



RESOURCE AND PATIENT MANAGEMENT SYSTEM

Radiology/Nuclear Medicine

(RA)

Technical Manual

Version 5.0
July 2004

Office of Information Technology (OIT)
Division of Information Resource Management
Albuquerque, New Mexico

Table of Contents

1.0	Introduction.....	1
2.0	Implementation and Maintenance	2
2.1	System Requirements	2
2.2	HL7 Interface	2
2.3	Virgin Installation	4
2.4	Implementation of an Installation over V 4.0.....	5
2.5	Information Messages	5
2.6	Maintenance	6
2.6.1	Imaging Type Mismatch Report.....	6
2.6.2	IRM Menu	6
2.6.3	Resource Device Specifications for Division (New)	11
2.7	Globals	15
2.8	Key Variables	17
2.9	Function.....	27
2.10	Bulletins.....	27
3.0	Package-Wide Variables	28
4.0	Routines	29
5.0	Files and Tables.....	46
5.1	File List	46
5.2	File Access	46
5.3	Cross References	48
5.4	Table Files	54
5.5	Templates.....	79
5.5.1	Input Templates.....	79
5.5.2	Sort Templates	81
5.5.3	Print Templates	81
6.0	Internal Relations	84
7.0	External Relations	85
7.1	External Calls	85
7.2	Published Entry Points.....	85
7.3	DBIAs	86
7.4	Callable Routines.....	86
7.5	Exported Options	87
7.5.1	Menus.....	87
7.5.2	Single options.....	98
7.5.3	Menu/Option Assignment	98
7.5.4	Protocols	99
7.5.5	FileMan Options	99
8.0	Package Security.....	100

8.1	Security Keys.....	100
8.2	Sign-on Security	101
8.3	Electronic Signature.....	101
8.4	Legal Requirements.....	101
9.0	Archiving and Purging	102
10.0	Generating Online Documentation	103
10.1	%Index.....	103
10.1.1	%INDEX	104
10.2	Inquire Option	104
10.3	Print Option File	105
10.4	List File Attributes	105
11.0	SAC Requirements and Exemptions	106
	Glossary.....	107
	Contact Information	150

Preface

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

All routines, files, options, and keys are namespaced starting with the letters "RA.". IHS specific routines are namespaced starting with the letters "BRA" The file number range for this package is 70-79.9.

1.0 Introduction

The Radiology package supports administrative functions related to processing patients for radiological examinations. It automates tedious tasks previously performed manually, providing increased efficiency, accuracy, and completeness in the data entry and tracking of radiological exams. Exam results are readily available online to a broad range of authorized users throughout the facility.

Some of the highlights of the Radiology package features include:

- Online patient registration for exams
- Automatic printing of flash cards and jacket labels
- Transcription of patient radiological reports
- Daily activity log, exam status reports, incomplete/delinquent exam reports, and unverified/unreleased exam reports
- Workload reports generated by various criteria such as personnel, film usage, exam area, and ward
- Reports by procedures, diagnostic codes, and radiologists for quality improvement
- Online physician verification of radiological exam reports through electronic signatures
- Fully integrated with the Patient Care Component
- Procedures identified with CPT codes to facilitate billing

This software application will work in conjunction with the existing Resource and Patient Management (RPMS) applications and the distribution of the package will be IHS-wide.

2.0 Implementation and Maintenance

2.1 System Requirements

The Radiology/Nuclear Medicine package relies on the following external packages to run effectively:

- If running Radiology v 4.0, must have patch 10 installed
- Kernel v8.0 or later, must have patch 1008 installed
- FileMan v21 or later
- MailMan v7.1
- PIMS v5.3
- HL 7 v1.6, must have patch 1005 installed
- Lexicon v 2.0
- XB/ZIB v 3.0
- Adverse Reaction Tracking v3.0
- OE/RR v2.5
- PCC v2.0

The following external files are expected to be present, with data:

- CPT (#81)
- CPT Categories (#81.1)
- Hospital Location (#44)
- Medical Center Division (#40.8)
- New Person (#200)
- Patient (#2)
- Ward Location (#42)

Also, the Electronic Signature fields in the New Person file (#200) are used by this package to verify reports.

2.2 HL7 Interface

HL7 messaging with Radiology/Nuclear Medicine V 5.0 can be divided into two categories:

Messages initiated by outside sources, e.g. vendor systems (COTS) or RPMS applications other than Radiology/Nuclear Medicine

- **Query:** A typical query message initiator would be a voice recognition reporting system that queries for unreported imaging exams, then displays them to the interpreting radiologist for selection of the particular case for which s/he wants to enter findings.
- **Report Transmission:** Reports can be transmitted to Radiology/Nuclear Medicine from vendor equipment such as voice recognition systems, or other RPMS applications.

To continue to support existing interfaces that may rest on older backwards-compatible versions of the HL7 package and to account for potential differences in the content of these incoming messages, the creation of an M routine that will act as a "bridge" may be necessary for new interfaces if they cannot work with existing bridge programs. The bridge program parses the HL7 message and places it in a consistent format for the Radiology/Nuclear Medicine software that does error checking, data filing or retrieval, and takes other appropriate action such as updating exam and order statuses, sending alerts and bulletins, etc.

- vendor's HL7 msg| RPMS HL7| bridge program| Rad/Nuc Med

Messages initiated or broadcast by the RPMS Radiology/Nuclear Medicine application

These messages are typically consumed by vendor PACS systems, the RPMS Imaging/Multi-Media system, and some voice recognition reporting systems. Messages are "broadcast" from RPMS Radiology/Nuclear Medicine whenever an imaging exam is registered, examined (i.e., when images have been collected), canceled or reported. This interface rests on the RPMS HL7 version 1.6 features, which use "protocol event points" and allow multiple subscribers who can be other RPMS applications or outside vendors.

- Rad/Nuc Med| RPMS HL7| subscriber

A Radiology/Nuclear Medicine related entry for the RPMS HL7 Application Parameter file (#771) is exported with this version. The exported entry contains the following data:

Table 2-1

Name:	RADIOLOGY
Active/Inactive:	Inactive
HL7 Encoding Characters:	~ \&
HL7 Field Separator:	^
HL7 Message: ACK:	Processing Routine: none
HL7 Message: ORF:	Processing Routine: none
HL7 Message: ORU:	Processing Routine: RAHLBKVR
HL7 Message: QRY:	Processing Routine: RAHLBKVQ

The above entry is necessary for HL7 message exchange with the existing vendor supplied voice recognition units that rely on the voice recognition interface released in 1992 with Radiology V4.0.

Please refer to the HL7 package documentation to set up and maintain the Radiology/Nuclear Medicine HL7 interface with any applications your facility has (e.g., voice recognition systems, PACS systems and other vendor or RPMS -to-RPMS applications).

See Appendix A: HL7 Interface Interface for a description of the specific HL7 messages, segments and fields used when the Rad/Nuc Med package sends/receives an HL7 message.

See Appendix B: Medicine-Initiated Messages for a list of records exported, and instructions and sample file setup so that HL7 messages may be sent to another application when a report is verified, or an exam is registered, examined or canceled.

See Appendix C: HL7 1.5 Voice Recognition Interface for additional setup for the older (1992) voice recognition system interface.

Since some vendors reuse message numbers, it is very important that you run the appropriate HL7 package option to purge all successfully transmitted entries on a frequent basis. Refer to the HL7 manual for instructions.

2.3 Virgin Installation

1. Enter at least one division into the Rad/Nuc Med Division file #79 to activate the system. The division can be further defined by the radiology supervisor.
2. Give the radiology supervisor access to at least one imaging location (field #74) in the New Person file (#200). Without this access established, no one will be able to sign onto the system. Once the radiology supervisor has access, he or she must give each package user (technologist, interpreting resident physician, interpreting staff physician, or clerk) location access so they can sign on. The radiology supervisor can give users access with the Classification Enter/Edit [RA PNLCLASS] option. Without an assigned imaging location, a user cannot access the package.
3. Along with the radiology supervisor, determine the devices needed for each imaging location that will be defined. Use the Device Specifications for Imaging Locations [RA DEVICE] option in the IRM Menu [RA SITEMANAGER] to assign them.

4. You will need to associate an existing or new mail group with each of the exported bulletins so users can receive these Radiology/Nuclear Medicine messages. The bulletins are generated when an important action has taken place, such as the deletion of a report. Consult with the package radiology supervisor to determine how many mail groups to create, what mail group(s) to associate with each bulletin, and who should be the mail group coordinator. It is strongly recommended that a mail group that includes the radiology supervisor and possibly an IRM support person as recipients be established and associated with the RAD/NUC MED CREDIT FAILURE bulletin. This is the only way users can be notified of credit failure due to lack of data or wrong data in the Radiology/Nuclear Medicine package.
5. The IRM Menu [RA SITEMANAGER] and the standalone Imaging Type Mismatch Report [RA EXAM/STATUS ITYPE] option covered in this chapter will help with the continued maintenance of the software. Further implementation and maintenance can be done by the radiology supervisor and is described in the Radiology/Nuclear Medicine super user's guide.

2.4 Implementation of an Installation over V 4.0

The burden of implementation falls mainly on the radiology supervisor and is fully discussed in the super user's manual with a checklist of steps to use in the implementation process.

2.5 Information Messages

There are two main messages that users may receive that concern your site manager, particularly during implementation after a virgin installation:

Radiology/Nuclear Medicine Division definition error. Call your site manager.

When this message appears, it means there is insufficient information in the imaging location that was selected by the user. Make sure that the radiology supervisor has assigned the location to a division in the Division Parameter Setup option Rad/Nuc Med Division file (#79), field #50.

No default "ABC" printer has been assigned. Contact IRM.

This message appears when the radiology supervisor is editing the printers in the Location Parameter Setup option and the printer has not been assigned for that activity (jacket labels, flash cards, or exam labels). Use the Device Specifications for Imaging Locations [RA DEVICE] option to assign them.

2.6 Maintenance

Information throughout this manual is meant to help the site manager in the maintenance of the software. The discussion that follows here covers the options available to assist the site manager in that maintenance.

2.6.1 Imaging Type Mismatch Report

[RA EXAM/STATUS ITYPE]

This option is not assigned to any menu. It generates a report listing each case where the imaging type of the visit does not match the imaging type of the current exam status. These cases should be edited to the Complete status as soon as possible to correct the exam status. This mismatch condition may have happened around the time a previous version was installed, but new mismatches should not occur.

The report requires 132-column output and displays the patient name, SSN, exam date/time, case number, imaging type of the visit, exam status, and imaging type of the exam status for each discrepancy.

2.6.2 IRM Menu

[RA SITEMANAGER]

Device Specifications for Imaging Locations

[RA DEVICE]

This function allows you to assign device names to represent divisions and locations.

When a user signs on to the system and tries to access the module, the first action by the module will be to determine which division and location the user is associated with. The module uses the device name to do this. During the entire session the system automatically uses the parameters that the coordinator has specified for that division and location. For example, the user will never be asked how many flash cards to print or what flash card format to use. The parameters have that information.

Once parameters are entered for default printers (flash card, jacket label, radiopharmaceutical dose ticket, report, request, and request cancellation) and the printer names have been assigned to the location, output will automatically be routed to these devices.

If a default printer is not entered, the user will be prompted to select a printer at the time he or she initially accesses the Radiology/Nuclear Medicine package. If a default printer is not selected at the time of initial access to the package, the user will be prompted for a printer each time they elect to print a flash card, jacket label, request, or report.

Note: When an exam is requested via the Request an Exam option, the "Submit Request To:" prompt is screened. Therefore, if a request printer is malfunctioning, it will have to be changed for that location until the printer is fixed. This is an option that you may wish to assign to the package radiology supervisor.

One of the new fields, Dosage Ticket Printer, only appears if the imaging location you select has a Nuclear Medicine or Cardiology Studies imaging type.

The option requests the imaging location name and then default printer names for:

- Flash Cards
- Jacket Labels
- Requests
- Reports
- Dosage Tickets
- Cancelled Requests

Distribution Queue Purge

[RA RPTDISTPURGE]

The Distribution Queue Purge option allows you to purge the distribution files. This can be done to eliminate old reports that have already been printed or reprinted.

The information purged includes the Activity Log in the Reports Distribution Queue file (#74.3) and the actual reports in the Report Distribution file (#74.4).

You are prompted for a purge date and a device. Any reports printed prior to that specified date are purged from the distribution files.

A mail message will be sent to you with the results of the purge that includes the date/time the purge begins and ends.

```
Subj: Distribution Queue Purge  [#12256]  09 Feb 97 11:34  4 Lines
From: Radiology Package in 'IN' basket.      Page 1  **NEW**
```

```
-----
Purge distribution files of reports printed before JAN 1,1997
```

```
Distribution files purge process begun at FEB 9,1997  11:34
Distribution files purge process completed at FEB 9,1997  11:34
```

Occasionally, a facility has kept the distribution queues active, but reports have not been printed for a long time causing a high volume of unprinted reports to sit in the queue. This purge option is not designed to purge unprinted reports. To delete unprinted historical reports that you do not want to print from the queues, use the Rebuild Distribution Queues [RA RPTDISTREBUILD] option. Rebuilding also supports populating the queues with reports verified on or after a date you choose.

Failsoft Parameters

[RA FAILSOFT]

The Failsoft Parameters option allows you to specify the Operating Conditions parameter. This field contains the hardware conditions parameter that tells the system the type of operating conditions that are in effect. Choose from Normal and Emergency. Under normal conditions, the system will use the parameters set up the Imaging Locations file (#79.1) to determine which input and printer devices to use. Under emergency conditions, the system ignores all the location parameters and prompts the user to enter this information during each process. This function is also referred to as failsoft.

Imaging Type Activity Log

[RA IMGLOG]

The Imaging Type Activity Log option enables you to acquire a hardcopy log of certain activities.

The log includes the following information by imaging type: the date on which the activity occurred, the type of activity, the user who initiated the activity, the number of exams affected (if any), and the number of reports affected (if any).

The types of activities listed are:

- Changes in imaging type parameters
- Scheduled data purges
- Completion of data purges
- Modification of online data criteria (changes made through the Purge Data Function option)

Purge Data Function

[RA PURGE]

The Purge Data Function option enables you to purge specific data from the system without affecting the integrity of the patient records. You must enter cut off dates (or accept the default) for the following types of data that may be purged using this option:

- Activity logs
- Reports (not the impressions)
- Clinical histories
- Status tracking times
- Order data (procedure requests)

At each prompt for one of the above data types, you will be setting the imaging type parameter for the number of days to keep the various activity logs online. The number of days for each should be determined by the coordinator and the IRM site manager.

The number of days must be a whole number between 90 and 9999 for activity logs, report, clinical history, and tracking time. The default number of days for the Order Data Cutoff is 90 and, if changed, must be a whole number between 30 and 9999. The orders which will be purged include those whose last activity date is greater than the number of default days and whose order status is Discontinued, Hold, Complete, or Pending. Order purges can also be initiated through OE/RR. The report impressions will remain online even after purging.

This operation should be run during off hours. A system backup should be completed prior to execution of the purge routine.

The output will include the date/time the purge starts and finishes, and all purge statistics compiled for records processed, reports processed and requests processed. Entries are made to the imaging type activity log showing any changes to on-line criteria, purge routine scheduling and a record of completion.

Upon completion of the purge process, a global efficiency should be run on the globals RADPT and RARPT. Following purges, the local computer specialist should assess disk space availability and global efficiency to decide whether a compaction of the RADPT and RARPT globals are necessary. On large systems, typically 2 to 4 megabytes of storage space can be regained, within a three-month period, if these globals are saved out to a host file, killed, then reloaded back to the MUMPS UCI. It is a site management decision as to when these globals should be saved out to host files.

By purging information that is unnecessary for the maintenance of the system and associated patient records, you will extend your disk space and possibly speed up processing time.

Note: Be sure you have done a system backup before you choose to purge data.

The following is an example:

```
Do you want to edit the Imaging Type purge parameters? Yes// <RET>

Select IMAGING TYPE: ULTRASOUND

Please indicate how many days each type of data should remain on-line:
-----
ACTIVITY LOG CUT-OFF: 90
REPORT CUT-OFF: 90
CLINICAL HISTORY CUT-OFF: 90
TRACKING TIME CUT-OFF: 90
ORDER DATA CUT-OFF: 90// <RET>
Select IMAGING TYPE: <RET>
Do you wish to schedule the data purge? No// ?

Enter 'YES' to schedule the data purge, or 'NO' not to.

Do you wish to schedule the data purge? No// Y

      IMAGING TYPES
      -----
1) ANGIO/NEURO/INTERVENTIONAL
2) RADIOLOGY STUDIES (NUC MED)
3) CT SCAN
4) GENERAL RADIOLOGY
5) MAGNETIC RESONANCE IMAGING
6) NUCLEAR MEDICINE
7) ULTRASOUND
8) VASCULAR LAB

Select Imaging Type(s) to Purge: (1-8): 7
Do you wish to re-purge records that have been purged in the past?
No//<RET>
DEVICE: printer name

DO YOU WANT YOUR OUTPUT QUEUED? NO// YES

Requested Start Time: NOW// <RET>
      Request Queued. Task #: 10157

Purge data routine started at MAR 1,1997 01:05.

Purging exams/reports.

Purging orders/requests.

Data purge completed at MAR 1,1997 01:18.

The following purge statistics were compiled:

      No. of exam records processed      : 863
      No. of reports processed           : 620
```

No. of requests processed	: 796
---------------------------	-------

Figure 2-1: Example of purge data function

Rebuild Distribution Queues

[RA RPTDISTREBUILD]

The Rebuild Distribution Queue option allows you to rebuild distribution files with reports verified on or after a selected date.

Rebuilding the distribution queues allows the user to reprint reports that have been printed through the Distribution Queue menu and then purged through the Distribution Queue Purge option. This might be necessary if the original reports were misplaced, a printer has jammed, etc.

This option can also be used if a facility that has not been using Distribution Queues wants to clean out the queues completely and rebuild with only the reports verified after a chosen date. In this way, the queues can be cleared without printing any reports.

Depending on the category of the report and the requirements of the distribution queue, there will be an entry made in the Report Distribution file (#74.4) for each report and the corresponding queue. In other words, if a report has a category of Outpatient and both the Clinic Reports queue and the File Room queue include outpatient reports, two entries will be made in the Report Distribution file (#74.4).

The output from this option will show the number of reports used to rebuild the distribution files. This report should be queued to a printer.

2.6.3 Resource Device Specifications for Division (New)

[RA RESOURCE DEVICE]

If your facility wishes to control the rate at which tasked exam status updates are released to be processed, use this option to enter resource device specifications. This is advised if the facility is experiencing drastic system slowdowns due to periodic heavy use of the online report verification and batch verification of reports options, which can queue a large number of tasks at once.

If you choose to enter a resource device in the Resource Device field, you should be careful to completely follow all directions in the Kernel documentation after a system crash to bring this resource device back up. Failure to follow those directions could result in Rad/Nuc Med tasks being severely delayed and data corruption.

When you select the option, you are asked to enter a division and the device.

Template Compilation

[RA COMPILE TEMPLATES]

This option recompiles Radiology/Nuclear Medicine input and print templates that are currently compiled. It is advised that all Radiology/Nuclear Medicine users be off the system while the templates are being recompiled. The user may select compiled templates from any or all of the Radiology/Nuclear Medicine package files that have compiled templates. Also, the user will select the maximum size of the compiled routines.

The following is an example:

```
Template Compilation
  This option will compile all Radiology/Nuclear Medicine input
  and print templates (within the defined file number range) which
  are currently compiled on your system. Since these templates
  are critical to the operation of the software, it is strongly
  advised that all Radiology/Nuclear Medicine users be off the
  system. It is also strongly advised that the compilation of
  templates be done when system activity is at a minimum.

Is it ok to continue? No// YES

Maximum routine size on this computer in bytes. (2400-5000) : 5000// <RET>

Select Rad/Nuc Med Input Template: ??

  Select a INPUT TEMPLATE NAME from the displayed list.
  To deselect a NAME type a minus sign (-)
  in front of it, e.g. -NAME.
  To get all NAMES type ALL.
  Use an asterisk (*) to do a wildcard selection, e.g.,
  enter NAME* to select all entries that begin
  with the text 'NAME".

Choose from:
  RA ORDER EXAM      File #: 75.1
  RA QUICK EXAM ORDER  File #: 75.1
  RA REGISTER        File #: 70
  RA REPORT EDIT     File #: 74
  RA VERIFY REPORT ONLY  File #: 74

Select Rad/Nuc Med Input Template: ALL

Another one (Select/De-Select): -RA REPORT EDIT      File #: 74

Another one (Select/De-Select): ??

  Select a INPUT TEMPLATE NAME from the displayed list.
  To deselect a NAME type a minus sign (-)
  in front of it, e.g., -NAME.
```



```
To get all NAMES type ALL.
Use an asterisk (*) to do a wildcard selection, e.g.,
enter NAME* to select all entries that begin
with the text 'NAME'. Wildcard selection is
case sensitive.

You have already selected:
  RA ORDER EXAM   File #: 75.1
  RA QUICK EXAM ORDER   File #: 75.1
  RA REGISTER     File #: 70
  RA VERIFY REPORT ONLY   File #: 74

Choose from:
  RA REPORT EDIT   File #: 74

Another one (Select/De-Select): <RET>

Select Rad/Nuc Med Print Template: ALL

Another one (Select/De-Select): ??

  Select a PRINT TEMPLATE NAME from the displayed list.
  To deselect a NAME type a minus sign (-)
  in front of it, e.g., -NAME.
  To get all NAMES type ALL.
  Use an asterisk (*) to do a wildcard selection, e.g.,
  enter NAME* to select all entries that begin
  with the text 'NAME'. Wildcard selection is
  case sensitive.

You have already selected:
  RA REPORT PRINT STATUS   File #: 74

Choose from:

Another one (Select/De-Select): <RET>

Are you sure you wish to compile the selected templates? No// YES

  Input template to be compiled: RA ORDER EXAM
  For file #75.1: RAD/NUC MED ORDERS
  Routines filed under the following namespace: 'RACTOE'.

Compiling RA ORDER EXAM Input Template of File 75.1...
'RACTOE' ROUTINE FILED.....
'RACTOE1' ROUTINE FILED.....
'RACTOE4' ROUTINE FILED.....
'RACTOE5' ROUTINE FILED.....
'RACTOE6' ROUTINE FILED.....
'RACTOE8' ROUTINE FILED..
'RACTOE2' ROUTINE FILED..
'RACTOE3' ROUTINE FILED...
'RACTOE7' ROUTINE FILED.
  Done!
```

```
Input template to be compiled: RA QUICK EXAM ORDER
For file #75.1: RAD/NUC MED ORDERS
Routines filed under the following namespace: 'RACTQE'.

Compiling RA QUICK EXAM ORDER Input Template of File 75.1....
'RACTQE' ROUTINE FILED.....
'RACTQE1' ROUTINE FILED.....
'RACTQE3' ROUTINE FILED.....
'RACTQE4' ROUTINE FILED...
'RACTQE6' ROUTINE FILED..
'RACTQE2' ROUTINE FILED...
'RACTQE5' ROUTINE FILED.
Done!

Input template to be compiled: RA REGISTER
For file #70: RAD/NUC MED PATIENT
Routines filed under the following namespace: 'RACTRG'.

Compiling RA REGISTER Input Template of File 70..
'RACTRG' ROUTINE FILED.....
'RACTRG1' ROUTINE FILED....
'RACTRG2' ROUTINE FILED....
'RACTRG3' ROUTINE FILED.....
'RACTRG6' ROUTINE FILED.....
'RACTRG7' ROUTINE FILED.....
'RACTRG8' ROUTINE FILED...
'RACTRG11' ROUTINE FILED..
'RACTRG4' ROUTINE FILED..
'RACTRG5' ROUTINE FILED..
'RACTRG9' ROUTINE FILED...
'RACTRG10' ROUTINE FILED...
'RACTRG12' ROUTINE FILED.
Done!

Input template to be compiled: RA VERIFY REPORT ONLY
For file #74: RAD/NUC MED REPORTS
Routines filed under the following namespace: 'RACTVR'.

Compiling RA VERIFY REPORT ONLY Input Template of File 74...
'RACTVR' ROUTINE FILED....
'RACTVR1' ROUTINE FILED.....
'RACTVR2' ROUTINE FILED.....
'RACTVR3' ROUTINE FILED...
'RACTVR4' ROUTINE FILED.
Done!

Print template to be compiled: RA REPORT PRINT STATUS
For file #74: RAD/NUC MED REPORTS
Routines filed under the following namespace: 'RACTRT'.

Compiling RA REPORT PRINT STATUS Print Template of File
74.....
...
'RACTRT' ROUTINE FILED.....
Done!
```

Figure 2-2: Template compilation

2.7 Globals

RA

This global contains all of the general table type files used by the Radiology/Nuclear Medicine package. These files are pointed to by other files and contain various types of parameters that may be set up at each site to customize the package to meet that site's needs. The files contained in this global are:

- Contract/Sharing Agreements (#34)
- Route of Administration (#71.6)
- Site of Administration (#71.7)
- Radiopharmaceutical Source (#71.8)
- Radiopharmaceutical Lot (#71.9)
- Examination Status (#72)
- Standard Reports (#74.1)
- Rad/Nuc Med Reason (#75.2)
- Complication Types (#78.1)
- Flash Card Formats (#78.2)
- Diagnostic Codes (#78.3)
- Film Sizes (#78.4)
- Camera/Equip/Rm (#78.6)
- Label Print Fields (#78.7)
- Rad/Nuc Med Division (#79)
- Imaging Locations (#79.1)
- Imaging Type (#79.2)

The global should be journaled and translated if the operating system supports these functions.

Journaling: Mandatory

RADPT

This global only contains data for the Rad/Nuc Med Patient file (#70).

The global should be journaled and translated if the operating system supports these functions.

Journaling: Mandatory

RADPTN

This global contains patient exam data specific to radiopharmaceuticals for the Nuc Med Exam Data file (#70.2).

The global should be journaled and translated if the operating system supports these functions.

Journaling: Mandatory

RAMIS

This global contains all the files related to Rad/Nuc Med AMIS reporting. The files contained in this global are:

- Rad/Nuc Med Procedures (#71)
- Major Rad/Nuc Med AMIS Codes (#71.1)
- Procedure Modifiers (#71.2)
- Rad/Nuc Med Common Procedure (#71.3)
- Rad/Nuc Med Procedure Message (#71.4)
- Imaging Stop Codes (#71.5)

The global should be journaled and translated if the operating system supports these functions.

Journaling: Mandatory

RABTCH

This global contains data for:

- Report Batches (#74.2)
- Report Distribution Queue (#74.3)
- Report Distribution (#74.4)

The global should be journaled and translated if the operating system supports these functions.

Journaling: Mandatory

RAO

This global contains the data for Rad/Nuc Med Orders file (#75.1).

The global should be journaled and translated if the operating system supports these functions.

Journaling: Mandatory

RARPT

This global contains only data for Rad/Nuc Med Reports file (#74).

The global should be journaled and translated if the operating system supports these functions.

Journaling: Mandatory

2.8 Key Variables

RACCESS

This local array identifies the user's division, imaging type and imaging location access. This variable, along with RAIMGTY, RAMLC, RAMDV, and RAMDIV are package-wide variables set by the system. They are all normally computed during the login process. They are also set by the individual options of the package if they do not already exist. The routine series RAPSET* sets these variables.

For any initial menu for the Radiology/Nuclear Medicine package created at the local site level, these variables must be killed. Do this by making D KILL^RAPSET1 the exit action for the menu.

The array elements that identify the user's division access look like the following:

```
RACCESS(DUZ,"DIV",File #79 IEN,File #79.1 IEN)=File #4 IEN^Division name
```

The array elements that identify the user's imaging type access look like the following:

```
RACCESS(DUZ,"IMG",File #79.2 IEN,File #79.1 IEN) =null^Imaging Type name
```

The array elements that identify the user's location access look like the following:

```
RACCESS(DUZ,"LOC",File #79.1 IEN)=File #44 IEN^Hospital Location name
```

RABED

Bedsection name. First piece of the zeroth-node for an entry in File #42.4 [Specialty - ^DIC(42.4,)].

RABTCH Internal entry number to File #74.2 [Report Batches - ^RABTCH()] that is used during various batch processing functions.

RACLNC

Default clinic name used in the initial exam entry process. First piece of the zeroth-node of an entry in File #44 [Hospital Location - ^SC()].

RACN

Case Number for an exam;
^RADPT(RADFN,"DT",RADTI,"P",RACNI,0)=RACN^...

RACNI

Internal entry number for an exam;
^RADPT(RADFN,"DT",RADTI,"P",RACNI,0)

RACRT

This variable is used by the various workload report routines and it contains either a 'y' for 'yes' or an 'n' for 'no' to indicate to the routine whether the exam being processed should be used in the compilation of the report.

The value of RACRT is obtained from the Examination Status file (#72) entry for which the exam being processed points to. In the Examination Status file there is a field for each workload report.

The variable name RACRT comes from 'CRiTeria'

RACS

RACS="Y" if the clinic stop has already been recorded for the exam currently being processed. This variable is only set when needed to determine whether to call SDACS to hand PIMS the stop code and CPT information for the exam.

RACT

Internal set value for the various activity logs through out the system; for example, in the exam activity log 'E' means 'Exam Entry'

RADATE

Date of registered exam expanded to a user readable format. (i.e., Jun 17,1984)

RADFN

Internal entry number to Files #2 and #70 [Patient - ^DPT()]; [Rad/Nuc Med Patient - ^RADPT()].

RADIV

Used in the various workload reports, such as RAWKL*, RAPRC*, RALWKL*, RAMIS*, RAFLM*, to indicate the division currently being processed.

RADOB

Patient's date of birth. Third piece of the zeroth node of an entry in File #2 [Patient - ^DPT(].

RADTE

Exam registration date/time; ^RADPT(RADFN,"DT",RADTI,0)=RADTE^....

RADTI

Internal entry number of exam registration date/time; also the inverse exam registration date/time; ^RADPT(RADFN,"DT",RADTI,0)

RADUZ

Most of the time this is the same as DUZ variable. However, the Radiology/Nuclear Medicine package has the 'feature' to require the user to input their access code during certain processes. RADUZ is equal to that access code's DUZ number.

RAEXFM

Internal entry number to File #78.2 [Flash Card/Label Format - ^RA(78.2,] that is used for the 'exam' label.

RAEXLBS

Number of exam labels to be produced by RAFLH* routines.

RAF5

RAF5=IEN of the ward for the patient if the exam being processed was done while the patient was an Inpatient. RAF5's value is taken from the Ward field of the exam subfile of the Rad/Nuc Med Patient file.

RAFIN

This variable is a flag that is set inside the RA REGISTER input template. If defined after the template is exited, then the system knows that the registration process went to normal completion.

If it is not defined, then the system will automatically delete that current exam because not all questions were answered during the registration process.

RAFLH

This variable can take on two different meanings depending on the routine that is being executed.

When you first log on to the package, the routine RAPSET is executed. This routine computes various parameters for the current logon session. One of the parameters set is the printer where all the flash cards requested by the user are printed. The variable RAFLH is used to store this printer information temporarily until it is set in the third piece of the variable RAMLC. (See RAMLC description for more information.)

The variable RAFLH, throughout the rest of the system, is used to specify which Flash Card Formats file (#78.2) entry to use when printing a flash card.

RAFMT

Internal entry number to File #78.2 [Flash Card Formats - ^RA(78.2) used to produce one of the following:

- flash card (RAFLH)
- exam label (RAEXFM)
- film jacket label (RAJAC)
- report header (RAHDFM)
- report footer (RAFTFM)

Before each of the above is produced, their respective routine sets RAFMT to their associated format entry and then PRT^RAFLH is called.

RAFTFM

Internal entry number to File #78.2 [Flash Card Formats - ^RA(78.2,) that is used for the report footer.

RAGE

Patient's age.

RAHDFM

Internal entry number to File #78.2 [Flash Card Formats - ^RA(78.2,) that is used for the report header.

RAHEAD

This is the header used when executing the utility routine RAPTLU. This routine displays the current exams on file for a patient. Depending on what the user is currently doing, the header is different.

RAIMGTY

This variable, along with RACCESS, RAMLC, RAMDV, and RAMDIV are package-wide variables set by the system. They are all normally computed during the login process. They are also set by the individual options of the package if they do not already exist. The routine series RAPSET* sets these variables.

For any initial menu for the package created at the local site level, these variables must be killed. Do this by making D KILL^RAPSET1 the exit action for the menu.

This variable tracks the Imaging Type for each user based on the location determined at sign-on.

RAJAC

Default jacket label printer information. (Used only in RAPSET*, the parameter setting routine executed upon logging into the program.)

RAKEY

During various processes in the Radiology/Nuclear Medicine system, the user must have a certain key. By setting RAKEY equal to this key and then calling USER^RAUTL the system uses one common set of code to check and verify if the user is qualified to do the current process and asks for an access code if required.

RAMDIV

This variable, along with RACCESS, RAMLC, RAMDV, and RAIMGTY are package-wide variables set by the system. They are all normally computed during the login process. They are also set by the individual options of the package if they do not already exist. The routine series RAPSET* sets these variables.

For any initial menu for the package created at the local site level, these variables must be killed. Do this by making D KILL^RAPSET1 the exit action for the menu.

The variable RAMDIV is the internal entry number to File #79 [Rad/Nuc Med Division - ^RA(79,]. This is the division that the current location is associated with.

Note: An imaging location can only be associated with one division.

RAMDV

This variable, along with RACCESS, RAMLC, RAMDIV, and RAIMGTY are package-wide variables set by the system. They are all normally computed during the login process. They are also set by the individual options of the package if they do not already exist. The routine series RAPSET* sets these variables.

For any initial menu for the package created at the local site level, these variables must be killed. Do this by making D KILL^RAPSET1 the exit action for the menu.

The variable RAMDV has 26 pieces. Each piece contains parameter information pertaining to the current 'division' the user is signed on under. All values are '1' for 'yes' or '0' for 'no'.

The following is a description of each piece:

- [not used]
- Should a flash card be printed for each exam.
- [no longer used]
- [no longer used]
- [no longer used].
- Various activity logs are kept during the processing of exams and their reports. This piece indicates whether the user should be asked for their access code during each process or should the system automatically use the user code associated with the initial logon. If 'yes' then system assumes the logon user code (DUZ).
- Should entry of a 'Detailed' or 'Series' procedure be required during initial exam registration. If '0' then user can enter a 'Broad' code. However, before the exam can be placed in a 'Complete' status the procedure must be changed to a 'Detailed' or 'Series' procedure.
- Should a jacket label be printed automatically during each visit.
- Should 'camera/equipment/room' be asked during exam editing.

- Should the system automatically collect the time when the exam status changes.
- If piece 10 is set to '1', collect status change time data, then should the user be asked the time of the status change or should the system automatically use the current date and time. (If you are batch filing the changes then this parameter would be '1' so that the user can put in the actual change time.)
- Should the transcriptionist be given the opportunity to select a standard report during initial report entry.
- Should the transcriptionist be given the opportunity to place reports in a batch during report entry.
- Should the transcriptionist be given the opportunity to copy the contents of one report into another.
- [not used]
- Require that an impression be given on a report before the report can be verified and the exam to be considered 'complete'.
- Should the transcriptionist be prompted for the date the exam was requested.
- Allow interpreting residents to verify other interpreting physicians' reports while using the On-line Verifying of Reports option.
- Collect the date and the time of request status changes.
- [not used]
- Indicate that the user should be asked when requesting an exam, which Imaging Location the request should be forwarded to.
- If a user without the RA MGR key can enter a report on a cancelled case.
- [not used]
- The number of hours in the future (0-168) that a user may register a patient for an exam.
- Should the report status appear on unverified reports.
- Should an e-mail of the radiology/nuclear medicine report findings be automatically sent to the requesting physician.

Note: These parameters are permanently stored in the .1 node of the appropriate entry in File #79 [Rad/Nuc Med Division - ^RA(79,)]. The Division Parameter Set-up option under the System Definition Menu is used to set this node.

RAMLC

This variable, along with RACCESS, RAMDIV, RAMDV, and RAIMGTY are package-wide variables set by the system. They are all normally computed during the login process. They are also set by the individual options of the package if they do not already exist. The routine series RAPSET* sets these variables.

For any initial menu for the Radiology/Nuclear Medicine package created at the local site level, these variables must be killed. Do this by making D KILL^RAPSET1 the exit action for the menu.

The variable RAMLC has thirteen pieces. Each piece contains parameter information pertaining to the current imaging location the user is signed on under.

The following is a description of each piece: (IEN ==> internal entry number)

- IEN to File #79.1 [Imaging Location] - used to stuff proper location in registration record.
- How many flash cards to produce per patient visit.
- Flash card printer name - used to automatically queue flash cards and exam labels without having to ask the user the device question.
- How many jacket labels to print per visit.
- Jacket label printer name - used to automatically queue jacket labels without having to ask the user the device question.
- IEN to File #79.2 [Imaging Type] - used to stuff proper imaging type in registration record (always Rad/Nuc Med's internal number).
- Default flash card format
 - IEN to File #78.2 [Flash Card Formats]
 - used when queuing a flash card to print; this format is the default flash card for the current location.
- How many exam labels to produce for each exam - when flash cards are queued to print the system must also be told how many exam labels to print.
- Default exam label format
 - IEN to File #78.2 [Flash Card Formats]
 - used when queuing an exam label to print; this format is the default 'exam label' for the current location.

Note: exam labels always print after flash card labels are printed.

- report printer name - used to automatically queue reports without having to ask the user the device question.

- default jacket label format
 - IEN to File #78.2 [Flash Card Formats]
 - - used when queuing a jacket label to print; this format is the default jacket label for the current location.
- default report header format
 - IEN to File #78.2 [Flash Card Formats]
 - used when queuing a report to print; this format is the default 'header' for the current location.
- default report footer format
 - IEN to File #78.2 [Flash Card Formats]
 - used when queuing a report to print; this format is the default footer for the current location.

Note: These parameters are permanently stored in the zeroth node of the appropriate entry in File #79.1 [Imaging Location - ^RA(79.1,)]

The Location Parameter Set-up option under the System Definition Menu is used to set this node.

RAMUL

Internal entry number to File #71.2 [Procedure Modifiers - ^RAMIS(71.2,]

RANME

Patient's name. First piece of the zeroth-node of File #2 [Patient - ^DPT(].

RANUM

Number of flash cards, exam labels or jacket labels to produce when there is a call to PRT^RAFLH. RANUM is always one for report header and footer production.

RAPHY

Default provider name used in the initial exam entry process. First piece of the zeroth-node of an entry in File #200 [New Person - ^VA(200,]

RAPRC

Exam Procedure name. First piece of the zeroth-node of an entry in File #71 [Rad/Nuc Med Procedures - ^RAMIS(71,].

RAPRI

Internal entry number to File #71 [Rad/Nuc Med Procedures - ^RAMIS(71,].

RAQUICK

This variable is used inside the 'Edit Exam' template to properly log an entry into the exam's activity log. The variable is set before going into the template. If set to '1' then the template knows that the editing is occurring through the case number edit routine and if set to '0' then it means the editing is occurring from the edit by patient routine.

RARPT

Internal entry number to File #74 [Rad/Nuc Med Reports - ^RARPT(].

RASER

Service name. First piece of the zeroth-node of an entry in File #49 [Service/Section - ^DIC(49,].

RASSN

Patient's SSN. Ninth piece of the zeroth-node of an entry in File #2 (Patient - ^DPT()

RAST

This variable can have three meanings depending on where it is used.

In routine RADEM1, the patient demographic display routine, it is equal to the first piece of the zeroth node of an entry in File #72 [Examination Status - ^RA(72,].

In routine RARTR, the report print routine, it is equal to the set code for the report status.

Otherwise, this variable is normally equal to the internal entry number of an entry in File #72 [Examination Status - ^RA(72,]

RASTI

Internal entry number to File #72 [Examination Status - ^RA(72,].

RAWARD

Ward Name. First piece of the zeroth-node of an entry in File #42 [Ward Location - ^DIC(42,].

2.9 Function

RACAT

Uses the RAUTL1 routine to compute the location (inpatient, outpatient, contract/sharing agreement, research) and convert time of day to external format. It computes the exam status and updates the status log and OE/RR. It sends alert/notification to OE/RR after the patient is examined.

2.10 Bulletins

We recommend that when setting up mail groups for each of the following bulletins, you name the mail group something similar to the bulletin.

Bulletin Name	Description
RAD/NUC MED CREDIT FAILURE	This bulletin will notify users in the selected mailgroup(s) that a crediting failure occurred.
RAD/NUC MED EXAM DELETED	This bulletin is used to notify the radiology supervisor that a radiology exam has been deleted and the computer user who did the deletion.
RAD/NUC MED REPORT DELETION	This bulletin is used to notify a mail group that a radiology report has been deleted.
RAD/NUC MED REPORT UNVERIFIED	This bulletin is used to notify the radiology supervisor, radiology supervisor and other selected recipients that a 'verified' radiology report was 'unverified' and the computer user who did the 'unverifying'.
RAD/NUC MED REQUEST CANCELLED	This bulletin is used to notify the recipient mail group (usually named 'RA REQUEST CANCELLED') that a radiology request has been cancelled.
RAD/NUC MED REQUEST HELD	This bulletin is used to notify the 'RA REQUEST HELD' mail group that a radiology request has been held.

3.0 Package-Wide Variables

RACCESS

This array identifies the user's division, imaging location and imaging type access.

RAIMGTY

This is the name of imaging type (File #79.2 entry) of the user based on the imaging location selected.

RAMDIV

The internal entry number of the division (File #79) the user has signed-on to.

RAMDV

The division parameters for a File #79 entry. The parameters that make up this variable are identified in the Key Variables portion.

RAMLC

The imaging location parameters for a File #79.1 entry. The parameters that make up this variable are identified in the Key Variables section.

These variables are created or changed when the user selects a sign-on imaging location usually during the login process or in the Switch Locations option. The variables are also set by the individual options if they do not already exist. The routine series RAPSET* sets these variables.

Example of when the package-wide variables are created or changed:

```

Please select a sign-on Imaging Location: X-RAY// <RET>          (GENERAL
RADIOLOGY)

-----
Welcome, you are signed on with the following parameters:

Version : 4.5
Division : HINES
Location : X-RAY
Img. Type: GENERAL RADIOLOGY
User    : METER,MILLIE

Printer Defaults
-----
Flash Card : RAD/NM FLASH CARDS
            1 card/exam
Jacket Label: RAD/NM JACKET LBLS
            1 labels/visit
Report      : RAD/NM REPORT PTR
-----

```

These variables are killed when the user exits the package menu they logged in under. The variables are killed by calling KILL^RAPSET1.

4.0 Routines

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RA12PST2	HIRMFO/CRT - Post-init functions (patch seventeen)
RA12PST3	HIRMFO/CRT - Post-init number three (patch seventeen)
RA12PST4	HIRMFO/CRT - Post-init number four (patch seventeen)
RA12PST5	HIRMFO/CRT - Post-init number five (patch seventeen)
RA13PST1	HIRMFO/CRT - Post-init number one (patch thirteen)
RA15PST1	HIRMFO/CRT - Post-init number one (patch fifteen)
RA25PRE1	HOIFO/CRT - Pre-install routine for Rad patch 25
RA26PST1	HIRMFO/CRT - Post-init number one (patch 26)
RA27ENV	HIRMFO/SWM-Environment Check routine
RA27LIST	HIRMFO/SWM - List data after RA27PST
RA27PST	HIRMFO/SWM - Clean up after Patch RA*5.0*27
RA2IPST	HIRMFO/GJC - Post-init Driver patch two
RA32ENV	HIRMFO/SWM-Environment Check routine
RA34PST	HOIFO/SWM-Post install to correct entries in file 71
RA410CNV	IHS/HQW/SCR - IHS patch 10 conversion checks
RA410MCK	IHS/HQW/SCR 10/15/01 - MOCK Conversion set-up
RA410PRE	IHS/HQW/SCR - Environment Check
RA411PRE	IHS/HQW/SCR - Patch 11 check for complete conversions
RA411PST	IHS/HQW/SCR - POSTINIT for RA patch 11;
RA412PRE	IHS/HQW/SCR - Patch 12 check for complete conversions
RA412PST	IHS/HQW/SCR - POSTINIT for RA patch 11;
RA4P8PRE	IHS/HQW/SCR - PREINIT, CHK RQMNTS ;
RA4P8PST	IHS/HQW/SCR - POSTINIT
RA5IPST	HIRMFO/GJC - Post-init Driver patch five
RA6IENV	HIRMFO/GJC - Environment Check for patch six
RA6IPST	HIRMFO/GJC - Post-init Driver patch six
RA7IPRE	HIRMFO/GJC - Pre-init Driver patch seven
RA7IPST	HIRMFO/GJC - Post-init Driver patch seven
RAACIENV	HISC/GJC-Environmental Check Routine (Patch 8)
RAACIPST	HISC/CAH - postinit for patch 8
RAAFCV	IHS/HQW/SCR - ATS conversion
RAAIPST0	HISC/SWM- PATCH RAD*4.5*2 Post-init Driver
RAAIPST1	HIRMFO/GJC - Post-init number one (patch four)

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAAIPST2	HIRMFO/GJC - Post-init number two (patch four)
RABAN	IHS/ADC/PDW - Radiology Banner
RABAR	HISC/GJC-Procedure & CPT Code barcode output (part 1 of 2)
RABAR1	HISC/GJC-Procedure & CPT Code barcode output (part 2 of 2)
RABTCH	HISC/CAH,FPT AISC/MJK,RMO-Batch Report Menu
RABTCH1	HISC/CAH,FPT AISC/MJK,RMO-Batch Report Menu
RABTCH2	HISC/GJC-Batch Report Option, delete by date
RABTCH3	HISC/GJC-Delete Batch Reports
RABUL	HISC/FPT,GJC AISC/DMK-Generate 'RAD/NUC MED REQUEST CANCELLED' or 'RAD/NUC MED REQUEST HELD' Bulletin ;
RABUL1	HISC/FPT,GJC-'RAD/NUC MED EXAM DELETED' Bulletin
RABUL2	HISC/FPT,GJC-'RAD/NUC MED REPORT UNVERIFIED' Bulletin
RABUL3	HISC/FPT,GJC-'RAD/NUC MED REPORT DELETION' Bulletin
RACDR	HISC/FPT AISC/SAW-Cost Distribution (CDR) Report
RACDR1	HISC/FPT-Continuation of routine RACDR, CDR report
RACMP	HISC/GJC AISC/MJK-Complication Report (Part 1 of 3)
RACMP1	HISC/GJC-Complication Report (Part 2 of 3)
RACMP2	HISC/GJC-Complication Report (Part 3 of 3)
RACMPLE	HISC-GJC/Compile Rad/Nuc Med input/print templates
RACNLU	HISC/CAH,FPT,GJC AISC/MJK,RMO-Case Number Lookup
RACOMDEL	HIRMFO/GJC-Utility, remove duplicates in ^RAMIS
RACPT	HISC/GJC AISC/DMK-Procedure/CPT Stats Report ;
RACPT1	HISC/GJC,FPT-Procedure/CPT Stats Report ;
RACPTMSC	HISC/SWM - CPT Mod screen, misc.
RACTOE	GENERATED FROM 'RA ORDER EXAM' INPUT TEMPLATE(#893), FIL
RACTOE1	
RACTOE2	
RACTOE3	
RACTOE4	
RACTOE5	
RACTOE6	
RACTOE7	
RACTOE8	
RACTQE	GENERATED FROM 'RA QUICK EXAM ORDER' INPUT TEMPLATE(#898), FIL
RACTQE1	

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RACTQE2	
RACTQE3	
RACTQE4	
RACTQE5	
RACTQE6	
RACTRG	GENERATED FROM 'RA REGISTER' INPUT TEMPLATE(#877), FILE 70;01/07/04
RACTRG1	
RACTRG10	
RACTRG11	
RACTRG2	
RACTRG3	
RACTRG4	
RACTRG5	
RACTRG6	
RACTRG7	
RACTRG8	
RACTRG9	
RACTRT	GENERATED FROM 'RA REPORT PRINT STATUS' PRINT TEMPLATE (#1215) ; (FILE 74, MARGIN=80)
RACTVR	GENERATED FROM 'RA VERIFY REPORT ONLY' INPUT TEMPLATE(#883), FILE 74;
RACTVR1	
RACTVR2	
RACTVR3	
RACTVR4	
RACTVR5	
RACTWR	GENERATED FROM 'RA REPORT EDIT' INPUT TEMPLATE(#878), FILE 74
RACTWR1	
RACTWR2	
RACTWR3	
RACTWR4	
RACTWR5	
RADD1	HISC/FPT-Radiology Utility Routine
RADD2	HISC/GJC/CAH-Radiology Data Dictionary Utility Routine
RADD3	HISC/SWM-Radiology Data Dictionary Utility Routine

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RADD4	HISC/GJC-Radiology Utility Routine ;
RADEM	HISC/CAH AISC/MJK,RMO,DMK-Display Patient Demographics
RADEM1	HISC/GJC-Display Patient Demographics
RADEM2	HISC/CAH,FPT,GJC-Display Patient Demographics (short) ;
RADLQ1	HISC/GJC AISC/MJK,RMO-Delq Status/Incomplete Rpt's ;
RADLQ2	HISC/GJC-Delq Status/Incomplete Rpt's
RADLQ3	HISC/GJC-Delq Status/Incomplete Rpt's
RADLY	HISC/GJC AISC/MJK,RMO-Rad Daily Log Report
RADLY1	HISC/GJC-Rad Daily Log Report
RADOSTIK	HISC/GJC-Routine to print dosage tickets
RADPA	HISC/GJC AISC/MJK,RMO-Look-up Rad/Nuc Med Patients
RADTICK	HIRMFO/GJC-Rad/Nuc Med Dosage Ticket output ;
RAEDCN	HISC/CAH,FPT,GJC,SS AISC/MJK,RMO-Edit Exams by Case Number
RAEDCN1	HISC/GJC-Utility routine for RAEDCN
RAEDCN7	IHS/ADC/PDW -Edit Exams by Case Number 17:13
RAEDPT	HISC/FPT,GJC,SS AISC/MJK,RMO-Edit Exams by Patient
RAENVCK	IHS/ADC/PDW - RADIOLOGY - V4 PRE-INIT
RAERRPT	HIRMFO/GJC-Access erroneous Rad/Nuc Med reports ;
RAESO	HISC/CAH,GJC AISC/SAW-Override Exam Status to Complete
RAESR	HISC/GJC AISC/RMO-Exam Statistics Rpt
RAESR1	HISC/GJC-Exam Statistics Rpt
RAESR2	HISC/GJC-Exam Statistics Rpt
RAESR3	HISC/GJC-Exam Statistics Rpt
RAFLH	HISC/FPT AISC/MJK-Print Radiology Flash Cards
RAFLH1	HISC/CAH,FPT AISC/MJK,RMO-Print Radiology Exam Labels
RAFLH2	HISC/GJC-Utility determines if flash cards print.
RAFLM	HISC/GJC AISC/MJK,RMO-Film Usage Report
RAFLM1	HISC/GJC-Radiology Film Usage Report
RAFLM2	HISC/FPT-Film Usage Rpt (cont.)
RAFLM3	HISC/FPT-Film Usage Workload Rpt (cont.)
RAHLBKVQ	HIRMFO/GJC-Bridge Query, Kurzweil compatible to HL7 v1.5
RAHLBKVR	HIRMFO/GJC-Bridge, Kurzweil compatible to HL7 v1.5 ;
RAHLBMS	HIRMFO/REL,GJC-Bridge, MedSpeak compatible to HL7 v1.6 ;
RAHLCV	IHS/HQW/SCR - HL7 file update for IHS patch 10 [
RAHLCV1	IHS/HQW/SCR - Continuation of VA routine RAHLCV

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAHLEX	HIRMFO/REL,CRT - RAD/NUC MED HL7 Voice Reporting Exception List
RAHLEX1	HIRMFO/REL,CRT - RAD/NUC MED HL7 Voice Reporting Exception Protocols;
RAHLEXF	HIRMFO/BNT - RAD/NUC MED HL7 Exceptions filer
RAHLO	HIRMFO/GJC-Process data set from the bridge program
RAHLO1	HIRMFO/GJC/BNT-File rpt (data from bridge program) ;
RAHLO2	HIRMFO/GJC-File rpt (data from bridge program) ;
RAHLO3	HIRMFO/GJC-Process data set from the bridge program ;
RAHLO4	HIRMFO/GJC-File rpt (data from bridge program)
RAHLQ	HISC/CAH,GJC AISC/SAW-Process Query Message (QRY) Type
RAHLQ1	HISC/CAH AISC/SAW-Compiles HL7 'ORF' Message Type
RAHLR	HISC/CAH/BNT - Generate Common Order (ORM) Message ;
RAHLROUT	HIRMFO/CRT - Rad/Nuc Med HL7 Interfaces Routing Logic
RAHLRPC	HIRMFO/BNT-Rad/NM HL7 Protocol calls ;0
RAHLRPT	HISC/CAH AISC/SAW-Compiles HL7 'ORU' Message Type ;
RAHLRS	HIRMFO/CRT - Resend HL7 messages for selected cases.
RAHLRU	HISC/SWM - utilities for HL7 messaging
RAHLTCPB	HIRMFO/REL,GJC,BNT - Rad/Nuc Med HL7 TCP/IP Bridge
RAIENV	HIRMFO/GJC-Environment Check routine (cleanup build)
RAIENVCK	HIRMFO/GJC-Environmental Check Routine
RAINI001	
RAINI002	
RAINI003	
RAINI004	
RAINI005	
RAINI006	
RAINI007	
RAINI008	
RAINI009	
RAINI00A	
RAINI00B	
RAINI00C	
RAINI00D	
RAINI00E	
RAINI00F	
RAINI00G	

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAINI00H	
RAINI00I	
RAINI00J	
RAINI00K	
RAINI00L	
RAINI00M	
RAINI00N	
RAINI00O	
RAINI00P	
RAINI00Q	
RAINI00R	
RAINI00S	
RAINI00T	
RAINI00U	
RAINI00V	
RAINI00W	
RAINI00X	
RAINI00Y	
RAINI00Z	
RAINI010	
RAINI011	
RAINI012	
RAINI013	
RAINI014	
RAINI015	
RAINI016	
RAINI017	
RAINI018	
RAINI019	
RAINI01A	
RAINI01B	
RAINI01C	
RAINI01D	
RAINI01E	
RAINI01F	
RAINI01G	

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAINI01H	
RAINI01I	
RAINI01J	
RAINI01K	
RAINI01L	
RAINI01M	
RAINI01N	
RAINI01O	
RAINI01P	
RAINI01Q	
RAINI01R	
RAINI01S	
RAINI01T	
RAINI01U	
RAINI01V	
RAINI01W	
RAINI01X	
RAINI01Y	
RAINI01Z	
RAINI020	
RAINI021	
RAINI022	
RAINI023	
RAINI024	
RAINI025	
RAINI026	
RAINI027	
RAINI028	
RAINI029	
RAINI02A	
RAINI02B	
RAINI02C	
RAINI02D	
RAINI02E	
RAINI02F	
RAINI02G	

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAINI02H	
RAINI02I	
RAINI02J	
RAINI02K	
RAINI02L	
RAINI02M	
RAINI02N	
RAINI02O	
RAINI02P	
RAINI02Q	
RAINI02R	
RAINI02S	
RAINI02T	
RAINI02U	
RAINI02V	
RAINI02W	
RAINI02X	
RAINI02Y	
RAINI02Z	
RAINI030	
RAINI031	
RAINI032	
RAINI033	
RAINI034	
RAINI035	
RAINI036	
RAINI037	
RAINI038	
RAINI039	
RAINI03A	
RAINI03B	
RAINI03C	
RAINI03D	
RAINI03E	
RAINI03F	
RAINI03G	

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAINI03H	
RAINI03I	
RAINI03J	
RAINI03K	
RAINI03L	
RAINI03M	
RAINI03N	
RAINI03O	
RAINI03P	
RAINI03Q	
RAINI03R	
RAINI03S	
RAINI03T	
RAINI03U	
RAINI03V	
RAINI03W	
RAINI03X	
RAINI03Y	
RAINI03Z	
RAINI040	
RAINI041	
RAINI042	
RAINI043	
RAINI044	
RAINI045	
RAINI046	
RAINI047	
RAINI048	
RAINI049	
RAINI04A	
RAINI04B	
RAINI04C	
RAINI04D	
RAINI04E	
RAINI04F	
RAINI04G	

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAINI04H	
RAINI04I	
RAINI04J	
RAINI04K	
RAINI04L	
RAINI04M	
RAINI04N	
RAINI04O	
RAINI04P	
RAINI04Q	
RAINI04R	
RAINI04S	
RAINI04T	
RAINI04U	
RAINIS	
RAINIT	
RAINIT1	
RAINIT2	
RAINIT3	
RAINIT4	
RAINIT5	
RAIPRE	HIRMFO/GJC- Pre-init Driver ;
RAIPRE1	HIRMFO/GJC- Pre-init routine
RAIPRE2	HIRMFO/GJC- Pre-init routine ;
RAIPRE3	HIRMFO/GJC- Pre-init routine ;
RAIPST	HIRMFO/GJC- Post-init Driver ;
RAIPST1	HISC/SWM - Post-init number one;
RAIPST12	HIRMFO/BNT - Post-init functions (patch twelve) ;
RAIPST13	HIRMFO/BNT - Post-init number one (patch twelve)
RAIPST14	HIRMFO/BNT - Post-init number two (patch twelve)
RAIPST15	HIRMFO/BNT - Post-init number three (patch twelve)
RAIPST16	HIRMFO/BNT - Post-init number one (patch twelve) ;
RAIPST2	HIRMFO/GJC - Post-init number two ;
RAIPST3	HIRMFO/GJC - Clean-up of the v5.0 environment
RAIPST4	HIRMFO/GJC - Post-init number four ;
RAIPST5	HIRMFO/GJC - Post-init number five ;

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAIPST6	HIRMFO/GJC - Post-init number six ;
RAJAC	HISC/FPT AISC/MJK,RMO-Print Film Jacket Labels
RAKRDIR	Hines OI/GJC-pass exam info within a date range, to PCE
RALIST	HISC/GJC AISC/MJK,RMO-List all patient exams associated w/selected Amis
RALIST1	HISC/GJC-List all patients w/exams associated w/specific Amis
RALWKL	HISC/GJC AISC/MJK,RMO-Workload Reports By Functional Area
RALWKL1	HISC/GJC-Workload Reports By Functional Area
RALWKL2	HISC/GJC-Workload Reports By Functional Area
RALWKL3	HISC/GJC-Workload Reports By Functional Area
RALWKL4	HISC/FPT-Workload Reports By Functional Area
RAMAIN	HISC/FPT,GJC,CAH AISC/MJK,RMO-Utility File Maintenance
RAMAIN1	HISC/CAH,GJC-Radiology Utility File Maintenance ;
RAMAIN2	HISC/GJC-Radiology Utility File Maintenance (Part Two) ;
RAMAINP	HISC/GJC AISC/TMP,RMO-Utility Files Print
RAMAINP1	HISC/GJC AISC/TMP,RMO-Utility Files Print
RAMIS	HISC/CAH,GJC,FPT AISC/MJK-Radiology AMIS Report
RAMIS1	HISC/CAH,FPT,GJC-Radiology AMIS Report
RAMIS2	HISC/CAH,FPT,GJC-Radiology AMIS Report
RANMED1	HISC/SWM-Nuclear Medicine Enter/Edit Routine
RANMPRT1	HISC/SWM-Nuclear Medicine Set-up file Lists
RANMPT1	HISC/GJC-Radiopharm interface;
RANMUSE1	HISC/SWM-Nuclear Medicine Usage reports
RANMUSE2	HISC/SWM-Nuclear Medicine Usage reports
RANMUSE3	HISC/SWM-Nuclear Medicine Usage reports ;
RANMUTL1	HISC/SWM-Nuclear Medicine utilities
RANTEG	IHS/ADC/PDW - KERNEL - Package checksum checker
RAO7CH	HISC/FPT,GJC-Cancel/Hold request from Rad to OE/RR!
RAO7CMP	HISC/FPT,GJC-Completed Request from Rad to OE/RR!
RAO7MFN	HISC/GJC-Create MFN orderable item update msg
RAO7NEW	HISC/FPT,GJC,SS-Create entry in OE/RR Order file (100)
RAO7OKR	HISC/GJC-Receive OE/RR accept/reject msg (backdoor)
RAO7OKS	HISC/GJC-Accept/reject OE/RR request
RAO7PC1	HISC/GJC,SS-Procedure Call utilities.
RAO7PC1A	HISC/GJC-Procedure Call utilities (cont)
RAO7PC2	HISC/GJC-Part two for Return Narrative (EN3^RAO7PC1)

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAO7PC3	HISC/SWM&CRT-Procedure Call utilities.
RAO7PC4	HISC/SWM-utilities ;
RAO7PURG	HISC/GJC-Purge order request
RAO7RCH	HISC/GJC,FPT-Process Discontinued Message
RAO7RO	HISC/GJC,FPT-Request message from OE/RR.
RAO7RO1	HISC/FPT-RAD/NM Error Messages
RAO7RON	HISC/GJC- Request message from OE/RR. (frontdoor)
RAO7RON1	HISC/GJC,FPT-Request message from OE/RR. (frontdoor)
RAO7SCH	HISC/FPT,GJC-Scheduled Request from Rad to OE/RR!
RAO7UTL	HISC/GJC,SS-Utilities for HL7 messages.
RAO7UTL1	HISC/GJC,FPT-Utilities for HL7 messages.
RAO7VLD	HISC/GJC-Validate OE/RR data to Rad (frontdoor)
RAO7XX	HISC/SS-Sending XX HL7 message to CPRS ;
RAONIT	IHS/ADC/PDW - NO DESCRIPTION PROVIDED DEC 16,1991 ;
RAONIT1	IHS/ADC/PDW - NO DESCRIPTION PROVIDED ;
RAONIT2	IHS/ADC/PDW - NO DESCRIPTION PROVIDED ;
RAONIT3	IHS/ADC/PDW - NO DESCRIPTION PROVIDED ;
RAORD	HISC/CAH,FPT,GJC AISC/RMO-Rad/NM Order Entry Main Menu
RAORD1	HISC/CAH,FPT,GJC AISC/RMO-Request An Exam
RAORD1A	HISC/FPT-Request an Exam
RAORD2	HISC/CAH,FPT,GJC,DAD AISC/RMO-Detailed Request Display
RAORD3	HISC/CAH,FPT,GJC AISC/RMO-Detailed Request Display Cont. ;
RAORD4	HISC/CAH,FPT,GJC AISC/RMO-Print Requests by Date
RAORD5	HISC/CAH,FPT,GJC AISC/RMO-Print A Request
RAORD6	HISC/CAH,FPT,GJC AISC/RMO-Print A Request Cont.
RAORD7	HISC/CAH AISC/RMO-Log of Scheduled Requests by Procedure
RAORD7A	HISC/CAH-Log of Scheduled Requests by Procedure
RAORD8	HISC/CAH,FPT AISC/RMO-Ward/Clinic Scheduled Request Log
RAORDC	HISC/CAH,FPT,GJC,DAD AISC/RMO-Check Request Status against Exam Status
RAORDC1	HISC/GJC-Continuation of the RAORDC routine.
RAORDP	HISC/CAH,FPT AISC/DMK-Log of Pending/Hold Requests
RAORDQ	HISC/CAH,FPT AISC/RMO-Queue Exam Request
RAORDS	HISC/CAH,DAD AISC/RMO-Select Patient's Requests
RAORDU	HISC/CAH,FPT,GJC AISC/RMO-Update Request Status
RAORDU1	HISC/CAH AISC/SAW-Utility for Rad/NM Orders Module ;

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAORR	HISC/CAH,FPT,GJC AISC/DMK-OE/RR driver
RAORR1	HISC/CAH,FPT,GJC AISC/DMK-Edit a new request from OERR ;
RAORR2	HISC/CAH,FPT,GJC AISC/DMK-Verify a request from OERR
RAORR3	HISC/CAH,FPT,GJC AISC/DMK-OE/RR results display
RAOUT	HISC/CAH,FPT,GJC AISC/TMP,RMO-Outside Film Option
RAPAST	HISC/CAH,FPT,GJC AISC/MJK,RMO-Enter Last Visit Date Before DHCP
RAPAT23	HISC/FPT-RADIOLOGY PATCH 23 CONVERSION ROUTINE ;
RAPAT23A	HISC/FPT-RADIOLOGY PATCH 23 CONVERSION (cont)
RAPCE	HIRMFO/GJC-Interface with PCE APIs for wrkload, visits
RAPCE1	HIRMFO/GJC-Interface with PCE APIs for workload, visits
RAPCE2	HIRMFO/GJC-Interface with PCE APIs for wrkload, visits
RAPER	HISC/CAH-Print Rad/NM Procedures with missing/invalid CPT/Stop codes
RAPER1	HIRMFO/GJC,CAH-Prt Img Locs missing/invalid Stop codes ;
RAPINFO	HIRMFO/GJC - Display Imaging Procedure Rad/Nuc Med info
RAPM	HOIFO/TH-Radiology Performance Monitors/Indicator;
RAPM1	HOIFO/TH-Radiology Performance Monitors/Indicator;
RAPM2	HOIFO/TH-Radiology Performance Monitors/Indicator;
RAPM3	HOIFO/SM-Radiology Performance Monitors/Indicator
RAPNL	HISC/CAH,FPT,GJC AISC/MJK,RMO-Radiology Personnel Menu
RAREG2	HISC/CAH,FPT,DAD,SS AISC/MJK,RMO-Register Patient
RAREG3	HISC/CAH,DAD,FPT,GJC-Register Rad/NM Patient (cont.)
RAREG4	HISC/GJC-Register Patient (cont)
RARESTOR	HISC/SWM-Recover Purged Rad/NM Report/Exam only
RARIC	HISC/FPT AISC/SAW-Radiologic Image Capture and Display Routine
RARIC1	HISC/GJC-Check to see if Imaging package exists
RART	HISC/CAH,FPT,GJC AISC/MJK,TMP,RMO-Reporting Menu ;
RART1	HISC/GJC,SWM-Reporting Menu (Part 2) ;
RART2	HISC/GJC-Reporting Menu (Part 3)
RART3	HISC/GJC,SWM-Reporting Menu (Part 2)
RARTB	IHS/ADC/PDW -BROKE UP RART, TOO BIG
RARTE	HISC/FPT,GJC AISC/MJK,RMO-Edit/Delete Reports
RARTE1	HISC/CAH,FPT,GJC AISC/MJK,RMO-Edit/Delete a Report
RARTE2	HISC/SWM-Edit/Delete a Report
RARTE3	HISC/GJC-Create a skeletal report, store in Error Reports multiple

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RARTE4	HISC/GJC-Edit/Delete Reports (cont)
RARTFLDS	HISC/CAH,FPT,GJC AISC/MJK-Computed fields on Reports(#74) file
RARTR	HISC/CAH COLUMBIA/REB AISC/MJK,RMO-Queue/print Reports ;
RARTR0	HISC/GJC-Queue/Print Radiology Rpts utility routine.
RARTR1	HISC/FPT,GJC-Queue/print Radiology Reports (cont.)
RARTR2	HIRMFO/GJC-Queue/print Radiology Reports (utility)
RARTR3	HIRMFO/SWM-Queue/print Radiology Reports (utility)
RARTRPV	HISC/FPT-Resident Pre-Verify Report
RARTRPV1	HISC/FPT-Resident Pre-Verify Report ;
RARTST	HISC/CAH,FPT,GJC AISC/MJK,RMO-Reports Distribution
RARTST1	HISC/CAH,FPT,GJC,DAD AISC/MJK,RMO-Reports Distribution
RARTST2	HISC/CAH,FPT,GJC,DAD AISC/MJK,RMO-Reports Distribution
RARTST2A	HISC/CAH,FPT,GJC AISC/MJK,RMO-Reports Distribution ;
RARTST3	HISC/CAH,FPT,GJC AISC/RMO-Distribution Reports ;
RARTUTL	HIRMFO/GJC-Utility to display Pharm & Radiopharm data ;
RARTUTL1	HIRMFO/GJC-Utility to display Pharm & Radiopharm data ;
RARTUVR	HISC/FPT,SWM AISC/RMO-Unverified Reports
RARTUVR1	HISC/FPT,SWM AISC/RMO-Unverified Reports
RARTUVR2	HISC/FPT,SWM -Unverified Reports ;
RARTUVR3	HISC/GJC-Unverified Reports
RARTVER	HISC/FPT,CAH AISC/MJK,RMO-On-line Verify Reports ;
RARTVER1	HISC/FPT AISC/MJK,RMO-On-Line Verify List/Select Reports ;
RARTVER2	HISC/FPT-On-line Verify Radiology Reports (cont.) ;
RASELCT	HISC/DAD-Generic file entry selector ;
RASERV	HISC/CAH,FPT,GJC AISC/MJK,DMK-Finds Service, Ward, Bedsection of Inpatient
RASETU	HISC/DAD-Determine Order Status for an Exam Set
RASETUP	IHS/ADC/PDW - SETUP ;
RASIGU	HISC/CAH,FPT,GJC,CRT - Check E-sig Code
RASITE	HISC/CAH,FPT,GJC AISC/MJK,RMO-IRM Menu
RASTAT	HISC/GJC,FPT,SS AISC/TMP-Status Tracking Statistics Report
RASTED	HISC/CAH,FPT,GJC,SS AISC/TMP,TAC,RMO-Edits for status tracking
RASTEXT	HISC/CAH,FPT,GJC AISC/TMP,TAC,RMO-Called by Status Tracking display,edit. Allow selection/edit of case if called from edit option

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RASTEXT1	HISC/CAH,FPT,GJC AISC/TMP,TAC-Selection of patient for status tracking
RASTREQ	HISC/CAH,GJC AISC/MJK-Status Requirements Check Routine
RASTREQ1	HISC/CAH,GJC AISC/MJK-Cont. of RASTREQ status reqmts ck
RASTREQN	HIRMFO/GJC-Status Requirement check for Radiopharms ;
RASTRPT	HISC/DAD,FPT,SS AISC/TMP-Status Tracking Statistics Repor
RASTRPT1	HISC/SS-Status Tracking Statistics Report
RASTRPT2	HISC/SS-Status Tracking Statistics Report
RASYS	HISC/CAH AISC/TMP-System Definition Menu ;
RASYS1	HISC/CAH - Utility to update I-Loc Type to Clinic ;
RATRAN	HISC/FPT AISC/DMK-Transcriptionist Report
RAUTL	HISC/CAH,FPT,GJC AISC/MJK,RMO-Utility Routine
RAUTL0	HISC/CAH,FPT,GJC-Utility Routine
RAUTL00	HIRMFO/GJC-Utility Routine (linked to RAUTL0) ;
RAUTL1	HISC/CAH,FPT,GJC AISC/MJK,RMO-Utility Routine ;
RAUTL10	HISC/CAH,FPT,GJC-Utility Routine
RAUTL11	HISC/CAH,FPT,GJC,SS-Utility File Maintenance
RAUTL12	HISC/CAH,FPT,GJC-Utility Routine ;
RAUTL13	HISC/CAH-Utility OMA Loc selector, Pt Loc change, Submit-to loc scr
RAUTL14	HISC/GJC-Utilities for message display. ;
RAUTL15	HISC/GJC-Skeleton rpt del if no data entered.
RAUTL16	HISC/DAD-EXAM STATUS IMAGING TYPE INCONSISTENCIES REPORT
RAUTL16A	HISC/DAD-EXAM STATUS IMAGING TYPE INCONSISTENCIES REPORT (FULL FILE SCAN)
RAUTL17	HISC/DAD-RAD/NUC MED COMMON PROCEDURE FILE (#71.3) UTILITIES
RAUTL18	HISC/DAD,GJC-PROCEDURE FILE UTILITIES
RAUTL19	HISC/GJC-Utility Routine ;
RAUTL19A	HISC/SWM-Utility Routine ;
RAUTL19B	HISC/SWM-Utility Routine ;
RAUTL19C	HISC/GJC-Utility Routine ;
RAUTL2	HISC/CAH,FPT,GJC AISC/MJK,RMO-Utility Routine ;
RAUTL20	HISC/SWM-Utility Routine
RAUTL21	HOIFO/SWM,CRT;list & delete unneeded ^RARPT("ASTF" & "ARES")
RAUTL3	HISC/CAH,FPT,GJC AISC/SAW-Utility for Callable Entry Points

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAUTL4	HISC/CAH,FPT,GJC AISC/SAW-Utility Routine
RAUTL4B	IHS/ADC/PDW -BROKE UP RAUTL4, TOO BIG
RAUTL5	HISC/CAH,FPT,GJC-Utility Routine
RAUTL6	HISC/GJC-Utility Routine
RAUTL7	HISC/CAH,FPT,GJC-Utility for RACCESS array
RAUTL7A	HISC/CAH,FPT-Utility for RACCESS array
RAUTL8	HISC/CAH-Utility routines
RAUTL9	HISC/FPT-Utility Routines
RAWFR1	HISC/GJC-'Wasted Film Report' (1 of 4)
RAWFR2	HISC/GJC-'Wasted Film Report' (2 of 4)
RAWFR3	HISC/GJC-'Wasted Film Report' (3 of 4)
RAWFR4	HISC/GJC-'Wasted Film Report' (4 of 4)
RAWKL	HISC/FPT AISC/MJK,RMO-Workload Reports ;
RAWKL1	HISC/FPT-Workload Reports (cont.) ;
RAWKL2	HISC/FPT-Workload Reports (cont.) ;
RAWKL3	HISC/FPT-Workload Reports (cont.)
RAWORK	HISC/CAH,FPT,GJC AISC/TMP,RMO-Rad/Nuc Med Worksheet print (132 Char.Format)
RAXREF	HISC/DAD-EXECUTE SET AND KILL XREF'S
RAXSTAT	HIRMFO/GJC-Examination Status List (Print)
RAZDPT	IHS/ADC/PDW -
RAZEXPT	IHS/ADC/PDW - EXPORT MAMS TO WOMEN'S HEALTH ;
RAZHDR	IHS/OHPRD/EDE - DISPLAY RADIOLOGY OPTION HEADER
RAZOREX	IHS/ADC/PDW - Ward Order Entry routine. ;
RAZPCC	IHS/ADC/PDW - RADIOLOGY PCC LINK ;05-Feb-2002 10:56;PLS
RAZPCC1	IHS/ADC/PDW - RADIOLOGY PCC LINK RELATED
RAZPCCX	IHS/ADC/PDW - RADIOLOGY PCC LINK ;
RAZRPT1	IHS/ADC/PDW - Radiology Exam Roster by Proc, Rad, Diag Code. ;
RAZRPT2	IHS/ADC/PDW - Print Rad Exam Roster by Rad, Proc, Diag Code. ;
RAZRPT3	IHS/ADC/PDW - Radiology Exam Roster by Technologist, Proc. ;
RAZRPT4	IHS/ADC/PDW - Print Exam Roster by Tech, Proc. ;
RAZRPT5	IHS/ADC/PDW - Radiology Exam Roster by Room, Procedure. ;
RAZRPT6	IHS/ADC/PDW - Print Rad Exam Roster by Room, Procedure. ;
RAZRPTS	IHS/ADC/PDW - NO DESCRIPTION PROVIDED ;

RA12PST1	HIRMFO/CRT - Post-init number one (patch seventeen)
RAZUTL	IHS/ADC/PDW - Utilities Routine. ;
RAZVRAD	IHS/OHPRD/EDE - FIX V RADIOLOGY PROVIDER POINTERS
RAZWH	IHS/ADC/PDW - RADIOLOGY WOMEN'S HEALTH LINK

576 ROUTINES

5.0 Files and Tables

5.1 File List

File Number	File Name
70	RAD/NUC MED PATIENT
71	RAD/NUC MED PROCEDURES
71.1	MAJOR RAD/NUC MED AMIS CODES
71.2	PROCEDURE MODIFIERS
71.3	RAD/NUC MED COMMON PROCEDURE
71.4	RAD/NUC MED PROCEDURE MESSAGE
72	EXAMINATION STATUS
74	RAD/NUC MED REPORTS
74.1	STANDARD REPORTS
74.2	REPORT BATCHES
74.3	REPORT DISTRIBUTION QUEUE
74.4	REPORT DISTRIBUTION
75.1	RAD/NUC MED ORDERS
75.2	RAD/NUC MED REASON
78.1	COMPLICATION TYPES
78.2	LBL/HDR/FTR FORMATS
78.3	DIAGNOSTIC CODES
78.4	FILM SIZES
78.6	CAMERA/EQUIP/RM
78.7	LABEL PRINT FIELDS
79	RAD/NUC MED DIVISION
79.1	IMAGING LOCATIONS
79.198	RADIOLOGY 200 CONVERSION
79.199	RADIOLOGY REQUESTING LOCATIONS
79.2	IMAGING TYPE

5.2 File Access

The following table indicates Read, Write, Laygo, Data Dictionary, and Delete access security for all BI files.

File Name	GL	DD	RD	WR	DEL	LYG
70 RAD/NUC MED PATIENT	^RADPT(@	R	R	#	R
71 RAD/NUC MED PROCEDURES	^RAMIS(71,	@	R	R	#	R
71.1 MAJOR RAD/NUC MED AMIS CODES	^RAMIS(71.1,	@	R	R	#	R
71.2 PROCEDURE MODIFIERS	^RAMIS(71.2,	@	R	R	#	R
71.3 RAD/NUC MED COMMON PROCEDURE	^RAMIS(71.3,	@	R	R		R
71.4 RAD/NUC MED PROCEDURE MESSAGE	^RAMIS(71.4,	@	R	R		R
72 EXAMINATION STATUS	^RA(72,	@	R	R	#	R
74 RAD/NUC MED REPORTS	^RARPT(@	R	R	#	R
74.1 STANDARD REPORTS	^RA(74.1,	@	R	R	#	R
74.2 REPORT BATCHES	^RABTCH(74.2,	@	R	R	R	R
74.3 REPORT DISTRIBUTION QUEUE	^RABTCH(74.3,	@	R	R	R	R
74.4 REPORT DISTRIBUTION	^RABTCH(74.4,	@	R	R	#	R
75.1 RAD/NUC MED ORDERS	^RAO(75.1,	@	R	R	#	R
75.2 RAD/NUC MED REASON	^RA(75.2,	@	R	R	#	R
78.1 COMPLICATION TYPES	^RA(78.1,	@	R	R	#	R
78.2 LBL/HDR/FTR FORMATS	^RA(78.2,	@	R	R	#	R
78.3 DIAGNOSTIC CODES	^RA(78.3,	@	R	R	#	R
78.4 FILM SIZES	^RA(78.4,	@	R	R	#	R
78.6 CAMERA/EQUIP/RM	^RA(78.6,	@	R	R	#	R
78.7 LABEL PRINT FIELDS	^RA(78.7,	@	R	R	#	R
79 RAD/NUC MED DIVISION	^RA(79,	@	R	R	#	R

File Name	GL	DD	RD	WR	DEL	LYG
79.1 IMAGING LOCATIONS	^RA(79.1,	@	R	R	#	R
79.198 RADIOLOGY 200 CONVERSION	^RA(79.198,					
79.199 RADIOLOGY REQUESTING LOCATIONS	^RA(79.199,	@	R	R		R
79.2 IMAGING TYPE	^RA(79.2,	@	R	R	#	R

5.3 Cross References

FILE: 70 RAD/NUC MED PATIENT

FIELD #	FIELD NAME
.01	NAME X: B
2	REGISTERED EXAMS (70.02)
.01	EXAM DATE X: B X: AR
50	EXAMINATIONS (70.03)
.01	CASE NUMBER X: B X: ABLTN^MUMPS X: ADC^MUMPS
2	PROCEDURE X: AP X: AW^MUMPS
3	EXAM STATUS X: AE^MUMPS X: AS^MUMPS
11	IMAGING ORDER X: AO
12	PRIMARY INTERPRETING RESIDE X: ARES^MUMPS
13	PRIMARY DIAGNOSTIC CODE X: AD^MUMPS
13.1	SECONDARY DIAGNOSTIC CODE (70.14)
.01	SECONDARY DIAGNOSTIC CODE X: B X: AD^MUMPS
15	PRIMARY INTERPRETING STAFF X: ASTF^MUMPS
16	COMPLICATION X: ACM^MUMPS
27	VISIT X: AVSIT X: AUPN^MUMPS
45	PREVENT PURGE X: AC^MUMPS
46	REASON FOR NOT PURGING (70.346)
.01	REASON FOR NOT PURGING X: B
60	SECONDARY INTERPRETING STAFF (70.11)

```

.01      SECONDARY INTERPRETING ST
        X: B
        X: ASTF^MUMPS
        X: ARES^MUMPS
        X: B
2        TYPE OF ACTION
3        COMPUTER USER
125     PROCEDURE MODIFIERS (70.1)
.01     PROCEDURE MODIFIERS
        X: B
135     CPT MODIFIERS (70.3135)
.01     CPT MODIFIERS
        X: B
200     MEDICATIONS (70.15)
.01     MED ADMINISTERED
        X: B
400     CLINICAL HISTORY FOR EXAM (70.13)
.01     CLINICAL HISTORY FOR EXAM
500     NUCLEAR MED DATA
        X: NMD^MUMPS
75      *PRE-REGISTERED EXAMS (70.01)
.01     PRE-REGISTERED EXAM DATE
        X: B
        X: AP
100     ACTIVITY LOG (70.09)
.01     SECONDARY INTERPRET'G RESID
        X: ARES^MUMPS
        X: B

```

FILE: 71 RAD/NUC MED PROCEDURES

```

FIELD #  FIELD NAME
.01      NAME
        X: B
        X: C^MUMPS
9        CPT CODE
        X: D
12       TYPE OF IMAGING
        X: AIMG
50       DEFAULT RADIOPHARMACEUTICALS (71.08)
.01     DEFAULT RADIOPHARMACEUTICAL
        X: B
55       DEFAULT MEDICATIONS (71.055)
.01     DEFAULT MEDICATION
        X: B
2        DEFAULT MED DOSE
135     DEFAULT CPT MODIFIERS(PROC) (71.0135)
.01     DEFAULT CPT MODIFIERS(PROC)
        X: B
150     SYNONYM (71.01)
.01     SYNONYM
        X: E
        X: F^MUMPS
175     AMIS CODES (71.03)
.01     AMIS CODE
        X: AC
200     MESSAGE (71.04)
.01     MESSAGE
        X: B
300     DESCENDENTS (71.05)
.01     DESCENDENTS

```

```

          X: B
          X: ADESC
731      MODALITY (71.0731)
.01      MODALITY
          X: B

```

FILE: 71.1 MAJOR RAD/NUC MED AMIS CODES

```

FIELD #   FIELD NAME
.01      DESCRIPTION
          X: B
FILE: 71.2 PROCEDURE MODIFIERS
FIELD #   FIELD NAME
.01      NAME
          X: B
3         TYPE OF IMAGING (71.23)
.01      TYPE OF IMAGING
          X: AB

```

FILE: 71.3 RAD/NUC MED COMMON PROCEDURE

```

FIELD #   FIELD NAME
.01      PROCEDURE
          X: B
          X: AD^MUMPS
          X: AE^MUMPS
3        SEQUENCE NUMBER
          X: AA^MUMPS
4        INACTIVE
          X: ^TRIGGER^71.3^3
          CREATE VALUE  " "
          DELETE VALUE  " "
          FIELD          SE
12       PROCEDURE MODIFIERS (71.312)
.01      PROCEDURE MODIFIERS
          X: B

```

FILE: 71.4 RAD/NUC MED PROCEDURE MESSAGE

```

FIELD #   FIELD NAME
.01      TEXT
          X: B
FILE: 72 EXAMINATION STATUS
FIELD #   FIELD NAME
.01      STATUS
          X: B
7        TYPE OF IMAGING
          X: AA2^MUMPS
9        VISTARAD CATEGORY
          X: AVC

```

FILE: 74 RAD/NUC MED REPORTS

```

FIELD #   FIELD NAME
.01      DAY-CASE#
          X: B
          X: ABLTN^MUMPS
2        PATIENT NAME
          X: C

```

```

4.5      OTHER CASE# (74.05)
.01      OTHER CASE#
          X: B
          X: SET
5        REPORT STATUS
          X: ABLTN1^MUMPS
          X: ARES^MUMPS
          X: ASTF^MUMPS
          X: ASTAT^MUMPS
6        DATE REPORT ENTERED
7        VERIFIED DATE
          X: AA^MUMPS
11       TRANSCRIPTIONIST
          X: AD^MUMPS
1000     ERROR REPORTS (74.06)
.01      DATE/TIME OF RPT SAVE
          X: B
2        ERRONEOUS REPORT (74.62)
.01      ERRONEOUS REPORT
2005     IMAGE (74.02005)
.01      IMAGE
          X: B

```

FILE: 74.1 STANDARD REPORTS

```

FIELD #   FIELD NAME
.01       STANDARD REPORT
          X: B

```

FILE: 74.2 REPORT BATCHES

```

FIELD #   FIELD NAME
.01       BATCH NAME
          X: B
2         DATE/TIME BATCH CREATED
          X: F
3         USER WHO CREATED BATCH
          X: C
4         DATE/TIME BATCH WAS PRINTED
          X: E
25        REPORTS (74.21)
.01       REPORT
          X: D
2         REPORT PRINTED

```

FILE: 74.3 REPORT DISTRIBUTION QUEUE

```

FIELD #   FIELD NAME
.01       NAME
          X: B
FILE: 74.4 REPORT DISTRIBUTION
FIELD #   FIELD NAME
.01       REPORT
          X: B
4         PRINT DATE/TIME
          X: AD
11        DISTRIBUTION QUEUE
          X: C

```

FILE: 75.1 RAD/NUC MED ORDERS

FIELD #	FIELD NAME
.01	NAME
	X: B
	X: ^TRIGGER^75.1^15
	CREATE VALUE S X=DUZ
	DELETE VALUE NO EFFECT
	FIELD USER ENTERING REQ
	X: ^TRIGGER^75.1^16
	CREATE VALUE NOW
	DELETE VALUE NO EFFECT
	FIELD REQUEST ENTERED DATE/TIME
	X: ASIHS^MUMPS
2	PROCEDURE
	X: AP^MUMPS
5	REQUEST STATUS
	X: AS^MUMPS
	X: ACHN^MUMPS
18	LAST ACTIVITY DATE/TIME
	X: AO
21	DATE DESIRED (Not guaranteed)
	X: AC^MUMPS
23	SCHEDULED DATE (TIME optional)
	X: AD^MUMPS
125	PROCEDURE MODIFIERS (75.1125)
.01	PROCEDURE MODIFIERS
	X: B

FILE: 75.2 RAD/NUC MED REASON

FIELD #	FIELD NAME
.01	REASON
	X: B
3	SYNONYM
	X: S

FILE: 78.1 COMPLICATION TYPES

FIELD #	FIELD NAME
.01	COMPLICATION
	X: B
FILE: 78.2 LBL/HDR/FTR FORMATS	
FILE #	FIELD NAME
.01	FORMAT NAME
	X: B
50	PRINT FIELDS (78.21)
.01	FIELD
	X: B

FILE: 78.3 DIAGNOSTIC CODES

FIELD #	FIELD NAME
.01	DIAGNOSTIC CODE
	X: B

FILE: 78.4 FILM SIZES

FIELD #	FIELD NAME
---------	------------


```

.01      FILM
          X: B
5        WASTED FILM?
          X: AW
          X: ^TRIGGER^78.4^6
          CREATE VALUE  NO EFFECT
          DELETE VALUE  @
          FIELD          ANALOGOUS UNWASTED FILM SIZE
6        ANALOGOUS UNWASTED FILM SIZE
          X: AUW

```

FILE: 78.6 CAMERA/EQUIP/RM

```

FIELD #   FIELD NAME
.01      CAMERA/EQUIP/RM
          X: B
2        DESCRIPTION
          X: C

```

FILE: 78.7 LABEL PRINT FIELDS

```

FIELD #   FIELD NAME
.01      PRINT FIELD
          X: B
2        TYPE OF DATA
          X: AC
5        INTERNAL VARIABLE
          X: C

```

FILE: 79 RAD/NUC MED DIVISION

```

FIELD #   FIELD NAME
.01      DIVISION
          X: B
.121     ASK 'IMAGING LOCATION'
          X: AC1^MUMPS
.129     HL7 RECEIVING APPLICATIONS (79.02)
.01      HL7 RECEIVING APPLICATION
          X: B
.17      DETAILED PROCEDURE REQUIRED
          X: AC^MUMPS
50       IMAGING LOCATIONS (79.01)
.01      IMAGING LOCATION
          X: B
          X: AL
          X: ^TRIGGER^79.1^25
          CREATE VALUE  INTERNAL(DIVISION)
          DELETE VALUE  @
          FIELD          #.01:#25
150      USER PREFERS LONG DISPLAY (79.03)
.01      USER PREFERS LONG DISPLAY
          X: B
175      PERF INDIC SMTP E-MAIL ADDRESS (79.0175)
.01      PERF INDC SMTP E-MAIL ADDRESS
          X: B

```

FILE: 79.1 IMAGING LOCATIONS

```

FIELD #   FIELD NAME

```

```

.01      LOCATION
        X: B
6        TYPE OF IMAGING
        X: BIMG
135     DEFAULT CPT MODIFIERS(LOC) (79.1135)
.01     DEFAULT CPT MODIFIERS(LOC)
        X: B
150     STAT REQUEST ALERT RECIPIENTS (79.13)
.01     STAT REQUEST ALERT RECIPIENTS
        X: B

```

FILE: 79.198 RADIOLOGY 200 CONVERSION

```

FIELD #   FIELD NAME
.01      CONVERSION DONE
        X: B

```

FILE: 79.199 RADIOLOGY REQUESTING LOCATIONS

```

FIELD #   FIELD NAME
.01      REQUESTING LOCATION
        X: B
        X: ^TRIGGER^79.199^5
          CREATE VALUE .01:ABBREV
          DELETE VALUE NO EFFECT
          FIELD        LO
        X: ^TRIGGER^79.199^2
          CREATE VALUE .01:2
          DELETE VALUE NO EFFECT
          FIELD        #2
        X: AZ9^MUMPS

```

FILE: 79.2 IMAGING TYPE

```

FIELD #   FIELD NAME
.01      TYPE OF IMAGING
        X: B
        X: AA^MUMPS
3        ABBREVIATION
        X: C
4        OPERATING CONDITIONS
        X: AC

```

5.4 Table Files

Table 5-1: FILE: 70 RAD/NUC MED PATIENT GLOBAL: ^RADPT(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	P
.03	DATE OF BIRTH	COMPUTED (DATE)		
.033	AGE	COMPUTED		
.04	USUAL CATEGORY	D0,0	4	S

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.06	USER WHO ENTERED PATIENT	"	6	P
.09	SSN	COMPUTED		
.361	ELIGIBILITY CODE	"		
1	NARRATIVE	D0,1	1	F
2	REGISTERED EXAMS (70.02)			
.01	EXAM DATE	D0,"DT",D1,0	1	D
2	TYPE OF IMAGING	"	2	P
3	HOSPITAL DIVISION	D0,"DT",D1,0	3	P
4	IMAGING LOCATION	"	4	P
5	EXAM SET	"	5	S
50	EXAMINATIONS (70.03)			
.01	CASE NUMBER	D0,"DT",D1,"P",D2,0	1	N
2	PROCEDURE	"	2	P
3	EXAM STATUS	"	3	P
3.5	REASON FOR CANCELLATION	"	23	P
4	CATEGORY OF EXAM	"	4	S
5	BARIUM USED?	"	5	S
6	WARD	"	6	P
7	SERVICE	"	7	P
8	PRINCIPAL CLINIC	"	8	P
9	CONTRACT/SHARING SOURCE	"	9	P
9.5	RESEARCH SOURCE	D0,"DT",D1,"P",D2,"R"	1	F
10	CONTRAST MEDIA USED	D0,"DT",D1,"P",D2,0	10	S
11	IMAGING ORDER	"	11	P
12	PRIMARY INTERPRETING RESIDE	"	12	P
13	PRIMARY DIAGNOSTIC CODE	D0,"DT",D1,"P",D2,0	13	P
13.1	SECONDARY DIAGNOSTIC CODE (70.14)			

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	SECONDARY DIAGNOSTIC CODE	D0,"DT",D1,"P",D2,"DX",D3,0	1	P
1	SECONDARY DX PRINT DATE	"	2	D
14	REQUESTING PHYSICIAN	D0,"DT",D1,"P",D2,0	14	P
15	PRIMARY INTERPRETING STAFF	"	15	P
16	COMPLICATION	"	16	P
16.5	COMPLICATION TEXT	D0,"DT",D1,"P",D2,"CO	1	F
17	REPORT TEXT	D0,"DT",D1,"P",D2,0	17	P
18	PRIMARY CAMERA/EQUIP/RM	"	18	P
19	BEDSECTION	"	19	P
20	DIAGNOSTIC PRINT DATE	"	20	D
21	REQUESTED DATE	"	21	D
22	REQUESTING LOCATION	"	22	P
23	CLINIC STOP RECORDED?	"	24	S
25	MEMBER OF SET	"	25	S
26	CREDIT METHOD	"	26	S
27	VISIT	D0,"DT",D1,"P",D2,0	27	P
29	DOSAGE TICKET PRINTED?	"	29	S
30	HL7 EXAMINED MSG SENT?	"	30	S
40	PURGED DATE	D0,"DT",D1,"P",D2,"PU	1	D
45	PREVENT PURGE	D0,"DT",D1,"P",D2,"NO PURGE"	1	S
46	REASON FOR NOT PURGING (70.346)			
.01	REASON FOR NOT PURGING	D0,"DT",D1,"P",D2,"NO PURSN",D3,0	1	S
50	FILM SIZE (70.04)			
.01	FILM SIZE	D0,"DT",D1,"P",D2,"F",D3,0	1	P

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
2	AMOUNT(#films or cine ft)	"	2	N
9	NUMBER OF REPEATS	"	9	N
60	SECONDARY INTERPRETING STAFF (70.11)			
.01	SECONDARY INTERPRETING ST	D0,"DT",D1,"P",D2,"SS	1	P
	AFF	R",D3,0		
70	SECONDARY INTERPRET'G RESIDENT (70.09)			
.01	SECONDARY INTERPRET'G RES	D0,"DT",D1,"P",D2,"SR	1	P
	IDENT	R",D3,0		
2	TYPE OF ACTION	"	2	S
3	COMPUTER USER	"	3	P
75	EXAM STATUS TIMES (70.05)			
.01	STATUS CHANGE DATE/TIME	D0,"DT",D1,"P",D2,"T",D3,0	1	D
2	NEW STATUS	"	2	P
3	COMPUTER USER	"	3	P
100	ACTIVITY LOG (70.07)			
.01	LOG DATE	D0,"DT",D1,"P",D2,"L",D3,0	1	D
2	TYPE OF ACTION	"	2	S
3	COMPUTER USER	"	3	P
4	TECHNOLOGIST COMMENT	D0,"DT",D1,"P",D2,"L" E1,245,D3,"TCOM"		F
125	PROCEDURE MODIFIERS (70.1)			
.01	PROCEDURE MODIFIERS	D0,"DT",D1,"P",D2,"M",D3,0	1	P
135	CPT MODIFIERS (70.3135)			
.01	CPT MODIFIERS	D0,"DT",D1,"P",D2,"CM OD",D3,0	1	P
175	TECHNOLOGIST (70.12)			

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	TECHNOLOGIST	D0,"DT",D1,"P",D2,"TC",D3,0	1	P
195	PCC DATE/TIME	D0,"DT",D1,"P",D2,"PC	1	D
196	PCC V RAD FILE IEN	"	2	N
197	PCC VISIT FILE IEN	"	3	N
200	MEDICATIONS (70.15)			
.01	MED ADMINISTERED	D0,"DT",D1,"P",D2,"RX",D3,0	1	P
2	MED DOSE	"	2	F
3	DATE/TIME MED ADMINISTERED	D0,"DT",D1,"P",D2,"RX",D3,0	3	D
4	PERSON WHO ADMINISTERED MED	"	4	P
400	CLINICAL HISTORY FOR EXAM (70.13)			
.01	CLINICAL HISTORY FOR EXAM	D0,"DT",D1,"P",D2,"H",D3,0	1	W
500	NUCLEAR MED DATA	D0,"DT",D1,"P",D2,0	28	P
498	LAST MENSTRUAL PERIOD	D0,"DT",D1,"LMP"	1	D
499	PRIMARY MEANS OF BIRTH CONTROL	"	2	S
500	LAST NEGATIVE HCG TEST	"	3	D
50	OUTSIDE FILMS REGISTRY (70.06)			
.01	OUTSIDE FILMS REGISTER DATE	D0,"O",D1,0	1	D
2	NEEDED BACK DATE	"	2	D
3	RETURNED DATE	"	3	D
4	SOURCE OF FILMS	D0,"O",D1,0	4	F
5	ASK FOR 'OK' BEFORE RETURNING? "		5	S
6	HAS RETURN BEEN OK'ed?	"	6	S
20	REMARKS	D0,"O",D1,1	1	F
100	ACTIVITY LOG (70.08)			
.01	LOG DATE	D0,"O",D1,"L",D2,0	1	D
2	TYPE OF ACTION	"	2	S

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
3	COMPUTER USER	"	3	P
75	*PRE-REGISTERED EXAMS (70.01)			
.01	PRE-REGISTERED EXAM DATE	D0,"PRE",D1,0	1	D
2	RADIOLOGY PROCEDURE	"	2	P
3	CATEGORY OF EXAM	"	3	S
4	ACTUAL PROCEDURE PERFORMED	"	4	P
5	STATUS	"	5	S
6	TYPE OF IMAGING	"	6	P
7	PRINCIPAL CLINIC	"	7	P
8	REQUESTING PHYSICIAN	"	8	P
9	WARD	D0,"PRE",D1,0	9	P
100	ACTIVITY LOG (70.09)			
.01	SECONDARY INTERPRET'G RESIDENT	D0,"DT",D1,"P",D2,"SR R",D3,0	1	P
2	TYPE OF ACTION	"	2	S
3	COMPUTER USER	"	3	P
1901	IS PATIENT A VETERAN?	COMPUTED		

Table 5-2: FILE: 71 RAD/NUC MED PROCEDURES GLOBAL: ^RAMIS(71,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	F
2	SUPPRESS RADIOPHARM PROMPT	"	2	S
3	REQUIRED FLASH CARD PRINTER	"	3	P
4	REQUIRED FLASH CARD FORMAT	"	4	P
5	PROMPT FOR MEDS	"	5	S
6	TYPE OF PROCEDURE	"	6	S

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
7	STAFF REVIEW REQUIRED	"	7	S
8	ORIGINAL PROCEDURE?	"	8	S
9	CPT CODE	"	9	P
10	COST OF PROCEDURE	"	10	N
11	RAD/NM PHYS APPROVAL REQUIRED	"	11	S
12	TYPE OF IMAGING	"	12	P
13	HEALTH SUMMARY WITH REQUEST	"	13	P
14	DEFAULT CAMERA/EQUIP/RM	"	14	P
15	PRINT PROCEDURE BARCODE	COMPUTED		
16	PRINT CPT BARCODE	COMPUTED		
17	DISPLAY ED DESC WHEN ORDERED	D0,0	17	S
18	SINGLE REPORT	"	18	S
19	PROMPT FOR RADIOPHARM RX	"	19	S
50	DEFAULT RADIOPHARMACEUTICALS (71.08)			
.01	DEFAULT RADIOPHARMACEUTICAL	D0,"NUC",D1,0	1	P
2	USUAL DOSE	"	2	N
3	DFLT ROUTE OF ADMINISTRATION	"	3	P
4	DEFAULT SITE OF ADMINISTRATION "		4	P
	N			
5	HIGH ADULT DOSE	"	5	N
6	LOW ADULT DOSE	"	6	N
7	DEFAULT FORM	"	7	S
55	DEFAULT MEDICATIONS (71.055)			
.01	DEFAULT MEDICATION	D0,"P",D1,0	1	P
2	DEFAULT MED DOSE "		2	F
75	FILMS NEEDED (71.02)			

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	FILM TYPE	D0,"F",D1,0	1	P
2	NORMAL AMOUNT NEEDED FOR EXAM "		2	N
100	INACTIVATION DATE	D0,"I"	1	D
135	DEFAULT CPT MODIFIERS(PROC) (71.0135)			
.01	DEFAULT CPT MODIFIERS(PROC)	D0,"DCM",D1,0	1	P
150	SYNONYM (71.01)			
.01	SYNONYM	D0,1,D1,0	1	F
175	AMIS CODES (71.03)			
.01	AMIS CODE	D0,2,D1,0	1	P
2	AMIS WEIGHT MULTIPLIER	"	2	N
3	BILATERAL?	"	3	S
4	CT HEAD OR BODY?	"	4	S
200	MESSAGE (71.04)			
.01	MESSAGE	D0,3,D1,0	1	P
300	DESCENDENTS (71.05)			
.01	DESCENDENTS	D0,4,D1,0	1	P
400	NEW PROCEDURE MESSAGE (71.07)			
.01	NEW PROCEDURE MESSAGE	D0,"PMES",D1,0	1	W
500	EDUCATIONAL DESCRIPTION (71.09)			
.01	EDUCATIONAL DESCRIPTION	D0,"EDU",D1,0	1	W
731	MODALITY (71.0731)			
.01	MODALITY	D0,"MDL",D1,0	1	P

Table 5-3: FILE: 71.1 MAJOR RAD/NUC MED AMIS CODES GLOBAL: ^RAMIS(71.1

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.001	MAJOR AMIS CODE			N
.01	DESCRIPTION	D0,0	1	F
2	WEIGHT	"	2	N

Table 5-4: FILE: 71.2 PROCEDURE MODIFIERS GLOBAL: ^RAMIS(71.2,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	F
3	TYPE OF IMAGING (71.23)			
.01	TYPE OF IMAGING	D0,1,D1,0	1	P
4	AMIS CREDIT INDICATOR	D0,0	2	S

Table 5-5: FILE: 71.3 RAD/NUC MED COMMON PROCEDURE GLOBAL: ^RAMIS(71.3,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	PROCEDURE	D0,0	1	P
3	SEQUENCE NUMBER	"	4	N
4	INACTIVE	"	5	S
6	CATEGORY OF EXAM	"	6	S
7	REQUESTED DATE	"	7	S
8	IMAGING LOCATION	"	8	P
9	MODE OF TRANSPORT	"	9	S
10	ISOLATION PROCEDURES	"	10	S
11	REQUEST URGENCY	"	11	S
12	PROCEDURE MODIFIERS (71.312)			
.01	PROCEDURE MODIFIERS	D0,"M",D1,0	1	P
13	NAME OF ORDERABLE ITEM	D0,0	13	F

Table 5-6: FILE: 71.4 RAD/NUC MED PROCEDURE MESSAGE GLOBAL: ^RAMIS(71.4,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	TEXT	D0,0	1	F

Table 5-7: FILE: 72 EXAMINATION STATUS GLOBAL: ^RA(72,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	STATUS	D0,0	1	F
.11	TECHNOLOGIST REQUIRED?	D0,.1	1	S
.111	REPORT ENTERED REQUIRED?	"	11	S
.112	VERIFIED REPORT REQUIRED?	"	12	S
.113	PROCEDURE MODIFIERS REQUIRED?	"	13	S
.114	CPT MODIFIERS REQUIRED?	"	14	S
.116	IMPRESSION REQUIRED?	"	16	S
.12	RESIDENT OR STAFF REQUIRED?	"	2	S
.13	DETAILED PROCEDURE REQUIRED?	"	3	S
.14	FILM ENTRY REQUIRED?	"	4	S
.15	DIAGNOSTIC CODE REQUIRED?	"	5	S
.16	CAMERA/EQUIP/RM REQUIRED?	"	6	S
.21	ASK FOR TECHNOLOGIST?	D0,.2	1	S
.211	ASK FOR USER CODE?	"	11	S
.213	ASK PROCEDURE MODIFIERS?	"	13	S
.214	ASK CPT MODIFIERS?	"	14	S
.22	ASK FOR INTERPRETING PHYS?	D0,.2	2	S
.23	ASK FOR PROCEDURE?	"	3	S
.24	ASK FOR FILM DATA?	"	4	S
.25	ASK FOR DIAGNOSTIC CODE?	"	5	S

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.26	ASK FOR CAMERA/EQUIP/RM?	"	6	S
.27	ASK MEDICATIONS & DOSAGES?	"	7	S
.28	ASK MED ADM DT/TIME/PERSON?	"	8	S
.31	CLINIC REPORT?	D0,.3	1	S
.311	CAMERA/EQUIP/RM REPORT?	"	11	S
.312	PHYSICIAN REPORT?	"	12	S
.313	RESIDENT REPORT?	"	13	S
.314	STAFF REPORT?	"	14	S
.315	DELINQUENT STATUS REPORT?	"	15	S
.32	PTF BEDSECTION REPORT?	"	2	S
.33	SERVICE REPORT?	"	3	S
.34	SHARING/CONTRACT REPORT?	"	4	S
.35	WARD REPORT?	"	5	S
.36	FILM USAGE REPORT?	"	6	S
.37	TECHNOLOGIST REPORT?	"	7	S
.38	AMIS REPORT?	"	8	S
.39	DETAILED PROCEDURE REPORT?	D0,.3	9	S
.51	RADIOPHARMS/DOSAGES REQUIRED?	D0,.5	1	S
.53	ACTIVITY DRAWN REQUIRED?	"	3	S
.54	DRAWN DT/TIME/PERSON REQUIRED?	"	4	S
.55	ADM DT/TIME/PERSON REQUIRED?	"	5	S
.57	ROUTE/SITE REQUIRED?	"	7	S
.58	LOT NO. REQUIRED?	"	8	S
.59	VOLUME/FORM REQUIRED?	"	9	S
.61	ASK RADIOPHARMS AND DOSAGES?	D0,.6	1	S

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.611	PRINT DOSAGE TICKET?	"	11	S
.63	ASK ACTIVITY DRAWN?	"	3	S
.64	ASK DRAWN DT/TIME/PERSON?	"	4	S
.65	ASK ADM DT/TIME/PERSON?	"	5	S
.67	ASK ROUTE/SITE OF ADM?	"	7	S
.68	ASK LOT NO.?	"	8	S
.69	ASK VOLUME/FORM?	"	9	S
1	GENERATE EXAM ALERT?	D0,"ALERT"	1	S
2	DEFAULT NEXT STATUS	D0,0	2	P
3	ORDER	"	3	N
4	USER KEY NEEDED	"	4	P
5	APPEAR ON STATUS TRACKING?	D0,0	5	S
6	ALLOW CANCELLING?	"	6	S
7	TYPE OF IMAGING	"	7	P
8	GENERATE EXAMINED HL7 MESSAGE	"	8	S
9	VISTARAD CATEGORY	"	9	S

Table 5-8: FILE: 74 RAD/NUC MED REPORTS GLOBAL: ^RARPT(

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	DAY-CASE#	D0,0	1	F
2	PATIENT NAME	"	2	P
3	EXAM DATE/TIME	"	3	D
4	CASE NUMBER	"	4	N
4.5	OTHER CASE# (74.05)			
.01	OTHER CASE#	D0,1,D1,0	1	F
5	REPORT STATUS	D0,0	5	S
6	DATE REPORT ENTERED	"	6	D
7	VERIFIED DATE	"	7	D
8	REPORTED DATE	"	8	D

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
9	VERIFYING PHYSICIAN	"	9	P
10	ELECTRONIC SIGNATURE CODE	"	10	F
11	TRANSCRIPTIONIST	D0,"T"	1	P
13	DATE REPORT PRINTED	D0,0	11	D
14	PRE-VERIFICATION DATE/TIME	D0,0	12	D
15	PRE-VERIFICATION USER	"	13	P
16	PRE-VERIFICATION E-SIG	"	14	F
17	STATUS CHANGED TO VERIFIED BY	"	17	P
25	PROBLEM STATEMENT	D0,"P" E1,240		F
40	PURGED DATE	D0,"PURGE"	1	D
45	NO PURGE INDICATOR	D0,"NOPURGE"	1	S
53	HOSPITAL DIVISION	COMPUTED		
54	IMAGING LOCATION	"		
100	ACTIVITY LOG (74.01)			
.01	LOG DATE	D0,"L",D1,0	1	D
2	TYPE OF ACTION	"	2	S
3	COMPUTER USER	"	3	P
102	PROCEDURE	COMPUTED		
103	EXAM STATUS	"		
104	CATEGORY OF EXAM	"		
106	WARD	"		
107	SERVICE	COMPUTED		
108	PRINCIPAL CLINIC	"		
109	CONTRACT/SHARING SOURCE	"		
109.5	RESEARCH SOURCE	"		
112	PRIMARY INTERPRETING RESIDENT "			

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
113	PRIMARY DIAGNOSTIC CODE	"		
114	REQUESTING PHYSICIAN	"		
115	PRIMARY INTERPRETING STAFF	"		
116	COMPLICATION	"		
118	PRIMARY CAMERA/EQUIP/RM	"		
119	BEDSECTION	"		
200	REPORT TEXT (74.02)			
.01	REPORT TEXT	D0,"R",D1,0	1	W
300	IMPRESSION TEXT (74.03)			
.01	IMPRESSION TEXT	D0,"I",D1,0	1	W
400	ADDITIONAL CLINICAL HISTORY (74.04)			
.01	ADDITIONAL CLINICAL HISTORY	D0,"H",D1,0	1	W
1000	ERROR REPORTS (74.06)			
.01	DATE/TIME OF RPT SAVE	D0,"ERR",D1,0	1	D
2	ERRONEOUS REPORT (74.62)			
.01	ERRONEOUS REPORT	D0,"ERR",D1,"RPT",D2	1	W
2005	IMAGE (74.02005)			
.01	IMAGE	D0,2005,D1,0	1	P

Table 5-9: FILE: 74.1 STANDARD REPORTS GLOBAL: ^RA(74.1,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.001	REPORT NUMBER			N
.01	STANDARD REPORT	D0,0	1	F

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
200	REPORT TEXT (74.11)			
.01	REPORT TEXT	D0,"R",D1,0	1	W
300	IMPRESSION (74.12)			
.01	IMPRESSION	D0,"I",D1,0	1	W

Table 5-10: FILE: 74.2 REPORT BATCHES GLOBAL: ^RABTCH(74.2,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	BATCH NAME	D0,0	1	F
2	DATE/TIME BATCH CREATED	"	2	D
3	USER WHO CREATED BATCH	"	3	P
4	DATE/TIME BATCH WAS PRINTED	"	4	D
25	REPORTS (74.21)			
.01	REPORT	D0,"R",D1,0	1	P
2	REPORT PRINTED	"	2	S

Table 5-11: FILE: 74.3 REPORT DISTRIBUTION QUEUE GLOBAL: ^RABTCH(74.3,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	F
2	CATEGORY OF REPORTS	"	2	S
75	TOP OF PAGE MESSAGE	D0,"M"	1	F
100	ACTIVITY LOG (74.33)			
.01	LOG DATE	D0,"L",D1,0	1	D
2	TYPE OF ACTION	"	2	S
3	COMPUTER USER	"	3	P
4	COMMENT	"	4	F
5	NO. OF REPORTS PRINTED	"	5	N
125	INACTIVATION DATE	D0,"I"	1	D

Table 5-12: FILE:74.4 REPORT DISTRIBUTION GLOBAL: ^RABTCH(74.4,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	REPORT	D0,0	1	P
2	DATE PLACED IN RPT DIST FILE	"	2	D
3	COMPUTER USER	"	3	P
4	PRINT DATE/TIME	"	4	D
6	WARD	"	6	P
8	PRINCIPAL CLINIC	"	8	P
11	DISTRIBUTION QUEUE	"	11	P
12	REQUESTING PHYSICIAN	"	12	P

Table 5-13: FILE: 75.1 RAD/NUC MED ORDERS GLOBAL: ^RAO(75.1,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	NAME	D0,0	1	P
2	PROCEDURE	"	2	P
3	TYPE OF IMAGING	"	3	P
4	CATEGORY OF EXAM	"	4	S
5	REQUEST STATUS	"	5	S
6	REQUEST URGENCY	"	6	S
7	ORDER	"	7	P
8	APPROVING RAD/NUC MED PHYS	"	8	P
9	CONTRACT/SHARING SOURCE	"	9	P
9.5	RESEARCH SOURCE	D0,"R"	1	F
10	REASON	D0,0	10	P
11	ORIGINAL REQUEST CHANGED	"	11	S
12	PRE-OP SCHEDULED DATE/TIME	"	12	D
13	PREGNANT	"	13	S
14	REQUESTING PHYSICIAN	"	14	P
15	USER ENTERING REQUEST	"	15	P
16	REQUEST ENTERED DATE/TIME	D0,0	16	D
17	PAST VISIT DATE/TIME	"	17	D
18	LAST ACTIVITY DATE/TIME	"	18	D
19	MODE OF TRANSPORT	"	19	S
20	IMAGING LOCATION	"	20	P
21	DATE DESIRED (Not guaranteed)	"	21	D
22	REQUESTING LOCATION	"	22	P
23	SCHEDULED DATE (TIME optional)	"	23	D

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
24	ISOLATION PROCEDURES	"	24	S
25	HOLD DESCRIPTION (75.125)			
.01	HOLD DESCRIPTION	D0,1,D1,0	1	W
26	NATURE OF (NEW) ORDER ACTIVITY	D0,0	26	S
27	CANCEL DESCRIPTION	"	27	F
75	REQUEST STATUS TIMES (75.12)			
.01	STATUS CHANGE DATE/TIME	D0,"T",D1,0	1	D
2	NEW STATUS	"	2	S
3	COMPUTER USER	"	3	P
4	REASON	D0,"T",D1,0	4	P
125	PROCEDURE MODIFIERS (75.1125)			
.01	PROCEDURE MODIFIERS	D0,"M",D1,0	1	P
190	PCC Date/Time	D0,"PCC"	1	D
400	CLINICAL HISTORY FOR EXAM (75.11)			
.01	CLINICAL HISTORY FOR EXAM	D0,"H",D1,0	1	W

Table 5-14: FILE: 75.2 RAD/NUC MED REASON GLOBAL: ^RA(75.2,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.001	NUMBER			N
.01	REASON	D0,0	1	F
2	TYPE OF REASON	"	2	S
3	SYNONYM	"	3	F
4	NATURE OF ORDER ACTIVITY	"	4	S

Table 5-15: FILE: 78.1 COMPLICATION TYPES GLOBAL: ^RA(78.1,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	COMPLICATION	D0,0	1	F
2	CONTRAST MEDIUM REACTION?	"	2	S

Table 5-16: FILE: 78.2 LBL/HDR/FTR FORMATS GLOBAL: ^RA(78.2,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	FORMAT NAME	D0,0	1	F
2	NUMBER OF ROWS IN FORMAT	"	2	N
50	PRINT FIELDS (78.21)			
.01	FIELD	D0,1,D1,0	1	P
2	ROW	"	2	N
3	COLUMN	"	3	N
4	TITLE (OPTIONAL)	"	4	F
5	LITERAL TEXT	"	5	F
100	COMPILED LOGIC (78.22)			
.01	COMPILED LOGIC	D0,"E",D1,0	1	W

Table 5-17: FILE: 78.3 DIAGNOSTIC CODES GLOBAL: ^RA(78.3,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.001	NUMBER			N
.01	DIAGNOSTIC CODE	D0,0	1	F
2	DESCRIPTION	"	2	F
3	PRINT ON ABNORMAL REPORT	"	3	S

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
4	GENERATE ABNORMAL ALERT?	"	4	S
5	INACTIVE	"	5	S

Table 5-18: FILE: 78.4 FILM SIZES GLOBAL: ^RA(78.4,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	FILM	D0,0	1	F
2	IS THIS A 'CINE' FILM SIZE?	"	2	S
3	FLUORO ONLY?	"	3	S
4	INACTIVATION DATE	D0,"I"	1	D
5	WASTED FILM?	D0,0	4	S
6	ANALOGOUS UNWASTED FILM SIZE	"	5	P

Table 5-19: FILE: 78.6 CAMERA/EQUIP/RM GLOBAL: ^RA(78.6,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	CAMERA/EQUIP/RM	D0,0	1	F
2	DESCRIPTION	"	2	F

Table 5-20: FILE: 78.7 LABEL PRINT FIELDS GLOBAL: ^RA(78.7,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	PRINT FIELD	D0,0	1	F
2	TYPE OF DATA	"	2	S
3	DEFAULT TITLE	"	3	F
4	TEST VALUE	"	4	F
5	INTERNAL VARIABLE	"	5	F

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
6	UNIQUE	"	6	S
100	MUMPS CODE TO SET VARIABLE	D0,"E", E1,240		F

Table 5-21: FILE: 79 RAD/NUC MED DIVISION GLOBAL: ^RA(79,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	DIVISION	D0,0	1	P
.11	TRACK EXAM STATUS CHANGES	D0,.1	10	S
.111	ASK EXAM STATUS TIME	"	11	S
.112	ALLOW STANDARD REPORTS	"	12	S
.113	ALLOW BATCHING OF REPORTS	"	13	S
.114	ALLOW COPYING OF REPORTS	"	14	S
.116	IMPRESSION REQUIRED ON REPORTS	"	16	S
.117	ASK 'REQUESTED DATE'	"	17	S
.118	ALLOW VERIFYING BY RESIDENTS	"	18	S
.119	TRACK REQUEST STATUS CHANGES	"	19	S
.12	PRINT FLASH CARD FOR EACH EXAM	"	2	S
.121	ASK 'IMAGING LOCATION'	"	21	S
.122	ALLOW RPTS ON CANCELLED CASES?	"	22	S
.124	TIME LIMIT FOR FUTURE EXAMS	"	24	N
.125	WARNING ON RPTS NOT YET VERIF?	"	25	S
.126	AUTO E-MAIL TO REQ. PHYS?	"	26	S

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.127	ALLOW E-SIG ON COTS HL7 RPTS	D0,.1	27	S
.128	INTERPRETING STAFF REQ'D?	"	28	S
.129	HL7 RECEIVING APPLICATIONS (79.02)			
.01	HL7 RECEIVING APPLICATION D0,"HL7",D1,0		1	P
.16	AUTO USER CODE FILING	D0,.1	6	S
.17	DETAILED PROCEDURE REQUIRED	"	7	S
.18	PRINT JACKET LBLs W/EACH VISIT	"	8	S
.19	ASK 'CAMERA/EQUIP/RM'	"	9	S
25	CONTRAST REACTION MESSAGE	D0,"CON"	1	F
50	IMAGING LOCATIONS (79.01)			
.01	IMAGING LOCATION D0,"L",D1,0		1	P
75	CLINICAL HISTORY MESSAGE	D0,"HIS"	1	F
100	RESOURCE DEVICE	D0,"RDEV"	1	P
125	RPHARM DOSE WARNING MESSAGE (79.0125)			
.01	RPHARM DOSE WARNING MESSAGE D0,"RWARN",D1,0		1	W
130	ASK PCC DATE/TIME	D0,.1	30	S
150	USER PREFERS LONG DISPLAY (79.03)			
.01	USER PREFERS LONG DISPLAY D0,"LDIS",D1,0		1	P

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
175	PERF INDIC SMTP E-MAIL ADDRESS (79.0175)			
.01	PERF INDC SMTP E- MAIL ADDRESS D0,1,D1,0		1	F
9999999.1	SEND PCC AT EXAMINED	D0,9999999	1	S

Table 5-22; FILE: 79.1 IMAGING LOCATIONS GLOBAL: ^RA(79.1,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	LOCATION	D0,0	1	P
2	HOW MANY FLASH CARDS PER VISIT	"	2	N
3	FLASH CARD PRINTER NAME	"	3	P
4	HOW MANY JACKET LBLS PER VISIT	"	4	N
5	JACKET LABEL PRINTER NAME	"	5	P
6	TYPE OF IMAGING	"	6	P
7	DEFAULT FLASH CARD FORMAT	"	7	P
8	HOW MANY EXAM LABELS PER EXAM	"	8	N
9	DEFAULT EXAM LABEL FORMAT	"	9	P
10	REPORT PRINTER NAME	"	10	P
11	DEFAULT JACKET LABEL FORMAT	"	11	P
12	DEFAULT REPORT HEADER FORMAT	"	12	P
13	DEFAULT REPORT FOOTER FORMAT	"	13	P
14	REPORT LEFT MARGIN	"	14	N
15	REPORT RIGHT MARGIN	"	15	N
16	REQUEST PRINTER NAME	"	16	P

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
17	ALLOW 'RELEASED/NOT VERIFIED'	D0,0	17	S
18	PRINT DX CODES IN REPORT?	"	18	S
19	INACTIVE	"	19	D
20	URGENT REQUEST ALERTS?	"	20	S
21	CREDIT METHOD	"	21	S
22	DSS ID	"	22	P
23	DOSAGE TICKET PRINTER	"	23	P
24	CANCELLED REQUEST PRINTER	"	24	P
25	RAD/NUC MED DIVISION	D0,"DIV"	1	P
26	VOICE DICTATION AUTO-PRINT	D0,0	26	S
100	CAMERAS/EQUIP/RMS (79.12)			
.01	CAMERA/EQUIP/RM	D0,"R",D1,0	1	P
135	DEFAULT CPT MODIFIERS(LOC) (79.1135)			
.01	DEFAULT CPT MODIFIERS(LOC)	D0,"DCM",D1,0	1	P
150	STAT REQUEST ALERT RECIPIENTS (79.13)			
.01	STAT REQUEST ALERT RECIPIENTS	D0,"REC",D1,0	1	P

Table 5-23: FILE: 79.198 RADIOLOGY 200 CONVERSION GLOBAL: ^RA(79.198,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	CONVERSION DONE	D0,0	1	S

Table 5-24: FILE: 79.199 RADIOLOGY REQUESTING LOCATIONS GLOBAL: ^RA(79.199,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	REQUESTING LOCATION	D0,0	1	P
1	PRINT REPORTS (YES/NO)	"	2	S
2	LOCATION TYPE	"	3	F
3	PRINTER	"	4	P
5	LOCATION ABBREVIATION	"	6	F
2505	INACTIVATE DATE	D0,"I"	1	D
2506	REACTIVATE DATE	"	2	D

Table 5-25: FILE: 79.2 IMAGING TYPE GLOBAL: ^RA(79.2,

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	TYPE OF IMAGING	D0,0	1	F
.11	ACTIVITY LOG CUT-OFF	D0,.1	1	N
.12	REPORT CUT-OFF	"	2	N
.13	CLINICAL HISTORY CUT-OFF	"	3	N
.14	TRACKING TIME CUT-OFF	"	4	N
.15	*PRE-REGISTER DATA CUT-OFF	"	5	N
.16	ORDER DATA CUT-OFF	"	6	N
3	ABBREVIATION	D0,0	3	F
4	OPERATING CONDITIONS	"	4	S
5	RADIOPHARMACEUTICALS USED?	"	5	S
25	NEXT CASE NUMBER	D0,"CN"	1	N
26	CASE NUMBER TURNOVER DATE	"	2	D
50	INTRODUCTION TEXT (79.21)			
.01	INTRODUCTION TEXT	D0,1,D1,0	1	W
100	ACTIVITY LOG (79.23)			

FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
.01	LOG DATE	D0,"L",D1,0	1	D
2	TYPE OF ACTION	"	2	S
3	COMPUTER USER	"	3	P
4	NO. OF EXAM RECORDS PROCESSED	"	4	N
5	NO. OF REPORTS PROCESSED	"	5	N
6	NO. OF REQUESTS PROCESSED	"	6	N

5.5 Templates

5.5.1 Input Templates

File	Name	Description
70	RA CANCEL	This template is used to cancel exams.
70	RA DIAGNOSTIC BY CASE	This template is used by the Diagnostic Code Entry by Case No. option.
70	RA EXAM EDIT	This template is used to edit exams.
70	RA LAST PAST VISIT	This template is used when adding the last visit prior to implementing the RPMS Radiology/Nuclear Medicine package.
70	RA NO PURGE SPECIFICATION	This template is used to set the no purge flag for an exam in the Indicate No Purging of an Exam/report option.
70	RA OUTSIDE ADD	This template is used to enter outside films for tracking purposes.
70	RA OUTSIDE EDIT	This template is used to edit information on outside film tracking.
70	RA OUTSIDE SUPEROK	This template is used to flag an outside film as needing a supervisor's concurrence in order to be released.
70	RA OVERRIDE	This template is used to override the status of an exam and set it to Complete.
70	RA REGISTER	This template is used to register patients for exams. It is compiled into the RACTRG* routines.
70	RA STATUS CHANGE	This template is used for the Status Tracking of Exams option.
71	RA PROCEDURE EDIT	This template is used to enter and edit procedures.

File	Name	Description
71.3	RA COMMON PROCEDURE EDIT	This template is used to set up and change the common procedure display used when requesting an exam.
72	RA STATUS ENTRY	This template is used to enter and edit a status for an exam.
74	RA PRE-VERIFY REPORT EDIT	This template is used by interpreting resident physicians to edit and pre-verify their reports.
74	RA PRE-VERIFY REPORT ONLY	This template is used by interpreting resident physicians to pre-verify their reports only.
74	RA REPORT EDIT	This template is used to enter and edit reports in File #74. It is compiled into the RACTWR* routines.
74	RA VERIFY REPORT ONLY	This template is used to verify reports in File #74. It is compiled into the RACTVR* routines.
74.1	RA STANDARD REPORT ENTRY	This template is used to enter standard reports into File #74.
74.3	RA DISTRIBUTION EDIT	This template is used in the Reports Distribution Edit option.
74.3	RA DISTRIBUTION LOG	This template is used to enter data in the activity log of File #74.3.
75.1	RA OERR EDIT	This template is to edit requests by OE/RR V. 2.5 users. It is compiled into the RACTOE* routines.
75.1	RA ORDER EXAM	This template is used to request an exam.
75.1	RA QUICK EXAM ORDER	This template is used by OE/RR V. 2.5 users for ordering an exam. It is compiled into the RACTQE* routines.
78.2	RA FLASH CARD EDIT	This template is used to enter and edit flash cards, jacket labels, exam labels, report headers and report footers.
79	RA DIVISION PARAMETERS	This template is used to enter division parameters for the package.
79.1	RA LOCATION PARAMETERS	This template is used to enter the location parameters for the package.
79.1	RA SITE MANAGER	This template is used by the IRM Service to define input and printing devices for the package.
79.2	RA IMAGE PARAMETERS	This template is used to enter parameters for an imaging type.
79.2	RA ON-LINE CRITERIA	This template is used to enter data associated with the storing of on-line data for an imaging location.
200	RA PERSONNEL	This template is used to enter Radiology/ Nuclear Medicine personnel into the package.

5.5.2 Sort Templates

File	Name	Description
70	RA DAILY LOG	This template is used to sort exams by exam date and hospital division.
70	RA OUTSIDE LIST	This template is used to sort the outside film registry.
71	RA ALPHA LIST OF ACTIVES	This template is used to determine which procedures are active and put them in alphabetical order.
71	RA PROCEDURES BY AMIS	This template is used to sort procedures by major AMIS code.
71	RA PROCEDURES BY AMIS CODES	This template sorts procedures by AMIS code and then by CPT code.
71	RA SERIES ONLY	This template is used to sort procedures by "Series" type only.
74.4	RA ALL UNPRINTED	This template is used to sort the Unprinted Reports List for the report distribution queue.
74.4	RA CLINIC BY PRINT DATE	This template sorts the distribution queue by clinic location. Also, it sorts reports by print status.
74.4	RA WARD BY PRINT DATE	This template sorts reports in the ward distribution queue by print date.
78.2	RA FLASH PRINT	This template sorts print formats by name for printing label set-ups.
79.1	RA EXAM ROOM LIST	This template sorts examination rooms by Radiology/Nuclear Medicine location.
79.1	RA IMAGE LOC LIST	This template is used to sort location parameters by imaging location.
200	RA PERSONNEL LIST	This template sorts Radiology/Nuclear Medicine personnel by classification (e.g., technologist).

5.5.3 Print Templates

File	Name	Description
70	RA DAILY LOG	This template is used to print a daily log of registered examinations.
70	RA OUTSIDE LIST	This template is used to generate the Delinquent Outside Film Report for outpatients.

File	Name	Description
71	RA ALPHA LIST OF ACTIVES	This template produces an alphabetic listing of all active Radiology/Nuclear Medicine procedures.
71	RA PROCEDURE BY AMIS	This template is used to generate the Short Active Procedure List.
71	RA PROCEDURE LIST	This template is used to generate the Long Procedure List.
71	RA PROCEDURE SHORT LIST	This template is used to generate the Inactive Short Procedure List.
74.1	RA STANDARD REPORTS LIST	This template is used in the Standard Reports Print option.
74.3	RA DISTRIBUTION	This template is used in the Report Distribution List.
74.4	RA ALL UNPRINTED REPORTS	This template is used to generate a list of reports in the distribution queue that have not been printed.
74.4	RA PRINTED REPORTS	This template is used in the List Reports in a Batch option.
74.4	RA UNPRINTED REPORTS	This template is used to generate reports in the distribution queue that have not yet been printed
78.2	RA FLASH PRINT	This template is used to generate the Flash Card/Label List.
78.3	RA DIAGNOSTIC CODE PRINT	This template is used to print the Diagnostic Code List.
78.4	RA FILM SIZE	This template is used to provide information about types of film (e.g., inactivation date).
79	RA IMAGE DIV LIST	This template is used to generate a list of divisions.
79.1	RA EXAM ROOM LIST	This template is used to generate an exam room list.
79.1	IMAGE LOC LIST	This template is used to generate a list of imaging locations.
79.2	RA ACTIVITY LOG	This template is used to print the activity log from File #79.2.
200	RA PERSONNEL LIST	This template is used to generate a list of personnel who have a Radiology/Nuclear Medicine classification and their inactivation date, if applicable.

File	Name	Description
200	RA RESIDENT RADIOLOGIST	This template is used to generate a list of personnel who have a Radiology/Nuclear Medicine classification, their inactivation date and whether a staff review is required

6.0 Internal Relations

All options in the Radiology/Nuclear Medicine v5.0 package can function independently. Most options require the use of the following package-wide variables: RACCESS, RAMDV, RAMLC, RAMDIV and RAIMGTY. If they do not already exist, these variables are set at the time the option is invoked. They are only killed by the exit action of the user's main Radiology/Nuclear Medicine menu (e.g., Rad/Nuc Med Transcriptionist Menu). If other options are invoked independently, these variables should be killed by adding 'D KILL^RAPSET1' to the exit action of the option.

7.0 External Relations

7.1 External Calls

Routine Called	Invoked By
BRAPCC	\$\$INPT1^BDGF1, \$\$PRIORTXN^BDGF1
BRARPT1	\$\$HRCN^BDGF2
BRARPT3	\$\$HRCN^BDGF2
BRARPT5	\$\$HRCN^BDGF2
BRAWH	AUTOADD^BWPATE,NEW2^BWPROC,RADMOD^BWPROC

7.2 Published Entry Points

BRAPCC

+5 CREATE ;EP---> CREATE OR MODIFY A VISIT FILE ENTRY, CREATE A NEW V RAD ENTRY.

+191 DELETE ;EP---> DELETE PCC V RAD ENTRY. (REQUIRES RADFN, RADTI, & RACNI)

BRARPT1

+101 SELECT ;EP---> SELECT PROCEDURE(S), RADIOLOGIST(S), DIAGNOSTIC CODE(S).

BRARPTS

+3 PROC1 ;EP---> ALPHABETIC LISTING OF ACTIVE PROCEDURES.

BRAWH

+30 CREATE(DFN,DATE,CASE) ;EP

+75 EXIT ;EP

+80 COPY(Y) ;EP

+156 UPDATE(DFN,DATE,CASE) ;EP

+189 LOOP ;EP

RAIENVCK

+31 IHS ;EP for ra45 environment check

7.3 DBIAs

For the latest information on active supported references, use the Subscriber Package Menu under the DBA's Integration Agreement Menu on FORUM

```
Select DBA Option: INTEGration Agreements Menu

0      Instructions for Entering IA's
1      Get New Integration #'s
2      Add/Edit
3      Inquire
4      Roll-up into Mail Message
5      File Agreements Menu ...
6      Routine Agreements Menu ...
7      Subscriber Package Menu ...
8      Custodial Package Menu ...
9      Print Other
10     Print Pending
11     Print Active
12     Print All
13     Supported References Menu ...
14     Private References Menu ...
15     Controlled Subscription References Menu ...
16     Agreement Lookup by Variable

Select Integration Agreements Menu Option: 7  Subscriber Package Menu

1      Print ACTIVE by Subscribing Package
2      Print ALL by Subscribing Package

Select Subscriber Package Menu Option:  Print ACTIVE by Subscribing Package
START WITH SUBSCRIBING PACKAGE: FIRST// RADIOLOGY/NUCLEAR MEDICINE
GO TO SUBSCRIBING PACKAGE: LAST// RADIOLOGY/NUCLEAR MEDICINE
DEVICE:
```

7.4 Callable Routines

For the latest information on active supported references, use the Custodial Package menu under the DBA's Integration Agreement menu on FORUM.

```
Select DBA Option: integration Agreements Menu

0      Instructions for Entering IA's
1      Get New Integration #'s
2      Add/Edit
3      Inquire
4      Roll-up into Mail Message
5      File Agreements Menu ...
6      Routine Agreements Menu ...
7      Subscriber Package Menu ...
8      Custodial Package Menu ...
9      Print Other
10     Print Pending
11     Print Active
```

```

12      Print All
13      Supported References Menu ...
14      Private References Menu ...
15      Controlled Subscription References Menu ...
16      Agreement Lookup by Variable

Select Integration Agreements Menu Option: 8  Custodial Package Menu

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

Select Custodial Package Menu Option: 1  ACTIVE by Custodial Package
Select PACKAGE NAME: RADIOLOGY/NUCLEAR MEDICINE      RA
DEVICE: (Enter a device)

```

7.5 Exported Options

7.5.1 Menus

7.5.1.1 IRM Menu (RA SITEMANAGER)

- Device Specifications for Imaging Locations [RA DEVICE]
- Distribution Queue Purge [RA RPTDISTPURGE]
- Failsoft Parameters [RA FAILSOFT]
- Imaging Type Activity Log [RA IMGLOG]
- Purge Data Function [RA PURGE]
- Rebuild Distribution Queues [RA RPTDISTREBUILD]
- Resource Device Specifications for Division [RA RESOURCE DEVICE]
- Template Compilation [RA COMPILE TEMPLATES]

7.5.1.2 Rad/Nuc Med Total System Menu [RA OVERALL]

- Exam Entry/Edit Menu [RA EXAMEDIT]
 - Add Exams to Last Visit [RA ADDEXAM]
 - Cancel an Exam [RA CANCEL]
 - Case No. Exam Edit [RA EDITCN]
 - Diagnostic Code and Interpreter Edit by Case No. [RA DIAGCN]
 - Edit Exam by Patient [RA EDITPT]
 - Enter Last Past Visit Before DHCP [RA PAST]
 - Exam Status Display [RA STATLOOK]

- Indicate No Purging of an Exam/report [RA NOPURGE]
- Register Patient for Exams [RA REG]
- Status Tracking of Exams [RA STATRACK]
- Switch Locations [RA LOC SWITCH]
- View Exam by Case No. [RA VIEWCN]
- Films Reporting Menu [RA RPT]
 - Batch Reports Menu [RA BTCH]
 - Add/Remove Report From Batch [RA BTCHREMOVE]
 - Create a Batch [RA BTCHNEW]
 - Delete Printed Batches [RABTCHDEL]
 - List Reports in a Batch [RA BTCHLIST]
 - Print a Batch of Reports [RA BTCHPRINT]
 - Verify Batch [RA BTCHVERIFY] **LOCKED: RA VERIFY**
 - Display a Rad/Nuc Med Report [RA RPTDISP]
 - Distribution Queue Menu [RA RPTDIST]
 - Activity Logs [RA RPTDISTACTIVITY]
 - Clinic Distribution List [RA RPTDISTLISTCLINIC]
 - Individual Ward [RA RPTDISTSINGLEWARD]
 - Print By Routing Queue [RA RPTDISTQUE]
 - Report's Print Status [RA RPTDISTPRINTSTATUS]
 - Single Clinic [RA RPTDISTSINGLECLINIC]
 - Unprinted Reports List [RA RPTDISTLISTUNPRINTED]
 - Ward Distribution List [RA RPTDISTLISTWARD]
 - Draft Report (Reprint) [RA REPRINT]
 - On-line Verifying of Reports [RA RPTONLINEVERIFY] **LOCKED: RA VERIFY**
 - Report Entry/Edit [RA RPTENTRY]
 - Resident On-Line Pre-Verification [RA RESIDENT PRE-VERIFY]
 - Select Report to Print by Patient [RA RPTPAT]
 - Switch Locations [RA LOC SWITCH]
 - Verify Report Only [RA RPTVERIFY] **LOCKED: RA VERIFY**
- Management Reports Menu [RA MGTRPTS]
 - Daily Management Reports [RA DAILYRPTS]

- Abnormal Exam Report [RA ABNORMAL]
- Complication Report [RA COMPLICATION]
- Daily Log Report [RA LOG]
- Delinquent Outside Film Report for Outpatients [RA OUTSIDERPT]
- Delinquent Status Report [RA DELINQUENT]
- Examination Statistics [RA DAISTATS]
- Incomplete Exam Report [RA INCOMPLETE]
- Log of Scheduled Requests by Procedure [RA ORDERLOG]
- Radiopharmaceutical Usage Report [RA RADIOPHARM USAGE]
- Unverified Reports [RA DAIUVR]
- Functional Area Workload Reports [RA LWKL]
 - Clinic Report [RA LWKLCLINIC]
 - PTF Bedsection Report [RA LWKLBEDSEC]
 - Service Report [RA LWKLSERVICE]
 - Sharing Agreement/Contract Report [RA LWKLSHARING]
 - Ward Report [RA LWKLWARD]
- Personnel Workload Reports [RA WKL]
 - Physician Report [RA WKLPHY]
 - Radiopharmaceutical Administration Report [RA RADIOPHARM ADMIN]
 - Resident Report [RA WKLRES]
 - Staff Report [RA WKLSTAFF]
 - Technologist Report [RA WKLTECH]
 - Transcription Report [RA TRANSRIP REPORT]
- Special Reports [RA SPECRPTS]
 - AMIS Code Dump by Patient [RA AMISDUMP]
 - AMIS Report [RA AMIS]
 - Camera/Equip/Rm Report [RA WKLROOM]
 - Cost Distribution Report [RA CDR REPORT]
 - Detailed Procedure Report [RA WKLPROCEDURE]
 - Film Usage Report [RA FILMUSE]

- Procedure/CPT Statistics Report [RA CPTSTATS]
- Status Time Report [RA STATRPT]
- Wasted Film Report [RA WASTED FILM RPT]
- Outside Films Registry Menu [RA OUTSIDE]
 - Add Films to Registry [RA OUTADD]
 - Delinquent Outside Film Report for Outpatients [RA OUTSIDERPT]
 - Edit Registry [RA OUTEDIT]
 - Flag Film to Need 'OK' Before Return [RA OUTFLAG]
 - Outside Films Profile [RA OUTPROF]
- Patient Profile Menu [RA PROFILES]
 - Detailed Request Display [RA ORDERDISPLAY]
 - Display Patient Demographics [RA PROFDEMOS]
 - Exam Profile (selected sort) [RA PROFSORT]
 - Outside Films Profile [RA OUTPROF]
 - Profile of Rad/Nuc Med Exams [RA PROFQUICK]
- Radiology/Nuclear Med Order Entry Menu [RA ORDER]
 - Cancel a Request [RA ORDERCANCEL]
 - Detailed Request Display [RA ORDERDISPLAY]
 - Hold a Request [RAORDERHOLD]
 - Log of Scheduled Requests by Procedure [RA ORDERLOG]
 - Pending/Hold Rad/Nuc Med Request Log [RA ORDERPENDING]
 - Print Rad/Nuc Med Requests by Date [RA ORDERPRINTS]
 - Print Selected Requests by Patient [RA ORDERPRINTPAT]
 - Rad/Nuc Med Procedure Information Look-Up [RA DISPLAY IMAGPROCINFO]
 - Request an Exam [RA ORDEREXAM]
 - Schedule a Request [RA ORDERSCHEDULE]
 - Ward/Clinic Scheduled Request Log [RAORDERLOGLOC]
- Supervisor Menu [RA SUPERVISOR]
 - Access Uncorrected Reports [RA UNCORRECTED REPORTS]
 - Delete a Report [RA DELETERPT] **LOCKED: RA MGR**
 - Delete Printed Batches By Date [RA BTCHDELDATE]** LOCKED: RA MGR**
 - Exam Deletion [RA DELETEXAM] **LOCKED: RA MGR**
 - Inquire to File Entries [DIINQUIRE]

- List Exams with Inactive/Invalid Statuses [RA INVALID EXAM STATUSES}
- Maintenance Files Print Menu [RA MAINTENANCEP]
 - Complication Type List [RA COMPRINT]
 - Diagnostic Code List [RA DIAGP]
 - Examination Status List [RA EXAMSTATUSP]
 - Film Sizes List [RA FILMP]
 - Label/Header/Footer Format List [RA FLASHFORMP]
 - Major AMIS Code List [RA MAJORAMISP]
 - Modifier List [RA MODIFIERP]
 - Nuclear Medicine List Menu [RA NM PRINT MENU]
 - Lot (Radiopharmaceutical) Number List [RA NM PRINT LOT]
 - Route of Administration List [RA NM PRINT ROUTE]
 - Site of Administration List [RA NM PRINT SITE]
 - Vendor/Source (Radiopharmaceutical) List [RA NM PRINT SOURCE]
 - Procedure File Listings [RA PROCLISTS]
 - Active Procedure List (Long) [RA PROCLONG]
 - Active Procedure List (Short) [RA PROCSHORT]
 - Alpha Listing of Active Procedures [RA ALPHALIST]
 - Barcoded Procedure List [RA BARPROCPRINT]
 - Inactive Procedure List (Long) [RA INACPRCLONG]
 - Invalid CPT/Stop Code List [RA INVALID CPT/STOP]
 - List of Inactive Procedures (Short) [RA INACPRCSHORT]
 - Parent Procedure List [RA PROCPARENT]
 - Procedure Message List [RA PROCMSGPRINT]
 - Series of Procedures List [RA PROCSERIES]
 - Report Distribution Lists [RA DISTP]
 - Sharing Agreement/Contract List [RA SHARINGP]
 - Standard Reports Print [RA STANDPRINT]
- Mass Override Exam Status [RA EXAMSTATUS MASS OVERRIDE]**LOCKED: RA MGR**
- Override a Single Exam Status to 'complete' [RA OVERRIDE]**LOCKED: RA MGR**

- Print File Entries [DIPRINT]
- Rad/Nuc Med Personnel Menu [RA PNL]
 - Classification Enter/Edit [RA PNLCLASS]
 - Clerical List [RA PNLCLERK]
 - Interpreting Resident List [RA PNLRES]
 - Interpreting Staff List [RA PNLSTAFF]
 - Technologist List [RA PNLTECH]
- Search File Entries [DISEARCH]
- Switch Locations [RA LOC SWITCH]
- System Definition Menu [RA SYSDEF]
 - Camera/Equip/Rm Entry/Edit [RA SYSEXROOM]
 - Division Parameter Set-up [RA SYSDIV]
 - List of Cameras/Equip/Rms [RA SYSEXLIST]
 - Location Parameter List [RA SYSLOCLIST]
 - Location Parameter Set-up [RA SYSLOC]
 - Print Division Parameter List [RA SYSDIVLIST]
- Unverify a Report for Amendment[RA UNVERIFY] ****LOCKED: RA MGR****
- Update Exam Status [RA UPDATEEXAM]
- Utility Files Maintenance Menu [RA MAINTENANCE]
 - Complication Type Entry/Edit [RA COMPEDIT]
 - Diagnostic Code Enter/Edit [RA DIAGEDIT]
 - Examination Status Entry/Edit [RA EXAMSTATUS]
 - Film Type Entry/Edit [RA FILMEDIT]
 - Label/Header/Footer Formatter [RA FLASHFORM]
 - Major AMIS Code Entry/Edit [RA MAJORAMIS]
 - Nuclear Medicine Setup Menu [RA NM EDIT MENU]
 - Lot (Radiopharmaceutical) Number Enter/Edit [RA NM EDIT LOT]
 - Route of Administration Enter/Edit [RA NM EDIT ROUTE]
 - Site of Administration Enter/Edit [RA NM EDIT SITE]
 - Vendor/Source (Radiopharmaceutical) Enter/Edit [RA NM EDIT SOURCE]
 - Order Entry Procedure Display Menu [RA ORDERDISPLAY MENU]

- Common Procedure Enter/Edit [RA COMMON PROCEDURE]
- Create OE/RR Protocol from Common Procedure [RA CREATE OE/RR PROTOCOL]
- Display Common Procedure List [RA DISPLAY COMMON PROCEDURES]
- Procedure Edit Menu [RA PROCEDURE EDIT MENU]
 - Cost of Procedure Enter/Edit [RA PROCOSTEDIT]
 - Procedure Enter/Edit [RA PROCEDURE]
 - Procedure Message Entry/Edit [RA PROCMSGEDIT]
 - Procedure Modifier Entry [RA MODIFIER]
- Reason Edit [RA REASON EDIT]
- Reports Distribution Edit [RA DISTEDIT]
- Sharing Agreement/Contract Entry/Edit [RA SHARING]
- Standard Reports Entry/Edit [RA STANDRPTS]
- Valid Imaging Stop Codes Edit [RA VALID STOP CODES]
 - **LOCKED: RA MGR**
 - Switch Locations [RA LOC SWITCH]
 - Update Patient Record [RA PTEDIT]
 - User Utility Menu [RA USERUTL]
- Duplicate Dosage Ticket [RA DOSAGE TICKET]
- Duplicate Flash Card [RA FLASH]
- Jacket Labels [RA LABELS]
- Print Worksheets [RA WORKSHEETS]
- Switch Locations [RA LOC SWITCH]
- Test Label Printer [RA LABELTEST]

7.5.1.3 Rad/Nuc Med Clerk Menu (RA CLERKMENU)

- Add Exams to Last Visit [RA ADDEXAM]
- Cancel an Exam [RA CANCEL]
- Case No. Exam Edit [RA EDITCN]
- Display a Rad/Nuc Med Report [RA RPTDISP]
- Display Patient Demographics [RA PROFDEMOS]
- Duplicate Flash Card [RA FLASH]
- Exam Status Display [RA STATLOOK]

- Profile of Rad/Nuc Med Exams [RA PROFQUICK]
- Radiology/Nuclear Med Order Entry Menu [RA ORDER]
 - Cancel a Request [RA ORDERCANCEL]
 - Detailed Request Display [RA ORDERDISPLAY]
 - Hold a Request [RA ORDERHOLD]
 - Log of Scheduled Requests by Procedure [RA ORDERLOG]
 - Pending/Hold Rad/Nuc Med Request Log [RA ORDERPENDING]
 - Print Rad/Nuc Med Requests by Date [RA ORDERPRINTS]
 - Print Selected Requests by Patient [RA ORDERPRINTPAT]
 - Rad/Nuc Med Procedure Information Look-Up [RA DISPLAY IMAGPROCINFO]
 - Request an Exam [RA ORDEREXAM]
 - Schedule a Request [RA ORDERSCHEDULE]
 - Ward/Clinic Scheduled Request Log [RA ORDERLOGLOC]
- Register Patient for Exams [RA REG]
- Switch Locations [RA LOC SWITCH]
 - View Exam by Case No. [RA VIEWCN]

7.5.1.4 Rad/Nuc Med Ward Clerk Menu (RA WARD)

- Cancel a Request [RA ORDERCANCEL]
- Detailed Request Display [RA ORDERDISPLAY]
- Display a Rad/Nuc Med Report [RA RPTDISP]
- Profile of Rad/Nuc Med Exams [RA PROFQUICK]
- Request an Exam [RA ORDEREXAM]
 - Ward/Clinic Scheduled Request Log [RA ORDERLOGLOC]

7.5.1.5 Rad/Nuc Med File Room Clerk Menu (RA FILERM)

- Detailed Request Display [RA ORDERDISPLAY]
- Display a Rad/Nuc Med Report [RA RPTDISP]
- Display Patient Demographics [RA PROFDEMOS]
- Outside Films Registry Menu [RA OUTSIDE]
 - Add Films to Registry [RA OUTADD]
 - Delinquent Outside Film Report for Outpatients [RA OUTSIDERPT]
 - Edit Registry [RA OUTEDIT]

- Flag Film To Need 'OK' Before Return [RA OUTFLAG]
- Outside Films Profile [RA OUTPROF]
- Profile of Rad/Nuc Med Exams [RA PROFQUICK]
- Select Report to Print by Patient [RA RPTPAT]
- User Utility Menu [RA USERUTL]
 - Duplicate Dosage Ticket [RA DOSAGE TICKET]
 - Duplicate Flash Card [RA FLASH]
 - Jacket Labels [RA LABELS]
 - Print Worksheets [RA WORKSHEETS]
 - Switch Locations [RA LOC SWITCH]
 - Test Label Printer [RA LABELTEST]
- View Exam by Case No. [RA VIEWCN]
- Ward/Clinic Scheduled Request Log [RA ORDERLOGLOC]

7.5.1.6 Interpreting Physician Menu (RA RADIOLOGIST)

- Detailed Request Display [RA ORDERDISPLAY]
- Display a Rad/Nuc Med Report [RA RPTDISP]
- Draft Report (Reprint) [RA REPRINT]
- Indicate No Purging of an Exam/report [RA NOPURGE]
- Online Verifying of Reports [RA RPTONLINEVERIFY] ****LOCKED: RA VERIFY****
- Print Selected Requests by Patient [RA ORDERPRINTPAT]
- Profile of Rad/Nuc Med Exams [RA PROFQUICK]
- Resident On-Line Pre-Verification [RA RESIDENT PRE-VERIFY]
- Select Report to Print by Patient [RA RPTPAT]
- Switch Locations [RA LOC SWITCH]
- View Exam by Case No. [RA VIEWCN]

7.5.1.7 Reports Menu (RA REPORTS)

- Abnormal Exam Report [RA ABNORMAL]
- Complication Report [RA COMPLICATION]
- Daily Log Report [RA LOG]
- Delinquent Outside Film Report for Outpatients [RA OUTSIDERPT]

- Delinquent Status Report [RA DELINQUENT]
- Duplicate Flash Card [RA FLASH]
- Film Usage Report [RA FILMUSE]
- Functional Area Workload Reports [RA LWKL]
 - Clinic Report [RA LWKLCLINIC]
 - PTF Bedsection Report [RA LWKLBEDSEC]
 - Service Report [RA LWKLSERVICE]
 - Sharing Agreement/Contract Report [RA LWKLSHARING]
 - Ward Report [RA LWKLWARD]
- Jacket Labels [RA LABELS]
- Log of Scheduled Requests by Procedure [RA ORDERLOG]
- Personnel Workload Reports [RA WKL]
 - Physician Report [RA WKLPHY]
 - Radiopharmaceutical Administration Report [RA RADIOPHARM ADMIN]
 - Resident Report [RA WKLRES]
 - Staff Report [RA WKLSTAFF]
 - Technologist Report [RA WKLTECH]
 - Transcription Report [RA TRANSCRIP REPORT]
- Print Worksheets [RA WORKSHEETS]
- Status Time Report [RA STATRPT]
- Test Label Printer [RA LABELTEST]

7.5.1.8 Rad/Nuc Med Secretary Menu (RA SECRETARY)

- Display a Rad/Nuc Med Report [RA RPTDISP]
- Draft Report (Reprint) [RA REPRINT]
- Rad/Nuc Med Personnel Menu [RA PNL]
 - Classification Enter/Edit [RA PNLCLASS]
 - Clerical List [RA PNLCLERK]
 - Interpreting Resident List [RA PNLRES]
 - Interpreting Staff List [RA PNLSTAFF]
 - o Technologist List [RA PNLTECH]
- Radiology/Nuclear Med Order Entry Menu [RA ORDER]
 - Cancel a Request [RA ORDERCANCEL]

- Detailed Request Display [RA ORDERDISPLAY]
- Hold a Request [RA ORDERHOLD]
- Log of Scheduled Requests by Procedure [RA ORDERLOG]
- Pending/Hold Rad/Nuc Med Request Log [RA ORDERPENDING]
- Print Rad/Nuc Med Requests by Date [RA ORDERPRINTS]
- Print Selected Requests by Patient [RA ORDERPRINTPAT]
- Rad/Nuc Med Procedure Information Look-Up [RA DISPLAY
IMAGPROCINFO]
- Request an Exam [RA ORDEREXAM]
- Schedule a Request [RA ORDERSCHEDULE]
- Ward/Clinic Scheduled Request Log [RA ORDERLOGLOC]
- Report Entry/Edit [RA RPTENTRY]
- Select Report to Print by Patient [RA RPTPAT]
- Switch Locations [RA LOC SWITCH]
- Verify Batch [RA BTCHVERIFY] **LOCKED: RA VERIFY**
- Verify Report Only [RA RPTVERIFY] **LOCKED: RA VERIFY**
- View Exam by Case No. [RA VIEWCN]

7.5.1.9 Rad/Nuc Med Technologist Menu (RA TECHMENU)

- Add Exams to Last Visit [RA ADDEXAM]
- Cancel an Exam [RA CANCEL]
- Case No. Exam Edit [RA EDITCN]
- Display a Rad/Nuc Med Report [RA RPTDISP]
- Duplicate Flash Card [RA FLASH]
- Indicate No Purging of an Exam/report [RA NOPURGE]
- Log of Scheduled Requests by Procedure [RA ORDERLOG]
- Patient Profile Menu [RA PROFILES]
 - Detailed Request Display [RA ORDERDISPLAY]
 - Display Patient Demographics [RA PROFDEMOS]
 - Exam Profile (selected sort) [RA PROFSORT]
 - Outside Films Profile [RA OUTPROF]
 - Profile of Rad/Nuc Med Exams [RA PROFQUICK]
- Print Selected Requests by Patient [RA ORDERPRINTPAT]

- Register Patient for Exams [RA REG]
- Status Tracking of Exams [RA STATRACK]
- Switch Locations [RA LOC SWITCH]
- View Exam by Case No. [RA VIEWCN]

7.5.1.10 Rad/Nuc Med Transcriptionist Menu (RA TRANSCRIPTIONIST)

- Batch Reports Menu [RA BTCH]
 - Add/Remove Report From Batch [RA BTCHREMOVE]
 - Create a Batch [RA BTCHNEW]
 - Delete Printed Batches [RA BTCHDEL]
 - List Reports in a Batch [RA BTCHLIST]
 - Print a Batch of Reports [RA BTCHPRINT]
 - Verify Batch [RA BTCHVERIFY] ****LOCKED: RA VERIFY****
- Diagnostic Code and Interpreter Edit by Case No. [RA DIAGCN]
- Display a Rad/Nuc Med Report [RA RPTDISP]
- Draft Report (Reprint) [RA REPRINT]
- Report Entry/Edit [RA RPTENTRY]
- Select Report to Print by Patient [RA RPTPAT]
- Standard Reports Entry/Edit [RA STANDRPTS]

7.5.2 Single options

The following options do not appear on any menu:

- Rad/Nuc Med [RA OERR EXAM]
- Imaging Type Mismatch Report [RA EXAM/STATUS ITYPE MISMATCH]
- Autopurge of Distribution Queues [RA RPTDISTAUTOPURGE]

7.5.3 Menu/Option Assignment

The RA SITEMANAGER menu may be assigned to the IRM staff member who supports this package. Descriptions of the RA SITEMANAGER options are in the Implementation and Maintenance section of this manual.

The RA OVERALL menu is the most extensive menu and may be assigned to the radiology supervisor.

All other menu and option assignments should be decided upon by the radiology supervisor. Descriptions of non-RA SITEMANAGER options may be found in the super user's manual or user manual.

7.5.4 Protocols

The following protocols are exported with this version:

- RA CANCEL
- RA EVSEND OR
- RA EXAMINED
- RA OERR DEFAULT PROTOCOL
- RA OERR EXAM
- RA OERR PROFILE
- RA ORDERABLE ITEM UPDATE
- RA RECEIVE
- RA REG
- RA RPT
- RA SEND ORM
- RA SEND ORU

7.5.5 FileMan Options

Three FileMan namespaced options are exported with this software to allow users to inquire, print or search Radiology/Nuclear Medicine package files. They are:

- DIINQUIRE
- DIPRINT
- DISEARCH

8.0 Package Security

8.1 Security Keys

Name	Descriptions
RA ALLOC	<p>The RA ALLOC key overrides location access security entered for each Radiology/Nuclear Medicine user through Personnel Classification. Owners of the RA ALLOC will have expanded access to Imaging Locations, Imaging Types, and Divisions. In the case of most workload reports, this means they will be able to select from a list of all Divisions and Imaging types to include on the report. In the case of various edit and ordering functions, it means they will be able to select from all locations within the Imaging Type to which they are currently signed on through the 'Select sign-on location:' prompt</p>
RA MGR	<p>This key gives users access to supervisor-type functions. Those functions are the following:</p> <ul style="list-style-type: none"> • Editing completed exams • Adding an exam to a visit that is older than yesterday • During execution of the 'status tracking' function the user will be shown all non-completed exams, not just those associated with the users current division. • Updating the exam status of an exam that is complete • Deleting exams • Deleting reports • Unverifying reports
RA OVERALL	Key to main Radiology menu
RA VERIFY	This key allows users to verify reports

8.2 Sign-on Security

Upon entering a Radiology/Nuclear Medicine menu, the user is prompted to select a "Sign-On Imaging Location". The set of locations the user is privileged to access is controlled by the radiology supervisor or IRM through the Classification Enter/Edit option. Most options are screened by a combination of imaging type, division, and location. Others are screened by ownership. For a thorough discussion of how users are allowed into the Radiology/Nuclear Medicine package options, see the Screening Methods section of the Radiology/Nuclear Medicine radiology supervisor manual.

8.3 Electronic Signature

Interpreting resident physicians and interpreting staff physicians must enter their electronic signature if they wish to use the Online Verifying of Reports option or the Resident Online Pre-Verification option.

8.4 Legal Requirements

The Radiology/Nuclear Medicine package uses the Current Procedural Terminology (CPT) coding system that is an American Medical Association (AMA) copyrighted product. Its use is governed by the terms of the agreement between the Indian Health Service and the AMA.

9.0 Archiving and Purging

This version of the Radiology/Nuclear Medicine package does not provide for the archiving of its data.

The Purge Data Function [RA PURGE] and the Distribution Queue Purge [RA RPTDISTPURGE] options are described in section 2.6.2.

10.0 Generating Online Documentation

This section describes a few methods to generate Radiology/Nuclear Medicine technical documentation. Online Radiology/Nuclear Medicine software technical documentation, in addition to that which is located in the help prompts throughout Radiology/Nuclear Medicine package, can be generated through the use of several Kernel options. These include, but are not limited to, the following:

- %INDEX
- Menu Management
- Inquire Option
- Print Option File
- VA FileMan
- Data Dictionary Utilities
- List File Attributes

Typing ? at the “Select . . . Option” prompt will provide online technical information.

- A single question mark (?) lists all options that can be accessed from the current option.
- Two question marks (??) list all options accessible from the current one, showing the formal name and lock for each.
- Three question marks (???) display a brief description for each option in a menu.
- An option name preceded by a question mark (?OPTION) shows extended help, if available, for that option.

For a more exhaustive option listing and further information about other utilities that supply online technical information, consult the DHCP Kernel Reference manual

10.1 %Index

This option analyzes the structure of a routine to determine in part if the routine adheres to RPMS programming standards. The %INDEX output can include the following components:

- • Compiled list of errors and warnings
- • Routine listing
- • Local variables
- • Global variables
- • Naked globals
- • Label references

- External references

Running %INDEX for a specified set of routines, allows users to discover any deviations from RPMS programming standards that exist in the selected routines and to see how routines interact with one another (i.e., which routines call or are called by other routines).

To run %INDEX for the Radiology package, type the RA namespace at the Routine(s)?> prompt.

10.1.1 %INDEX

The %INDEX option analyzes the structure of a routine to determine in part, if the routine adheres to RPMS programming standards. The output can include the following components:

- Compiled list of errors and warnings
- Routine listing
- Local variables
- Global variables
- Naked globals
- Label references
- External references
- Running %INDEX for a specified set of routines allows users to discover any deviations from RPMS programming standards that exist, and to see how routines interact with one another (i.e., which routines call or are called by other routines).
- To run %INDEX for the VPS system:
- At the “Routine(s)?” prompt, type the <<CC>> namespace.

10.2 Inquire Option

This menu management option provides the following information about a specified option:

- Option name
- Menu text
- Option description
- Type of option
- Lock (if any)

In addition, all items on the menu are listed for each menu option. To secure information about patient registration options, specify the RA namespace.

10.3 Print Option File

This utility generates a listing of options from the Option file (#19). Users can choose to print all of the entries in this file or specify a single option or range of options. For a list of Radiology options, refer to the Exported Options section of this manual.

10.4 List File Attributes

This VA FileMan option allows users to generate documentation pertaining to files and file structure. Using the standard format of this option yields the following data dictionary information for a specified file:

- File name and description
- Identifiers
- Cross-references
- Files pointed to by the file specified
- Files that point to the file specified
- Input, print, and sort templates

In addition, the following applicable data is supplied for each field in the file:

- Field name, number, title, and description
- Global location
- Help prompt
- Cross-references
- Input transform
- Date last edited
- Notes

Using the Global Map format of this option generates an output that lists the following information:

- All cross-references for the file selected
- Global location of each field in the file
- Input, print, and sort templates

11.0 SAC Requirements and Exemptions

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

Glossary

AMIS code

For imaging, one of 27 codes used to categorize procedures, determine which procedures use contrast media, calculate workload crediting and weighted work units. AMIS codes are determined by VA central office and should not be changed at the medical centers.

AMIS weight multiplier

A number associated with a procedure-AMIS code pair that is multiplied by the AMIS code weighted work units. If the multiplier is greater than 1, a single exam receives multiple exam credits.

Active

An order status that occurs when a request to perform a procedure on a patient has been registered as an exam, but before it has reached a status of Complete.

Activity log

A log of dates and times data was entered and/or changed. The Radiology/Nuclear Medicine system is capable of maintaining activity logs for reports, exam status changes, imaging type parameter changes, purge dates, outside film registry activity, and order status changes.

Alert

Alerts consist of information displayed to specific users triggered by an event. For example, alerts pertaining to Rad/Nuc Med include the Stat Imaging Request alert, an Imaging Results Amended alert, and an Abnormal Imaging Results alert. The purpose of an alert is to make a user aware that something has happened that may need attention. Refer to Kernel and OE/RR documentation.

Attending physician

The Radiology/Nuclear Medicine software obtains this data from the PIMS package, which is responsible for its entry and validity. Refer to the PIMS package documentation for more information and a description of the meaning of this term as it applies to RPMS.

Batch

In the Radiology/Nuclear Medicine system, a batch is a set of results reports. Transcriptionists may create batches to keep similar reports together and cause them to print together. One possible purpose might be to print all reports dictated by the same physician together.

Bedsection

See PTF Bedsection.

Bilateral

A special type of modifier that can be associated with an exam, a procedure, or an AMIS code. When an exam is bilateral due to one of the aforementioned associations, workload credit and exam counts are doubled for that exam on most workload and AMIS reports.

Broad procedure

A non-specific procedure that is useful for ordering when the ordering party is not familiar enough with imaging procedures to be able to specify the exact procedure that is to be performed. Before an exam status can progress to Complete, the imaging service must determine a more specific procedure and change the exam procedure to reflect the actual detailed or series procedure done. Depending on site parameters, broad procedures may or may not be used at a given facility. Also see Detailed and Series procedure.

Bulletin

A special type of mail message that is computer-generated and sent to a designated user or members of a mail group. Bulletins are usually created to inform someone of an event triggered by another user's data entry, or exam and request updates that require some action on the part of the bulletin recipient.

CPT code

See Current Procedural Terminology.

Camera/Equipment/Room

The specific room or piece of equipment used for a patient's imaging exam. Each is associated with one or more imaging locations. The Radiology/Nuclear Medicine system supports, but does not require users to record the camera/equipment/room used for each exam.

Cancelled

A status that can be associated with an exam. Also see Discontinued.

Case number

A computer-generated number assigned to the record generated when one patient is registered for one procedure at a given date/time. Note that when multiple procedures are registered for a patient at the same date/time, each procedure will be given a different case number. Case numbers will be recycled and reused by a new patient/procedure/date instance when the exam attains a Complete status.

Category of exam

For the purposes of this system, category of exam must be Outpatient, Inpatient, Contract, Sharing, Employee, or Research. Several workload and statistical reports print exam counts by category. Others use the category to determine whether exams should be included on the report.

Clinic

Hospital locations where outpatients are cared for. In RPMS, clinics are represented by entries in the Hospital Location file (#44). Radiology/Nuclear Medicine Imaging Locations, represented by entries in the Imaging Location file (#79.1), are a subset of the Hospital Location file.

Clinical history

Data entered in the Radiology/Nuclear Medicine system during exam ordering and exam edit. Usually entered by the requesting party to inform the imaging service why the exam needs to be done and what they hope to find out by doing the exam.

Clinical history message

Text that, if entered in system parameter setup, will always display when the user is prompted for clinical history. Generally used to instruct the user on what they should enter for clinical history.

Common

procedureA frequently ordered procedure that will appear on the order screen. Up to 40 per imaging type are allowed by the system. Other active Rad/Nuc Med procedures are selectable for ordering, but only the ones designated as common procedures and given a display sequence number will be displayed prior to selection.

Complete

A status that can be attained by an order or an exam.

Complication

A problem that occurs during or resulting from an exam, commonly a contrast medium reaction.

Contract

A possible category of exam when imaging services are contracted out.

Contrast medium

A radio-opaque injectable or ingestible substance that appears on radiographic images and is helpful in image interpretation. It is used in many imaging procedures.

Contrast reaction message

A warning message that will display when a patient who has had a previous contrast medium reaction is registered for a procedure that uses contrast media. The message text is entered during Rad/Nuc Med division parameter setup.

Credit stop code

See Stop Code. Also see PIMS package documentation.

Current Procedural Terminology (CPT)

A set of codes published annually by the American Medical Association that include Radiology/Nuclear Medicine procedures. Each active detailed or series procedure must be assigned a valid, active CPT code to facilitate proper workload crediting. In RPMS, CPTs are represented by entries in the CPT file #81.

Descendent

A type of Rad/Nuc Med procedure. One of several associated with a parent type of procedure. The descendent procedures are actually registered and performed. Also see Parent.

Desired date (of an order)

The date the ordering party would like for the exam to be performed. Not an appointment date. The imaging service is at liberty to change the date depending on their availability.

Detailed procedure

A procedure that represents the exact exam performed, and is associated with a CPT code and an AMIS code.

Diagnostic code

Represented, for the purposes of this system, by entries in the Diagnostic Codes file (#78.3). Diagnostic codes describe the outcome of an exam, such as normal, abnormal. A case may be given one or more (or no) diagnostic code(s).

Discontinued

An order status that occurs when a user cancels an order.

Distribution queue

A mechanism within the Radiology/Nuclear Medicine system that facilitates printing results reports at various hospital locations, such as the patient's current ward or clinic, the file room, and medical records.

Division, Rad/Nuc Med

A subset of the Institution file (#4). Multi-divisional sites are usually sites responsible for imaging at more than one facility.

Draft

A report status that is assigned to all Rad/Nuc Med results reports as soon as they are initially entered into the system, but before they are changed to a status of Verified or (if allowed) Released/Not Verified.

DSS ID

Formerly Stop Code associated with each procedure, now DSS ID associated with each imaging location.

Electronic signature code

A security code that the user must enter to identify him/herself to the system. This is required before the user is allowed to electronically verify Rad/Nuc Med reports. This is not the same as the Access/Verify codes.

Exam label

One of three types of labels that can be printed at the time exam registration is done for a patient. Also see Jacket Label, Flash Card.

Exam set

An exam set contains a parent procedure and its detailed or series descendent procedures. Requesting a parent will automatically cause each descendent to be presented for registration as separate cases under a single visit date and time.

Exam status

The state of an exam that describes its level of progress. Valid exam statuses are represented in this system by entries in the Examination Status file (#72). Examples are ordered, cancelled, complete, waiting for exam, called for exam, and transcribed. The valid set of exam statuses can, to a degree, be tailored by the site. There are many parameters controlling required data fields, status tracking and report contents that are determined when the parameters of this file are set up. There are separate and different set of statuses for requests and reports.

Exam status parameter setup

See Exam status.

Exam status time

The date/time when an exam's status changes, triggered by exam data entry that can be done through over a dozen different options.

Film size

Represented by entries in the Film Sizes file (#78.4) in this system. Used to facilitate film use/waste tracking.

Flash card

One of 3 labels that can be generated at the time an exam is registered for a patient. The flash card was named because it can be photographed along with an x-ray, and its image will appear on the finished x-ray. Helpful in marking x-ray images with the patient's name, SSN, etc. to insure that x-rays are not mixed up.

Flash card formatter

The name given to the option/mechanism that allows users to define formats for labels and for headers and footers on results reports. Users can specify which fields to print at various columns and lines on the label or report header/footer.

Footer

The last lines of the results report, the format of which can be specified using the Flash card formatter.

Format

The specification for print locations of fields on a printed page. In this system, print formats can be specified using the Flash card formatter.

Header

The top lines of the results report, the format of which can be specified using the Flash card formatter.

Health Summary

Refers to a report or RPMS software package that produces a report showing historical patient data. Can be configured to meet various requirements. Refer to the Health Summary documentation for more information.

Hold

An order status occurring when a users puts an order on hold, indicating that a study should not yet be done or scheduled, but that it will likely be needed in the future.

Hospital location

Represented in RPMS by entries in the Hospital Location file (#44). Rad/Nuc Med locations are a subset of the Hospital Location file.

Imaging location

One of a subset of Hospital Locations (See Hospital location) that is represented in the Imaging Location file #79.1, and is a location where imaging exams are performed.

Imaging type

For the Rad/Nuc Med software, the set of valid imaging types is:

ANGIO/NEURO/INTERVENTIONAL

GENERAL RADIOLOGY

MAMMOGRAPHY

NUCLEAR MEDICINE

ULTRASOUND

VASCULAR LAB

CARDIOLOGY STUDIES (NUC MED)

CT SCAN

MAGNETIC RESONANCE IMAGING

These are the imaging types that are supported by this version of the software. Each imaging location and procedure may be associated with only one imaging type.

Impression

A short description or summary of a patient's exam results report. Usually mandatory data to complete an exam. The impression is not purged from older reports even though the lengthier report text is.

Inactivate

The process of making a record in a file inactive, usually by entering an inactive date on that record or deleting a field that is necessary to keep it active. When a record is inactive, it becomes essentially "invisible" to users. Procedures, common procedures, modifiers, and exam statuses can be inactivated.

Inactivation date

A date entered on a record to make it inactive. See Inactivate.

Interpreting physician (also Interpreting Resident, Interpreting Staff)

The resident or staff physician who interprets exam images.

Jacket label

One of the three types of labels that can be generated at the time an exam is registered for a patient. Usually affixed to the x-ray film jacket. See also Exam Label, Flash Card.

Key

See security key.

Label print fields

Fields that are selectable for printing on a label, report header, or report footer on formats that are designed using the Flash card formatter. Also see Flash card formatter.

Mode of transport

The patient's method of moving within the hospital, (ambulatory, wheelchair, portable, stretcher) designated at the time an exam is ordered.

Modifier

Additional information about the characteristics of an exam or procedure (such as bilateral, operating room, portable, left, right). Also see bilateral, operating room, portable.

No purge indicator

A flag that can be set on the exam record to force the purge process to bypass the record. Guarantees that the record will not be purged when a historic data purge is scheduled by IRM. Also see Purge.

Non-credit stop code

Certain stop codes, usually for health screening, that do not count toward workload credit. If a non-credit stop code is assigned to a procedure, another credit stop code must also be assigned. Also see Stop code.

OE/RR

See Order Entry/Results Reporting.

On-line verification

The option within the Radiology/Nuclear Medicine package that allows physicians to review, modify, and electronically sign patient result reports.

Operating room

A special type of procedure modifier, that, when assigned to an exam will cause the exam to be included in workload/AMIS reports under both the AMIS code of the procedure and under the AMIS code designated for Operating Room.

Order

The paper or electronic request for an imaging exam to be performed.

Order Entry

The process of requesting that one or more exams be performed for a patient. Order entry for Radiology/Nuclear Medicine procedures can be accomplished through a Rad/Nuc Med software option or through the Order Entry/Results Reporting (OE/RR) functions.

Outside films registry

A mechanism in this system that allows users to track films done outside of the medical center.

Parent procedure

A type of Rad/Nuc Med procedure that is used for ordering purposes. It must be associated with descendent procedures that are of the detailed and/or series procedure type. At the time of registration the descendent procedures are actually registered. Setting up a parent procedure provides a convenient way to order multiple related procedures on one order. Parent/descendent procedure relationships must be set up ahead of time during system definition and file tailoring by the radiology supervisor.

Pending

An order status that every Rad/Nuc Med order is placed in as soon as it is ordered through this system's ordering option. This system also receives orders from the OE/RR system and places them in a pending status.

Portable

A special type of procedure modifier, that, when assigned to an exam will cause the exam to be included in workload/AMIS reports under both the AMIS code of the procedure and under the AMIS code designated for Portable.

Pre-verification

The process whereby a resident reviews a report and affixes his/her electronic signature to indicate that the report is ready for staff (attending) review, facilitated through an option in this system for Resident Pre-verification.

Primary Interpreting Staff/ Resident

The attending or resident primarily responsible for the interpretation of the case. (See also Secondary Interpreting Staff/Resident.)

Primary physician

The Radiology/Nuclear Medicine software obtains this data from the PIMS package, which is responsible for its entry and validity. Refer to the PIMS package documentation for more information and a description of the meaning of this term as it applies to RPMS.

Principal clinic

For the purposes of the Radiology/Nuclear Medicine system, this term is usually synonymous with 'referring clinic'. However, for the purposes of crediting, it is defined as the DSS (clinic/stop) code that is associated with the imaging location where the exam was performed.

Print set

A print set contains a parent procedure and its detailed or series descendent procedures. If the parent is defined to be a print set, the collection and printing of all common report related data between the descendents is seen as one entity.

Problem draft

A report status that occurs when a physician identifies a results report as having unresolved problems, and designates the status to be Problem Draft. Depending on site parameters, a report may be designated as a Problem Draft due to lack of an impression. Also see Problem statement.

Problem statement

When a results report is in the Problem Draft status, the physician or transcriptionist is required to enter a brief statement of the problem. This problem statement appears on report displays and printouts.

Procedure

For the purposes of this system, a medical procedure done with imaging technology for diagnostic purposes.

Procedure message

Represented in this system by entries in the Rad/Nuc Med Procedure Message file (#71.4). If one or more procedure messages are associated with a procedure, the text of the messages will be displayed when the procedures is ordered, registered, and printed on the request form. Useful in alerting ordering clinicians and imaging personnel of special precautions, procedures, or requirements of a given procedure.

Procedure type

A characteristic of a Rad/Nuc Med procedure that affects exam processing and workload crediting. See Detailed, Series, Broad, and Parent.

PTF Bedsection

See PIMS documentation.

Purge

The process that is scheduled at some interval by IRM to purge historic computer data. In this system, purges are done on results report text, orders, activity logs, and clinical history.

Registration (of an exam)

The process of creating a computer record for one or more patient/procedure/visit date-time instances. Usually done when the patient arrives at the imaging service for an exam.

Released/not verified

A results report status that may or may not be implemented at a given medical center. Reports in this status may be viewed or printed by hospital staff outside of the imaging service.

Report batch

See Batch.

Report status

The state of a report that describes its progress level. Valid report statuses in this system are Draft, Problem draft, Released/not verified (if the site allows this status), and Verified. The status of a report may affect the status of an exam. Also see Exam status. Exams and requests each have a separate and different set of statuses.

Request

Synonymous with order. See Order.

Request status

The state of a request (order) that describes its progress level. Valid request statuses in this system are Unreleased (only if created through OE/RR), Pending, Hold, Scheduled, Active, Discontinued, and Complete. Reports and exams each have a separate and different set of statuses.

Request urgency

Data entered at the time an exam is ordered to describe the priority/criticality of completing the exam quickly (i.e. Stat, Urgent, Routine).

Requesting location

Usually the location where the patient was last seen or treated (an inpatient's ward, or an outpatient's clinic). All requesting locations are represented by an entry in the RPMS Hospital Location file (#44). The requesting location may be, but is usually not an imaging location.

Requesting physician

The physician who requested the exam.

Research source

A research project or institution that refers a patient for a Radiology/Nuclear Medicine exam.

Scheduled

An order status that occurs when imaging personnel enter a date when the exam is expected to be performed.

Secondary Interpreting Staff/Resident

This generally refers to an attending/resident who assisted or sat in on review of the case, but is not primarily responsible for it. It may also be used to indicate a second reviewer of the case, for quality control or peer review purposes.

Security key

Represented by an entry in the RPMS Security Key file. Radiology/Nuclear Medicine keys include RA MGR, RA ALLOC, and RA VERIFY. Various options and functionalities within options require that the user "own" a security key.

Staff

Imaging Attending.

Staff review (of reports)

The requirement where an attending imaging physician is required to review the reports written by a resident imaging physician.

Standard report

Represented in this system by entries in the Standard Reports file (#74.1). Standard can be created by the radiology supervisor during system definition and set up. If the division setup specifies that they are allowed, transcriptionists will be offered a selection of standard report text and impressions to minimize data entry effort.

Status tracking

The mechanism within this system that facilitates exam tracking from initial states to the complete state. Radiology supervisors must specify during exam status parameter setup which statuses will be used, which data fields will be required to progress to each status, which data fields will be prompted, and exams of which statuses will be included on various management reports.

Stop code

Member of a coding system designed by VA central office to aid in determining workload and reimbursement of the medical centers. Stop codes are controlled by VA Central Office PIMS. The set of valid stop codes is revised October 1 of each year. At this time the PIMS package developers issue a maintenance patch to the software updating the file containing stop codes. Imaging stop codes are represented by entries in the Valid Imaging Stop Code file #71.5. Imaging stop codes are a subset of the Clinic Stop file #40.7. See PIMS documentation for more information.

Synonym

In the Radiology/Nuclear Medicine package, synonyms are alternate terms that can be associated with procedures for the purposes of convenient look-up/retrieval. A given procedure may have more than one synonym, and a given synonym may be used for more than one procedure.

Technologist

Radiology/Nuclear Medicine personnel who usually are responsible for performing imaging exams and entering exam data into the system.

Time-out

The amount of time allowed before a user is automatically logged out of the system if no keystrokes are entered. This is a security feature, to help prevent unauthorized users from accessing your RPMS account in case you forget to log off the system or leave your terminal unattended.

Transcribed

An exam status that may occur when a results report is initially entered into the system for an exam. If this status is not activated at the site, it will not occur.

Unreleased

An order status that occurs when an exam order is created, but no authorization to carry out the order has been given. This is possible only if the order is created through the OE/RR software.

Verification

For the purposes of this system, the process of causing a results report to progress to the status of Verified. This happens when a physician affixes his/her electronic signature to the report, or when a transcriptionist, with the proper authorization, enters the name of a physician who has reviewed and approved a report. This is analogous to a physician signing a paper report.

Verified

A results report status that occurs at the time of verification. A report is verified when the interpreting physician electronically signs the report or gives his/her authorization that the report is complete and correct. Also see Verification.

Waiting for exam

An exam status that occurs as soon as the exam is first registered. The system automatically places all exams in this status upon registration.

Ward

The hospital location where an inpatient resides. In RPMS, wards are a subset of the Hospital Location file (#44).

Weighted work unit

The number that results from multiplying the weight of a procedure's AMIS code with the procedure's AMIS weight multiplier for that AMIS code. If a procedure has more than one AMIS code, the multiplication is done for each and the results are summed.

Workload credit

A general term that can refer to either the stop code or CPT type of workload credit that is used in the VA to calculate reimbursement to medical centers for work done, or the AMIS crediting used by the AMIS workload system.

Appendix A: HL7 Interface

This appendix describes interfaces to the Radiology/Nuclear Medicine package based upon HL7 messaging standards. The HL7 messages form the basis for the exchange of health care information between the RPMS Radiology/Nuclear Medicine package and all non- RPMS systems that generate Radiology/Nuclear Medicine results information in the form of reports and impressions, or require data about Radiology/Nuclear Medicine exam registration, exam completion, cancellation, and results reports.

The following HL7 messages are used to support the exchange of Radiology/ Nuclear Medicine data:

- ACK General Acknowledgment
- ORF Observational Report Response
- ORM Order
- ORU Observational Results Unsolicited
- QRY Query Message

The following HL7 segments are used to support the exchange of Radiology/ Nuclear Medicine data:

- MSA Message Acknowledgment
- MSH Message Header
- OBR Observational Request
- OBX Result
- ORC Common Order
- PID Patient Identification
- QRD Query Definition

The following HL7 fields may be used to support the exchange of Radiology/ Nuclear Medicine data for each of the segments listed above. (Not all fields are used in all messages; see indications on the table below and examples that follow.)

Key for field usage:

V_n = Vendor-initiated message, where n can be one or more of the following:

- vendor's (or other application's) SSN query
- RPMS Rad/Nuc Med Response to SSN query
- vendor's (or other application's) Case Number query
- RPMS Rad/Nuc Med Response to Case Number query

- vendor's (or other application's) findings report
- RPMS Rad/Nuc Med Response to findings report (acknowledgment)

Rn = Message initiated ('broadcast') by RPMS Radiology/Nuclear Medicine, where n can be one or more of the following:

- RPMS Rad/Nuc Med Exam Registration message
- RPMS Rad/Nuc Med Exam Cancellation/Deletion message
- RPMS Rad/Nuc Med Examined/Images collected message
- RPMS Rad/Nuc Med Report Released or Verified message

Segment	Field Seq #	Field Element Name and Values	Where Used
MSA	1	Acknowledgment Code (AA=Accepted, AE=Error)	V246
	2	Message Control ID	V246
	3	Text Message (contains the reason a query or findings report was invalid)	V6
MSH	1	Field Separator (determined by HL7 package set up)	V123456 R1234
	2	Encoding Characters (determined by HL7 package set up)	V123456 R1234
	3	Sending Application (determined by HL7 package set up or vendor)	V123456 R1234
	4	Sending Facility (determined by HL7 package set up or vendor)	V123456 R1234
	5	Receiving Application (determined by HL7 package set up)	V123456 R1234
	6	Receiving Facility (determined by HL7 package set up)	V123456 R1234
	7	Date/Time of Message	V123456 R1234
	8	Security (applicable only to messages incoming to RPMS)	V135
	9	Message Type and Event Code	V123456 R1234
	10	Message Control ID (determined by HL7 package set up or vendor)	V123456 R1234
OBR	11	Processing ID (determined by HL7 package set up)	V123456 R1234
	12	Version ID (determined by HL7 package set up)	V123456 R1234
	17	Country Code (HL7 package sends contents of Country Code field on the related entry in file 771)	R1234
	3	Fillers Order # (Exam & Case IDs)	R1234
	4	Universal Service ID (V-Exam & Case IDs P-CPT code~CPT standard procedure name~CPT4~Rad/Nuc Med internal ID~Rad/Nuc Med procedure name~99RAP)	V245 R1234
	7	Observation Date/Time (Exam date/time)	V245 R1234
	14	Received Date/Time (Date rpt entered)	R4

	16	Ordering Provider (Requesting Phys. RPMS Internal ID~phys. name)	V245 R1234
	18	Placers Field #1 (Patient loc ward/clinic)	R1234
	20	Fillers Field #1 (V-Patient loc Ward/Clinic, or P-Imaging Location internal ID and name, Station number and name)	V245 R123
	21	Fillers Field #2 (Imaging Type of exam - Abbreviated Code and Name)	R123
	22	Results Rpt/Status Change Date Time (R123-date/time of exam R4-if report is verified, date/time report was verified, otherwise date/time of this transaction)	V245 R1234
	25	Report Status (F=final, R=preliminary, A=addendum)	R4
	27	Urgency (S=stat, A=urgent, R=routine) Ex: ~~~~~R	R123
	32	Verifying Physician ID and Name	R4
	33	Primary Staff or Resident Physician ID and Name	R4

Note: OBR and OBX (for procedure only) segments will repeat in pairs for print sets (i.e. single report entered for multiple cases).

OBR-3 and OBR-4-V format:

ex: 7089898.8453-1~043091-66~L

VA exam dt/time internal record number-VA case internal record number~external VA exam dt/time-external VA case number~L

OBX	2	Value Type (CE=procedure follows, TX=modifier, clinical history or results text follows, ST=diagnostic code follows)	V245 R1234
.	3	Observation Identifier (D~DIAGNOSTIC CODE~L=diag. code, I~IMPRESSION~L=impression text, P~PROCEDURE~L=procedure, M~MODIFIER~L=modifier, H~HISTORY~L=clinical history text, R~REPORT~L=report text, A~ALLERGIES~L=allergies) V245: Diagnostic code must be from a predefined set contained in RPMS Rad/Nuc Med file #78.3. P1234: If multiple diagnostic codes exist, the primary diagnosis will occur first.	V245 R1234
	5	Observation Results	V245 R1234

	11	Observation Result Status (F=report verified P=Preliminary results released/not verified, C=amended report verified ""=status does not apply)	V2 R1234
ORC	1	Order Control (NW=new registration, CA=canceled or deleted exam XO=examined/images captured)	R123
	5	Order Status (IP=registered, CA=canceled or deleted CM=examined/images captured)	R123
	8	Parent - First component only will be present only if the procedure is part of an exam set (ordered under one procedure name) or print set (ordered under one procedure name and only one report message will be generated since a single report covers entire set of procedures). Format: EXAMSET: parent_procedure_name or PRINTSET: parent_procedure_name	R123

Note: Under rare circumstances, the parent procedure order will have been purged at the time the message is created. If this is true, the parent_procedure_name will be replaced by the text "ORIGINAL ORDER PURGED".

	9	Date/Time of Transaction (date/time of registration, cancel, or image collection)	R123
PID	2	Patient ID (External format, may differ from SSN in some cases. Ex: pseudo-SSN, DOD sharing patient)	R1234
	3	Patient ID and checksum (3-parts: RPMS internal record number, check digit, check digit scheme)	V245 R1234
	5	Patient Name	V245 R1234
	7	Date of Birth	V245 R1234
	8	Sex	V245 R1234
	19	Patient SSN	V245 R1234
Note:		Entire PID, OBR, OBX repeat as triples if multiple case data is retrieved for a query based on patient ID rather than case number	V24
QRD	1	Query Date/Time	V1234
	2	Query Format Code (R=response in record format)	V1234
	3	Query Priority (I=immediate)	V1234
	4	Query ID	V1234

	7	Quantity Limited Request (2-parts: maximum number of records to return, RD code indicates records)	V1234
	8	Who Subject Filter (V12-long or short case number, V34-patient's 9-digit ssn or, first letter of last name followed by last 4 digits of ssn or, 9-digit ssn followed by one alpha character to denote pseudo-ssn)	V1234
	9	What Subject Filter (OTH=other)	V1234
	10	What Department Data Code (V12-EXAM, V34- PATIENT)	V1234
	11	What Data Code Value Qual. (S)	V1234

If there is a need to uniquely identify a case across facilities, a combination of several fields would be needed: PID-2, PID-7, OBR-3, and the VA station number in the MSH segment. The Health Level Seven software can be configured so that the station number is placed in the MSH segment. See HL7 documentation for more information.

A.1 Vendor-initiated Messages

For vendor-initiated messages, another application (typically a vendor-supplied voice recognition system) may query (QRY) the Radiology/Nuclear Medicine package for an exam list either for a patient or for a specific exam. The Radiology/Nuclear Medicine application will respond (ORF) with the clinical history, allergy, modifier, and procedure information for the unique case selected, or, with up to the maximum requested active, unreported cases if the query was on a patient rather than a specific case.

Once the case to be reported is identified, the vendor system or other application sends the report (ORU) results for a selected exam back to the Radiology/Nuclear Medicine package. The report will be acknowledged (ACK) either positively, or negatively with an error message. If the case selected is one of a "printset" (e.g. same report should apply to multiple cases) the Radiology/Nuclear Medicine software will detect this when the report message is received and will use the report for all cases in the set.

A.2 Clinical Scenario

A patient is registered within the RPMS Rad/Nuc Med system for an exam. The imaging exam is performed and the images for the case are given to a radiologist or nuclear medicine physician. The interpreting physician uses vendor equipment to enter either the specific case number or the patient ID to retrieve related RPMS data on this case or on all active cases for the patient. This triggers the vendor software to create and send a Query (QRY) message, and RPMS Rad/Nuc Med responds with an Observation Report Response (ORF) containing the requested data. The physician uses the vendor equipment to enter findings in a report and performs whatever action is necessary to trigger the vendor software to create and send to RPMS an HL7 ORU message containing the report. RPMS accepts and files the report and sends a positive acknowledgment (ACK) message, or rejects the report and sends an HL7 response (ACK) indicating why it was rejected.

A.3 Messaging Specifics

When an outside application sends a Query (QRY) message to the Radiology/Nuclear Medicine package it consists of the following segments:

- MSH Message Header
- QRD Query Definition

The Security field (MSH-8) must contain the user's RPMS Access Code and Electronic Signature code. A query can be used to request one specific exam or a list of active exams (i.e., exams with no findings report entered). To receive a list of active exams, more than one record would be specified as in the example below (10~RD) where up to 10 records may be retrieved. To request a specific exam, the Who Subject Filter field (QRD-8) must specify the exam case number (e.g., 011995-219, or just 219) and the What Department Data Code field (QRD-10) must contain the word EXAM.

```
Example:
MSH^^~`&^VOICERAD^VENDOR^RADIOLOGY^578^199506190652^ACCESS CODE~~
ELECTRONIC SIGNATURE^QRY^447^P^2.1
QRD^199506190652^R^I^001^^^10~RD^682816440^OTH^PATIENT^S
```

A query can be rejected due to invalid security codes, invalid or ambiguous patient identifier, invalid exam ID, no exams on file, report already on file, case canceled, lack of proper security classification to enter reports on canceled cases, canceled case is part of an exam set with a single report, or user without the proper security key.

The Radiology/Nuclear Medicine package responds to the query with a list of exams for a patient in an ORF message. The ORF message consists of the following segments, with PID, OBR and OBX repeating in sets for each exam:

- MSH Message Header

- MSA Message Acknowledgment
- QRD Query Definition
- PID Patient Identification
- OBR Observational Result
- OBX Result

In the following example, only one active exam existed for the patient.

```
MSH^~|\&^RADIOLOGY^608^RADIOLOGY^NON-VISTA^199104301101^^ORF^54321^P^2.1
MSA^AA^12347
QRD^199104301101^R^I^Q1^^^1~RD^55555^OTH^PATIENT
PID^^^55555~5~M11^^DOE~JOHN~J^^19300101^M^^^^^^^^^^^^^987654321
OBR^^^7089898.8453-1~043091-66~L^^199104301200^"^^"^^"^^"^^"^^3232~
HARRIS~JACK^^^MEDICINE^^199104301200
OBX^^TX^H~HISTORY~L^^A history is not available for this patient.
OBX^^TX^P~PROCEDURE~L^^CHEST 1 VIEW^^^^^^"
OBX^^TX^M~MODIFIERS~L^^RIGHT, PORTABLE^^^^^^"
OBX^^TX^A~ALLERGIES~L^^BEE STINGS^^^^^^"
```

In the next example, several active exams existed for the patient. Note that the PID, OBR, and OBX repeat for each exam.

```
MSH^^~`&^RADIOLOGY^578^VOICERAD^VENDOR^19950619120423^^ORF^2950619
.120423^P^2.1
MSA^AA^447
QRD^199506190652^R^I^001^^^4~RD^682816440^OTH^PATIENT^S
PID^^^4710~1~M11^^DINGLE~BENJAMIN^^19480325^M^^^^^^^^^^^^^682816440
OBR^^^7049880.8549-1~011995-219~L^^199501191450^"^^"^^"^^"^^4507~TAY
LOR~FRANK^^^X-RAY STOP^^199501191450
OBX^^CE^P~PROCEDURE~L^^ANKLE 2 VIEWS^^^^^^"
OBX^^TX^M~MODIFIERS~L^^RIGHT^^^^^^"
OBX^^TX^H~HISTORY~L^^Twisted ankle playing football.^^^^^^"
PID^^^4710~1~M11^^DINGLE~BENJAMIN^^19480325^M^^^^^^^^^^^^^682816440
OBR^^^7049880.8549-2~011995-220~L^^199501191450^"^^"^^"^^"^^4507~TAY
LOR~FRANK^^^X-RAY STOP^^199501191450
OBX^^CE^P~PROCEDURE~L^^FOOT 2 VIEWS^^^^^^"
OBX^^TX^M~MODIFIERS~L^^RIGHT^^^^^^"
OBX^^TX^H~HISTORY~L^^Foot is swollen.^^^^^^"
PID^^^4710~1~M11^^DINGLE~BENJAMIN^^19480325^M^^^^^^^^^^^^^682816440
OBR^^^7049880.8549-3~011995-221~L^^199501191450^"^^"^^"^^"^^4507~TAY
LOR~FRANK^^^X-RAY STOP^^199501191450
OBX^^CE^P~PROCEDURE~L^^NON-INVAS.,LOW EXT. VEIN W/O US^^^^^^"
OBX^^TX^M~MODIFIERS~L^^LEFT^^^^^^"
OBX^^TX^H~HISTORY~L^^High blood pressure, mod smoker (cigars).^^^^^^"
PID^^^4710~1~M11^^DINGLE~BENJAMIN^^19480325^M^^^^^^^^^^^^^682816440
OBR^^^7049880.8549-4~011995-223~L^^199501191450^"^^"^^"^^"^^4507~TAY
LOR~FRANK^^^X-RAY STOP^^199501191450
OBX^^CE^P~PROCEDURE~L^^TOE(S) 2 OR MORE VIEWS^^^^^^"
OBX^^TX^M~MODIFIERS~L^^RIGHT^^^^^^"
OBX^^TX^H~HISTORY~L^^Toes are swollen and discolored.^^^^^^"
PID^^^4710~1~M11^^DINGLE~BENJAMIN^^19480325^M^^^^^^^^^^^^^682816440
OBR^^^7049880.8551-1~011995-216~L^^199501191448^"^^"^^"^^"^^4507~TAY
LOR~FRANK^^^X-RAY STOP^^199501191448
OBX^^CE^P~PROCEDURE~L^^FOREARM 2 VIEWS^^^^^^"
OBX^^TX^M~MODIFIERS~L^^RIGHT^^^^^^"
```

```
OBX^^TX^H~HISTORY~L^^High blood pressure, mod smoker (cigars).^^^^^^"
```

When the vendor (or other) application sends report results, they send an Observational Results Unsolicited (ORU) message to the Radiology/Nuclear Medicine package. The ORU message consists of the following segments:

- MSH Message Header
- PID Patient Identification
- OBR Observational Request
- OBX Result

Example:

```
MSH^~|\&^VOICERAD^VENDOR^RADIOLOGY^578^199104301010^ACCESS CODE~VERIFY
CODE~SIGNATURE CODE^ORU^12346^P^2.1
PID^^^100~10~M11^^JONES~JOHN~J^^19421112^M^^^^^^^^^^123456789
OBR^^^7089898.8543-1~043091-66~L^^^199104301200^"^^"^^^^^^"^^3232~
HARRIS~JACK^^^MEDICINE^^199104301010
OBX^^TX^I~IMPRESSION~L^^HEART NORMAL SIZE
OBX^^ST^D~DIAGNOSTIC CODE~L^^NORMAL
OBX^^TX^R~REPORT~L^^Heart appears to be of normal size.
OBX^^TX^R~REPORT~L^^No infiltrate or abnormal mass noted.
```

Notes: The Diagnostic Code sent to RPMS must be one of a predefined set in the RPMS Rad/Nuc Med's Diagnostic Codes file (#78.3). These codes are facility specific. Impression is mandatory.

The Radiology/Nuclear Medicine package sends back a General Acknowledgment (ACK) message. If the report is rejected, possible reasons are invalid or duplicate diagnostic code, provider not classified as "staff" or "resident" within the Radiology/Nuclear Medicine package, missing or invalid patient identification, attempt to edit a canceled case, or a case where a report is already on file, missing impression text, or missing segment or field from a message.

A.4 Radiology/Nuclear Medicine-Initiated Messages

The Radiology/Nuclear Medicine package will send an HL7 message with exam information to all site specified subscribers, if one or more is defined within the HL7 package setup, when each exam has been registered, examined (i.e., images have been collected), canceled, and when a report has been put in a status of Verified or Released/Not Verified. Subscribers may choose to subscribe to a subset rather than all of the available messages.

A.5 Clinical Scenarios

Registration: A VAMC may register a patient for an imaging exam at the time the patient arrives at the radiology or nuclear medicine reception desk for his/her appointment, or registration may be done up to a week prior to the appointment depending on the policy of that VAMC's imaging services. At this point, the registration message is broadcast and can be sent as an "order" to the PACS/Imaging, Voice Recognition, or other recipient. For exam sets, each procedure will be sent in its own HL7 message.

Examined/Images collected

The RPMS Rad/Nuc Med software allows the radiology supervisor to specify an exam status that will trigger this event. If, for example, the "Examined" status is specified, when the radiology tech enters the required data to cause the exam record to reach the "Examined" status, the examined message will be broadcast. This message is intended to signal the recipient that images have been collected.

Cancellation/Deletion

If an imaging tech or other RPMS Rad/Nuc Med software user cancels or deletes an exam, this will trigger the cancel message broadcast. An exam is usually canceled before it is done. However, since exam data may have been erroneously entered or entered for the wrong patient, the RPMS Rad/Nuc Med system allows users to back data out and cancel after an exam is done, and possibly after results reports are entered. So, there is a possibility that an examined message and a report message would have been broadcast prior to a cancellation message.

Verified/Released Unverified Report: The report message is triggered when a RPMS Rad/Nuc Med radiologist or transcriptionist enters data causing the findings report to move to a "Verified" (final) or "Released/Unverified" (preliminary) status. Depending on the policy of the VAMC, the "Released/Unverified" status may or may not be allowed. If the released/unverified report is broadcast on a message, a later message will contain the verified (final) report. It is also possible for a verified report to be retracted ("Unverified"), then re-verified later. If this happens a second report message would be broadcast with the amended, re-verified report, or else an exam cancel/delete message would be broadcast retracting the entire exam.

The registration message will always be the first message generated since registration must be done before any of the other events can take place. There is no software setup that can prevent users from entering and verifying a report prior to the tech entering exam information, so there is no guarantee that the "Examined" message will be sent before the "Report" message. However, a facility can choose to enforce the practice of case editing before entering and verifying reports to guarantee that the case gets to the proper "Examined" status before the report is verified.

A.6 Messaging Specifics

When an exam is registered, examined, or canceled by the Radiology/Nuclear Medicine package, an Order (ORM) message is sent to the site-specified application. The ORM message consists of the following segments:

- MSH Message Header
- PID Patient Identification
- ORC Common Order
- OBR Observational Request
- OBX Result

Example:

```

MSH~|\&^RADPACS^578^PACS^HINES^19950412150219^^ORM~001^88^P^2.1
PID^^321-44-8277^6552~7~M11^^HAMMER,RHONDA^^19840515^F^^^^^^^^^^
321448277
ORC^NW^^^^IP^^EXAMSET: MAMMO PARENT PROCEDURE^19950412091135
OBR^^^7049589.8964-1~041095-85~L^76091~MAMMOGRAM, BOTH BREASTS~CPT4~436
~MAMMOGRAM
BILAT~99RAP^^^19950412091135^"^^"^^"^^4505~HILLER,CINDY^^1N^^ 2~X-RAY
ROOM 101~578~HINES VAMC^RAD~GENERAL RADIOLOGY^19950412091135^^^^^ ~~~~~R
OBX^^CE^P~PROCEDURE~L^^436~MAMMOGRAM BILAT~L^^^^^^"
OBX^^TX^M~MODIFIERS~L^^LEFT, OBLIQUE^^^^^^"
OBX^^TX^H~HISTORY~L^^This is the clinical history for the patient's exam.
This is going to be several^^^^^^"
OBX^^TX^H~HISTORY~L^^lines in length so we can see what happens when we
create the HL7 message.^^^^^^"
OBX^^TX^H~HISTORY~L^^^^^^"
OBX^^TX^H~HISTORY~L^^This is the first line of the second
paragraph^^^^^^"
OBX^^TX^H~HISTORY~L^^This is the second line of this paragraph. ^^^^^^^"
OBX^^TX^A~ALLERGIES~L^^PENICILLIN(V), CATS(V), DOGS(V), TOMATO(V),
RAGWEED(V), RADIOLOGICAL/CONTRAST MEDIA(N), COCAINE(V)^^^^^^"
    
```

Note: The messages broadcast at these three event points (registered, examined and canceled) are almost identical, with the exception of the Order Control, Order Status, and Mode of Transportation. Differences to note between an HL7 message for registration, image collection (examined) and cancellation are shown here:

HL7 ORC Field	Registration	Cancel/Delete	Examined
•1-Order Control	NW	CA	XO
5-Order Status	IP	CA	CM

The Mode of Transportation value on the OBR segment (in the example above, ~~~~~R) is omitted from the cancellation message.

Please also be aware that the OBR segment may exceed 255 characters. This means that other RPMS applications will have to receive those segments in an array. See the HL7 manual for more information about the method for handling segments greater than 255 characters. Outside vendor recipients should not be affected since they receive the message as a data stream.

When a report is Verified or Released/Not Verified by the Radiology/Nuclear Medicine package, an Order (ORU) message is sent to the site specified application. The ORU message consists of the following segments:

- MSH Message Header
- PID Patient Identification
- OBR Observational Request
- OBX Result

Example: ORU message containing report for single procedure

```
MSH^~|\&^RADPACS^578^PACS^HINES^199504121040^^ORU~R01^170^P^2.1
PID^^714-26-2873^374~3~M11^^LIME~HARRY^^19080817^M^^^^^^^^^^^^714262873
OBR^^^7049587.8959-1~041295-334~L^76020~X-RAYS FOR BONE AGE~CPT4~423~
BONE
AGE~99RAP^^^199504121040^"^^"^^^19950412150219^^4507~TAYLOR,FRANK^^1N^^
^199504121503^^^F^^^^^^4505~HILLER~CINDY^4532~FLASHCARD~FERGUS
  OBX^^TX^I~IMPRESSION~L^^This is the first line of impression text on the
report record.^^^^^^F
  OBX^^TX^I~IMPRESSION~L^^The second line of impression text on the report
record.^^^^^^F
  OBX^^TX^I~IMPRESSION~L^^The third line of impression text on the report
record.^^^^^^F
  OBX^^ST^D~DIAGNOSTIC CODE~L^^POSSIBLE MALIGNANCY, FOLLOW-UP NEEDED^^^^^^F
  OBX^^ST^D~DIAGNOSTIC CODE~L^^ABNORMALITY, ATTN. NEEDED^^^^^^F
  OBX^^TX^R~REPORT~L^^This is the first line of report text in the report
record.^^^^^^F
  OBX^^TX^R~REPORT~L^^The second line of report text.^^^^^^F
  OBX^^TX^R~REPORT~L^^The third line of report text.^^^^^^F
  OBX^^CE^P~PROCEDURE~L^^423~BONE AGE~L^^^^^^"
  OBX^^TX^M~MODIFIERS~L^^PORTABLE EXAM^^^^^^"
```

Example: ORU message for "printset", (i.e., multiple procedures and single report):

```
MSH^~|\&^RADPACS^578^PACS^HINES^199504121040^^ORU~R01^170^P^2.1
PID^^149-16-2645^43~7~M11^^FICKEN~LEON~P^^19100606^M^^^^^^^^^^^^149162645
OBR^^^7029871.8488-1~012897-436~L^73600~X-RAY EXAM OF ANKLE~CPT4~161~ANKLE
2VIEWS~99RAP^^^199701281511^"^^"^^^19970128155928^^4599~
ORDERER~ORVILLE^^^^EMERGENCY ROOM^^199701281600^^^F^^^^^^4505~HELLER~CINDY
OBX^^CE^P~PROCEDURE~L^^161~ANKLE 2 VIEWS~L^^^^^^"
OBR^^^7029871.8488-2~012897-439~L^73620~X-RAY EXAM OF FOOT~CPT4~165~FOOT 2
VIEWS~99RAP^^^199701281511^"^^"^^^19970128155928^^4599~ORDERER~ORVILLE^^
^
^EMERGENCY ROOM^^199701281600^^^F^^^^^^4505~HELLER~CINDY
OBX^^CE^P~PROCEDURE~L^^165~FOOT 2 VIEWS~L^^^^^^"
OBR^^^7029871.8488-3~012897-440~L^73660~X-RAY EXAM OF TOE(S)~CPT4~168~
TOE(S) 2 OR MORE VIEWS~99RAP^^^199701281511^"^^"^^^19970128155928^^4599~
```

```
ORDERER~ORVILLE^^^^EMERGENCY
ROOM^^199701281600^^^F^^^^^^4505~HELLER~CINDY^ 4515~SPOCK~DOCTOR
OBX^^CE^P~PROCEDURE~L^^168~TOE(S) 2 OR MORE VIEWS~L^^^^^^"
OBX^^TX^I~IMPRESSION~L^^TOE FRACTURES.^^^^^^F
OBX^^ST^D~DIAGNOSTIC CODE~L^^ABNORMALITY, ATTN. NEEDED^^^^^^F
OBX^^TX^R~REPORT~L^^FOUND EVIDENCE OF SEVERAL FRACTURES IN R. FOOT,
  IN ALL 5 TOES.^^^^^^F
OBX^^TX^M~MODIFIERS~L^^PORTABLE EXAM^^^^^^"
```

If the receiving application is outside of RPMS, it should then send a General Acknowledgment (ACK) message back to the HL7 package. The ACK message consists of the following segments:

- MSH Message Header
- MSA Message Acknowledgment

Example:

```
MSH^~|\&^PACS^HINES^RADIOLOGY^578^199504121041^^ACK^170^P^2.1
MSA^AA^170
```


Appendix B: Medicine-Initiated Messages

B.1 Setup Instructions and Examples

Four protocols are exported with Radiology/Nuclear Medicine to send exam or report data from the Radiology/Nuclear Medicine package to another application such as a commercial imaging system via the HL7 V. 1.6 package (see pages later in this section for full listing of all fields of all records exported):

Protocol	Triggering event in RPMS Rad/Nuc Med processing
RA REG	Rad/Nuc Med case registration
RA CANCEL	Rad/Nuc Med case cancellation or deletion
RA EXAMINED	Rad/Nuc Med case reaches a status with file #72, field 8 GENERATE EXAMINED HL7 MESSAGE marked "yes"
RA RPT	Rad/Nuc Med report status changes to "Verified" or "Released/Unverified"

Two "subscriber" protocols, RA SEND ORM and RA SEND ORU, are also exported. RA SEND ORM is entered in the ITEM field of the three ORM event point protocols (RA REG, RA CANCEL, RA EXAMINED), and RA SEND ORU is entered in the ITEM field of the ORU event point protocol (RA RPT). Sites can set up their own equivalent of the subscriber protocols for a single message or various combinations of messages. The RA SEND ORM and RA SEND ORU protocols are only exported for convenience; they can be used as subscribers, or they can serve as an example for creating new subscriber protocols.

Although sample setup for messaging is described below, this should in no way replace or act as a substitute for the instructions in the HL7 documentation. The descriptions and samples below are subject to change based on new versions or patches to the HL7 package.

B.2 Protocol Set-up

Overview of records exported:

FILE 771 (HL7 APPLICATION PARAMETER) ENTRIES:

RA-SERVER-IMG

RA-CLIENT-IMG

FILE 101 (PROTOCOL) ENTRIES:

RA SEND ORM - (subscriber)

RA SEND ORU - (subscriber) (you may add more subscribers as needed)

RA REG - (event driver - Registration of an exam)

RA CANCEL - (event driver - Cancellation of an exam)

RA RPT - (event driver - Verifying/releasing a report)

RA EXAMINED - (event driver - upgrading an exam to a status where GENERATE EXAMINED HL7 MESSAGE is Y)

Setup involves editing fields on exported records, and, in some cases, adding records depending on the needs of the site. This can be done via the HL7 package's Workbench option, or via the VA FileMan Enter or Edit File Entries option.

Instructions to enable protocols to send HL7 messages:

1. (OPTIONAL) Attach a new subscriber protocol to an event driver protocol:

This release already comes with an appropriate subscriber protocol attached to each of the driver protocols as an ITEM in the driver protocol. You may enter additional subscriber protocols under each driver protocol's ITEM field. Make sure that each item protocol has its own unique CLIENT (SUBSCRIBER), which points to a record in file #771. If you create and attach your own subscriber protocols to the event drivers, the RA SEND ORU and RA SEND ORM protocols will have to be deleted from the ITEM field of the server protocols if no other application is using them.

For example, this event driver protocol is given 2 subscribers in the ITEM field:

NAME: RA REG <-- exported

TYPE: event driver

...

ITEM: RA SEND ORM <-- exported

ITEM: RA SEND OUT <-- not exported

Note: RA SEND ORM's CLIENT (SUBSCRIBER) is RA-CLIENT-IMG

RA SEND OUT's CLIENT (SUBSCRIBER) is RA-CLIENT2-IMG

2. Activate the triggering of HL7 messages during Rad/Nuc Med exam registration, cancellation/deletion, report verification, and upgrading to a selected (examined) status. Note: Make sure you also complete Step 2c before you let the users back onto the system.

In file 101, for each of the 4 protocols,

RA REG (event driver - Registration of an exam)

RA CANCEL (event driver - Cancellation of an exam)

RA RPT (event driver - Verifying/releasing a report)

RA EXAMINED (event driver - upgrading an exam to a status where GENERATE EXAMINED HL7 MESSAGE field #8 of the Examination Status file #72 is set to Y.)

enter the following for SERVER APPLICATION:

RA-SERVER-IMG

Note: Once you've entered a server application in this field, File 772 will start growing. See HL7 manual for instructions on purging. If you are not receiving and processing the messages, you may want to remove the server name from this field to prevent growth of File 772. If you experience problems and wish to temporarily disable the interface, just delete the contents of the Server Application field on whichever server protocols are causing the errors.

- a. Skip this step if radiology doesn't need to send data to another RPMS application. Otherwise, enter M code to specify which routine needs to be invoked so that another RPMS application can capture and process the information from the HL7 message:

In File 101, for the subscriber protocol (e.g., RA SEND ORM or a subscriber protocol you have added), you need to enter the M code to be executed (for receiving and processing the message) in the field, GENERATE/PROCESS ROUTINE.

For example:

In the RA SEND ORM protocol,

GENERATE/PROCESS ROUTINE: Q <-- exported (leave as is if receiving software is an outside, non-RPMS system)

GENERATE/PROCESS ROUTINE: D EN^OTHERPKG <-- change to (if receiving software is another application)

where EN^OTHERPKG should be replaced by a real line label and routine references. The routine you enter as the GENERATE/PROCESS ROUTINE should contain M code like the following:

```
EN N I,J,X
```

```
F I=1:1 X HLNEXT Q:HLQUIT'>0 S X(I)=HLNODE,J=0 F S
```

```
J=$O(HLNODE(J)) Q:'J S X(I,J)=HLNODE(J)
```

```
; code to process each message segment
```

This sample code is taken from the HL7 Developer Manual V 1.6. It is used to retrieve each message segment.

- b. Enter message types on subscriber protocols. This step must be done for both RPMS application and outside vendor subscriber protocols.

If receiving software is an OUTSIDE VENDOR subscribing to the ORM message.

```
MESSAGE TYPE RECEIVED: ACK
```

```
MESSAGE TYPE GENERATED: ORM
```

If receiving software is an OUTSIDE VENDOR subscribing to the ORU message.

```
MESSAGE TYPE RECEIVED: ACK
```

```
MESSAGE TYPE GENERATED: ORU
```

If receiving software is a RPMS application subscribing to the ORM message.

```
MESSAGE TYPE RECEIVED: ORM
```

```
MESSAGE TYPE GENERATED: ACK
```

If receiving software is a RPMS application subscribing to the ORU message.

```
MESSAGE TYPE RECEIVED: ORU
```

```
MESSAGE TYPE GENERATED: ACK
```

Note: If you create your own subscribing protocols, and the RA SEND ORM and/or RA SEND ORU protocols are not being used by any other application or outside vendor recipient, you will need to remove them from the ITEM field of the server protocols.

3. Skip step 3 below if radiology doesn't need to send data to a dedicated port. Otherwise, enter data in related files to allow an application outside of RPMS to receive the messages sent to File 772.

For example:

File 3.5 (DEVICE) <-- IRM should assign the device

\ to a dedicated port on a decserver; the
 \ vendor device would be connected to this port
 \

File 869.2 (HL LOWER LEVEL PROTOCOL PARAMETER)

\ this record's HLLP DEVICE field should be
 \ the name of the record set up in File 3.5
 \

File 870 (HL LOGICAL LINK)

\ this record's LLP PARAMETERS field should be
 \ the name of the record set up in File 869.2
 \

File 101 (PROTOCOL)

 the subscriber protocol (e.g. RA SEND OUT)'s
 LOGICAL LINK field should be
 the name of the record set up in file 870

- a. Start three HL7 background jobs:

Start up 2 filers (incoming and outgoing) and also the LLP.

For example, you would have to use the following menus and options:

HL7 Main Menu

\

V1.6 OPTIONS

\

Communications Server

\

Manage incoming & outgoing filers

\

Start an incoming filer

Start an outgoing filer

\

Start LLP

4. Skip step 4 below if subscribing software does not require an HL7 message when images have been collected. Otherwise, select the EXAMINATION STATUS for each Imaging Type that should trigger the "Examined" HL7 message. (The radiology supervisor usually does this step.) The HL7 message will only be triggered once for an exam — when the exam has upgraded to the Examined status with the Generate Examined H17 Message field set to Yes. Repeat this step for each active imaging type at your facility.

Supervisor Menu

\

Utility Files Maintenance Menu

\

Examination Status Enter/Edit

\

Select an Imaging Type:

\

Select an Examination Status: (usually, the appropriate

status to select at this prompt will be

EXAMINED)

.....

GENERATE EXAMINED HL7 MESSAGE: YES

.....

B.3 Listing of Records Exported

B.3.1 File 771 (HL7 Application Parameter)

NAME: RA-CLIENT-IMG	ACTIVE/INACTIVE: ACTIVE
FACILITY NAME:(field not exported)	MAIL GROUP: (field not exported)
COUNTRY CODE: USA	
NAME: RA-SERVER-IMG	ACTIVE/INACTIVE: ACTIVE
FACILITY NAME:(field not exported)	MAIL GROUP: (field not exported)
COUNTRY CODE: USA	

B.3.2 File 101 (Protocol)

Name: RA SEND ORM

Item Text: Client for Imaging (ORM)

Type: subscriber Creator: 0

Package: RADIOLOGY/NUCLEAR MEDICINE

Description: This protocol receives the HL7 message.

Exit Action: QEntry Action: Q

Timestamp: 56956,49285 Client (Subscriber): RA-CLIENT-IMG

Event Type: 001 Processing ID: PRODUCTION

Version ID: 2.1 Generate/Process Routine: Q

Sending Facility Required?: NO

Receiving Facility Required?: NO

Security Required?: NO Date/Time Of Message Required?: YES

Name: RA SEND ORU

Item Text: Client for Imaging (ORU)
Type: subscriber Creator: 0
Package: RADIOLOGY/NUCLEAR MEDICINE
Description: This protocol receives the HL7 message.
Exit Action: Q Entry Action: Q
Timestamp: 56956,49285 Client (Subscriber): RA-CLIENT-IMG
Event Type: R01 Processing ID: PRODUCTION
Version ID: 2.1 Generate/Process Routine: Q
Sending facility required?: NO
Receiving Facility Required?: NO
Security Required?: NO Date/Time Of Message Required?: YES

Name: RA REG

Item Text: Rad/Nuc Med exam registered

Type: event driver Creator: 0

Package: RADIOLOGY/NUCLEAR MEDICINE

Description: This protocol is triggered whenever a Radiology/Nuclear Medicine exam is registered. It executes code that creates an HL7 ORM message consisting of PID, ORC, OBR and OBX segments. The message contains all relevant information about the exam, including procedure, time of registration, procedure modifiers, patient allergies, and clinical history.

Item: RA SEND ORM

Entry Action: Q Timestamp: 56959,31813

Message Type Received: ORM Event Type: O01

Processing ID: PRODUCTION Version ID: 2.1

Generate/Process Ack Routine: Q

Name: RA CANCEL

Item Text: Rad/Nuc Med exam cancellation

Type: event driver Creator: 0

Package: RADIOLOGY/NUCLEAR MEDICINE

Description: This protocol is triggered whenever a Radiology/Nuclear Medicine exam is canceled. It executes code that creates an HL7 ORM message consisting of PID, ORC, OBR and OBX segments. The message contains all relevant information about the exam, including procedure, time of cancellation, procedure modifiers, patient allergies and clinical history.

Item: RA SEND ORM

Entry Action: Q Timestamp: 56956,49194

Message Type Received: ORM Event Type: O01

Processing ID: PRODUCTION Version ID: 2.1

Generate/Process Ack Routine: Q

Name: RA RPT

Item Text: Rad/Nuc Med report released/verified

Type: event driver Creator: 0

Description: This protocol is triggered whenever a Radiology/Nuclear Medicine report enters into a status of Verified or Released/Not Verified. It executes code that creates an HL7 ORU message consisting of PID, OBR and OBX segments. The message contains relevant information about the report, including procedure, procedure modifiers, diagnostic code, interpreting physician, impression text, and report text.

Item: RA SEND ORU

Entry Action: Q Timestamp: 56956,49194

Message Type Received: ORU Event Type: R01

Processing ID: PRODUCTION Version ID: 2.1

Generate/Process Ack Routine: Q

Name: RA EXAMINED

Item Text: Rad/Nuc Med examined case

Type: event driver Creator: 0

Package: RADIOLOGY/NUCLEAR MEDICINE

Description: This protocol is triggered whenever a Radiology/Nuclear Medicine exam has reached a status where GENERATE EXAMINED HL7 MSG is Y at that (or at a lower) status. This message contains all relevant information about the exam, including procedure, time of registration, procedure modifiers, patient allergies, and clinical history.

Entry Action: Q

Item: RA SEND ORM Timestamp: 56956,50805

Message Type Received: ORM Event Type: O01

Processing ID: PRODUCTION Version ID: 2.1

Generate/Process Ack Routine: Q

B.4 Sample RPMS to RPMS Imaging Interface

B.4.1 File 771 Setup as Completed by Site

NAME: RA-CLIENT-IMG FACILITY NAME: 499	ACTIVE/INACTIVE: ACTIVE COUNTRY CODE: USA
NAME: RA-CLIENT2-IMG FACILITY NAME: 499	ACTIVE/INACTIVE: ACTIVE COUNTRY CODE: USA
NAME: RA-SERVER-IMG FACILITY NAME: 499	ACTIVE/INACTIVE: ACTIVE COUNTRY CODE: USA

B.4.2 File 101 Setup as Completed by Site

In this example, RA SEND ORM and RA SEND 2 are subscriber protocols. The RA SEND ORM protocol subscribes to all three ORM message event servers, but the RA SEND 2 protocol only subscribes to one message event server, RA REG.

NAME: RA SEND ORM TYPE: subscriber PACKAGE: ANYPKG DESCRIPTION: This protocol receives the HL7 messages. EXIT ACTION: Q	ITEM TEXT: Client for Imaging CREATOR: 0 ENTRY ACTION: Q
---	--

```

TIMESTAMP: 56956,54228      CLIENT (SUBSCRIBER): RA-CLIENT-IMG
MESSAGE TYPE RECEIVED: ORM   EVENT TYPE: 001
PROCESSING ID: PRODUCTION    VERSION ID: 2.1
MESSAGE TYPE GENERATED: ACK
GENERATE/PROCESS ROUTINE: D ^CHTESTI
SENDING FACILITY REQUIRED?: NO      RECEIVING FACILITY REQUIRED?: NO
SECURITY REQUIRED?: NO           DATE/TIME OF MESSAGE REQUIRED?: YES

NAME: RA SEND 2
  ITEM TEXT: Test client protocol for RA REG, RA CANCEL
  TYPE: subscriber              CREATOR: IRM,SPECIALIST
  PACKAGE: ANYPKG
DESCRIPTION: This is the client protocol.
TIMESTAMP: 56952,38965      CLIENT (SUBSCRIBER): RA-CLIENT2-IMG
MESSAGE TYPE RECEIVED: ORM   EVENT TYPE: 001
PRIORITY: IMMEDIATE          PROCESSING ID: PRODUCTION
VERSION ID: 2.1              MESSAGE TYPE GENERATED: ACK
GENERATE/PROCESS ROUTINE: D ^XXTEST2
SENDING FACILITY REQUIRED?: NO
RECEIVING FACILITY REQUIRED?: NO   SECURITY REQUIRED?: NO
DATE/TIME OF MESSAGE REQUIRED?: YES

NAME: RA REG      ITEM TEXT: Rad/Nuc Med exam registered
  TYPE: event driver      CREATOR: 0
  PACKAGE: RADIOLOGY/NUCLEAR MEDICINE
DESCRIPTION: This protocol is triggered whenever a Radiology/Nuclear
Medicine exam is registered. It executes code that creates an HL7 ORM
message consisting of PID, ORC, OBR and OBX segments.
The message contains all relevant information about the exam, including
procedure, time of registration, procedure modifiers, patient allergies,
and clinical history.
ITEM: RA SEND ORM
ITEM: RA SEND 2
  ENTRY ACTION: Q      TIMESTAMP: 56960,33969
  SERVER APPLICATION: RA-SERVER-IMG
  MESSAGE TYPE RECEIVED: ORM
  EVENT TYPE: 001      PROCESSING ID: PRODUCTION
  VERSION ID: 2.1      GENERATE/PROCESS ACK ROUTINE: Q

NAME: RA CANCEL      ITEM TEXT: Rad/Nuc Med exam cancellation
  TYPE: event driver      CREATOR: 0
  PACKAGE: RADIOLOGY/NUCLEAR MEDICINE
DESCRIPTION: This protocol is triggered whenever a Radiology/Nuclear
Medicine exam is canceled. It executes code that creates an HL7 ORM
message consisting of PID, ORC, OBR and OBX segments.
The message contains all relevant information about the exam, including
procedure, time of cancellation, procedure modifiers, patient allergies
and clinical history.
ITEM: RA SEND ORM
  ENTRY ACTION: Q      TIMESTAMP: 56960,33975
  SERVER APPLICATION: RA-SERVER-IMG
  MESSAGE TYPE RECEIVED: ORM
  EVENT TYPE: 001      PROCESSING ID: PRODUCTION
  VERSION ID: 2.1      GENERATE/PROCESS ACK ROUTINE: Q

NAME: RA RPT
  ITEM TEXT: Rad/Nuc Med report released/verified
  TYPE: event driver      CREATOR: 0
DESCRIPTION: This protocol is triggered whenever a Radiology/Nuclear
Medicine report enters into a status of Verified or Released/Not
Verified. It executes code that creates an HL7 ORU message consisting of

```

```

PID, OBR and OBX segments. The message contains relevant information
about the report, including procedure, procedure modifiers, diagnostic
code, interpreting physician, impression text and report text.
ITEM: RA SEND ORU
ENTRY ACTION: Q          TIMESTAMP: 56956,54228
SERVER APPLICATION: RA-SERVER-IMG
MESSAGE TYPE RECEIVED: ORU
EVENT TYPE: R01         PROCESSING ID: PRODUCTION
VERSION ID: 2.1         GENERATE/PROCESS ACK ROUTINE: Q

NAME: RA EXAMINED      ITEM TEXT: Rad/Nuc Med examined case
TYPE: event driver     CREATOR:0
PACKAGE: RADIOLOGY/NUCLEAR MEDICINE
DESCRIPTION: This protocol is triggered whenever a Radiology/Nuclear
Medicine exam has reached a status where GENERATE EXAMINED HL7 MSG is
Y at that (or at a lower) status. This message contains all relevant
information about the exam, including procedure, time of registration,
procedure modifiers, patient allergies, and clinical history.
ITEM: RA SEND
TIMESTAMP: 56956,54228          SERVER APPLICATION: RA-SERVER-IMG
MESSAGE TYPE RECEIVED: ORM     EVENT TYPE: O01
PROCESSING ID: PRODUCTION     VERSION ID: 2.1
GENERATE/PROCESS ACK ROUTINE: Q

```

B.4.3 File 3.5 Setup as Completed by Site

In this example, the RA SEND OUT ORM and RA SEND OUT ORU protocols represent the outside vendor. Note that there is a QUIT command in the Generate/Process Routine field. The messages are routed to a dedicated port (i.e., the port to which the vendor equipment is attached) rather than consumed by another MUMPS program as in the RPMS to RPMS messaging example above. This also requires logical link and device setup. Hardware setup and use of operating system utilities to define port characteristics are necessary, but not included in this example.

```

NAME: VENDOR DEVICE    $I: _LTA884:
ASK DEVICE: YES        ASK PARAMETERS: NO
LOCATION OF TERMINAL: B143
ASK HOST FILE: NO      ASK HFS I/O OPERATION: NO
*MARGIN WIDTH: 80      *FORM FEED: #,$C(27,91,50,74,27,91,72)
*PAGE LENGTH: 24      *BACK SPACE: $C(8) MNEMONIC: PACS
SUBTYPE: C-VT100      TYPE: TERMINAL
LAT SERVER NODE: ISC408  LAT SERVER PORT: 84
LAT PORT SPEED: 96     TYPE-AHEAD: ALLOWED
BAUD RATE (c): UNKNOWN

```

B.4.4 File 869.2 Setup as Completed by Site

Note: Data for both files 869.2 and 870 can be entered under one session within VISTA HL7's Interface Workbench's EL (Edit Logical Link).

```

NAME: HLLP            LLP TYPE: HLLP
HLLP DEVICE: VENDOR DEVICE  RE-TRANSMISSION ATTEMPTS: 3

```

```

BLOCK SIZE: 245                READ TIMEOUT: 10
ACK TIMEOUT: 10                LLP START BLOCK: VT
LLP END BLOCK: FS              PROTOCOL ID VERSION: 2.1
Figure 14 4: Sample File 869.2 – HL Lower Level Protocol Parameter

```

B.4.5 File 870 Setup as Completed by Site

Note: Some of the data here was entered by the LLP background job.

```

NODE: RAD HLLP                LLP PARAMETERS: HLLP
LLP ONLINE: NO                STATE: SHUTDOWN
TIME STOPPED: DEC 06, 1996@11:04:23  SHUTDOWN LLP ?: YES
QUEUE SIZE: 10
IN QUEUE BACK POINTER: 0      IN QUEUE FRONT POINTER: 0
OUT QUEUE BACK POINTER: 0     OUT QUEUE FRONT POINTER: 0

```

B.4.6 6 File 771 Setup as Completed by Site

```

NAME: RA-CLIENT3-ORM          ACTIVE/INACTIVE: ACTIVE
FACILITY NAME: 499           COUNTRY CODE: USA

NAME: RA-CLIENT3-ORU          ACTIVE/INACTIVE: ACTIVE
FACILITY NAME: 499           COUNTRY CODE: USA

NAME: RA-SERVER-IMG           ACTIVE/INACTIVE: ACTIVE
FACILITY NAME: 499           COUNTRY CODE: USA
Figure 14 6: Sample File 771 – HL7 Application Parameter
14.4.7 File 101 Setup as Completed by Site
NAME: RA SEND OUT ORM        ITEM TEXT: TESTING DATA STREAM
TYPE: subscriber            CREATOR: 0
DESCRIPTION: This subscriber requires messages to be sent in a DATASTREAM
directly to a dedicated port. This subscriber is a PACS or other vendor.
TIMESTAMP: 56953,38556      CLIENT (SUBSCRIBER): RA-CLIENT3-ORM
MESSAGE TYPE RECEIVED: ACK   EVENT TYPE: 001
PROCESSING ID: PRODUCTION    LOGICAL LINK: RAD HLLP
VERSION ID: 2.1              MESSAGE TYPE GENERATED: ORM
GENERATE/PROCESS ROUTINE: Q  SENDING FACILITY REQUIRED?: NO
RECEIVING FACILITY REQUIRED?: NO SECURITY REQUIRED?: NO
DATE/TIME OF MESSAGE REQUIRED?: YES

NAME: RA SEND OUT ORU        ITEM TEXT: TESTING DATA STREAM
TYPE: subscriber            CREATOR: 0
DESCRIPTION: This subscriber requires messages to be sent in a DATASTREAM
directly to a dedicated port. This subscriber is a PACS or other vendor.
TIMESTAMP: 56953,38556      CLIENT (SUBSCRIBER): RA-CLIENT3-ORU
MESSAGE TYPE RECEIVED: ACK   EVENT TYPE: R01
PROCESSING ID: PRODUCTION    LOGICAL LINK: RAD HLLP
VERSION ID: 2.1              MESSAGE TYPE GENERATED: ORM
GENERATE/PROCESS ROUTINE: Q  SENDING FACILITY REQUIRED?: NO
RECEIVING FACILITY REQUIRED?: NO SECURITY REQUIRED?: NO
DATE/TIME OF MESSAGE REQUIRED?: YES

NAME: RA REG                  ITEM TEXT: Rad/Nuc Med exam registered
TYPE: event driver           CREATOR: 0
PACKAGE: RADIOLOGY/NUCLEAR MEDICINE

```

DESCRIPTION: This protocol is triggered whenever a Radiology/Nuclear Medicine exam is registered. It executes code that creates an HL7 ORM message consisting of PID, ORC, OBR and OBX segments. The message contains all relevant information about the exam, including procedure, time of registration, procedure modifiers, patient allergies, and clinical history.

ITEM: RA SEND OUT ORM

ENTRY ACTION: Q TIMESTAMP: 56963,56123
 SERVER APPLICATION: RA-SERVER-IMG
 MESSAGE TYPE RECEIVED: ORM
 EVENT TYPE: O01 PROCESSING ID: PRODUCTION
 VERSION ID: 2.1 GENERATE/PROCESS ACK ROUTINE: Q

NAME: RA CANCEL ITEM TEXT: Rad/Nuc Med exam cancellation

TYPE: event driver CREATOR: 0

PACKAGE: RADIOLOGY/NUCLEAR MEDICINE

DESCRIPTION: This protocol is triggered whenever a Radiology/Nuclear Medicine exam is canceled. It executes code that creates an HL7 ORM message consisting of PID, ORC, OBR and OBX segments. The message contains all relevant information about the exam, including procedure, time of cancellation, procedure modifiers, patient allergies and clinical history.

ITEM: RA SEND OUT ORM

ENTRY ACTION: Q TIMESTAMP: 56960,33975
 SERVER APPLICATION: RA-SERVER-IMG
 MESSAGE TYPE RECEIVED: ORM
 EVENT TYPE: O01 PROCESSING ID: PRODUCTION
 VERSION ID: 2.1 GENERATE/PROCESS ACK ROUTINE: Q

NAME: RA RPT

ITEM TEXT: Rad/Nuc Med report released/verified

TYPE: event driver CREATOR: 0

DESCRIPTION: This protocol is triggered whenever a Radiology/Nuclear Medicine report enters into a status of Verified or Released/Not Verified. It executes code that creates an HL7 ORU message consisting of PID, OBR and OBX segments. The message contains relevant information about the report, including procedure, procedure modifiers, diagnostic code, interpreting physician, impression text and report text.

ITEM: RA SEND OUT ORU

ENTRY ACTION: Q TIMESTAMP: 56956,54228
 SERVER APPLICATION: RA-SERVER-IMG
 MESSAGE TYPE RECEIVED: ORU
 EVENT TYPE: R01 PROCESSING ID: PRODUCTION
 VERSION ID: 2.1 GENERATE/PROCESS ACK ROUTINE: Q

NAME: RA EXAMINED ITEM TEXT: Rad/Nuc Med examined case

TYPE: event driver CREATOR: 0

PACKAGE: RADIOLOGY/NUCLEAR MEDICINE

DESCRIPTION: This protocol is triggered whenever a Radiology/Nuclear Medicine exam has reached a status where GENERATE EXAMINED HL7 MSG is Y at that (or at a lower) status. This message contains all relevant information about the exam, including procedure, time of registration, procedure modifiers, patient allergies, and clinical history.

ITEM: RA SEND OUT ORM

TIMESTAMP: 56956,54228 SERVER APPLICATION: RA-SERVER-IMG
 MESSAGE TYPE RECEIVED: ORM EVENT TYPE: O01
 PROCESSING ID: PRODUCTION VERSION ID: 2.1
 GENERATE/PROCESS ACK ROUTINE: Q

Appendix C: HL7 1.5 Voice Recognition Interface

For query/report interface released with Radiology V4.0 in 1992.

C.1 Installation Instructions

Note: These instructions are specific to VISTA HL7 V 1.5 and any changes to that software could potentially make these instructions invalid.

To install the Voice Recognition HL7 interface on a VAX system, complete the following steps. An example of each step is provided on the following pages.

1. Familiarize yourself with the HL7 package. The voice recognition system uses the 1.5 backwards compatible features still contained in the 1.6 released version.
2. Create a login command file for each username.
3. Set up the decserver port for each non-RPMS system you will be connecting.
4. Tie the decserver node/port to the Username through the VMS automatic login file (^ALF).
5. Create the VMS terminal characteristics and protection.
6. Create the appropriate entries in the VISTA Device file (#3.5).
7. Use the HL7 package to do any required setup.
8. Test the HL7 interface.

C.2 Username Creation (VOICE1)

```

Username: VOICE1   Owner:
Account: UIC: [50,115] ([mgrdsm,voice1])
CLI: DCL Tables: DCLTABLES
Default: DISK$VA1:[VOICE1]
LGICMD: VOICE1.COM
Flags: disCtly Restricted DisWelcome DisNewMail DisReport Captive
Primary Dys: Mon Tue Wed Thu Fri
Secondary Days:                               Sat Sun
No access restrictions
Expiration:                (none)   Pwdminimum:      6   Login Fails:    0
Pwdlifetime:              180 00:00   Pwdchange:      (pre-expired)
Last Login: 13-Sep-1996 09:22 (interactive), (none) (non-
interactive)
Maxjobs: 0   Fillm: 150 Byt1m: 40960
Maxacctjobs: 0   Shrfillm: 0   Pbyt1m 0
Maxdetach: 0   BIOLm: 18   Jtquota: 1024
Prclm: 2   DIOLm 18   Wsdef: 800
Prio: 4   AST1m: 300   Wsquo: 1200

```

```

Queprio: 0  TQElm: 10  Wsextant: 1600
CPU:  (none)  Enqlm: 300  Pgflquo:  10240
Authorized Privileges:
  LOG_IO  TMPMBX  NETMBX  PRMGBL
Default Privileges:
  LOG_IO  TMPMBX  NETMBX  PRMGBL

```

C.3 Login Command File (VOICE1.COM)

```

$!Captive for VOICE1
$ if f$mode().nes."INTERACTIVE" then exit
$ on error then $logout
$ set nocontrol=t
$ set term/nowrap/noline/hostsync/noecho/eight/nobroad/pasthru
$
$ pid=f$getjpi("", "pid")
$ term-f$getjpi(pid, "terminal")
$ proc-"VOICE1_"term
$ set proc/name='proc'
$dsm
$ dsm/input=sys$command/uci=VAH/VOL=ROU^HLLP
$
$exit
$logout/brief

```

C.4 Set Up the Decserver Port

```

Port 48: AVAILABLE Server: DSV9
Character Size: 8  Input speed: 9600
Flow Control:  XONOutput Speed: 9600
Parity:  None  Modem Control:  Disabled
Stop Bits:  Dynamic

Access:  Dynamic  Local Switch: None
Backward Switch:  None  Name: LC-3-16
Break:  Disabled  Session Limit:  1
Forward Switch:  None  Type: ANSI

Dedicated service:  DHCP

Authorized Groups:  0
(Current) Groups:  0

Enabled Characters:

Autoprompt

```

C.5 Tie Decserver Node/Port to Username (VOICE1)

```

$ MC SYSMAN
SYSMAN> ALF ADD "ISC408/LC-6-4" VOICE1 /PORT
SYSMAN> ALF SHOW
%SYSMAN-I-ALFFIL, contents of ALF database on node ISC4A1

```


Terminal/Port Name	Username
-----	-----
ISC408/LC-6-4	
SYSMAN> EXIT	
\$	

C.6 Create LAT Port

```
MC LATCP CREAT PORT LTA9048 /NOLOG
MC LATCP SET PORT /NODE= DSVn /PORT=LC-n-n /NOLOG LTA9048
```

C.7 Create VMS Terminal Characteristics/Protection

```
$!VOICE1
$ SET PROTECT=W:RWLP /DEVICE LTA9048
$ SET TERM/PERM/NOWRAP/HOSTSYSNC/NOECHO/EIGHT/NOBROAD/ALTYPE/PASTHRU
LTA9048
```

C.8 Create DHCP Device File Entries

```
NAME: VOICE1 $I: _LAT9048
LOCATION OF TERMINAL; RADIOLOGY MARGIN WIDTH: 80
FORM FEED: #,*27,*91,*50,*74,*27,*91,*72
PAGE LENGTH: 24 BACK SPACE: $C(8)
SUBTYPE: C-VT100

NAME: NULL DEVICE $I _NLA0:
LOCATION OF TERMINAL: NULL DEVICE MARGIN WIDTH: 255
FORM FEED: # PAGE LENGTH: 256
BACK SPACE: $C(8) SYBTYP: P-OTHER
TYPE: TERMINAL
```

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

Web: <http://www.ihs.gov/GeneralWeb/HelpCenter/Helpdesk/index.cfm>

Email: support@ihs.gov