when the TIMESTAMP field is modified.

## 8925.2 - TIU UPLOAD BUFFER File

Field #	Field Name	X-ref	Description
.01	PROCESS ID NUMBER	B	The REGULAR "B" cross-reference.
2,.01	ERROR LOG ENTRIES	B	The REGULAR "B" cross-reference.

## 8925.3 - TIU UPLOAD ERROR DEFINITION File

Field #	Field Name	X-ref	Description
.001	ERROR CODE #	B	The REGULAR "B" cross-reference.

## 8925.4 - TIU UPLOAD LOG File

Field #	Field Name	X-ref	Description
.01	EVENT DATE/TIME	B	The REGULAR "B" cross-reference.
.06	RESOLUTION STATUS	C	This REGULAR, whole-file cross reference is used to identify unresolved errors for the

Field #	Field Name	X-ref	Description
			filer/router process.
.08	EVENT TYPE	D	This REGULAR FileMan Cross-Reference by EVENT TYPE is used for list building.

## 8925.5 - TIU AUDIT TRAIL File

Field #	Field Name	X-ref	Description
.01	TIU DOCUMENT NAME	B AR	The REGULAR "B" cross-reference.  This MUMPS-type multi-field cross-reference by TIU Document Pointer and Reassignment date/time will help to identify records that have been reassigned.
1.01	REASSIGN-MENT DATE/TIME	AR	This MUMPS-type multi-field cross-reference by TIU Document Pointer and Reassignment date/time will help to identify records that have been reassigned.

## 8925.6 - TIU STATUS File

Field #	Field Name	X-ref	Description
.01	NAME	B	The REGULAR "B" cross-reference.
.03	SEQUENCE	C	This index is used for looking up and sorting document statuses by sequence number. Higher sequence numbers indicate more finished documents.

## 8925.7 - TIU MULTIPLE SIGNATURE File

Field #	Field Name	X-ref	Description
.01	TIU DOCUMENT NUMBER	B AE	The REGULAR "B" cross-reference.  This multi-field, MUMPS-type cross-reference by document and expected cosigner facilitates the identification of privilege to sign the document.
.03	EXPECTED SIGNER	AE	This multi-field, MUMPS-type cross-reference by document and expected cosigner facilitates the identification of privilege to sign the document.

## 8925.8 - TIU SEARCH CATEGORIES File

Field #	Field Name	X-ref	Description
.01	SEARCH CATEGORY	B	The REGULAR "B" cross-reference.
.02	CROSS REFERENCE	C	This REGULAR cross-reference is used to map SEARCH CATEGORY to CROSS

Field #	Field Name	X-ref	Description
		AM	REFERENCE  This MUMPS-type cross-reference is used to update the timestamp on the search category selection menu when a DISPLAY NAME changes.
.99	TIMESTAMP	AM	This cross-reference invokes menu compilation in ^XUTL("XQORM", DA;TIU(8925.8, when the TIMESTAMP field is modified.

## 8925.9 - TIU PROBLEM LINK File

Field #	Field Name	X-ref	Description
.01	DOCUMENT	B  APRB	The REGULAR "B" cross-reference.  This MUMPS-type, multi-field cross-reference by Problem, Document type, Status, and Inverse Reference Date/time facilitates query by problem.
.05	PROVIDER NARRATIVE	APRB	This MUMPS-type, multi-field cross-reference by Problem, Document type, Status, and Inverse Reference Date/time facilitates query by problem.

## 8925.91 - TIU LINK File

Field #	Field Name	X-ref	Description
.01	DOCUMENT	B  APRB	The REGULAR "B" cross-reference.  This MUMPS-type, multi-field cross-reference by Problem, Document type, Status, and Inverse Reference Date/time facilitates query by problem.
.05	PROVIDER NARRATIVE	APRB	This MUMPS-type, multi-field cross-reference by Problem, Document type, Status, and Inverse Reference Date/time facilitates query by problem.

## 8925.93 - TIU PRINT PARAMETERS File

Field #	Field Name	X-ref	Description
.01	DIVISION	B	The REGULAR "B" cross-reference.

## 8925.94 - TIU DIVISION PRINT PARAMETERS File

Field #	Field Name	X-ref	Description
.01	DIVISION	B	The REGULAR "B" cross-reference.

## 8925.95 - TIU DOCUMENT PARAMETERS File

Field #	Field Name	X-ref	Description
.01	DOCUMENT DEFINITION	B	The REGULAR "B" cross-reference.

## 8925.97 - TIU CONVERSIONS File

Field #	Field Name	X-ref	Description
.01	DATA CONVERTED	B	The REGULAR "B" cross-reference.

## 8925.98 - TIU PERSONAL DOCUMENT TYPE LIST File

Field #	Field Name	X-ref	Description
.01	PERSON	B AC	The REGULAR "B" cross-reference.  This multi-field, MUMPS-type cross-reference by User and Parent Document class is used to facilitate identification of the user's preferred list of documents within the context of a given parent class.
.03	DISPLAY NAME	AM	This MUMPS-type cross-reference is used for marking records for menu recompilation when the DISPLAY NAME for an item changes.
.99	TIMESTAMP	AM	This MUMPS-type cross reference on the TIMESTAMP field is used to accomplish menu compilation into ^XUTL("XQORM","DA;TIU(9025.98", for presentation of menus by ^XQORM.

## 8925.99 - TIU PARAMETERS File

Field #	Field Name	X-ref	Description
.01	INSTITUTION	B	The REGULAR "B" cross-reference.

## 8926 - TIU PERSONAL PREFERENCES File

Field #	Field Name	X-ref	Description
.01	USER NAME	B	The REGULAR "B" cross-reference.
.05	DISPLAY MENUS	AMENU	This MUMPS-type cross-reference evaluates the user's preference concerning display or suppression of menus within TIU.

## 5.4 Table File

FILE: TIU DOCUMENT

GLOBAL: ^TIU(8925,

FILE #: 8925

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	DOCUMENT TYPE	D0,0	1	P
.02	PATIENT	"	2	P
.03	VISIT	"	3	P
.04	PARENT DOCUMENT TYPE	"	4	P
.05	STATUS	"	5	P
.06	PARENT	"	6	P
.07	EPISODE BEGIN DATE/TIME	"	7	D
.08	EPISODE END DATE/TIME	"	8	D
.09	URGENCY	"	9	S
.1	LINE COUNT	"	10	F
.11	CREDIT STOP CODE ON COMPLETION	"	11	S
.12	MARK DISCH DT FOR CORRECTION	"	12	S
.13	VISIT TYPE	"	13	F
2	REPORT TEXT (8925.02)			
.01	REPORT TEXT	D0,"TEXT",D1,0	1	W
3	EDIT TEXT BUFFER (8925.03)			
.01	EDIT TEXT BUFFER	D0,"TEMP",D1,0	1	W
1201	ENTRY DATE/TIME	D0,12	1	D
1202	AUTHOR/DICTATOR	"	2	P
1203	CLINIC	"	3	P
1204	EXPECTED SIGNER	"	4	P
1205	HOSPITAL LOCATION	"	5	P
1206	SERVICE CREDIT STOP	"	6	P
1207	SECONDARY VISIT	"	7	P
1208	EXPECTED COSIGNER	"	8	P
1209	ATTENDING PHYSICIAN	"	9	P
1210	ORDER NUMBER	"	10	P
1211	VISIT LOCATION	"	11	P
1301	REFERENCE DATE	D0,13	1	D
1302	ENTERED BY	"	2	P
1303	CAPTURE METHOD	"	3	S
1304	RELEASE DATE/TIME	"	4	D

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
1305	VERIFICATION DATE/TIME	"	5	D
1306	VERIFIED BY	"	6	P
1307	DICTIONARY DATE	"	7	D
1308	SUSPENSE DATE/TIME	"	8	D
1401	PATIENT MOVEMENT RECORD	D0,14	1	P
1402	TREATING SPECIALTY	"	2	P
1403	IRT RECORD	"	3	P
1404	SERVICE	"	4	P
1405	REQUESTING PACKAGE REFERENCE	"	5	V
1406	RETRACTED ORIGINAL	"	6	P
1501	SIGNATURE DATE/TIME	D0,15	1	D
1502	SIGNED BY	"	2	P
1503	SIGNATURE BLOCK NAME	"	3	F
1504	SIGNATURE BLOCK TITLE	"	4	F
1505	SIGNATURE MODE	"	5	S
1506	COSIGNATURE NEEDED	"	6	S
1507	COSIGNATURE DATE/TIME	"	7	D
1508	COSIGNED BY	"	8	P
1509	COSIGNATURE BLOCK NAME	"	9	F
1510	COSIGNATURE BLOCK TITLE	"	10	F
1511	COSIGNATURE MODE	"	11	S
1512	MARKED SIGNED ON CHART BY	"	12	P
1513	MARKED COSIGNED ON CHART BY	"	13	P
1601	AMENDMENT DATE/TIME	D0,16	1	D
1602	AMENDED BY	"	2	P
1603	AMENDMENT SIGNED	"	3	D
1604	AMENDMENT SIGN BLOCK NAME	"	4	F

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
1605	AMENDMENT SIGN BLOCK TITLE	"	5	F
1606	ADMINISTRATIVE CLOSURE DATE	"	6	D
1607	ADMIN CLOSURE SIG BLOCK NAME	"	7	F
1608	ADMIN CLOSURE SIG BLOCK TITLE	"	8	F
1609	ARCHIVE/PURGE DATE/TIME	"	9	D
1610	DELETED BY	"	10	P
1611	DELETION DATE	"	11	D
1612	REASON FOR DELETION	"	12	S
1613	ADMINISTRATIVE CLOSURE MODE	"	13	S
1701	SUBJECT (OPTIONAL description)	D0,17	1	F
2101	ID PARENT	D0,21	1	P
15001	VISIT ID	D0,150	1	F
70201	PROCEDURE SUMMARY CODE	D0,702	1	S
70202	DATE/TIME PERFORMED	"	2	D

FILE: TIU DOCUMENT DEFINITION

GLOBAL: ^TIU(8925.1,

FILE #: 8925.1

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	F
.02	ABBREVIATION	"	2	F
.03	PRINT NAME	"	3	F
.04	TYPE	"	4	S
.05	PERSONAL OWNER	"	5	P
.06	CLASS OWNER	"	6	P
.07	STATUS	"	7	P
.08	IN USE	COMPUTED		
.1	SHARED	D0,0	10	S
.11	ORPHAN	COMPUTED		
.12	HAS BOILTXT	"		
.13	NATIONAL STANDARD	D0,0	13	S
.14	POSTING INDICATOR	"	14	S

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
1	UPLOAD DELIMITED ASCII HEADER (8925.11)			
.01	HEADER PIECE	D0,"ITEM",D1,0	1	N
.02	ITEM NAME	"	2	F
.03	FIELD NUMBER	"	3	F
.04	LOOKUP LOCAL VARIABLE NAME	"	4	F
.05	EXAMPLE ENTRY	"	5	F
.06	CLINICIAN MUST DICTATE	"	6	S
.07	REQUIRED FIELD?	"	7	S
1	TRANSFORM CODE	D0,"ITEM",D1,1		K
1.01	UPLOAD TARGET FILE	D0,1	1	P
1.02	LAYGO ALLOWED	"	2	S
1.03	TARGET TEXT FIELD SUBSCRIPT	"	3	F
1.04	BOILERPLATE ON UPLOAD ENABLED	"	4	S
2	UPLOAD CAPTIONED ASCII HEADER (8925.12)			
.01	CAPTION	D0,"HEAD",D1,0	1	F
.02	ITEM NAME	"	2	F
.03	FIELD NUMBER	"	3	F
.04	LOOKUP LOCAL VARIABLE NAME	"	4	F
.05	EXAMPLE ENTRY	"	5	F
.06	CLINICIAN MUST DICTATE	"	6	S
.07	REQUIRED FIELD?	"	7	S
1	TRANSFORM CODE	D0,"HEAD",D1,1		K
3	BOILERPLATE TEXT (8925.13)			
.01	BOILERPLATE TEXT	D0,"DFLT",D1,0	1	W
3.02	OK TO DISTRIBUTE	D0,3	2	S
3.03	SUPPRESS VISIT SELECTION	"	3	S
4	UPLOAD LOOK-UP METHOD	D0,4		K
4.1	COMMIT ACTION	D0,4.1		K
4.2	RELEASE ACTION	D0,4.2		K
4.3	VERIFICATION ACTION	D0,4.3		K
4.4	DELETE ACTION	D0,4.4		K

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
4.45	PACKAGE REASSIGNMENT ACTION	D0,4.45		K
4.5	UPLOAD POST-FILING CODE	D0,4.5		K
4.6	ENTRY ACTION	D0,4.6		K
4.7	EXIT ACTION	D0,4.7		K
4.8	UPLOAD FILING ERROR CODE	D0,4.8		K
4.9	POST-SIGNATURE CODE	D0,4.9		K
5	EDIT TEMPLATE	D0,5	E1,245	F
6	PRINT METHOD	D0,6		K
6.1	PRINT FORM HEADER	D0,6.1	1	F
6.12	PRINT FORM NUMBER	"	2	F
6.13	PRINT GROUP	"	3	N
6.14	ALLOW CUSTOM FORM HEADERS	"	4	S
7	VISIT LINKAGE METHOD	D0,7		K
8	VALIDATION METHOD	D0,8		K
9	OBJECT METHOD	D0,9		K
10	ITEM (8925.14)			
.01	ITEM	D0,10,D1,0	1	P
2	MNEMONIC	"	2	F
3	SEQUENCE	"	3	N
4	MENU TEXT	"	4	F
11	STAT AUTO PRINT EVENT (8925.111)			
.01	STAT AUTO PRINT EVENT	D0,11,D1,0	1	S
12	ROUTINE AUTO PRINT EVENT (8925.112)			
.01	ROUTINE AUTO PRINT EVENT	D0,12,D1,0	1	S
13	PROCESSING STEPS (8925.113)			
.01	PROCESSING STEP	D0,13,D1,0	1	P
.02	SEQUENCE	"	2	N
.03	REQUIRED?	"	3	S
.04	RESULTING STATUS	"	4	P
.05	CONDITION TEXT	"	5	F
14	DIALOG (8925.114)			

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	PROMPT	D0,"DIALOG",D1,0	1	F
.02	ITEM NAME	"	2	F
.03	SEQUENCE	"	3	N
.04	FIELD	"	4	F
.05	REQUIRED	"	5	S
.06	VISIBLE	"	6	S
1	SET METHOD	D0,"DIALOG",D1,1		K
101	WINDOWS CONTROL	D0,"DIALOG",D1,"W"	1	S
102	API NAME	"	2	F
103	API PARAMETER #1	"	3	F
113	WINDOWS CONDITION	D0,"DIALOG",D1,"W3"		K
117	WINDOWS DEFAULT	D0,"DIALOG",D1,"W7"		K
99	TIMESTAMP	D0,99	1	F

FILE: 8925.2 TIU UPLOAD BUFFER

GLOBAL: ^TIU(8925.2,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	PROCESS ID NUMBER	D0,0	1	F
.02	USER	"	2	P
.03	PROCESS BEGIN TIME	"	3	D
.04	PROCESS END TIME	"	4	D
1	REPORT TEXT (8925.21)			
.01	REPORT TEXT	D0,"TEXT",D1,0	1	W
2	ERROR LOG ENTRIES (8925.22)			
.01	ERROR LOG ENTRIES	D0,"ERR",D1,0	1	P

FILE: 8925.3 TIU UPLOAD ERROR DEFINITION

GLOBAL: ^TIU(8925.3,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.001	ERROR CODE #			N
.01	NAME	D0,0	1	F
.02	ERROR TEXT	"	2	F
.03	ALERT TYPE	"	3	S

FILE: 8925.4 TIU UPLOAD LOG

GLOBAL: ^TIU(8925.4,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	EVENT DATE/TIME	D0,0	1	D

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.02	USER	"	2	P
.03	DOCUMENT TYPE	"	3	F
.04	ERROR DESCRIPTION	"	4	F
.05	BUFFER FILE POINTER	"	5	P
.06	RESOLUTION STATUS	"	6	S
.07	RESOLUTION DATE	"	7	D
.08	EVENT TYPE	"	8	S
1	HEADER TEXT (8925.41)			
.01	HEADER TEXT	D0,"HEAD",D1,0	1	W
2	MISSING FIELDS (8925.42)			
.01	FILE NUMBER	D0,1,D1,0	1	N
.02	RECORD NUMBER	"	2	N
.03	FIELD NUMBER	"	3	N
.04	FAILED VALUE	"	4	F

FILE: 8925.5 TIU AUDIT TRAIL

GLOBAL: ^TIU(8925.5,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	TIU DOCUMENT NAME	D0,0	1	P
.02	EDIT DATE/TIME	"	2	D
.03	EDITED BY	"	3	P
.04	INITIAL CHECKSUM	"	4	F
.05	FINAL CHECKSUM	"	5	F
1	PRE-EDIT TEXT (8925.51)			
.01	PRE-EDIT TEXT	D0,"TEXT",D1,0	1	W
1.01	REASSIGNMENT DATE/TIME	D0,1	1	D
1.02	REASSIGNED BY	"	2	P
1.03	INITIAL PATIENT	"	3	P
1.04	FINAL PATIENT	"	4	P
1.05	INITIAL VISIT DATE/TIME	"	5	D
1.06	FINAL VISIT DATE/TIME	"	6	D
1.07	INITIAL VISIT LOCATION	"	7	P
1.08	FINAL VISIT LOCATION	"	8	P
1.09	INITIAL VISIT TYPE	"	9	S
1.1	FINAL VISIT TYPE	"	10	S
1.11	INITIAL VISIT RECORD	"	11	P
1.12	FINAL VISIT RECORD	"	12	P
2.01	DELETION DATE/TIME	D0,2	1	D
2.02	DELETED BY	"	2	P
2.03	REASON FOR DELETION	"	3	S
3.01	INTERDISCIPLINARY NOTE ACTION	D0,3	1	S
3.02	DATE/TIME OF ACTION	"	2	D

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
3.03	PERSON	"	3	P
3.04	ID ENTRY STATUS	"	4	P
3.05	ID PARENT	"	5	P

FILE: 8925.6 TIU STATUS

GLOBAL: ^TIU(8925.6,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	F
.02	SYMBOL	"	2	F
.03	SEQUENCE	"	3	N
.04	APPLIES TO	"	4	S
1	DESCRIPTION (8925.61)			
.01	DESCRIPTION	D0,1,D1,0	1	W

FILE: TIU MULTIPLE SIGNATURE

GLOBAL: ^TIU(8925.7,

FILE #: 8925.7

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	TIU DOCUMENT NUMBER	D0,0	1	P
.02	COSIGNATURE NEEDED	"	2	S
.03	EXPECTED SIGNER	"	3	P
.04	COSIGNATURE DATE/TIME	"	4	D
.05	ACTUAL COSIGNER	"	5	P
.06	COSIGNER'S SIGNATURE BLOCK	"	6	F
.07	COSIGNER'S TITLE	"	7	F
.08	COSIGNATURE MODE	"	8	S

GLOBAL: ^TIU(8925.8,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	SEARCH CATEGORY	D0,0	1	F
.02	CROSS-REFERENCE	"	2	F
.03	DISPLAY NAME	"	3	F
.04	ASSOCIATED FILE	"	4	P
1	SCREEN	D0,1		K
2	LOOK-UP CODE	D0,2		K
99	TIMESTAMP	D0,99	1	F

FILE: TIU PROBLEM LINK

GLOBAL: ^TIU(8925.9,

FILE #: 8925.9

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	DOCUMENT	D0,0	1	P
.02	PROBLEM	"	2	P
.03	PURPOSE OF VISIT	"	3	P
.04	CLINICAL TERM	"	4	P
.05	PROVIDER NARRATIVE	"	5	F
.06	ICD9 DIAGNOSIS	"	6	P

FILE: 8925.91 TIU EXTERNAL DATA LINK

GLOBAL: ^TIU(8925.91,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	DOCUMENT	D0,0	1	P
.02	IMAGE	"	2	P
1	LINKED DATA OBJECT	D0,1	1	F

FILE: 8925.93 TIU PRINT PARAMETERS

GLOBAL: ^TIU(8925.93,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	HOSPITAL LOCATION	D0,0	1	P
1.01	PROGRESS NOTES	D0,1	1	S
1.02	LAST PROGRESS NOTE PRINTED	"	2	F
1.03	PROGRESS NOTES DEFAULT PRINTER	"	3	P
3	EXCLUDE FROM PN BATCH PRINT	D0,3	1	S

FILE: 8925.94 TIU DIVISION PRINT PARAMETERS

GLOBAL: ^TIU(8925.94,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	DIVISION	D0,0	1	P
.02	LOCATION TO PRINT ON FOOTER	"	2	F
1.01	LAST PROGRESS NOTE PRINTED	D0,1	1	D
1.02	PROGRESS NOTES BATCH PRINTER	"	2	P

FILE: 8925.95 TIU DOCUMENT PARAMETERS

GLOBAL: ^TIU(8925.95,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	DOCUMENT DEFINITION	D0,0	1	P
.02	REQUIRE RELEASE	"	2	S
.03	REQUIRE MAS VERIFICATION	"	3	S
.04	REQUIRE AUTHOR TO SIGN	"	4	S
.05	WHEN MAY CHART COPY BE PRINTED	"	5	P
.06	ROUTINE PRINT EVENT(S)	"	6	S
.07	STAT PRINT EVENT(S)	"	7	S
.08	MANUAL PRINT AFTER ENTRY	"	8	S
.09	ALLOW CHART PRINT OUTSIDE MAS	"	9	S
.1	ALLOW >1 RECORDS PER VISIT	"	10	S
.11	ENABLE IRT INTERFACE	"	11	S
.12	IRT DEFICIENCY	"	12	P
.13	DEFAULT PRINTER	"	13	P
.14	SUPPRESS DX/CPT ON ENTRY	"	14	S
.15	FORCE RESPONSE TO EXPOSURES	"	15	S
.16	ASK DX/CPT ON ALL OPT VISITS	"	16	S
.17	SEND ALERTS ON ADDENDA	"	17	S
.18	ORDER ID ENTRIES BY TITLE	"	18	S
.19	SEND ALERTS ON NEW ID ENTRY	"	19	S
.2	SEND COSIGNATURE ALERT	"	20	S
1	PROCESSING STEPS (8925.951)			
.01	PROCESSING STEPS	D0,1,D1,0	1	P
.02	SEQUENCE	"	2	N
.03	REQUIRED	"	3	S
.04	RESULTING STATUS	"	4	P
.05	CONDITION TEXT	"	5	F
1	CONDITION CODE	D0,1,D1,1		K
2	DIVISION (8925.952)			
.01	DIVISION	D0,2,D1,0	1	P
.02	CHART COPY PRINTER	"	2	P
.03	STAT CHART COPY PRINTER	"	3	P
3	EDITOR SET-UP CODE	D0,3		K
4	FILING ERROR ALERT RECIPIENTS (8925.954)			
.01	FILING ERROR ALERT	D0,4,D1,0	1	P

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
	RECIPIENTS			
5	USERS REQUIRING COSIGNATURE (8925.955)			
.01	USERS REQUIRING COSIGNATURE	D0,5,D1,0	1	P

FILE: 8925.97 TIU CONVERSIONS

GLOBAL: ^TIU(8925.97,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	DATA CONVERTED	D0,0	1	S
.02	START DATE	"	2	D
.03	COMPLETED DATE	"	3	D
.04	STARTING IEN	"	4	N
.05	PROCESSING IEN	"	5	N
.06	RECORDS PROCESSED	"	6	N
.07	ERROR COUNTER	"	7	N
.08	STOPPING IEN	"	8	N
2	ROLLBACK - START	D0,2	1	N
2.1	ROLLBACK - STOP	"	2	N
2.5	HALT CONVERSION	"	3	S

FILE: 8925.98 TIU PERSONAL DOCUMENT TYPE LIST

GLOBAL: ^TIU(8925.98,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	PERSON	D0,0	1	P
.02	PARENT DOCUMENT CLASS	"	2	P
.03	DEFAULT TYPE	"	3	P
10	PERSONAL DOCUMENT LIST(8925.9801)			
.01	TITLE	D0,10,D1,0	1	P
.02	SEQUENCE	"	2	N
.03	DISPLAY NAME	"	3	F
99	TIMESTAMP	D0,99	1	F

FILE: 8925.99 TIU PARAMETERS

GLOBAL: ^TIU(8925.99,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	INSTITUTION	D0,0	1	P
.02	ENABLE ELECTRONIC SIGNATURE	"	2	S

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.03	CHARACTERS PER LINE	"	3	N
.04	GRACE PERIOD FOR PURGE	"	4	N
.05	GRACE PERIOD FOR SIGNATURE	"	5	N
.06	OPTIMIZE LIST BUILDING FOR	"	6	S
.07	SUPPRESS REVIEW NOTES PROMPT	"	7	S
.08	DEFAULT PRIMARY PROVIDER	"	8	S
.09	ASCII UPLOAD SOURCE	"	9	S
.1	RECORD HEADER SIGNAL	"	10	F
.11	END OF MESSAGE SIGNAL	"	11	F
.12	BEGIN REPORT TEXT SIGNAL	"	12	F
.13	MAJOR DELIMITER	"	13	F
.14	FUTURE APPOINTMENT RANGE	"	14	N
.15	PACE CHARACTER	"	15	F
.16	UPLOAD HEADER FORMAT	"	16	S
.17	UPLOAD PROTOCOL	"	17	S
.18	RUN UPLOAD FILER IN FOREGROUND	"	18	S
.22	ENABLE CHART COPY PROMPT	"	22	S
1.05	AMENDMENT SIGNATURE BLOCK	D0,1	5	F
1.06	BLANK CHARACTER STRING	"	6	F
1.07	ENABLE NOTIFICATIONS DATE	"	7	D
2	UPLOAD ERROR ALERT RECIPIENT (8925.992)			
.01	ALERT RECIPIENT	D0,2,D1,0	1	P
9999999.01	UPLOAD FILE DIRECTORY	D0,99999999	1	F
9999999.02	ARCHIVE FILE DIRECTORY	"	2	F
9999999.03	UPLOAD FILE NAME	"	3	F

FILE: 8926 TIU PERSONAL PREFERENCES

GLOBAL: ^TIU(8926,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	USER NAME	D0,0	1	P
.02	DEFAULT LOCATION	"	2	P
.03	REVIEW SCREEN SORT FIELD	"	3	S
.04	REVIEW SCREEN SORT ORDER	"	4	S
.05	DISPLAY MENUS	"	5	S
.06	PATIENT SELECTION PREFERENCE	"	6	S
.07	ASK 'Save changes?' AFTER EDIT	"	7	S
.08	ASK SUBJECT FOR PROGRESS NOTES	"	8	S

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.09	DEFAULT COSIGNER	"	9	P
.1	NUMBER OF NOTES ON REV SCREEN	"	10	N
.11	SUPPRESS REVIEW NOTES PROMPT	"	11	S
1	LOCATION BY DAY OF WEEK (8926.01)			
.01	DAY OF WEEK	D0,1,D1,0	1	S
.02	HOSPITAL LOCATION	"	2	P

FILE: 8927 TIU TEMPLATE

GLOBAL: ^TIU(8927,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	F
.02	BLANK LINES	"	2	N
.03	TYPE	"	3	S
.04	STATUS	"	4	S
.05	EXCLUDE FROM GROUP BOILERPLATE	"	5	S
.06	PERSONAL OWNER	"	6	P
.07	EDITOR CLASS	"	7	P
.08	DIALOG	"	8	S
.09	DISPLAY ONLY	"	9	S
.1	FIRST LINE	"	10	S
.11	ONE ITEM ONLY	"	11	S
.12	HIDE DIALOG ITEMS	"	12	S
.13	HIDE TREE ITEMS	"	13	S
.14	INDENT ITEMS	"	14	S
.15	REMINDER DIALOG	"	15	P
.16	LOCK	"	16	S
.17	COM OBJECT	"	17	P
.18	COM PARAM	"	18	F
.19	LINK	"	19	V
2	BOILERPLATE TEXT (8927.02)			
.01	BOILERPLATE TEXT	D0,2,D1,0	1	W
5	DESCRIPTION (8927.05)			
.01	DESCRIPTION	D0,5,D1,0	1	W
10	ITEMS (8927.03)			
.01	SEQUENCE	D0,10,D1,0	1	N
.02	ITEM	"	2	P

FILE: 8927.1 TIU TEMPLATE FIELD

GLOBAL: ^TIU(8927.1,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	F
.02	TYPE	"	2	S
.03	INACTIVE	"	3	S
.04	LENGTH	"	4	N
.05	DEFAULT TEXT	"	5	F
.06	LIST MANAGER	"	6	F
.07	TEXT DEFAULT INDEX	"	7	N
.08	REQUIRED	"	8	S
.09	SEPARATE LINES	"	9	S
.1	MAX LENGTH	"	10	N
.11	INDENT	"	11	N
.12	PAD	"	12	N
.13	MIN VALUE	"	13	N
.14	MAX VALUE	"	14	N
.15	INCREMENT	"	15	N
.16	DATE TYPE	"	16	S
2	DESCRIPTION (8927.12)			
.01	DESCRIPTION	D0,2,D1,0	1	W
3	URL	D0,3	1	F
10	ITEMS (8927.11)			
.01	ITEMS	D0,10,D1,0	1	W

FILE: 9003130.1 BTIU OBJECT DESCRIPTION

GLOBAL: ^BTIUOD(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	P
1	DESCRIPTION (9003130.11)			
.01	DESCRIPTION	D0,1,D1,0	1	W

FILE: 9003130.2 BTIU UPLOAD STATUS

GLOBAL: ^BTIUZ(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	N
.02	UPLOAD RUNNING?	"	2	D
.03	FILE AT LAST CHECK?	"	3	D
.04	LAST FILE PROCESSED	"	4	D
.05	UPLOAD ERROR MESSAGE	"	5	F

## 6.0 External Relations

The following list indicates the external call made by the system to the other RPMS packages.

<b>Routine Called</b>	<b>Invoked By (routines unless stated otherwise)</b>
^APCDALV	^BTIUVSIT
EN^APCDALV	^BTIUPUTP, ^BTIUVSIT
EN^APCDALVR	^BTIUPCC
EN^APCDEFL	^BTIUED
EN^APCDEKL	^BTIUED
EN2^APCDEKL	^BTIUED
^APCDELMP	Menu Option BTIU EDIT VISIT
EN^APCDVD	^BTIUPCC
PRTTXT^APCHSUTL	^BTIULO1
\$\$DSCHDATE^APCLV	^BTIUPCC
\$\$IMM^APCLV	^BTIUPCC
\$\$PCCVF^APCLV	^BTIUPCC
\$\$SC^APCLV	^BTIUED
\$\$VD^APCLV	^BTIUPCC
\$\$ICD^ATXCHK	^BTIULO
\$\$MCD^AUPNPAT	^BTIULO2
\$\$MCR^AUPNPAT	^BTIULO2
\$\$PI^AUPNPAT	^BTIULO2
\$\$PIN^AUPNPAT	^BTIULO2
ADD^AUPNVSIT	^TIUPNCVX, ^TIUXRC4, ^TIUXRC5,  dd8925
SUB^AUPNVSIT	^TIUPNCV, ^TIUXRC1,  dd8925
^BDGAD1	^BTIUUDSC
\$\$CONF^BDGF	^BTIUUDOC, ^BTIUUDSC
\$\$NUMDATE^BDGF	^BTIULO6
^BDGF1	^BTIUUDSC, ^BTIUICL, ^BTIUPCC
\$\$LASTPRV^BDGF1	^BTIUUDSC
\$\$LASTSRVN^BDGF1	^BTIUUDSC
IMMFORC^BIRPC	^BTIULO2
IMMHX^BIRPC	^BTIULO2
\$\$VSTR2VIS^CIAVCXEN	BTIULO3, BTIULO4, BTIULO5
\$\$GETVAR^CIAVMEVT	BTIULO3, BTIULO4, BTIULO5
GETVAR^CIAVMEVT	BTIULO3, BTIULO4, BTIULO5
CHECK^DGJSUM	TIUDIRT
DCSDEL^DGJSUM	TIUDIRT
EDIT^DGJSUM	TIUDIRT
SIGUP^DGJSUM	TIUDIRT
^DGPMLOS	TIUPRDS1
CUR^FHORD7	BTIULO2

ACTIVE^GMPLUTL	TIURP
\$\$MSG^GMPLX	TIURP
EN1^GMRADPT	BTIULO, BTIULO2, GMRPNCW, TIULADR
EN1^GMRAOR1	TIUPP3
\$\$CPACTM^GMRCCP	TIULP, TIUPUTCP
\$\$CPINTERP^GMRCCP	TIULP
\$\$CPPAT^GMRCCP	TIU144, TIUPUTCN, TIUPUTCP
CPINTERP^GMRCCP	TIULP
TIUEN^GMRCP513	TIUPRCN
GET^GMRCTIU	TIUCNSLT, TIUPS14, TIUPS155, TIUPUTCN, TIUPUTCP, TIURB
SEND^GMRCTIU	TIUCNSLT
ROLLBACK^GMRCTIU1	TIUCNSLT
ALERTDEL^GMRDALRT	TIUDSCNV
EN1^GMRVUT0	TIULO
ENCWA^GMTS	GMRPNCW
CD^GMTSCW	GMRPNCW
^GMTSLRCE	TIULAB
\$\$CRE^GMTSOBJ	TIUHSL, TIUHSOBJ, TIUHSOLM, TIUHSV
EXTRACT^GMTSOBJ	TIUHSOLM
TYPE^GMTSOBJ	TIUHSOLM
GETLST^BDF18A	TIUPXAPC, TIUPXAPI
\$\$CODM^ICPTCOD	TIUPXAPM
\$\$CPT^ICPTCOD	TIUPXAPC
\$\$MOD^ICPTMOD	TIUPXAPC
CONFIG^LEXSET	TIUPXAPC, TIUPXAPI
\$\$CPCONE^LEXU	TIUPXAPC
\$\$CPTONE^LEXU	TIUPXAPC
TEST^LR7OR2	TIULO, TIULO1
\$\$TIUCOMP^MDAPI	TIUCPCL
\$\$TIUDEL^MDAPI	TIUCPCL
\$\$TIUREAS^MDAPI	TIURD
TIUREAS^MDAPI	TIURD
IN^OR	GMRPNOR1
EN^ORQ1	BTIULO5
PATIENT^ORU1	TIUEDIM, TIURC1
OCL^PSOORRL	TIULMED
\$\$DATA2PCE^PXAPI	TIUPXAP1
\$\$GETENC^PXAPI	TIUP134, TIUP149, TIUPXAP2
\$\$INTV^PXAPI	TIUPXAP2, TIURD3
\$\$PRVCLASS^PXAPI	TIUPXAP1
\$\$VST2APPT^PXAPI	TIUPXAP2
PRV^PXBUTL2	TIUPXAPI
ENCEVENT^PXKENC	TIUPXAP2
QUE^PXPTPOST	TIUDSCNV
\$\$APPOINT^PXUTL1	TIUPXAP2
SCCOND^PXUTLSCC	TIUPXAPS

PXXDPT^PXXDPT	TIUENV
\$\$STATUS^SDAM1	TIUPXAP2
52^VADPT	TIULV
ADD^VADPT	TIULO1, TIULV
DEM^VADPT	TIULO, TIULV, TIURB, TIURB1
ELIG^VADPT	TIULV
IN5^VADPT	TIUPRPN6
INP^VADPT	TIULO, TIULV
OERR^VADPT	GMRPNOR1, TIULV, TIUP134P, TIUP146P, TIUP149P
PID^VADPT	TIUPRPN7, TIUR2, TIURECL1, TIURL, TIURM1, TIURPTT1, TIURTIT1
\$\$NAME^VASITE	TIULV
\$\$IEN2VID^VSIT	dd8925, func
VSIT^VSIT	TIUENV

Also have calls to 2 PIMS ScreenMan forms which link TIU and Incomplete Chart Tracking module of ADT. In routine ^BTIUCD, the following forms are called:

- BDG INCOMPLETE EDIT
- BDG DAY SURGERY EDIT

## 6.1 Published Entry Points

Routine	Description
MAIN^BTIUEDIT	Enter documents with patient and visit already set
MRG^BTIULINK	Called by PCC when visits are merged

## 6.2 Remote Procedure Call

Remote Procedure Calls (RPCs), Application Program Interfaces (APIs) and supported references to which you may subscribe will be described in a Developer's Guide and on the DBA menu on Forum.

Name	Description	Availability
TIU AUTHORIZATION	This RPC allows the calling application to evaluate privilege to perform any ASU-mediated action on a TIU document.	SUBSCRIPTION
TIU CAN CHANGE COSIGNER?	BOOLEAN RPC to evaluate user's privilege to modify the expected cosigner, given the current status of the document, and the user's role with respect to it.	SUBSCRIPTION
TIU CREATE ADDENDUM	This Remote Procedure allows the creation of addenda to TIU Documents.	SUBSCRIPTION

<b>Name</b>	<b>Description</b>	<b>Availability</b>
RECORD		
TIU CREATE RECORD	This remote procedure allows the creation of TIU DOCUMENT records.	SUBSCRIPTION
TIU DELETE RECORD	Deletes TIU Document records...Evaluates authorization.	SUBSCRIPTION
TIU DETAILED DISPLAY	Gets details for display of a given record.	SUBSCRIPTION
TIU DOCUMENTS BY CONTEXT	Returns lists of TIU Documents that satisfy the following search criteria: 1 - signed documents (all) 2 - unsigned documents 3 - uncosigned documents 4 - signed documents/author 5 - signed documents/date range	SUBSCRIPTION
TIU GET ADDITIONAL SIGNERS	Returns the list of additional signers currently identified for a given TIU document.	SUBSCRIPTION
TIU GET ALERT INFO	Given a TIU XQAID, return the patient and document type for the item being alerted.	SUBSCRIPTION
TIU GET ASSOCIATED IMAGES	Given a Document, get the list of associated images.	SUBSCRIPTION
TIU GET BOILERPLATE	Returns a title's boilerplate text and resolves any objects embedded in the text.	AGREEMENT
TIU GET DEFAULT PROVIDER	This RPC returns the default provider as specified by the TIU Site Parameter DEFAULT PRIMARY PROVIDER, which has the following allowable values: 0 - NONE, DON'T PROMT In which case the call will return 0^ 1 - DEFAULT, BY LOCATION In this case, the call will return the default provider for a given Hospital Location, as specified in the set-up for the Clinic in MAS. If a default provider is specified for the location in question, that person will be returned. If the Clinic set-up specifies use of the Primary Provider (defined) for the patient, then that person will be returned. The return format will be DUZ^LASTNAME,FIRSTNAME. 2 - AUTHOR (IF PROVIDER) In this case, the call will return the current user (if they are a Provider). If their not a known Provider, then the call will return 0^.	SUBSCRIPTION
TIU GET DOC COUNT BY VISIT	This remote procedure returns the number of documents that are linked to a particular visit.	SUBSCRIPTION
TIU GET	This Remote Procedure returns the	SUBSCRIPTION

Name	Description	Availability
DOCUMENT PARAMETERS	parameters by which a given document or document type is to be processed.	
TIU GET DOCUMENT TITLE	This remote procedure returns the pointer to the TIU DOCUMENT DEFINITION FILE that corresponds to the TITLE of the document identified in the TIUDA parameter.	SUBSCRIPTION
TIU GET DOCUMENTS FOR IMAGE	Given an image, get the list of associated documents.	SUBSCRIPTION
TIU GET DS URGENCIES	Returns a set of discharge summary urgencies for use in a long list box.	SUBSCRIPTION
TIU GET LIST OF OBJECTS	This RPC returns the list of TIU OBJECTS that the current user may select from.	SUBSCRIPTION
TIU GET PERSONAL PREFERENCE S	Returns Users personal preferences for TIU in the following format: TIUY = USER [1P] ^ DEFAULT LOCATION [2P] ^ REVIEW SCREEN SORT FIELD [3S] ^ REVIEW SCREEN SORT ORDER [4S] ^ DISPLAY MENUS [5S] ^ PATIENT SELECTION PREFERENCE [6S] ^ ASK 'Save changes?' AFTER EDIT [7S] ^ASK SUBJECT FOR PROGRESS NOTES [8S] ^	SUBSCRIPTION
TIU GET PRINT NAME	This Remote Procedure receives a pointer to the TIU DOCUMENT DEFINITION FILE (#8925.1) and returns a string containing the Print Name of the corresponding Document Definition.	SUBSCRIPTION
TIU GET RECORD TEXT	This RPC will get the textual portion of a TIU Document Record.	SUBSCRIPTION
TIU GET REQUEST	This Remote Procedure returns the variable pointer to the REQUESTING PACKAGE REFERENCE (File #8925, Field #1405). This would be the record in the Requesting Package (e.g., Consult/Request Tracking or Surgery) for which the resulting document has been entered in TIU.	SUBSCRIPTION
TIU GET SITE PARAMETERS	This RPC returns the TIU Parameters for the Division the user is logged in to.	SUBSCRIPTION
TIU IDENTIFY CONSULTS CLASS	This RPC returns the record number of the class CONSULTS in the TIU DOCUMENT DEFINITION file (#8925.1).	SUBSCRIPTION
TIU IS THIS A CONSULT?	BOOLEAN RPC which evaluates whether the title indicated is that of a consult.	SUBSCRIPTION
TIU IS USER A PROVIDER?	This Boolean RPC returns TRUE if the user was a known provider on the date specified.	SUBSCRIPTION
TIU JUSTIFY DELETE?	BOOLEAN RPC that evaluates whether a justification is required for deletion (e.g., deletion is authorized, but the document has been signed, etc.).	SUBSCRIPTION

<b>Name</b>	<b>Description</b>	<b>Availability</b>
TIU LINK DOCUMENT TO IMAGE	This RPC links a document with an image. It will support a many-to-many association between documents and images.	SUBSCRIPTION
TIU LOAD BOILERPLATE TEXT	This RPC will load the boilerplate text associated with the selected title, and execute the methods for any objects embedded in the boilerplate text.	SUBSCRIPTION
TIU LOAD RECORD FOR EDIT	This RPC loads the return array with data in a format consistent with that required by the TIU UPDATE RECORD API. It should be invoked when the user invokes the Edit action, to load the dialog for editing the document.	SUBSCRIPTION
TIU LOCK RECORD	This RPC will issue an incremental LOCK on the record identified by the TIUDA parameter, returning an integer truth value indicating success or failure in obtaining the LOCK.	SUBSCRIPTION
TIU LONG LIST BOILERPLATE D	Used by the GUI to supply a long list of boiler plated titles.	RESTRICTED
TIU LONG LIST CONSULT TITLES	This RPC serves data to a long list of selectable TITLES for CONSULTS.	SUBSCRIPTION
TIU LONG LIST OF TITLES	This RPC serves data to a long list of selectable TITLES by CLASS. e.g., passing the class PROGRESS NOTES will return active Progress Notes titles which the current user is authorized to enter notes under.	SUBSCRIPTION
TIU NOTES	This API gets lists of progress notes for a patient, with optional parameters for STATUS, EARLY DATE/TIME, and LATE DATE/TIME.	SUBSCRIPTION
TIU NOTES 16 BIT	This API gets lists of progress notes for a patient, with optional parameters for STATUS, EARLY DATE/TIME, and LATE DATE/TIME.	SUBSCRIPTION
TIU NOTES BY VISIT	This API gets lists of Progress Notes by visit from TIU.	SUBSCRIPTION
TIU PERSONAL TITLE LIST	This Remote Procedure returns the user's list of preferred titles for a given class of documents, along with the default title, if specified.	SUBSCRIPTION
TIU PRINT RECORD	Allows Printing of TIU Documents on demand.	SUBSCRIPTION
TIU REMOVE LINK TO IMAGE	This RPC will remove a link between a document and an image. Only valid links may be removed.	SUBSCRIPTION
TIU REQUIRES	This Boolean RPC simply evaluates whether	SUBSCRIPTION

Name	Description	Availability
COSIGNATURE	the current user requires cosignature for TIU DOCUMENTS, and returns a 1 if true, or a 0 if false.	
TIU SIGN RECORD	This API Supports the application of the user's electronic signature to a TIU document while evaluating authorization, and validating the user's electronic signature.	SUBSCRIPTION
TIU SUMMARIES	This API gets lists of Discharge Summaries for a patient, with optional parameters for STATUS, EARLY DATE/TIME, and LATE DATE/TIME.	SUBSCRIPTION
TIU SUMMARIES BY VISIT	This API returns lists of Discharge Summaries by visit.	SUBSCRIPTION
TIU TEMPLATE ACCESS LEVEL	Used to determine what access a user has to templates.	RESTRICTED
TIU TEMPLATE CHECK BOILERPLATE	This RPC will evaluate boilerplate passed in the input array, checking to see whether any of the embedded objects are inactive, faulty, or ambiguous.	SUBSCRIPTION
TIU TEMPLATE CREATE/MODIFY	This remote procedure allows creation and update of Templates.	SUBSCRIPTION
TIU TEMPLATE DELETE	This RPC will delete orphan entries in the Template file (i.e., only those entries that have been removed from any Groups, Classes, Personal or Shared Root entries).	SUBSCRIPTION
TIU TEMPLATE GETBOIL	Returns the boilerplate of a given template. TIU objects within the boilerplate are not expanded.	RESTRICTED
TIU TEMPLATE GETITEMS	Returns the children of a given template folder, group template or template dialog.	RESTRICTED
TIU TEMPLATE GETPROOT	Gets information about the users My Template folder.	RESTRICTED
TIU TEMPLATE GETROOTS	Gets information about the users My Template folder, as well as the Shared Templates folder.	RESTRICTED
TIU TEMPLATE GETTEXT	Receives boilerplate text, expands any TIU objects contained within it, and returns the expanded text.	RESTRICTED
TIU TEMPLATE ISEEDITOR	Returns TRUE if the user is allowed to edit shared templates.	RESTRICTED
TIU TEMPLATE LISTOWNR	Uses in long lists to return a subset of users who have personal templates.	RESTRICTED
TIU TEMPLATE SET ITEMS	This RPC will create or update the items for a Group, Class, or Root.	SUBSCRIPTION
TIU UNLOCK	This RPC will decrement the lock on a given	SUBSCRIPTION

<b>Name</b>	<b>Description</b>	<b>Availability</b>
RECORD	TIU Document Record, identified by the TIUDA input parameter. The return value will always be 0.	
TIU UPDATE ADDITIONAL SIGNERS	This RPC accepts a list of persons, and adds them as additional signers for the document identified by the first parameter.	SUBSCRIPTION
TIU UPDATE RECORD	This API updates the record named in the TIUDA parameter, with the information contained in the TIUX(Field #) array. The body of the modified TIU document should be passed in the TIUX("TEXT",i,0) subscript, where i is the line number (i.e., the "TEXT" node should be ready to MERGE with a word processing field). Any filing errors which may occur will be returned in the single valued ERR parameter (which is passed by reference).	SUBSCRIPTION
TIU WAS THIS SAVED?	This Boolean Remote Procedure will evaluate whether a given document was committed to the database, or whether the user who last edited it was disconnected.	SUBSCRIPTION
TIU WHICH SIGNATURE ACTION	This RPC infers whether the user is trying to sign or cosign the documents in question, and indicates which ASU ACTION the GUI should pass to the TIU AUTHORIZATION RPC.	SUBSCRIPTION

### 6.3 Exported Options

<b>Option Name</b>	<b>Description</b>
BTIU BROWSE PAT BY MR	Individual Patient Document
BTIU CWAD DISPLAY	CWAD Display
BTIU DICT STATS	Dictation Timeliness Statistics
BTIU DOC LIST	List of Active Document Titles
BTIU EDIT VISIT	Edit/Update Visit
BTIU HELP CLINICIANS	Fields Required for Dictation
BTIU IC LISTING	Awaiting Signature Listing
BTIU LINE	
BTIU MENU DOC DEF CLIN	Document Definitions (Clinician)
BTIU MENU DOC DEF MGR	Document Definitions (Manager)
BTIU MENU HELP CLINICIANS	TIU Help for Clinicians
BTIU MENU MGR	TIU Maintenance Menu
BTIU MENU PARAMETERS	TIU Parameters Menu
BTIU MENU PRINT DOCS	Print Documents Menu
BTIU MENU REPORTS	TIU Reports Menu
BTIU MENU STATS REPORTS	Statistical Reports
BTIU MENU UPLOAD	TIU Upload Menu

Option Name	Description
BTIU MENU USER CLASS	User Class Management Menu
BTIU MENU1	TIU Menu for Clinicians
BTIU MENU2	TIU Menu for Medical Records
BTIU OBJECT DESCRIPTIONS	List Object Descriptions
BTIU PERSONAL PREFERENCES	Personal Preferences
BTIU REVIEW - READ ONLY	View Patient Documents
BTIU REVIEW BY PATIENT	Individual Patient's Documents
BTIU REVIEW SCREEN MR	Multiple Patient Documents
BTIU SEARCH FOR MR	Search for Selected Documents
BTIU UPLOAD DISPLAY	Display Upload Status
BTIU UPLOAD DOCUMENTS QUEUED	Upload Documents (Queued)
BTIU UPLOAD RESET	Reset Upload to Restart
BTIU VIEW USER ALERTS	View a User's Alerts
TIU ALERT TOOLS	TIU Alert Tools
TIU BASIC PARAMETER EDIT	Basic TIU Parameters
TIU BRIEF DS MENU	Brief Discharge Summary Menu
TIU BROWSE DOCUMENT CLINICIAN	Individual Patient Document
TIU BROWSE DOCUMENT MGR	Individual Patient Document
TIU BROWSE DOCUMENT MRT	Individual Patient Document
TIU BROWSE DOCUMENT READ ONLY	Individual Patient Document
TIU BROWSE DS CLINICIAN	Individual Patient Discharge Summary
TIU BROWSE DS MGR	Individual Patient Discharge Summary
TIU BROWSE DS MRT	Individual Patient Discharge Summary
TIU BROWSE PN CLINICIAN	Review Progress Notes by Patient
TIU BROWSE PN MGR	Individual Patient Progress Note
TIU BROWSE PN MRT	Individual Patient Progress Note
TIU CONVERSIONS MENU	TIU Conversions Menu
TIU DEFINE CONSULTS	Define CONSULTS for TIU/CT Interface
TIU DISCHARGE SUMMARY CONVERT	Run/Restart DS Conversion ( <b>BE CERTAIN</b> )
TIU DOCUMENT DEFINITION EDIT	Edit Document Definition
TIU DOCUMENT PARAMETER EDIT	Document Parameter Edit
TIU DS LINE COUNT BY AUTHOR	AUTHOR Line Count Statistics
TIU DS LINE COUNT BY SERVICE	SERVICE Line Count Statistics
TIU DS LINE COUNT BY TRANSCR	TRANSCRIPTIONIST Line Count Statistics
TIU ENTER/EDIT	Enter/edit Document
TIU ENTER/EDIT DS	Enter/Edit Discharge Summary
TIU ENTER/EDIT PN	Entry of Progress Note
TIU ENTER/EDIT TRANSCRIBER	Transcribe Document
TIU GMRD CONVERSION MENU	Discharge Summary Conversion
TIU GMRD CONVERT SINGLE	Single Discharge Summary Conversion
TIU GMRPN CONVERSION	Progress Note Conversion
TIU GMRPN CONVERT	Convert Progress Notes
TIU GMRPN FINAL	Final Pass Progress Notes Conversion
TIU GMRPN HALT	Halt Progress Note Conversion

Option Name	Description
TIU GMRPN MONITOR	Monitor Progress Note Conversion
TIU GMRPN RESTART	Restart Progress Note Conversion
TIU GMRPN SINGLE	Single Progress Note Conversion
TIU GMRPN TITLES	Undefined Progress Note Titles
TIU IRM MAINTENANCE MENU	TIU Maintenance Menu
TIU IRM TEMPLATE MGMT	TIU Template Mgmt Functions
TIU LINE COUNT BY AUTHOR	Author Line Count Statistics
TIU LIST NOTES BY TITLE	List Notes By Title
TIU MAIN MENU CLINICIAN	Progress Notes/Discharge Summary [TIU]
TIU MAIN MENU DS CLINICIAN	Discharge Summary User Menu
TIU MAIN MENU MGR	Text Integration Utilities (MIS Manager)
TIU MAIN MENU MIXED CLINICIAN	Integrated Document Management
TIU MAIN MENU MRT	Text Integration Utilities (MRT)
TIU MAIN MENU PN CLINICIAN	Progress Notes User Menu
TIU MAIN MENU REMOTE USER	Text Integration Utilities (Remote User)
TIU MAIN MENU TRANSCRIPTION	Text Integration Utilities (Transcriptionists)
TIU NIGHTLY TASK	Text Integration Utility Nightly Task
TIU OE/RR REVIEW PROG NOTES	Review Progress Notes
TIU PERSONAL PREFERENCE MENU	Personal Preferences
TIU PERSONAL PREFERENCES	Personal Preferences
TIU PREFERRED DOCUMENT LIST	Document List Management
TIU PRINT PN	Progress Notes Print Options
TIU PRINT PN ADMISSION	Admission- Prints all PNs for Current Admission
TIU PRINT PN AUTHOR	Author- Print Progress Notes
TIU PRINT PN BATCH INTERACTIVE	Batch Print Outpt PNs by Division
TIU PRINT PN BATCH SCHEDULED	Scheduled Print Outpt PNs by Division
TIU PRINT PN DIV PARAMS	Division - Progress Notes Print Params
TIU PRINT PN LOC	Location- Print Progress Notes
TIU PRINT PN LOC PARAMS	Progress Notes Batch Print Locations
TIU PRINT PN MAS MENU	MAS Progress Notes Print Options
TIU PRINT PN OUTPT LOC	Outpatient Location- Print Progress Notes
TIU PRINT PN PT	Patient- Print Progress Notes
TIU PRINT PN USER MENU	Progress Notes Print Options
TIU PRINT PN WARD	Ward- Print Progress Notes
TIU RE-INDEX DOCUMENT FILE	Re-index Document file for CPRS
TIU RELEASED/UNVERIFIED REPORT	Released/Unverified Report
TIU REVIEW DS CLINICIAN	Multiple Patient Discharge Summaries
TIU REVIEW DS UNSIGNED	All MY UNSIGNED Discharge Summaries
TIU REVIEW FILING EVENTS	Review Upload Filing Events
TIU REVIEW PN CLINICIAN	Show Progress Notes Across Patients
TIU REVIEW PN UNSIGNED	All MY UNSIGNED Progress Notes
TIU REVIEW SCREEN CLINICIAN	Multiple Patient Documents
TIU REVIEW SCREEN MIS MANAGER	Multiple Patient Documents

Option Name	Description
TIU REVIEW SCREEN MRT	Multiple Patient Documents
TIU REVIEW SCREEN READ ONLY	Multiple Patient Documents
TIU REVIEW UNSIGNED	All MY UNSIGNED Documents
TIU SEARCH BY PATIENT/TITLE	Search by Patient AND Title
TIU SEARCH LIST MGR	Search for Selected Documents
TIU SEARCH LIST MRT	Search for Selected Documents
TIU SET-UP MENU	TIU Parameters Menu
TIU STATISTICAL REPORTS	Statistical Reports
TIU TEMPLATE CAC USER DELETE	Delete TIU templates for selected user.
TIU TEMPLATE DELETE TERM ALL	Delete templates for ALL terminated users.
TIU TEMPLATE USER DELETE	Delete user's TIU templates.
TIU TEMPLATE USER DELETE PARAM	Edit Auto Template Cleanup Parameter.
TIU UPLOAD DOCUMENTS	Upload Documents
TIU UPLOAD HELP	Help for Upload Utility
TIU UPLOAD MENU	Upload Menu
TIU UPLOAD PARAMETER EDIT	Modify Upload Parameters
TIU144 ENHANCED MISMATCH LIST	Enhanced Mismatched Consults List
TIUF DOCUMENT DEFINITION CLIN	Document Definitions (Clinician)
TIUF DOCUMENT DEFINITION MGR	Document Definitions (Manager)
TIUF NATL CS UTILITY	NATL Edit Document Definitions
TIUFA SORT DDEFS CLIN	Sort Document Definitions
TIUFA SORT DDEFS MGR	Sort Document Definitions
TIUFC CREATE DDEFS MGR	Create Document Definitions
TIUFH EDIT DDEFS CLIN	Edit Document Definitions
TIUFH EDIT DDEFS MGR	Edit Document Definitions
TIUFJ CREATE OBJECTS MGR	Create Objects
TIUFJ VIEW OBJECTS CLIN	View Objects
TIUFZZ43 CLEANUP AFTER PTCH 43	Correct 'All' in Existing Menu Text
TIUFZZ8 UPDATE PARENT DOC TYPE	ZZ Update Parent Document Type
TIUHS LIST MANAGER	Create TIU/Health Summary Objects
TIUHSOBJ MENU	Health Summary Object Menu
TIUP PRINT DISCHARGE SUMMARIES	Discharge Summary Print
TIUP PRINT DOCUMENTS	Clinical Document Print
TIUP PRINT MENU	Print Document Menu
TIUP PRINT PROGRESS NOTES	Progress Note Print
TIUZZ65 CLEANUP AFTER PTCH 65	Reset TIU XREF ACLPT05

## 7.0 Internal Relations

There are two menu options that are distributed separate from the main menus. They need to be added to general clinician menus as appropriate to a facility's system.

- BTIU REVIEW – READ ONLY View Patient Documents

This option allows those without access to TIU to read documents.

- BTIU CWAD DISPLAY CWAD Display

This option allows those holding the TIUZWAD key to view CWAD style notes. It is suggested that this option be placed on the Command menu so it can be accessed from any menu.

## 8.0 Security Keys

Key Name	Description
TIU AUTOVERIFY	This key will result in transcribed documents entered by the holder to be excluded from MAS Verification, when required for the document in question. It should only be allocated to Transcriptionists whose work is of such merit that normal processing may be expedited.
TIUZCLIN	Unlocks the main TIU menu used by clinicians. By itself, it only gives access to edit and sign documents, not create them.
TIUZCLIN2	Unlocks the Enter/edit Document option to create a note on the clinician's TIU menu as well as the Personal Preferences option under TIU Help for Clinicians.
TIUZCMGR	Unlocks the Document Definitions (Clinician) option under the TIU Help for Clinicians menu. This option gives "super users" the ability to update their document titles and boilerplates.
TIUZCWAD	Unlocks option to view CWAD type documents. It is suggested that the option be placed on a common menu.
TIUZHIS	Unlocks the main TIU menu used by medical records. It gives access to all options except TIU Maintenance Menu. This main menu is generally used when a facility uploads dictated documents.
TIUZMGR	Unlocks the TIU Maintenance Menu, which is used by the application coordinator to implement and maintain TIU. Functions include creating document titles and patient objects, assigning user classes, maintaining the business rules and updating parameters.
TIUZPPR	Give this key to a super user who needs to update other staff members' personal preferences.
TIUZTRANS	Unlocks the Transcribe Document option on the main TIU clinician menu. This acts much like the Enter/edit Document option but it assumes the author is not the person entering the document. Different rules apply.
TIUZVSIT	Unlocks the Edit/Update Visit option on the main TIU clinician menu as well as allowing updating of a visit when entering a document. This is to be given to users who need to code their own visits.

## 9.0 Archiving and Purging

Archiving utilities are not provided for the distributed files. Therefore, archival copies must be produced from the printed chart by methods familiar to your Medical Records Service (e.g., microfiche). Grace period for purge may then be defined in your parameter set-up.

## 10.0 Generating Online Documentation

### 10.1 Documentation

TIU/ASU's documentation set (Installation Guide, Implementation Guide, Technical Manual, and User Manual) is available on the RPMS Documentation web page:

<http://www.ihc.gov/Cio/RPMS/appselectdoc.cfm>

### 10.2 KIDS Install Print Options

#### Build File Print

Use the KIDS Build File Print option if you would like a complete listing of package components (e.g., routines and options) exported with this software.

```
Select OPTION NAME: XPD MAIN      Kernel Installation & Distribution System
menu

      Edits and Distribution ...
      Utilities ...
      Installation ...

Select Kernel Installation & Distribution System Option: Utilities

      Build File Print
      Install File Print
      Convert Loaded Package for Redistribution
      Display Patches for a Package
      Purge Build or Install Files
      Rollup Patches into a Build
      Update Routine File
      Verify a Build
      Verify Package Integrity

Select Utilities Option: Build File Print
Select BUILD NAME: TEXT INTEGRATION UTILITIES 1.0      TEXT INTEGRATION
UTILITIES
DEVICE: HOME//    VAX
```

### 10.3 Print Results of the Installation Process

Use the KIDS Install File Print option if you'd like to print out the results of the installation process.

```
DEVICE: HOME//    ANYWHERE
PACKAGE: TEXT INTEGRATION UTILITIES 1.0      Jan 21, 1997 3:34 pm      PAGE 1
                                           COMPLETED          ELAPSED
-----
STATUS: Install Completed          DATE LOADED: JAN 21,
1997@12:49:03
```

```

INSTALLED BY: RUSSELL,JOEL E
NATIONAL PACKAGE: TEXT INTEGRATION UTILITIES
INSTALL STARTED: JAN 21, 1997@12:49:53      12:52:26      0:02:33

ROUTINES:                                  12:50:06      0:00:13
FILES:
HEALTH SUMMARY TYPE                       12:50:17      0:00:11
TIU DOCUMENT                              12:50:24      0:00:07
TIU DOCUMENT DEFINITION                   12:50:29      0:00:05
TIU UPLOAD BUFFER                         12:50:29
TIU UPLOAD ERROR DEFINITION               12:50:29
TIU UPLOAD LOG                            12:50:30      0:00:01
TIU AUDIT TRAIL                           12:50:30
TIU STATUS                                12:50:31      0:00:01
TIU MULTIPLE SIGNATURE                    12:50:31
TIU SEARCH CATEGORIES                      12:50:31
TIU PROBLEM LINK                           12:50:32      0:00:01
TIU EXTERNAL DATA LINK                   12:50:32
TIU PRINT PARAMETERS                       12:50:33      0:00:01
TIU DIVISION PRINT PARAMETERS              12:50:33
TIU DOCUMENT PARAMETERS                    12:50:34      0:00:01
TIU CONVERSIONS                           12:50:35      0:00:01
TIU PERSONAL DOCUMENT TYPE LIST           12:50:35
TIU PARAMETERS                            12:50:36      0:00:01
TIU PERSONAL PREFERENCES                   12:50:36
PATIENT POSTING SITE PARAMETERS            12:50:38      0:00:02
BULLETIN                                  12:50:43      0:00:05
SECURITY KEY                               12:50:43
FUNCTION                                   12:50:43
PRINT TEMPLATE                             12:50:49      0:00:06
INPUT TEMPLATE                             12:50:50      0:00:01
DIALOG                                     12:50:50
PROTOCOL                                   12:51:20      0:00:30
OPTION                                     12:52:05      0:00:45
POST-INIT CHECK POINTS:
XPD POSTINSTALL STARTED                   12:52:09      0:00:04
XPD POSTINSTALL COMPLETED                 12:52:09

INSTALL QUESTION PROMPT                    ANSWER
XPZ1

```

### 10.3.1 Other Kernel Print Options

Besides using the Kernel Installation & Distribution (KIDS) options to get lists of routines, files, etc., you can also use other Kernel options to print online technical information.

#### Routines

XUPRROU (List Routines) prints a list of any or all of the TIU routines. This option is found on the XUPR-ROUTINE-TOOLS menu on the XUPROG (Programmer Options) menu, which is a sub-menu of the EVE (Systems Manager Menu) option.

```

Select Systems Manager Menu Option: programmer Options
Select Programmer Options Option: routine Tools

```

```
Select Routine Tools Option: list Routines
Routine Print
Want to start each routine on a new page: No// [ENTER]

routine(s) ? > TIU*
```

The first line of each routine contains a brief description of the general function of the routine. Use the Kernel option XU FIRST LINE PRINT (First Line Routine Print) to print a list of just the first line of each TIU subset routine.

```
Select Systems Manager Menu Option: programmer Options
Select Programmer Options Option: routine Tools
Select Routine Tools Option: First Line Routine Print
PRINTS FIRST LINES
routine(s) ? >TIU*
```

## Globals

The global unique to VA in the TIU package is ^TIU( Use the Kernel option XUPRGL (List Global) to print a list of any of these globals. This option is found on the XUPROG (Programmer Options) menu, which is a sub-menu of the EVE (Systems Manager Menu) option.

```
Select Systems Manager Menu Option: programmer Options
Select Programmer Options Option: LIST Global
Global ^^PX*
```

## 10.4 %INDEX

%INDEX is a routine that produces a report called the VA Cross-Referencer. This report is a technical and cross-reference listing of one routine or a group of routines. %INDEX provides a summary of errors and warnings for routines that do not comply with VA programming standards and conventions, a list of local and global variables and what routines they are referenced in, and a list of internal and external routine calls.

%INDEX is invoked from programmer mode: D ^%INDEX.

When selecting routines, select TIU\*.

## 10.5 Data Dictionaries/ Files

The number-spaces for TIU files unique to VA are 8925-8926. Use FileMan DATA DICTIONARY UTILITIES, option #8 ( DILIST, List File Attributes), to print a list of these files. Depending on the FileMan template used to print the list, this option will print out all or part of the data dictionary for the TIU files.

### Example:

```
>D P^DI
VA FileMan 21.0
Select OPTION: DATA DICTIONARY UTILITIES
Select DATA DICTIONARY UTILITY OPTION: LIST FILE ATTRIBUTES
  START WITH WHAT FILE: 8925
                                     (1 entry)
      GO TO WHAT FILE: 8925// 8926*
Select LISTING FORMAT: STANDARD// [Enter]
DEVICE: PRINTER
```

## **11.0 SAC Requirements and Exemptions**

There are no exemptions in the SAC standards for this version.

## Glossary

This section describes the terms and rules used in the Document Definition system.

### NAME

Plus (+) indicates that the entry has Items under it and can be expanded.

The name of a Document Definition entry (.01 field) must be between three and 60 characters long and may not begin with a punctuation character. Although names can be entered in upper or lower case, they are transformed to upper case before being stored.

Name functions as the Technical Name of the entry. Some sites have put KWIC cross references on it to get, say, all Titles from a given Service.

Name can be used when entering documents as the name of the Title being entered. Print Name and Abbreviation will also be accepted.

Since it is the Technical, .01 Name, TIU uses this name throughout.

The .01 name differs from the Print Name, which appears in lists of documents and functions as the Title of the document.

It also differs from Item Menu Text (1-26 characters), which is used when selecting documents from three-column menus.

The order of names in the *options Edit Document Definitions* and *Create Document Definitions* is by Item Sequence under the parent. The order is alphabetic by Menu Text if an Item has no Item Sequence.

When a new entry is added to file 8925.1 the default Print Name is entered. The Print Name can be edited if a different Print Name is desired.

File 8925.1 permits more than one entry with the same name if they are different Types. In that sense, Names are reusable. However, Entries are not reusable (except specially marked Components); an entry is not allowed to be an item under more than one parent unless it is a Shared Component. (See Component.)

### OBJECT NAME

Object Names, like any other names are 3-60 characters, not starting with punctuation. Sites may want to namespace object names, use the object Print Name as a more familiar name, and use the object Abbreviation as a short name to embed in boilerplate text. Unlike other Types, Object Abbreviation and Print Name as well as Name must be uppercase.

Object Name, Abbreviation, or Print Name can be embedded in boilerplate text. Since TIU must be able to determine from this which object is intended, object Names, Abbreviations, and Print Names must be unique. In fact, an object Name must differ not only from every other object name, but also from every other object Abbreviation and from every other object Print Name. Same for Abbreviations and Print Names. For example, if some object has the abbreviation CND, then CND cannot be used for any other object Name, Abbreviation, or Print Name.

## TYPE

Type determines the nature of the entry and what sort of items the entry may have. There are five possible types:

Class (CL): Classes group documents.

**Example:** “Progress Notes” is a class with many kinds of progress notes under it.

Classes may themselves be subdivided into items under a Class and/or may have items of Document Class if no further subdivisions are desired.

If a hierarchy deeper than Class-Document Class-Title is desired, Class is the place to insert another level into the hierarchy: Class-Class-Document Class-Title.

Besides grouping documents, Classes also store behavior which is then inherited by lower level entries.

Document Class (DC): Document Classes group documents. Document Class is the lowest level of class, and has items of the Title Type under it.

**Example:** “Day Pass Note” could be a Document Class under class Progress Note.

Document Classes also store behavior which is then inherited by lower entries.

Title (TL): Titles are used to enter documents. They store the behavior of the documents which use them.

Titles may have predefined boilerplate (Overprint) text. They may have Components as items. Boilerplate Text can have Objects in it.

**Examples:** “Routine Day Pass Note” could be a Title under document class Day Pass Note. Another example might be “Exceptional Circumstances Day Pass Note.”

Titles store their own behavior. They also inherit behavior from higher levels of the hierarchy. However, behavior stored in the Title itself always overrides inherited behavior.

**Component (CO):** Components are “sections” or “pieces” of documents. In the Hierarchy, Components are organized as items under Titles.

**Examples:** “Reason for Pass” could be a component of Routine Day Pass Note. Subjective is a component of a SOAP Note.

Components may have (sub)Components as items. They may have Boilerplate Text. Components may be designated Shared (see field description for Shared). Shared Components are shown in Document Definition Utility displays as Type “CO S”.

There are advantages and disadvantages in splitting a document up into separate components (rather than writing sections into the Boilerplate Text of the Title). Since Components are stored as separate file entries, they are inherently accessible and even “movable.” Using FileMan, sites can access components of documents the same way they can access documents for reports, etc. Also, in the future, TIU may have options to move or copy certain components from one document into another. The disadvantage is speed. Components make the structure more complex and, therefore, slow down processing.

**Object (O):** Objects are names which may be embedded in the predefined boilerplate text of Titles. Example: “PATIENT AGE.” Objects are typed into the boilerplate text of a Title, enclosed by ‘|’s. For example, suppose a Title has the following boilerplate text:

Patient is a healthy |PATIENT AGE| year old |PATIENT SEX| ...

Then when you enter such a note for a patient known by the system to be 56 years old and male, you would be presented with the text:

Patient is a healthy 56 year old male ...

You can then add to the text and/or edit the text, including the age (56) of the patient. From this point on, the patient age (56) is regular text and is not updated in this note.

Objects must always have uppercase names, abbreviations, and print names. When embedding objects in boilerplate text, you may embed any of these three (name, abbreviation, print name) in boilerplate text, enclosed by an “|” on both sides. Objects must always be embedded in uppercase.

Objects are stored in the DOCUMENT DEFINITION File, but are not part of the Hierarchy. They are accessible through the options Create Objects and Sort Document Definitions (by selecting Sort by Type and selecting Type Object).

TIU exports a small library of Objects. Sites can also create their own.

Only an owner can edit an object and should do so only after consulting with others who use it. The object must be Inactive for editing. It should be thoroughly tested. (See Object Status, under Status.)

Entries of type Object cannot be changed to any other type. Entries of type Class, Document Class, Title, or Component cannot be changed to type Object.

Type is a BASIC field.

## **SHARED**

Components may be designated SHARED by Owners who have the Manager menu. This means the Component can be an item under multiple parents, and anyone who owns a Title can add it as an item.

Shared Components are the only members of the Document Definition hierarchy which can appear in more than one place in the hierarchy. (Objects can be used in multiple entries, but are not members of the hierarchy.)

Shared Components are intended for broad use across the site, such as a Privacy Act Component. Since a Shared Component may be used in many different Document Definitions, its Owner is essentially the caretaker for it, hospital wide, and must take into account all users before editing it. Users who disagree with a proposed change can choose to create and use their own copy instead of using the Shared Component.

Parents of a Shared Component are listed on the Detailed Display screen.

Shared Field values are 1 for YES and 0 for NO, with a default value of 0 for NO if the field is empty.

An entry may not be designated Shared unless it is a Component. Only a Manager or an Owner can designate a Component as Shared. Only an owner can edit it. (Normally Managers can override ownership and edit entries. Manager options do not override Ownership for editing Shared Components).

Shared Components can only be edited from the Sort Document Definitions option.

Shared Components can't be deleted. If they don't have multiple parents, they can, however, be edited to not shared and then deleted, assuming they are not In Use by documents and the parent is Inactive.

Shared Components don't have a Status. They can be edited only if all parent Titles are Inactive. This ensures that parent Titles are offline for entering documents while their components are being edited. Parents are listed on the Detailed Display Screen.

If a Shared Component has subcomponents, they are automatically shared, since they, with their parents, can be used in more than one place in the hierarchy.

Sharing of Document Definitions other than Components is not permitted because it unduly restricts the owner's right to edit or delete the Document Definition and adds undue complexity to the Hierarchy

## **NATIONAL STANDARD**

Some Document Definitions such as CWADs are developed nationally and sent out as standardized entries across the nation. TIU and other packages depend on their standard definition, and they must not be edited by sites, but only by the persons who are nationally responsible for them.

Such entries are marked NATIONAL STANDARD (the field has a value of 1 for YES), which prevents sites from editing the entry.

Sites cannot edit National Standard entries, except for the Item Multiple.

If a National Standard entry is a Class or Document Class, sites can add or delete non-National items as they please, and can edit all items as items (e.g., Item Sequence, etc.). Sites cannot add or delete National items.

If a National Standard entry is a Title or Component, sites cannot add or delete items, but they can still edit items as Items.

Sites cannot add National Standard entries as Items to parents except for adding National Shared Components to non-National titles. Sites can delete National Standard Items from any non-National parents. (Unless there has been a mistake, such items will be limited to Shared Components.)

Field is NOT heritable. If field has no value for an entry, its value is 0 by default. This means that entries created by sites are not National Standard.

**Note:** National entries (except for Shared Components) must have National ancestors; if a National entry has a non-National ancestor, TIU doesn't permit it to be activated. (Shared Components need not have National ancestors, and do not have a Status.)

National Standard is a basic field.

## STATUS

Status provides a way of making Document Definitions “Offline” to documents. Document Definitions need to be offline if they are new and not ready for use, if they are being edited, or if they are retired from further use.

Status is limited to those Statuses in the STATUS File which apply to Document Definitions: Inactive, Test, and Active. TIU further limits the Status to those appropriate for the entry Type (see below), limits the Status of entries with Inactive ancestors to Inactive, and limits the Status of faulty entries to Inactive.

Status applies to all Document Definitions, but its meaning and possible values vary somewhat with the Document Definition Type. Object Status differs significantly from status of other Types. See Object Status, at the end of this description. Also see Component Status below, to see how Shared Components differs.

## TITLE STATUS

Status has its most basic meaning for Titles.

A Title can have a Status of Inactive, Test, or Active. If its Status is Inactive, it can't be used to enter Documents (except through the Try Action, which deletes the document when done). If its Status is Test, only its Owner can enter documents. Titles should be tested using test patients only. If a Title's Status is Active, anyone with access and authorization can enter documents.

Although Status affects availability for entering documents, there are other factors which also affect availability: A Document Definition is not available to a given user for entering documents (except through the Try action) unless all of the following three criteria are met:

- It is a Title.
- It has a Status of Active or Test. If its Status is Test, the user entering a document must own the Title.
- If authorization for using the Title to enter documents is restricted through the Authorization/Subscription Utility (Business Rules), the user must be a member of the authorized user class.

Unless these criteria are all met, users trying to enter documents will not see the Document Definition. Therefore, it is wise to warn users when taking definitions offline for edit to do so at non-peak hours for entering documents.

When you are changing a Title's Status to Test or Active, the Title is examined for rudimentary completeness and must be judged OK before the change takes place. You can perform the same examination by selecting the action Try. For Titles, the Try action also lets you enter a document on the entry. The document is deleted immediately after the check.

Although availability for entering documents is the central meaning of Status, Status also controls edit and deletion of Document Definitions. A Title can be edited only if its Status is Inactive, ensuring that no one is using it to enter a document while its behavior is changing. Titles can be deleted only if their Status is Inactive.

**Note:** Although Status affects Editing ability, it is not the only factor affecting editing. If an entry is already IN USE by documents, editing or deletion is restricted to aspects which will not harm existing documents.

Components under a Title have the same status as the Title. When a Title's status is changed, the statuses of its descendant Components are automatically changed with it.

## **CLASS AND DOCUMENT CLASS STATUS**

Classes or Document Classes can have Active or Inactive Statuses.

“Basics” for a Class or Document Class cannot be edited (except for Owner and Status) unless it is Inactive. Since Inactivating a Class or Document Class automatically inactivates its descendants, this ensures that all Titles which inherit behavior from it are neither Active nor Test and are thus Offline while inherited behaviors are edited.

In contrast to Basics, the ability to add or edit items of a Class or Document Class depends on the Status of the item, not its parent; it is not necessary to Inactivate a Class such as Progress Notes in order to edit or add items.

Activating a Class or Document Class differs from Inactivating the Class or Document Class. When a Class/Document Class is activated, its descendants may have any Status which their Type permits; they are not required to be Active. Hence, they are not automatically Activated when the parent is Activated.

## COMPONENT STATUS

A Component has the same status as its parent. Its status can be changed only by changing the Status of its Parent, if it has one. Components without parents are always Inactive.

**Note:** The above also means that Test or Active Titles can't have Inactive Components. In other words, Inactivating a Component is not a way of retiring it. If a Component is no longer a useful section of a Title, it should be edited so as to make it useful, or it should be deleted as an item from the Title of which it is a part. As with all retired Document Definitions, it should not be deleted from the file if it has been used by documents.

Components can be edited only if their status is Inactive. This ensures that all Titles using them are offline while they are being edited.

Shared Components are a special case since they can have multiple parents. They do not have a status. They can be edited only when all parent Titles have a Status of Inactive. (The Detailed Display screen shows parents.) This ensures that all parent Titles of Shared Components are offline while the components are being edited. Edit of Shared Components is permitted only through the option Sort Document Definition.

Editing Shared Components is severely restricted by Ownership, since they may be used multiple times and across the site. Even an Inactive Status does not permit those with the Manager menu to override ownership and edit a Shared Component they do not own. See the description of Shared Components under Type.

## OBJECT STATUS

Objects can have Inactive or Active Statuses. Only Active objects function. That is, if you enter a document on a Title with boilerplate text containing an inactive object, the object does not do anything. You see the name of the object and an error message in place of the object data.

Only Active objects should be embedded in boilerplate text. Exception: when objects are being created or edited. Otherwise, you should NOT embed inactive objects in boilerplate text since they may not be ready for use and since they do not function when users enter documents against them. Titles whose boilerplate text contains inactive objects can't be activated. (This does not imply that active titles never have inactive objects embedded in them, since users can, after a warning, inactivate objects even when they are embedded in active titles.)

Only Inactive objects can be edited (and only by an owner). Only an owner can activate or inactivate an object. (Exception: if you own an object and edit the owner to someone else, then you are not prevented from going on to edit the status in the same edit session, since you were the owner a few seconds ago.) Active objects are assumed to be ready for use in any boilerplate text.

Since the owner is essentially the caretaker of the object for the entire site, the owner should consult with all who use it before editing it. An object can be tested by embedding it in the boilerplate text of a Title and selecting the action “Try” for the Title. It need not have an Active status for this testing (and should not have an Active status until testing is complete). Owners who inactivate objects for editing should make sure to reactivate them if they are being used.

Sites should either inactivate relevant Titles before editing objects or edit objects only when users are not likely to be entering documents since Inactive objects do not function.

If a site changes the name or behavior of an Object, it is up to the site to change the name wherever it has already been embedded in Boilerplate Text, and to inform users of the change.

An object which is no longer wanted for future documents can be removed from the boilerplate text of all Titles and Components and then deleted from file 8925.1. Only an owner can delete it. All of the documents that used it have already got it in hard words so there is no need to keep it for their sake. Old Objects should be edited so they are useful, or deleted, not kept around forever as Inactive.

## **PERSONAL OWNER**

Document Definition Ownership has nothing to do with who can use the entry to enter a document. It determines responsibility for the Document Definition itself.

An entry can be edited by its owner. The Manager menu permits override of ownership so that ownership can be assigned to a clinician who can then fill in boilerplate text, while the Manager can still edit the entry, since there are many fields the clinician does not have access to. Exception: the Manager menu does not allow override of Object or Shared Component ownership. Only owners can edit Objects and Shared Components, regardless of menu.

If a Title owner edits the boilerplate text of the Title, that person can edit the boilerplate text of all components of the Title as well, without regard to component ownership. In order to edit components individually, however, the user must own the component. This allows users to assign ownership of components to different people, for example, for future multidisciplinary documents.

A Personal Owner is a person who uniquely owns the entry. An entry may have a Personal Owner or a Class Owner but not both. When entering a Personal Owner, be sure to delete any existing Class Owner.

TIU uses the term “Individual Owner.” Someone is an Individual Owner of an entry if s/he is the personal owner or if the entry is CLASS Owned, if s/he belongs to the Owner Class.

When you enter a new entry, you are entered as the Personal Owner if you don’t assign ownership. You can then reassign ownership if desired. Copying an entry makes you the personal owner of the copy.

If the person responsible for an entry plays a role corresponding to a User Class, e.g. Clinical Coordinator, it may be more efficient to assign ownership to the class rather than to the person. Owners are then automatically updated as the class is updated.

Editing privilege is affected not only by Owner but also by Status, by Shared, by In Use, and by menu access. Manager menus, for example, provide fuller editing capabilities than Clinician menus.

## **CLASS OWNER**

Document Definition Ownership has nothing to do with who can USE the entry to enter a document. It determines responsibility for the Document Definition itself.

An entry can be EDITED by its owner. (The Manager menu permits override of ownership so that ownership can be assigned to a clinician (person with Clinician Menu) who can then fill in boilerplate text, while the manager can still edit the entry, since there are many fields the clinician does not have access to.) Exception: the Manager menu does NOT override ownership of Objects or of Shared Components. These can ONLY be edited by an owner, regardless of menu.

If a Title owner edits the boilerplate text of the Title, that person can edit the boilerplate text of all components of the title as well, without regard to component ownership. However, the user must own the component in order to edit it individually, permitting separate ownership of components.

A Class Owner is a User Class from the USR CLASS file whose members may edit the entry. An entry may have a Personal OR a Class Owner (not both). TIU doesn't prompt for Class Owner if the entry has a Personal Owner. To change to Class Owner, first delete the Personal Owner by entering '@' at the Personal Owner prompt.

For new entries, you are prompted to enter the Class Owner Clinical Coordinator as the default. To enter a different Class Owner, enter the appropriate class after the //s. If there are no //s and the Replace...with editor is being used, enter ... to replace the whole class and then enter the appropriate class.

Class Owner is a BASIC field.

## IN USE

IN USE applies to all entries except Objects. It cannot be edited since it gets its value automatically.

IN USE may have values of "Yes," "No," or "?."

Titles or Components are IN USE (Yes) if there are entries in the TIU Document file which store it as their Document Definition. If not, it is not used (No).

**Note:** It is possible for Document Definitions to be used by documents in files other than the TIU Document File and still be Not In Use, since In Use means in use by documents in the TIU Document file.

Classes or Document Classes are IN USE (Yes) if they have children which are Titles which are IN USE. That is, it is Used by Documents (Yes) if there are entries in the TIU Document file which inherit behavior from it. If not, it is not used (No).

In Use has a value of ? for a DOCUMENT DEFINITION File entry if the routine TIUFLF is missing or if the program encounters a nonexistent item and the entry is not IN USE so far as the check has been able to go.

**Note:** Since Shared Components can be items of more than one Title, a Shared Component may be IN USE even when a particular parent Title is not IN USE. This simply means that it is also a Component of another Title which is IN USE.

If IN USE is “No” for a particular Document Definition entry, the entry can be deleted by the owner without harming documents in the TIU DOCUMENT File #8925. Deleting it will, however, orphan any descendant Document Definitions.

**Note:** If a site is using TIU to upload documents into a file other than the TIU DOCUMENT file, it may create Document Definition entries to store upload information. For example, it may create an Operative Reports title containing instructions for uploading documents into the Surgery file. These document definitions will be orphans and will be not In Use. They must NOT be deleted from the Document Definition file.

Deleting Objects will not harm existing documents, but will harm future documents if the Object is embedded in existing Document Definition Boilerplate Text.

If IN USE has a value of “Yes” or “?”, TIU doesn’t permit the entry to be deleted. Deleting the entry would cause documents in file 8925 not to function. This is true even if the entry has an Inactive status and documents are no longer being written on the entry.

Technical Note: A Document Definition of Type Title or Component is IN USE only if it appears in file 8925’s ‘B’ Cross Reference.

IN USE is a Basic field.

### **HAS BOILTXT**

Applies to Title and Component only. This field can’t be edited since its value is automatic. A Document Definition Has Boiltxt if it or its descendant Components have Boilerplate Text (Field 3).

### **PRINT NAME**

Print Name is the name used in lists of documents. For Titles, Print Name is used as the document Title in the Patient Chart.

### **ORPHAN**

Orphan applies to Document Definitions of all Types except Objects and Shared Components.

Orphan is not editable since it gets its value automatically.

Document Definitions are Orphans if they do not belong to the Clinical Documents Hierarchy, i.e., they cannot trace their ancestry all the way back to the Class Clinical Documents. If an Orphan is not In Use, it may be “dead wood” which should be deleted from the file. Orphans not In Use which should not be deleted include those being kept for later possible use, those temporarily orphaned in order to move them around in the hierarchy, and those used for uploading documents into files other than the TIU Document file. (Orphan does not apply to Objects since they don’t ever belong to the hierarchy. Orphan does not apply to Shared Components since they may have more than one line of ancestry.)

Orphan does not apply to Objects since they don’t ever belong to the hierarchy. Orphan doesn’t apply to Shared Components since they may have more than one line of ancestry.

**Note:** The DOCUMENT DEFINITION file may contain orphan entries which are not used by documents in the TIU DOCUMENT file but which contain upload instructions for storing documents somewhere else. For example, if a site is uploading Operative Reports into the Surgery file, there may be an orphan Operative Report Document Definition in the DOCUMENT DEFINITION file. These should NOT be deleted just because they are orphans. Such entries can be identified by viewing them through Detailed Display in the Sort Option and looking for Upload fields.

Orphan, as used in TIU, doesn’t mean having no parents. For example, suppose Exceptional Day Pass Note has a parent named Day Pass Note. If Day Pass Note has no parent, then Exceptional Day Pass Note can’t trace its ancestry back to Clinical Documents and is an Orphan even though it has a parent.

Orphans are invisible to TIU users and can’t be used to enter documents.

When an item under a non-orphan is deleted as an item, it becomes an orphan. TIU doesn’t permit non-orphan entries to become orphaned if they are In Use. Titles already used but being retired from further use should be Inactivated, NOT orphaned. Components are a different story. Components being retired from further use can and should be orphaned (deleted as items from the Title). This is because Titles inherit attributes and therefore require a complete ancestry in order to process existing documents. Since components, on the other hand, do not inherit attributes, they do NOT require a complete ancestry to process existing documents (although they must remain in the file.)

Since Orphans do not belong to the hierarchy, they do not appear on the Edit Document Definitions option. They can be accessed through the Sort Document Definitions option.

**Note:** Most Technical fields are heritable, and Basic field Suppress Visit Selection is heritable. Upload fields are heritable as a group. The display does not show inheritance for Upload fields.) The Document Definition Detailed Display action displays the EFFECTIVE value of inherited fields. If an inherited field does not have its own explicit value, its effective value is its inherited value. If it doesn't have an inherited value, its effective value is the default value for the field. If the field doesn't have a default value, it doesn't have an effective value and the field display is blank. Values marked with \* have been inherited.

For EDITING heritable fields, see the Technical field Edit Template.

## **ABBREVIATION**

Abbreviation can be entered at the "Select Title" prompt when entering a document. Since all Titles with the given abbreviation will then be listed, Abbreviation can serve to group Titles.

## **IFN**

The Internal File Number is the number of the entry in the TIU Document Definition File. IFN is included in the display to help programmers with debugging.

## **Items**

Items are Document Definitions listed under other Document Definitions in the hierarchy; e.g., Progress Notes and Discharge Summary are items under Clinical Documents. The Type of the parent entry determines what Types of items it has. A Class parent entry has items of Classes or Document Classes. A Document Class entry has Titles as items. If a Title entry has more than a single section, it has items of Components. Components may also be multi-sectioned with Component items. Objects do not have items.

## **Mnemonic**

Mnemonic is a 1-4 character shortcut for selecting Classes or Document Classes from a menu. Mnemonics are usually numeric with the same value as the Sequence. Alpha mnemonics are also permitted.

**Sequence**

Sequence, if entered, determines an item's order under its parent. If items have no sequence, item order is alphabetic by Menu Text. Sequence is a number between .01 and 999, with two decimal places allowed.

**Menu Text**

Menu Text is the short name (1 - 20 characters) you see for Classes and Document Classes when selecting them from 3- column menus which are seen when viewing documents across many patients and when viewing many kinds of documents at the same time (e.g. Progress Notes and Discharge Summaries).

You can edit Menu Text for selected items. Menu Text can affect the item order under a parent, since order is alphabetic by menu text if items don't have sequence numbers. To edit NAME (rather than Menu Text), go back to the previous screen.

**BOILERPLATE TEXT**

Sites can preload the text field of a document with default text, default format, overprint data which is presented to you when you enter the document. You can then edit and/or add to the boilerplate text.

If a document is formatted into columns, you should use replace mode rather than insert mode (or Find/Replace Text) to preserve the columns.

Field may be used as an alternative to components to split a document up into sections, but such sections are stored together and can't be separately accessed the way components can. See Component, under Basic field Type.

Boilerplate Text is the place to embed objects which get data from the relevant package (e.g., the Laboratory package). See Object, under Basic field Type.

A document with multiple components can have boilerplate text in the entry itself and/or in any component. Boilerplate text in the entry itself appears first.

## Acronym List

None

## Appendix A: Creating an Object

To create an object, you must be familiar with M code at least well enough to read and copy it.

In this example, we create a very simple object, test it, make it more realistic, and then re-test it. After that, we'll present further issues to consider.

### A.1 Create a very simple Object.

We'll create an object called PATIENT RELIGION which inserts the patient's religion into the text of a document.

- Go into the option **Create Objects** and select the action **Create**:

```

Select TIU Maintenance Menu Option: 2 Document Definitions (Manager)
--- Manager Document Definition Menu ---
 1 Edit Document Definitions
 2 Sort Document Definitions
 3 Create Document Definitions
 4 Create Objects

Select Document Definitions (Manager) Option: 4 Create Objects

START WITH OBJECT: FIRST// <Enter>.....
Objects Mar 09, 1997 16:10:12 Page: 1 of
3
                                Objects
                                Status
+
1 ACTIVE MEDICATIONS A
2 ALLERGIES/ADR A
3 BASELINE LIPIDS A
4 BLOOD PRESSURE A
5 CURRENT ADMISSION A
6 FASTING BLOOD GLUCOSE A
7 HEMOGLOBIN A1C A
8 INR VALUE A
9 LABS ADMISSION ABNORMAL A
10 LABS ADMISSION ALL A
11 NOW A
12 PATIENT AGE A
13 PATIENT DATE OF BIRTH A
14 PATIENT DATE OF DEATH A
+ ?Help >ScrollRight PS/PL PrintScrn/List +/- >>>
  Find Detailed Display Copy
  Change View Try Quit
  Create Owner
Select Action: Next Screen// <Enter>

Objects Mar 09, 1997 16:13:44 Page: 2 of 3
                                Objects
                                Status
+
15 PATIENT HEIGHT A
16 PATIENT NAME A
17 PATIENT RACE A
18 PATIENT RELIGION A

```

```

19    PATIENT SEX                                A
20    PATIENT SSN                               A
21    PATIENT WEIGHT                             A
22    PROTHROMBIN TIME                           A
23    PROTHROMBIN TIME COLLECTED                 A
24    PULSE                                       A
25    RESPIRATION                                A
26    SGOT                                        A
27    TEMPERATURE                               A
28    TODAY'S DATE                              A
+      ?Help  >ScrollRight  PS/PL PrintScrn/List  +/-      >>>
      Find      Detailed Display      Copy
      Change View      Try      Quit
      Create      Owner
Select Action: Next Screen// ??

```

- Select the action **Create**.

```

Objects          Mar 05, 1997 15:03:12          Page: 1 of 3
                   Objects
                   Status
1      ACTIVE MEDICATIONS                        A
2      ALLERGIES/ADR                             A
3      BASELINE LIPIDS                           A
+      ?Help  >ScrollRight  PS/PL PrintScrn/List  +/-      >>>
      Find      Detailed Display      Copy
      Change View      Try      Quit
      Create      Owner
Select Action: Next Screen// CR  Create

```

- Enter **PATIENT RELIGION**.
- Delete the default owner **CLINICAL COORDINATOR** with an @ sign and enter your own name as the personal owner. This enables you to continue editing the object.

```

Enter Document Definition Name to add as New Entry: PATIENT RELIGION
CLASS OWNER: CLINICAL COORDINATOR  Replace @
PERSONAL OWNER: MCCLENAHAN,MARGARET      MAM
Entry added

```

- The new object appears at the top of the list.
- Scroll right (>) to see that you are the owner.
- Select the action Detailed Display and select your new entry.

**Note:** You can do this in one step by entering **DET**=(entry number):

```

Objects          Mar 05, 1997 15:03:12          Page: 2 of 3
                   Objects
                   Status
18     PATIENT RELIGION                          I
19     PATIENT SEX                                A

```

```

PATIENT SSN                                     A

+          ?Help  >ScrollRight  PS/PL PrintScrn/List  +/-          >>>
  Find          Detailed Display          Copy
  Change View   Try                      Quit
  Create        Owner
Select Action: Next Screen// DET=18 Detailed Display

```

- The Detailed Display screen appears, showing your entry.
- Select the action Technical Fields.

```

Detailed Display           Mar 05, 1997 15:03:58           Page: 1 of 1
                          Object PATIENT RELIGION

Basics
  Name:      PATIENT RELIGION
  Abbreviation:
  Print Name: PATIENT RELIGION
  Type:      OBJECT
  IFN:      599
  National
  Standard: NO
  Status:    INACTIVE
  Owner:     MCCLENAHAN, MARGARET

Technical Fields
  Object Method:
+          ?Help  >ScrollRight  PS/PL PrintScrn/List  +/-          >>>
  Find          Detailed Display          Delete
  Basics       Technical Fields          Find
  (Items: Seq Mnem MenuTxt) (Upload)          Quit
  (Boilerplate Text)        Try
Select Action: Quit// TE TECHNICAL FIELDS

```

- Enter the object method: S X="TESTING123"

```

OBJECT METHOD:  S X="TESTING123"

```

### A.1.1 Testing the Object

Now that we have a new object, let's try it out.

- Quit all the way out of Create Objects.
- Go into the option **Create Document Definitions**:

```

--- Manager Document Definition Menu ---
 1   Edit Document Definitions
 2   Sort Document Definitions
 3   Create Document Definitions
 4   Create Objects

Select Document Definitions (Manager) Option: 3 Create Document
Definitions

```

- Find or create a title you wish to embed the new object in.

- If it is active, make a copy rather than inactivating the original, which takes it offline to users.
- Use an item under an active document class so that later you can change its status to “Test.”
- Use a Title under Progress Notes so that it inherits from Progress Notes.
- Make its status Inactive so you can edit it.
- Check it using the action **Try** to make sure it works properly before continuing this process (do a Detailed Display and select TRY).
- We’ll use the Title DEMOGRAPHIC NOTE, under the Document Class DEMOGRAPHIC NOTE, under Progress Notes.
- When you have your title, select the action **Boilerplate Text** and your title:

```

Create Document Definitions      Mar 05, 1997 15:05:23      Page: 1 of 1 _
                                BASICS
+      Name                                Type _
2      PROGRESS NOTES                      CL
3      DEMOGRAPHIC NOTE                    DC
4      DEMOGRAPHIC NOTE                    TL
+      ?Help  >ScrollRight  PS/PL PrintScrn/List  +/-      >>>
      (Class/DocumentClass)  Next Level      Detailed Display
      Title                  Restart          Status...
      (Component)           Boilerplate Text  Delete
Select Action: Title// BO=4

```

- The Boilerplate Text screen is displayed. At present, there is no text.
- Select **Boilerplate Text** again, this time to edit it (rather than display it):

```

Boilerplate Text                Mar 05, 1997 15:05:37      Page: 1 of 1 _
                                Title DEMOGRAPHIC NOTE
-----
+      ?Help  >ScrollRight  PS/PL PrintScrn/List  +/-      >>>
      Boilerplate Text      Try          Quit
      Status                Find
Select Action: Quit// B Boilerplate Text

```

- Your preferred editor appears. Type in the following:

```

===== [WRAP] == [INSERT] = <DEMOGRAPHIC NOTE> ===== [ <PF1> H=HELP ] =====
Patient's religious preference: |PATIENT RELIGION|. Patient's home address:
.....

```

```
=====T=====T=====T=====T=====T=====T=====T=====T=====T=====
```

**Note:** Be sure to spell the object name correctly, use upper case, and enclose it in vertical bars:

- Exit out of the editor. The screen displays our new boilerplate text.
- Select the action **TRY**:

```

Saving text ...
Boilerplate Text           Mar 05, 1997 15:05:37           Page:    1 of    1
                               Title DEMOGRAPHIC NOTE

-----
Patient's religious preference: |PATIENT RELIGION|. Patient's home address:
...

+      ?Help  >ScrollRight  PS/PL PrintScrn/List  +/-      >>>
  Boilerplate Text           Try
  Status                     Find
Select Action: Quit// Try
Entry Checks out OK for rudimentary completeness

```

- The entry checks out OK.
- Select a **TEST** patient. (Since it's a title, you are given the opportunity to try it on a patient.)
- Accept the defaults for location, etc.
- You are presented with the boilerplate text, just as if you had entered a document Demographic Note on the patient:

```

Object |PATIENT RELIGION| is not active.

Press RETURN to continue or '^' or '^ ^' to exit:  <Enter>

Checking Title on a document.  You will not be permitted to sign the
document, and the document will be deleted at the end of the check.

  Be sure to select a TEST PATIENT since the document will show up on
Unsigned lists while you are editing it.

Select PATIENT NAME:  DOE,WILLIAM C.           09-12-44           243236572           YES
SC VETERAN
      (2 notes)  C: 02/24/97 08:44
      (1 note )  W: 02/21/97 09:19
                  A: Known allergies

Creating new progress note...
  Patient Location:  UNKNOWN
  Date/time of Visit: 03/05/97 15:07

```

```

Date/time of Note: NOW
Author of Note: MCCLAN,MARGE
...OK? YES// <Enter>

Calling text editor, please wait...

=====[WRAP]==[INSERT]=< >====[<PF1>H=HELP]=====
Patient's religious preference: TESTING123. Patient's home address: ...
====T====T====T====T====T====T====T====T====T====T====T====T

```

- The trial document looks all right. The data we set X to is inserted in the text.

Note: If there are errors in the object other than the status, we may receive any of the following messages:

```

Object |PATIENT RELIGION| cannot be found. User uppercase and use object's
exact name, print name, or abbreviation. Objects' name/print
name/abbreviation may have changed since this was embedded.
Object |PATIENT RELIGION| is not active.
Object |PATIENT RELIGION| lacks an object method.
Object |PATIENT RELIGION| is ambiguous. Can't tell which object is
intended.
Object split between lines, rest of line not checked.

```

The split line message refers to lines such as:

```

This is a test of Object |PATIENT
RELIGION|. Patient's Home address: . . .

```

But none of these messages apply to us.

- Exit the editor. The document is deleted:

```

Saving text ...
<NOTHING ENTERED. DEMOGRAPHIC NOTE DELETED>

```

### A.1.2 Making the Object More Realistic

Now that we have the basic idea, we'll write an object method that actually gets the patient's religion. We'll imitate the PATIENT AGE object, which has the object method:

```
S X=$$SAGE^TIULO(DFN)
```

Note that, again, the object method sets the variable X. This time the object depends on the patient. The variable DFN is the internal entry number in the Patient File ^DPT. Its value is known to the system at the time a document is entered on a particular patient.

This object method calls the TIULO routine, exported with the TIU package, and sets X equal to the value of the function \$\$AGE^TIULO. That code looks like this:

```
TIULO ; SLC/JER - Embedded Objects ;9/28/95 16 :26
; ;1.0;TEXT INTEGRATION UTILITIES;Mar 05, 1997
AGE(DFN) ; Patient AGE
I '$D(VADM(4)) D DEM^TIULO(DFN,.VADM)
Q $$ (VADM(4)]"":VADM(4),1:"AGE UNKNOWN")
;
DEM(DFN,VADM) ; Calls DEM^VADPT
D DEM^VADPT
Q
```

If the VADM array hasn't been defined for subscript 4, the age subscript, the code calls module DEM, passing array VADM by reference. DEM calls the VADPT patient demographics utility, and passes patient demographics back. We can copy this and only need to understand that it puts demographic information for patient DFN in the VADM array as described in the VADPT utility.

Note that AGE is a function and quits with the value VADM(4) if VADM(4) has a value. Otherwise, it quits with the value "AGE UNKNOWN."

We'll write similar code for religion.

- Quit out of the Manager Menu and get into programmer mode.
- Write a similar function for religion. Looking up the VADPT utility, we find that patient religion is returned in VADM(9), so we have:

```
MYROUTIN ; HERE/ME - Embedded Objects ; 9/28/96 16:26
;
RELIG (DFN) ; Patient RELIGION
I '$D(VADM(9)) D DEM^TIULO(DFN,.VADM)
Q $$ (VADM(9)]"":VADM(9),1:"Religious Preference UNKNOWN")
```

- To test the code, set DFN to a known patient. (To find the DFN of a patient, do a Fileman Inquiry to the PATIENT file, enter the name of a patient, and enter R at the Include COMPUTED fields prompt to get the record number. Set DFN to this record number.).
- Set X= \$\$RELIG^MYROUTIN(DFN).
- WRITE !,X:

```
W !,X
OTHER
```

This patient's religion is listed as "OTHER."

- When the code has been thoroughly tested on several different patients, including some who have no religion in the patient file, go back to the option **Create Objects**.

- Select the action **Detailed Display** for object PATIENT RELIGION,
- Select the action **Technical Fields**
- Edit the object method to:

```
S X=$$RELIG^MYROUTIN(DFN)
```

- While we're here, let's go in, and put in an abbreviation for the object, and namespace the print name. To do so, we select the action **Basics**:

<b>Detailed Display</b>	Mar 05, 1997 15:03:58	Page:	1 of 1
Object PATIENT RELIGION			
Basics			
Name:	PATIENT RELIGION		
Abbreviation:			
Print Name:	PATIENT RELIGION		
Type:	OBJECT		
IFN:	599		
National			
Standard:	NO		
Status:	INACTIVE		
Owner:	MCCLENAHAN, MARGARET		
Object Method:	S X=\$\$RELIG^MYROUTIN(DFN)		
Technical Fields			
+ ?Help	>ScrollRight	PS/PL PrintScrn/List	+/- >>>
Basics		Technical Fields	Find
Items: Seq Mnem MenuTxt	Upload		Quit
Boilerplate Text	Try		

```
Select Action: Quit// BA BASICS
```

NAME: Since objects are embedded by name, abbreviation, or print name, NOT by file number, your edit of name, abbreviation, or print name may affect which titles have the object embedded in them. You may want to note the list of titles NOW before it changes.

Press RETURN to continue or '^' or '^ ^' to exit: <Enter>

Since our object is new and we know it's only in DEMOGRAPHIC NOTE, we'll disregard the warning and enter a new Name and an abbreviation. We'll keep the old print name and up-arrow out:

```
NAME: DEM PATIENT RELIGION// <Enter>
ABBREVIATION: RELI
PRINT NAME: PATIENT RELIGION// ^
```

### A.1.3 Testing the More Realistic Object

When the Object Method, Name, Abbreviation, and Print Name are all as we wish, we again test the Object. Before trying our title DEMOGRAPHICS as we did before, we will try the object itself.

- While still in the above Object Detailed Display screen, select the action **TRY**. We get the message:

```

Detailed Display                Mar 05, 1997 15:03:58      Page: 1 of 1
                                Object PATIENT RELIGION
-----
Basics
  Name:      DEM PATIENT RELIGION
  Abbreviation: RELI
  Print Name: PATIENT RELIGION
  Type:      OBJECT
  IFN:       599
  National
  Standard:  NO
  Status:    INACTIVE
  Owner:     MCCAN,MARGE

Technical Fields
  Object Method: S X=$$RELI^MYROUTIN (DFN)

Object is embedded in Title(s)      Status  Owner  IFN
DEMOGRAPHIC                          I      ME    567
  ? Help      +, - Next, Previous Screen  PS/PL
  Basics      Try      Delete
  Technical Fields  Find      Quit

Select Action: Quit// <Enter>

Select Action: Quit// T
Entry checks out OK for rudimentary completeness

```

This is an important step. If there were problems, we might have gotten any or all of the following messages:

```

Faulty Entry: No Object Method
Faulty Entry: Object Name finds multiple/wrong object(s)
Faulty Entry: Object Abbreviation finds multiple/wrong object(s)
Faulty Entry: Object Print Name finds multiple/wrong object(s)

```

The first message appears if the object has no Object Method. Unfortunately, this doesn't tell us whether the Object Method functions correctly. It only tells us the entry has or doesn't have an Object Method. We know it functions correctly because we tested the code.

We get one or more of the other messages if our object has a duplicate Name, Abbreviation, or Print Name with some other object. This would cause our object not to be found when that Name, Abbreviation, or Print Name is used in boilerplate text. We also get such a message if, for example, our object Abbreviation is the same as the Name of another object. In that case we would get the message:

```

Faulty entry: Object Abbreviation finds multiple/wrong object(s).

```

If this happens, our object might find and insert the WRONG object into boilerplate text. We must change the abbreviation so it doesn't match the name, abbreviation, or print name for another object.

Once we have thoroughly tested the Object Method code, put in Name, Abbreviation, and Print Name as desired, and gotten a clean TRY when we tried the OBJECT, we can now try our title containing the object.

- Quit out of Create Objects
- Go into the option **Create Document Definitions**
- Use the action **Next Level** to drill down to our title
- Select the action **Boilerplate Text**
- Select the title

```

Create Document Definitions      Mar 05, 1997 15:05:23      Page: 1 of 1
                                BASICS
+      Name                      Type
2  PROGRESS NOTES                CL
3      DEMOGRAPHIC NOTE          DC
4      DEMOGRAPHIC NOTE          TL

?Help      >ScrollRight      PS/PL PrintScrn/List      +/-      >>>
           (Class/DocumentClass)      Next Level      Detailed Display
           Title                      Restart          Status...
           (Component)                Boilerplate Text      Delete
Select Action: Title// BO=4

```

- The Boilerplate Text that we entered previously is displayed.

We changed the name of the object, but we do not need to make that update here since the Print Name is PATIENT RELIGION, and the Print Name will do just as well as the name.

- Select the action **Try**.

```

Boilerplate Text                Mar 05, 1997 15:05:37      Page: 1 of
                                Title DEMOGRAPHIC NOTE

Patient's religious preference: |PATIENT RELIGION|. Patient's home
address:...

? Help      +, - Next, Previous Screen      PS/PL
           Boilerplate Text                Try          Quit
           Status                          Find
Select Action: Quit// Try

```

- Enter a test patient
- Accept the defaults
- The following text appears:

```
Object |PATIENT RELIGION| is not active.
.
.
Calling text editor, please wait...

=====[WRAP]==[INSERT]=< >====[<PF1>H=HELP]=====
Patient's religious preference: UNITARIAN; UNIVERSALIST. Patient's home ad

=====T=====T=====T=====T=====T=====T=====T=====T=====T=====
```

- This allows you to check out the formatting of the boilerplate text when the object is being used.
- In this case the line continues beyond 80 characters - we haven't left enough room in the line for the object.
- If there isn't enough room for the object data, or it doesn't print out in the right format, we change the Object Method and/or the Boilerplate text until it looks right.
- Go into **Boilerplate text** and move the next sentence to the next line:

```
=====[WRAP]==[INSERT]=< >====[<PF1>H=HELP]=====
Patient's religious preference |PATIENT RELIGION|.
Patient's home address:...

=====T=====T=====T=====T=====T=====T=====T=====T=====T=====
```

- Exit the editor.
- In the Boilerplate screen, use the **TRY** action again:

```
=====[WRAP]==[INSERT]=< >====[<PF1>H=HELP]=====
Patient's religious preference: UNITARIAN; UNIVERSALIST.
Patient's home address: ...

=====T=====T=====T=====T=====T=====T=====T=====T=====T=====
```

This time the formatting looks fine.

We have tested the Object Method code, TRIED the object, and TRIED a title with the object in it.

Everything looks good, so we proceed to activate the object.

#### A.1.4 Activating the object

- Quit out of the Detailed Display screen.
- In the Objects screen, select the **Status action**.
- Select **A** for Active status:

```

Detailed Display      Mar 05, 1997 15:03:58      Page:    1 of    1
                        Object PATIENT RELIGION
-----
Basics
      Name:      DEM PATIENT RELIGION
      Abbreviation: RELI
      Print Name: PATIENT RELIGION
      Type:      OBJECT
      IFN:       599
      National
      Standard:  NO
      Status:    INACTIVE
      Owner:     MCCLAN,MARGE

Technical Fields
      Object Method: S X=$$RELI^MYROUTIN (DFN)
? Help      +, - Next, Previous Screen      PS/PL
Basics      Try                               Delete
Technical Fields      Find                   Quit

Select Action: Quit// BA      Basics

NAME: DEM PATIENT RELIGION// <Enter>
ABBREVIATION: RELI// <Enter>
PRINT NAME: PATIENT RELIGION// <Enter>
PERSONAL OWNER: ME// <Enter>
STATUS: (a/I): INACTIVE// A ACTIVE

```

Activating an object communicates to users that it is ready for embedding in boilerplate text. It also causes the object to execute its object method code rather than to write an inactive message when documents are entered on it through the regular options (as opposed to the action Try). If the object TRY action had not been clean, we would not have been able to activate the object.

The Active object is now ready for entering documents. One last test and we'll be done.

To enter documents (rather than just TRY them), the title also must have a status of Active or Test.

- Quit out of the option Create Objects and
- Go into the option **Create Document Definitions**.
- Edit the status of the test title to Test.
- Check to make sure that you own it.
- Quit out of the Document Definition menu
- Go into the **Clinician menu**.
- Select **Entry of Progress Note** from the Clinician's Progress Notes Menu

```

--- Clinician's Progress Notes Menu ---
1      Entry of Progress Note

```

```

2      Review Progress Notes by Patient
2b     Review Progress Notes
3      All MY UNSIGNED Progress Notes
4      Show Progress Notes Across Patients
5      Progress Notes Print Options ...
6      List Notes By Title
7      Search by Patient AND Title
8      Personal Preferences ...

```

```
Select Progress Notes User Menu Option: 1  Entry of Progress Note
```

### A.1.5 Entering a Progress Note using the Object

- Select a TEST PATIENT
- Select the title:

```

Select PATIENT NAME: DOE,WILLIAM C.          09-12-44      243236572
YES
SC VETERAN
      (2 notes)  C: 02/24/97 08:44
      (1 note )  W: 02/21/97 09:19
                  A: Known allergies
Available note(s): 11/07/96 thru 03/05/97 (23)
Do you wish to review any of these notes? NO// <Enter>
Personal PROGRESS NOTES Title List for ME

```

```

1      CRISIS NOTE
2      ADVANCE DIRECTIVE
3      Other Title
TITLE: (1-3): 1// 3
TITLE: CRISIS NOTE// DEMOGRAPHICS NOTE      TITLE
Creating new progress note...
      Patient Location: 2B
      Date/time of Visit: 04/18/96 10:00
      Date/time of Note: NOW
      Author of Note: MCMANN,MARGE
...OK? YES// <Enter>

Calling text editor, please wait...

=====[ WRAP ][ INSERT ]=< Patient: DOE,WILLIAM C. >[
<PF1>H=Help]=====
Patient's religious preference: UNITARIAN; UNIVERSALIST.
Patient's home address: ...

T=====T=====T=====T=====T=====T=====T=====T=====T=====

```

- Exit your editor:

```
Saving text ...
No changes made...
```

- Do not sign it. You'll want to delete it later since it's a test note:

```
Enter your Current Signature Code: <Enter>
NOT SIGNED.
```

```
Press RETURN to continue... <Enter>
Print this note? No// <Enter> NO
You may enter another Progress Note. Press RETURN to exit.
Select PATIENT NAME: <Enter>
```

### A.1.6 Troubleshooting:

If you have problems with this note:

- Make sure its status is Active or Test.
- If its status is Test, make sure you own it.
- Make sure the embedded object PATIENT RELIGION has an active status.

### A.1.7 Using the Object

When the note works properly, the object is finished and available for any user with a Document Definition menu to embed it in boilerplate text. Unless you assign ownership to someone else, you are the site-wide caretaker for this object. Any questions or requests should be addressed to you.

### A.1.8 Further considerations

Using the option Sort Document Definitions to create Objects

Once you are comfortable creating objects, it is actually easier to use the option Sort Document Definitions than the option Create Objects. To use the Sort option, select ALL, and select a narrow alphabetic range which includes both the object name and the name of a test title. Another possibility is to enter yourself as the Personal Owner. This assumes you are the personal owner of both the object and test title. Sort Document Definitions permits the object to be edited and tested (except for the code itself) without switching options.

Activating/Inactivating/Editing Objects

Objects must be inactive before they can be edited. Before inactivating an object that has already been used in boilerplate text, you should inactivate all Titles which use it. This takes those titles offline for entering documents. If a title containing an inactive object is not offline and someone enters a document on it, the object will not function and the user will see an “Object Inactive” error message where the object data should appear.

Objects can be tested using the Try action when they are inactive, but must be activated before they will function for the option Entry of Progress Note. So, when you have finished editing an object, be sure to reactivate it.

Objects should not be activated until they have been thoroughly tested both by trying the object and by trying a test title with the object embedded in its boilerplate text.

### Ownership of Objects

When creating a new object, make yourself an owner, at least until you have finished testing it. Only the owner can edit an object, even with the Manager menu.

Persons with the Manager menu are permitted to edit the owner of objects they don't own. This allows reassignment of object owner in those rare cases when reassignment is necessary. It should be done only by high-level managers. In general, users are expected to respect object ownership and edit only objects they own. If an object needs changing, contact its owner. When you own an object, you are caretaker of it for the entire site since it is available across the site for use in boilerplate text. Consult with all users before changing it.

### Naming Objects

Although TIU doesn't enforce any rules regarding which name of the object to embed in boilerplate text, sites may want to maintain the convention of embedding print name or abbreviation only, leaving the .O1 name to be a longer, technical, namespaced name. Then Print Name must be long enough to be unique, but otherwise as short as possible for typing convenience. Abbreviation is 2 to 4 letters.

Objects must always have uppercase names, abbreviations, and print names. When embedding objects in boilerplate text, users may embed any of these three (name, abbreviation, print name) in boilerplate text, enclosed by an “|” on both sides. Objects must always be embedded in uppercase.

As for namespacing, sites will want to share ideas among themselves as to what works best. Some possibilities are by service or product, like the Document Definition Hierarchy, and/or by the site where the object originated. Sites can post objects to share on SHOP,ALL

### Creating more complex objects

For ideas on creating more complex, longer objects, look at the object methods of some other exported objects. Look at the associated routines. Copy an exported object, put a break in the copy's object method, embed the copy in a title and try the title.

#### Action Descriptions

Actions are not selectable when they are enclosed in parentheses.

#### FIND

Finds text in a list of entries/information displayed. The program searches all pages of list/information (except for unexpanded entries in the Edit Document Definitions Option). Can be a quick way to get to the right page. Enter F

#### CHANGE VIEW

Changes the view to a different list of Document Definitions.

**CREATE**

This action can be used to create either Objects or nonobject Document Definitions in TIU Document Definition file 8925.1. After it is created, a nonobject entry must be explicitly added as an Item to a parent in the hierarchy before it can be used. (The Create Document Definitions Option does this automatically.) File 8925.1 cannot have two entries of the same type with the same name.

**DETAILED DISPLAY**

Detailed Display displays the selected entry and permits edit if appropriate. Edit is limited if the entry is National. Shared Components can be VIEWED via the Edit Document Definitions Option but can be EDITED only via the Sort Option.

The DETAILED DISPLAY action lets you edit all aspects of an entry, including Items. The Items action, in contrast, looks at the entry ONLY as an Item under its parent and permits edit of Item characteristics ONLY. Managers (anyone assigned the Manager menu) need not own the entry in order to edit it. You can edit Basics, Items, Boilerplate Text, Technical Fields and Upload Fields.

**TRY**

TRY examines the selected entry for basic problems.

For titles and components with boilerplate text, this includes checking any Embedded objects to make sure the object is embedded correctly. If the entry is a title and checks out OK (or if its only problem is an inactive Object), you can test the boilerplate text by choosing a patient and entering A document using the entry. TRY doesn't require any particular status for the Title, since documents entered during the trial function even if inactive, in Order to permit testing of objects. (Ordinarily, object data are not retrieved Unless the object is active, so be sure to activate the object when it's ready For use.) Since the trial document shows up on Unsigned lists during the time It's being edited, we recommend that you select test patients only.

If TRY is selected from the Boilerplate Text Screen, TRY shows which objects are badly embedded and why. Checks include whether the object as written exists in the file, whether it is active, whether it is split between lines, and whether the object as written is ambiguous as to which object is intended. If the entry is OK, you can enter a trial document.

For objects, TRY checks the object Name, Abbreviation and Print Name to make sure they are not ambiguous. That is, it makes sure the utility can decide which object to invoke when given the Name, Abbreviation, or Print Name and that it does not get the wrong object. TRY checks that the object has an Object Method, but does NOT check that the Object Method functions correctly.

**OWNER**

You can select multiple entries and edit Owner, Personal and/or Class. To change from Personal to Class Owner or vice versa, you must delete the unwanted entry before you are prompted for the other.

#### COPY

Copy can be done from the Edit Document Definitions option or from the Sort option, but not from the Create Document Definitions option. Titles, Components, or Objects may be copied.

Copy can be used to "jump start" new entries by copying an old entry and then editing it.

Copy could be used to change the behavior of an entry (i.e. change the behavior of the copy and inactivate the original), but most behavior can be edited even when the entry is in use by documents. Edit is better than copy/inactivate since it does not clutter up the hierarchy with inactive entries.

Copy can be used to "move" entries once they are in use by documents. (This is not a true "move", but is the only possibility once an entry has been used by documents. If the entry is not yet in use by documents, it is better to delete it as an item from the old parent, and add it to the new parent, a true move).

The Copy action prompts for an entry to copy and a Name to copy into. This name must be different from the name of the entry being copied. The action then creates a new entry with the chosen name and copies the fields in the Document Definition File 8925.1 into the new entry. The copier is made the personal owner of the copy.

If the copying is being done through the Edit Document Definitions option, the copy is then added as an item to the parent. If the copying is done through the Sort Document Definitions option, the copy is NOT added as an item to the parent. Since items must not be added to Active or Test Titles, components of Active or Test Titles can only be copied through the Sort option. Objects are copied from the Sort option or the Create Objects option.

Several fields are NOT copied as is. If the original is a National Standard, the entry may be copied, but the copy is not National Standard. If the original is Shared, it may be copied but the copy is not Shared. The other exceptional field is the Items field. If the entry has items, the action prompts for item names to copy into, creates NEW entries for the items, and adds the NEW items to the copy.

Exception to the Items field Exception: if a nonshared entry has a Shared item, the action does NOT copy the Shared item but merely adds the Shared item to the copy. If the entry being copied is itself a Shared component, the copy is not shared, and NEW items are added to the copy rather than reusing shared items.

If the copying is being done through the Edit Document Definitions option, the user is asked which parent to add the copy to, and the copy is added as an item to this parent. If the copy is a Title and the user has chosen a new parent rather than the same parent, the user is asked whether to activate the copy and inactivate the original.

If the copying is done through the Sort Document Definitions option, the copy action does NOT add the copy to any parent. Such orphan copies can be added to any parent using action Items for the parent.

Objects are copied from the Sort Option or the Create Objects Option.

QUIT  
Allows user to quit the current menu level.

## A.2 Creating Additional Medications Objects

Patch 38 provided six new TIU medication Objects:

- ACTIVE MEDICATIONS
- ACTIVE MEDS COMBINED
- DETAILED ACTIVE MEDS
- DETAILED RECENT MEDS
- RECENT MEDS
- RECENT MEDS COMBINED

And a method for providing values to four (4) variables in order to create additional medication objects without the necessity of modifying M code.

Patch 73 retains the basic functionality of the previous patch, but provides expanded capabilities for customizing TIU medication objects.

The following variables and values are now supported:

Variable Name	Also Known As	Values
ACTIVE	ACTVONLY	0 – Active and recently expired meds. 1 – Active meds only. 2 – Recently expired meds only. *

DETAILED		0 – One line per med only. 1 – Detailed information on each med.
ALL	ALLMEDS	0 – Specifies inpatient meds if patient is an inpatient, or outpatient meds if patient is an outpatient. 1 – Specifies both inpatient and outpatient meds. 2 or “I” – Specifies inpatient only. * 3 or “O” – Specifies outpatient only. *
COMBINED	ONELIST	0 – Separates Active, Pending, and Inactive meds into separate lists. 1 – Combines Active, Pending, and Inactive meds into the same list.
CLASSORT ✓		0 – Sorts meds alphabetically. 1 – Sorts meds by drug class, and within drug class alphabetically. 2 – Same as #1, except shows drug class in header.
SUPPLIES ✓		0 – Supplies are excluded. 1 – Supplies are included.

\*Indicates new functionality

There are almost 300 different combinations of these six variables, each of which can represent a different TIU object. If you want one of the other views of the medication data, you need to create a new TIU object (for which you'll require Programmer Access and must be listed as a Clinical Coordinator in ASU).

### A.3 Creating a New Medications Object

In the following example, we create a new TIU Object that reports only recently expired medications, prints one medication per line, lists both inpatient and outpatient medications, combines Active, Pending, and Inactive medications into one list, sorts medications by drug class, and includes supplies. Note that the way the procedure accepts the values for each variable is in a list such as this:

,2,0,1,1,1,1

#### Example:

```
Select TIU Maintenance Menu Option: DOcument Definitions (Manager)

      --- Manager Document Definition Menu ---

Select Document Definitions (Manager) Option: ?

  1      Edit Document Definitions
  2      Sort Document Definitions
  3      Create Document Definitions
  4      Create Objects

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

```
Select Document Definitions (Manager) Option: 4 Create Objects
```

```
START DISPLAY WITH OBJECT: FIRST//
```

```
<Enter>.....
```

```
.....
```

```
.....
```

```
.....
```

```
Objects                               Oct 06, 1999 10:10:55       Page: 1 of 6
                                Objects
```

```
Status
```

```
1      ACTIVE INPATIENT MEDS
```

```
A
```

```
2      ACTIVE MEDICATIONS
```

```
A
```

```
3      ACTIVE MEDS BY DRUG CLASS
```

```
A
```

```
4      ACTIVE MEDS COMBINED
```

```
A
```

```
5      ACTIVE OUTPATIENT MEDS
```

```
A
```

```
6      ACTIVE SMOKER?
```

```
A
```

```
7      ALL ACTIVE MEDICATIONS
```

```
A
```

```
8      ALL ACTIVE MEDS COMBINED
```

```
A
```

```
9      ALL DET ACTIVE MEDS COMBINED
```

```
A
```

```
10     ALL DET RECENT MEDS COMB BDC
```

```
A
```

```
11     ALL DET RECENT MEDS COMBINED
```

```
A
```

```
12     ALL DETAILED ACTIVE MEDS
```

```
A
```

```
13     ALL DETAILED RECENT MEDS
```

```
A
```

```
14     ALL RECENT MEDICATIONS
```

```
A
```

```
+      ?Help   >ScrollRight   PS/PL PrintScrn/List   +/-
```

```
>>>
```

```
Find      Detailed Display/Edit      Copy
```

```
Change View      Try      Quit
```

```
Create      Owner
```

```
Select Action: Next Screen// CO Copy
```

```
Select Entry to Copy: (1-14): 2
```

```
Copy into (different) Name: ACTIVE MEDICATIONS// RECENTLY EXPIRED MEDS
```

```
OBJECT copied into File Entry #1110
```

```
Press RETURN to continue or '^' or '^ ^' to exit: <Enter>
```

```
Please test the copy object and activate it when it is ready for users to  
embed
```

```
it in boilerplate text.
```

Press RETURN to continue or '^' or '^ ^' to exit: <Enter>

```

Objects                               Oct 06, 1999 10:11:36       Page:   5 of   6
                                Objects

+
Status
61  RECENTLY EXPIRED MEDS
I
62  RESPIRATION
A
63  SGOT
A
64  TEMPERATURE
A
65  TEST ACTIVE MEDS
I
66  TEST AGE
I
67  TEST NOTES
I
68  TEST OBJECT
69  TODAY'S DATE
A
70  TSH/T4
A
71  URIC ACID
A
72  VISIT DATE
A

                ?Help   >ScrollRight   PS/PL PrintScrn/List   +/-
>>>
    Find                Detailed Display/Edit   Copy
    Change View         Try                Quit
    Create              Owner
Select Action: Quit// DE   Detailed Display/Edit

Select Entry:  (61-72): 61

```

```

Detailed Display                   Oct 06, 1999 10:11:46       Page:   1 of   1
                                Object RECENTLY EXPIRED MEDS

Basics
    Name:  RECENTLY EXPIRED MEDS
    Abbreviation:
    Print Name:
    Type:  OBJECT
    IFN:   1110
    National
    Standard:  NO
    Status:  INACTIVE
    Owner:   CLINICAL COORDINATOR

Technical Fields

```

```

Object Method:  S X=$$LIST^TIULMED(DFN,"^TMP("TIUMED",$J),1)

      ? Help      +, - Next, Previous Screen      PS/PL
      Basics      Try                                Delete
      Technical Fields      Find                    Quit
Select Action: Quit// TE Technical Fields

OBJECT METHOD: S X=$$LIST^TIULMED(DFN,"^TMP("TIUMED",$J),1)
                Replace ,1 With ,2,0,1,1,1,1 Replace <Enter>
S X=$$LIST^TIULMED(DFN,"^TMP("TIUMED",$J),2,0,1,1,1,1)

```

```

Detailed Display      Oct 06, 1999 10:12:14      Page: 1 of 1
                        Object RECENTLY EXPIRED MEDS

Basics
  Name: RECENTLY EXPIRED MEDS
  Abbreviation:
  Print Name:
  Type: OBJECT
  IFN: 1110
  National
  Standard: NO
  Status: INACTIVE
  Owner: CLINICAL COORDINATOR

Technical Fields
  Object Method: S
X=$$LIST^TIULMED(DFN,"^TMP("TIUMED",$J),2,0,1,1,1,1)

      ? Help      +, - Next, Previous Screen      PS/PL
      Basics      Try                                Delete
      Technical Fields      Find                    Quit
Select Action: Quit// BASICS Basics

```

```

NAME: RECENTLY EXPIRED MEDS Replace <Enter>
ABBREVIATION: <Enter>
PRINT NAME: RECENTLY EXPIRED MEDS
CLASS OWNER: CLINICAL COORDINATOR Replace <Enter>
STATUS: (A/I): INACTIVE// A ACTIVE

Detailed Display      Oct 06, 1999 10:13:38      Page: 1 of 1
                        Object RECENTLY EXPIRED MEDS

Basics
  Name: RECENTLY EXPIRED MEDS
  Abbreviation:
  Print Name: RECENTLY EXPIRED MEDS
  Type: OBJECT
  IFN: 1110
  National
  Standard: NO
  Status: ACTIVE
  Owner: CLINICAL COORDINATOR

Technical Fields

```

```

Object Method: S
X=$$LIST^TIULMED(DFN,"^TMP("TIUMED",$J)",2,0,1,1,1,1

      ? Help      +, - Next, Previous Screen      PS/PL
      Basics      Try                               Delete
      Technical Fields      Find                   Quit
Select Action: Quit//      Quit
.....

```

```

Objects                               Oct 06, 1999 10:13:54      Page: 5 of 6
                                Objects

+
Status
61  RECENTLY EXPIRED MEDS
A
62  RESPIRATION
A
63  SGOT
A
64  TEMPERATURE
A
65  TEST ACTIVE MEDS
I
66  TEST AGE
I
67  TEST NOTES
I
68  TEST OBJECT
69  TODAY'S DATE
A
70  TSH/T4
A
71  URIC ACID
A
72  VISIT DATE
A

      ?Help      >ScrollRight      PS/PL PrintScrn/List      +/-
>>>
      Find      Detailed Display/Edit      Copy
      Change View      Try                               Quit
      Create      Owner
Select Action: Quit//

```

## Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

**Phone:** (505) 248-4371 or (888) 830-7280 (toll free)

**Fax:** (505) 248-4363

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