



Patient Appointment Information  
Transmission (PAIT)  
Release Notes and Installation Guide  
Patch SD\*5.3\*333

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Department of Veterans Affairs  
VistA Health Systems Design and Development

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## **Introduction**

This patch contains several enhancements, modifications and a fix to the Patient Appointment Information Transmission, originally released in patch SD\*5.3\*290. A post install routine will delete all previous seeding and update data from file 409.6 and a new seeding run will be activated.

Data from all pending appointments within the range 9.01.2002 to present and data for final appointments, that meet specified criteria, beginning 9.01.2003 will be wrapped in HL7 batch messages and transmitted to the Austin Automation Center (AAC).

This additional data supplements the existing Clinic Appointment Wait Time extracts 1 & 2. At this time those extracts should continue to be transmitted on the 5<sup>th</sup> and 31<sup>st</sup> of each month as originally designated in SD\*5.3\*193. Further instructions will be provided when those transmissions will no longer be necessary.

The One –Time Option Queue from the Taskman Management menu will be used to start SD-PAIT TASKED TRANSMISSION on a scheduled date. Subsequent updating transmissions will be scheduled on 1<sup>st</sup> and 15<sup>th</sup> day of each month. The frequency of transmission may change based on reporting needs.

## **Description of Functionality**

A bi-monthly Taskman job will collect and format data for HL7 batch transmission.

A set number of appointments, maximum of 5000, is collected in a temporary file. This file is used to create a HL7 batch transmission. After the batch data has been moved to the HL7 processing queue the temporary file is deleted and the process of generating data for transmission continues until all required data is generated and transmitted. The design allows for an immediate transmission after generation of partial data, and prevents the temporary file from becoming too large. The process is repeated until all required data is generated and transmitted.

Follow up transmissions begin scanning appointment data created from the day following the last scanned date saved at the end of each transmission in the last Scanned Date field (# 1.2) of the PATIENT APPOINTMENT INFO LOG file. Appointment statuses of previously transmitted data is also checked for final status values, (see SCH.25 Filler Status in the Interface Appendix). Entries in file 409.6 sent with the final status will be deleted after an HL7 acknowledgement of the successful transmission is received.

## Changes introduced with SD\*5.3\*333 patch

This patch contains significant enhancements, modifications and a fix to the Patient Appointment Information Transmission - PAIT. The majority of enhancements are related to message transmission and tracking.

The transmission process involves several steps and makes use of new technology – the VistA Interface Engine .

- Transmission to a local VistA Interface Engine
- Transmission to the clustered Interface Engine at the AAC
- Transmission and conversion of data to the AAC to create SAS files

A thorough review of all steps and the quality of data pointed us to the following enhancements, modifications and a fix:

1. Utilization of the server functionality of VA Mailman and creation of a server option on Forum that will receive PAIT and AAC messages related to transmission and acknowledgements. Selected data elements from transmission and acknowledgement messages are parsed and filed in the PAIT TRANSMISSION LOG file (# 409.8) hosted on Forum. Report options provide transmission verification and history for all VA sites.

Field	Description
DATE/TIME	the date/time a transmission mail message is received by the FORUM server option SD-PAIT-SERVER
MESSAGE TYPE	this field records the type of message received: A - Site Batch acknowledgement B - Site Background job transmission completion M - Missing sites report FROM AAC T –Transmitted sites report from AAC
SITE NUMBER	a unique three digits facility site number
LOG NUMBER	the log entry number of the transmission; this is the run entry number of the PATIENT multiple field in file 409.6

RUN COMPLETION DATE      the date/time of the completed



	transmission; this is the TRANSMISSION FINISHED field (#1.5) of 409.6 file
# OF BATCHES	the number of batch messages transmitted from the site.
# OF APPOINTMENTS	the number of appointments included in all created batches.
IP ADDRESS	the IP address of the Vitria Interface Engine set up at the PAIT transmission site.
BATCHES GENERATED	the number of HL7 messages generated by the PAIT transmissions and recorded in SD-PAIT Logical Link; this number may include batches from the previous transmissions.
BATCHES SENT	the number of HL7 messages sent to the local Interface Engine and recorded in the SD-PAIT Logical Link.
STATUS	the status indicated by a received Message A or B: A – status of the acknowledgement completion B – status of the SD-PAIT Logical Link at the end of transmission
HL7 MESSAGE ID	This field records the HL7 Message ID of received acknowledgement.
BATCH CONTROL ID	This field records the HL7 Batch ID of received acknowledgement.
RUN ACK STATUS	the ACK Status - the number ACK's received by HL7 vs the number of messages (batches) sent .
ACKS COMPLETE	this field is marked YES if all ACK's for a PAIT transmission are received.

2. Detailed information related to each transmission will be permanently stored in file 409.6

Field Description

- 1.3 # OF APPOINTMENTS
- 1.4 # OF BATCHES
- 1.5 TRANSMISSION FINISHED
- 2 PATIENT <-Mult [409.69P
- 9 CLINIC - pointer to the HOSPITAL LOCATION file
- 3 BATCH TRACKING <-Mult [409.7A]
- 01 BATCH CONTROL ID
- 02 BATCH CREATE DATE/TIME
- 03 MESSAGE CONTROL ID
- 04 APPLICATION ACK DATE/TIME
- 05 APPLICATION ACK TYPE

3 New report options for the site to print both the Transmission Summary and Acknowledgement Summary.

4.. New option SD-PAIT MANUAL BATCH REJECT to be used if a batch was not accepted by the AAC, was sent from VistA and the whole batch rejection has not been received.

Note: In a future enhancement it is anticipated to generate the whole batch rejection from the AAC, after comparison of batch control number ID, sent from VistA with received by the AAC.

5. To enhance the quality of data the following changes are introduced:

New components are added to SCH.11, SCH6, and SCH.7 segments of HL7 transmission.

**Table VA087 - Scheduling Event Reason**

VALUE	DESCRIPTION
CI	Check-in
CO	Check-out
NS	No Show
CC	Cancel by clinic
CP	Cancel by patient
COE	Check-out by encounter
NM	No Match
CT	<b>Cancelled Terminated</b>

CT is the Event Reason to finalize an appointment that was sent as pending and then, during the update process a new appointment is created for the same date and time. That situation caused the previous appointment record to be overridden by the new appointment record with a new creation date.

**Table 0276 - Appointment Reason Codes**

VALUE	DESCRIPTION
1	Next Ava. Appt. Indicated by User
2	Next Ava. Appt. Indicated by Calculation
3	Next Ava. Appt. Indicated by User & Calculation
4	Not Next Available with AutoRebook
5	Not Next Available No AutoRebook
6	Null (All others)

Appointment Reason Code table includes new six values instead of the previous “N” and “A” only. It will allow for more detailed sorting criteria, especially when calculating the next available time.

### 2.3.9 SCH Schedule Activity Information

SEQ	LE N	DT	R/O/C	RP /#	TBL#	ITEM #	ELEMENT NAME	VISTA DESCRIPTION
1	75	EI	R			00860	Placer Appointment ID	Sequential Number
11	200	TQ	O	Y		00884	Appointment Timing Quantity	In the following order: Date Appt Created Desired Date Appt Date (time) Checkout Date (time) Cancellation Date (time) Auto-rebook Date (time) Resched Date(time) Consult Request Date (time)

**Resched (uled) Date (time)** was added as the scheduled Appointment Date/Time of the appointment created as a continuation of previously canceled appointment. This components is always sent when the RS – Re-scheduled Appointment Type is identified. Including that new component will help to identify the follow-up appointments in the AAC.

**Consult Request Date (time)** was added as a new sequence identifying an optional date/time of the consultation if there is one associated with the appointment.

**Table VA0021 – Enrollment Priority**

VALUE	DESCRIPTION
8	Priority 8

The indicated change applies only to the table description, the indicated value was used before.

**Table 0277 - Appointment Type Codes**

VALUE	DESCRIPTION
0	Outpatient

The indicated change applies only to the table description, the indicated value was used before.

6. The logic of generating appointments from the update runs has been modified to start from scanning newly created records and then to update the previous pending appointments, if applicable. Also the last scanned date is the last date before the start of transmission, to avoid possible duplications.

The message generated at the end of transmission will contain additional information.

Subj: 500 - PAIT BACKGROUND JOB [#151708] 01/23/04@11:32 lines

The PAIT job has completed - TASK #: 60720 Log #: 1 on 1/23/04@11:32

Pending appointments: 10054  
Final appointments: 1534

-----  
Total appointments: 11588 Number of batches: 3

Fac	Log	Bch	Appt #	Date finished	IP Address	Gen	Sent	Com R	Com P	Status										
500		1		3		11588		1/23/04@11:32		10.88.63.68		7		6		6		6		Enabled

This message will be sent also to [S.SD-PAIT-SERVER@FORUM.VA.GOV](mailto:S.SD-PAIT-SERVER@FORUM.VA.GOV) and to the National Help Desk, if number of generated and sent batches indicates that there is potential problem in communication between VistA site and its local Interface Engine. In this situation additional warning messages may be sent.

7. Error codes for a possible rejection have been evaluated, modified and added by the AAC. The increased number of error code forced us to use a pointer to the PCMM Error Code file with adding the codes related to the PAIT.

**Table AAC001 - Error Code Set**

VALUE	DESCRIPTION
100	PATIENT DFN IS NOT NUMERIC OR IS MISSING
150	CLINIC IEN IS NOT NUMERIC OR IS MISSING
200	BHS STATION NUMBER AND STA3N ARE NOT EQUAL
250	INVALID OR MISSING BHS STATION NUMBER
300	INVALID OR MISSING STA3N
350	HL7 DATE IS NOT IN PROPER FORMAT OR IS MISSING.
400	DOB IS MISSING OR INVALID
450	CREATE DATE OR APPT DATE IS MISSING
500	CREATION DATE IS BEFORE SEPTEMBER 1, 2002
600	RESCHEDULED DATE AND APPT TYPE ARE NOT IN AGREEMENT - Rescheduled date requires SCH.8 Appt type = 'RS' and vice versa
650	CHECK OUT DATE AND EVENT REASON ARE NOT IN AGREEMENT - Check out date requires either SCH.6 Event reason = 'CO' or 'COE'
700	CANCELLATION DATE AND EVENT REASON ARE NOT IN AGREEMENT - Cancellation date requires SCH.6 Event reason = 'CC' or 'CP' or 'NS'
750	EVENT REASON AND FILLER STATUS ARE NOT IN AGREEMENT - All SCH.6 Event reason codes, except 'CI' require SCH.25 Filler status to be 'F' Final and accordingly only 'CI' and NULL should have SCH.25 Filler status to be 'P' Pending
800	FILLER STATUS IS MISSING OR IS INVALID
850	ADMIT TYPE IS INVALID (table SD009)
R	WHOLE BATCH REJECTED

R – Whole Batch Reject may be used with the manual batch rejection.

8. Application acknowledgements will be recognized by messages sent both to a local SD-PAIT Mail Group and to [S.SD-PAIT-SERVER@FORUM.VA.GOV](mailto:S.SD-PAIT-SERVER@FORUM.VA.GOV)

9. New and updated SORT/PRINT TEMPLATES (See Technical Information).

10. Independent reports, reflecting the transmission status, have been developed both by the AAC and Messaging and Interface Services Team.

11. Conversion data to HL7 formats have been verified and corrected.

12. The Release Notes have been updated with additional, detailed, functional and technical information.

## Installation

This patch has **POST INSTALL INSTRUCTIONS** that must be completed.

Documentation, Release Notes & Installation Guide:

SD\_53\_P333\_RN.PDF

KIDS Host File:

SD\_53\_P333.KID

The preferred method is to FTP the file from:

download.vista.med.va.gov

which will transmit the files from the first available FTP server.

The files may also be downloaded directly from a particular FTP location at the following locations.

Albany	<a href="ftp.fo-albany.med.va.gov">ftp.fo-albany.med.va.gov</a>
Hines	<a href="ftp.fo-hines.med.va.gov">ftp.fo-hines.med.va.gov</a>
Salt Lake	<a href="ftp.fo-slc.med.va.gov">ftp.fo-slc.med.va.gov</a>

Files are available in the ANONYMOUS.SOFTWARE directory

This patch may be installed with users on the system. Installation will take less than 2 minutes.

Use the 'LOAD A DISTRIBUTION' option on the KERNEL INSTALLATION & DISTRIBUTION menu. The host file name is SD\_53\_P333.KID. Answer YES to the question: 'Want to Continue with the Load? YES//']

Review your mapped set. If any of the routines listed in the ROUTINE SUMMARY section are mapped, they should be removed from the mapped set at this time.

From the Kernel Installation and Distribution System Menu, select the Installation menu.

From this menu, you may elect to use the following options  
(when prompted for INSTALL NAME, enter SD\*5.3\*333):

Backup a Transport Global – this option will create a backup message of any routines exported with the patch. It will NOT backup any other changes such as DDs or templates.

Compare Transport Global to Current System - this option will allow you to view all changes that will be made when the patch is installed. It compares all components of the patch (routines, DDs, templates, etc.).

Verify Checksums in Transport Global – this option will allow you to ensure the integrity of the routines that are in the transport global.

Print Transport Global – this option will allow you to view the components of the KIDS build.

Use the Install Package(s) option and select the package SD\*5.3\*333.

Select Installation Option: 6 Install Package(s)

Select INSTALL NAME: SD\*5.3\*333 Loaded from Distribution MM/DD/YYYY  
=> SD\*5.3\*333

This Distribution was loaded on MM/DD/YYYY with header of  
SD\*5.3\*333

It consisted of the following Install(s):

SD\*5.3\*333

Checking Install for Package SD\*5.3\*333

Incoming Files:

404.472 PCMM HL7 ERROR CODE (including data)

Note: You already have the 'PCMM HL7 ERROR CODE' File.  
I will OVERWRITE your data with mine.

409.6 PATIENT APPOINTMENT INFO LOG

Note: You already have the 'PATIENT APPOINTMENT INFO LOG' File.

Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES// NO

Want KIDS to INHIBIT LOGONs during the install? YES// NO

Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES// NO

Enter the Device you want to print the Install messages.

You can queue the install by enter a 'Q' at the device prompt.

Enter a '^' to abort the install      Press Return.

If routines were unmapped as part of step 2, they should be returned to the mapped set once the installation has run to completion.

SD-PAIT REPORTS option is a stand alone menu and should be assigned to the appropriate users who monitor patient appointment wait times. SD-PAIT MANUAL TRANSMISSION should be assigned to an IRM staff member or HAS ADPAC.

### Sample Installation:

```
Select Installation Option: INstall Package(s)
Select INSTALL NAME: SD*5.3*333 Loaded from Distribution 1/28/04@14:32:01
=> SD*5.3*333
```

```
This Distribution was loaded on Jan 28, 2004@14:32:01 with header of
SD*5.3*333
```

```
It consisted of the following Install(s):
```

```
SD*5.3*333
```

```
Checking Install for Package SD*5.3*333
```

Incoming Files:

```
404.472 PCMM HL7 ERROR CODE (including data)
```

```
Note: You already have the 'PCMM HL7 ERROR CODE' File.
```

```
I will OVERWRITE your data with mine.
```

```
409.6 PATIENT APPOINTMENT INFO LOG
```

```
Note: You already have the 'PATIENT APPOINTMENT INFO LOG' File.
```

Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES// NO

Want KIDS to INHIBIT LOGONs during the install? YES// NO

Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES// NO



Enter the Device you want to print the Install messages.  
You can queue the install by enter a 'Q' at the device prompt.  
Enter a '^' to abort the install.

DEVICE: HOME// UCX/TELNET

Install Started for SD\*5.3\*333 :  
Jan 28, 2004@14:37:19

Build Distribution Date: Jan 28, 2004

Installing Routines:  
Jan 28, 2004@14:37:19

Installing Data Dictionaries:  
Jan 28, 2004@14:37:20

Installing Data:  
Jan 28, 2004@14:37:20

Installing PACKAGE COMPONENTS:

Installing PRINT TEMPLATE

Installing SORT TEMPLATE  
SD\*5.3\*333

---

Installing PROTOCOL

Installing OPTION  
Jan 28, 2004@14:37:21

Updating Routine file...

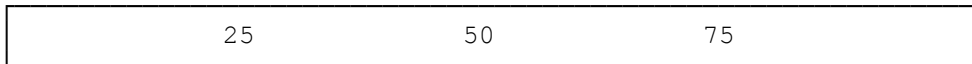
Updating KIDS files...

SD\*5.3\*333 Installed.  
Jan 28, 2004@14:37:21

Install Message sent #1852746

---

100%  
Complete



Install Completed

## Post Installation Instructions

### Run Post Init Routine SDP333P

From the programmer prompt run routine SDP333P

```
BAY>D ^SDP333P
```

```
SD*5.3*333 POST INIT  
Clean-Up file 409.6? NO// ?
```

ATTENTION: Answering 'YES' will delete all entries from file 409.6 (Patient Appointment Information Transmission). This is CORRECT for a first installation of the patch. If you are re-installing the patch and want to keep the entries in 409.6 answer 'NO' If this is the first installation of the patch answer 'YES'

```
Clean-Up file 409.6? NO// YES  
PAIT Clean-UP Task Submitted. Task number: nnnnn  
Members of the SD-PAIT mail group will receive a notification message  
when the clean-up job has completed.
```

### Example Mail Message:

```
Subj: PAIT Clean-Up [#152206] 02/03/04@10:25 3 lines  
From: POSTMASTER In 'IN' basket. Page 1 *New*
```

-----  
--

The PAIT Clean-Up, task #nnnnn, from the post installation of SD\*5.3\*333 has completed. You may resume post installation activities.

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

Post init routine, SDP333P, may be deleted after clean-up has completed.

Insure the SD-PAIT logical link is **ENABLED**:

Select HL7 Main Menu Option:

- Systems Link Monitor
- Filer and Link Management Options ...
- Message Management Options ...
- Interface Developer Options ...
- Site Parameter Edit

Select HL7 Main Menu Option: Filer and Link Management Options

SM Systems Link Monitor  
FM Monitor, Start, Stop Filers  
LM TCP Link Manager Start/Stop  
SA Stop All Messaging Background Processes  
RA Restart/Start All Links and Filers  
DF Default Filers Startup  
SL Start/Stop Links  
PI Ping (TCP Only)  
ED Link Edit  
ER Link Errors ...

Select Filer and Link Management Options Option: SL Start/Stop Links

This option is used to launch the lower level protocol for the appropriate device. Please select the node with which you want to communicate

Select HL LOGICAL LINK NODE: SD-PAIT

This LLP has been enabled!

```
SM      Systems Link Monitor
FM      Monitor, Start, Stop Filers
LM      TCP Link Manager Start/Stop
SA      Stop All Messaging Background Processes
RA      Restart/Start All Links and Filers
DF      Default Filers Startup
SL      Start/Stop Links
PI      Ping (TCP Only)
ED      Link Edit
ER      Link Errors ...

Select Filer and Link Management Options Option: SL Start/Stop Links

This option is used to launch the lower level protocol for the
appropriate device. Please select the node with which you want
to communicate

Select HL LOGICAL LINK NODE: SD-PAIT

This LLP has been enabled!
```

Edit the new SD-PAIT logical link:

Systems Link Monitor  
Filer and Link Management Options ...  
Message Management Options ...  
Interface Developer Options ...  
Site Parameter Edit

Select HL7 Main Menu Option: Interface Developer Options

EA Application Edit  
EP Protocol Edit  
EL Link Edit  
VI Validate Interfaces  
Reports ...

Select Interface Developer Options Option: EL Link Edit

Select HL LOGICAL LINK NODE: SD-PAIT

HL7 LOGICAL LINK	
-----	
<u>NODE:</u>	SD-PAIT
INSTITUTION:	
DOMAIN:	
AUTOSTART:	Enabled
QUEUE SIZE:	10
<u>LLP TYPE:</u>	TCP
-----	

```

HL7 LOGICAL LINK
-----
TCP LOWER LEVEL PARAMETERS
SD-PAIT

TCP/IP SERVICE TYPE: CLIENT (SENDER)
TCP/IP ADDRESS:
TCP/IP PORT:

ACK TIMEOUT:                                RE-TRANSMISION ATTEMPTS: 3
READ TIMEOUT:                               EXCEED RE-TRANSMIT ACTION:
BLOCK SIZE:                                 SAY HELO: NO

STARTUP NODE:                               PERSISTENT:
RETENTION:                                  UNI-DIRECTIONAL WAIT:

```

Enter the TCP/IP ADDRESS of your VistA Interface Engine

See Appendix B to determine your sites I.P. Address for the Interface Engine.

Enter the TCP/IP PORT – 9270

```

HL7 LOGICAL LINK
-----
TCP LOWER LEVEL PARAMETERS
SD-PAIT

TCP/IP SERVICE TYPE: CLIENT (SENDER)
TCP/IP ADDRESS: Your Vitria Interface IP
TCP/IP PORT: 9270

ACK TIMEOUT:                                RE-TRANSMISION ATTEMPTS: 3
READ TIMEOUT:                               EXCEED RE-TRANSMIT ACTION:
BLOCK SIZE:                                 SAY HELO: NO

STARTUP NODE:                               PERSISTENT:
RETENTION:                                  UNI-DIRECTIONAL WAIT:

```

To begin the initial March 15<sup>th</sup> seeding run use Taskman option “One-time Option Queue” and select option SD-PAIT TASKED TRANSMISSION.

When prompted 'Does this option need a DEVICE? NO//' press return.

When prompted 'Enter Particular Volume set if needed:' press return.

When prompted 'Requested Start Time: NOW//' press return. Optionally, you may elect to schedule the initial seeding run to begin during off peak hours.

**The initial seeding run will be executed only once, on March 15, 2004.**

```
Schedule/Unschedule Options
One-time Option Queue
Taskman Management Utilities ...
List Tasks
Dequeue Tasks
Requeue Tasks
Delete Tasks
Print Options that are Scheduled to run
Cleanup Task List
Print Options Recommended for Queueing

Select Taskman Management Option: ONE-time Option Queue

You can only select OPTION's that have the SCHEDULING RECOMMENDED
field set to YES or STARTUP.
Select OPTION NAME: SD-PAIT TASKED TRANSMISSION           Taskman PAIT Transmission
Does this option need a DEVICE? NO//
Enter Particular Volume set if needed:
Requested Start Time: NOW//
```

Using Taskman option Schedule/Unschedule Options schedule option SD-PAIT TASKED TRANSMISSION to run the 1<sup>st</sup> and 15<sup>th</sup> of every month. It is important to schedule the first tasked run to begin on 4.01.2004 (time is site selectable). This establishes the bi-monthly transmission schedule with the first transmission taking place on 4.01.2004

If your TASKED TRANSMISSION does not start on the 1<sup>st</sup> or 15<sup>th</sup> contact the National Help Desk (1 888 596 4357) before re-scheduling the transmission on a day other than the 1<sup>st</sup> or the 15<sup>th</sup>.

Edit Option Schedule	
Option Name: SD-PAIT TASKED TRANSMISSION	TASK ID: 61403
Menu Text: Taskman PAIT Transmission	
-----	
QUEUED TO RUN AT WHAT TIME: APR 1, 2004@04:00	
DEVICE FOR QUEUED JOB OUTPUT: [REDACTED]	
QUEUED TO RUN ON VOLUME SET:	
RESCHEDULING FREQUENCY: 1M(1,15)	
TASK PARAMETERS:	
SPECIAL QUEUEING:	
-----	
Only enter a DEVICE if the job needs an output device.	

**QUEUED TO RUN AT  
WHAT TIME FIELD**

1st scheduled run  
date should be  
4/01/2004. Time is  
site selectable

A MailMan message addressed to the SD-PAIT mail group will confirm completion of the tasked job.

## User Options

Option “SD-PAIT REPORTS      PAIT Reports Menu” provides four reports:

SD-PAIT PENDING	Pending Transmissions
SD-PAIT REJECTED	Rejected Transmissions
SD-PAIT ACK SUMMARY	Acknowledgement Summary
SD-PAIT TRANSMISSION SUMMARY	Transmission Summary

Pending Transmissions will list all transmitted HL7 messages whose status is Pending, but not designated as a future appointment. This report is a diagnostic tool useful for follow-up of inpatient appointments that have not been dispositioned.

Rejected Transmissions will list all transmitted HL7 messages that have been rejected by the AAC. The AAC will reject messages in which the data is not correctly formatted. Entries on this list warrant a review by the MAS ADPAC to validate patient demographic data.

Acknowledgement Summary lists all batches in Batch Control ID order. The report also indicates the Message Control ID, the Acknowledgement Date, and Acknowledgement Type.

Transmission Summary report may be used to determine the total number of patient appointment records, the run date, total number of batches, Batch Control ID, Message Control ID, and date/time stamp.

Option “SD-PAIT MANUAL TRANSMISSION Manual Startup PAIT Transmission” can be used to start a transmission if needed

## MailMan Messages

MailMan notification messages are generated for two events.

### 1. Background processing has completed:

```

Subj: 500 - PAIT BACKGROUND JOB [#151708] 01/23/04@11:32
lines

The PAIT job has completed - TASK #: 60720 Log #: 1 on
1/23/04@11:32

Pending appointments:          10054
Final appointments:           1534
-----
Total appointments:           11588 Number of batches: 3

Fac Log Bch Appt #  Date finished  IP Address  Gen  Sent Com R Com P  Status
-----
500|  1|  3| 11588|1/23/04@11:32|10.88.63.68|  7|   6|   6|   6| Enabled

```

**Legend:**

- Fac - Vista Site Facility Number
- Log - Run number
- Bch - Number of generated batches
- Appt # - Number of Appointments
- Date finished - Date/time when the transmission has finished
- IP Address - IP Address of HL Logical Link "SD\_PAIT"
- Gen - Number of batches generated ( including previous transmissions)
- Send - Number of all sent batches (including previous transmissions)
- Com R - Number of Commit Ack Received
- Com P - Number of Commit Ack Processed
- Status - Status of 'SD-PAIT' link at the end of transmission

### 2. Batch acknowledgement message from the AAC is received by the local HL7 package:



Subj: PAIT BATCH ACKNOWLEDGEMENT 442179 [#1407] 01/29/04@12:18 9 lines  
From: POSTMASTER In 'IN' basket. Page 1 \*New\*

-----  
----  
Station Number: 442  
Batch Control ID: 442179  
Message ID: 442179  
Log Entry: 2  
Run Date: Jan 29, 2004@10:02:27  
Status: Acknowledged - with rejections  
1 of 1 ACKs received for this run date

Use option SD-PAIT REJECTED Rejected Transmissions to view the rejections.

### **SD\*5.3\*333 Imports the following components:**

#### **POST-INIT ROUTINE**

SDP333P (May be deleted after install)

#### **FILES - updated**

409.6 PATIENT APPOINTMENT INFO LOG  
404.472 PCMM HL7 ERROR CODE FILE

#### **GLOBALS**

^SDWL(409.6  
^SCPT(404.472,

#### **NEW AND MODIFIED PRINT TEMPLATES**

SD-PAIT PAIT ACK SUMMARY  
SD-PAIT PATIENT PENDING APPT  
SD-PAIT REJECTED APPT  
SD-PAIT TRANS SUMMARY

#### **NEW AND MODIFIED SORT TEMPLATES**

SD-PAIT PAIT ACK SOR  
SD-PAIT PEND EXCL FUTURE  
SD-PAIT REJECTED APPT  
SD-PAIT TRANS SUMMARY

#### **MAIL GROUP**

SD-PAIT

## **MODIFIED ROUTINES**

SDRPA00  
SDRPA05  
SDRPA06  
SDRPA07  
SDRPA08

## **NEW ROUTINE**

SDRPA09

## **OPTIONS**

SD-PAIT MANUAL TRANSMISSION  
SD-PAIT TASKED TRANSMISSION  
SD-PAIT REPORTS  
SD-PAIT PENDING  
SD-PAIT REJECTED  
SD-PAIT TRANSMISSION SUMMARY  
SD-PAIT ACK SUMMARY

## **PROTOCOLS**

SD-PAIT-EVENT  
SD-PAIT-SUBS

## **HL7 APPLICATION PARAMETERS**

SD-AAC-PAIT  
SD-SITE-PAIT

## **HL LOGICAL LINK**

SD-PAIT

## **BACKGROUND JOB**

SD-PAIT TASKED TRANSMISSION

## **SECURITY KEYS**

NONE

## BULLETINS

NO BULLETINS are generated with this patch. Please reference MAILMAN NOTIFICATION MESSAGES listed above

### Initial Seeding Run Times:

Site	Patients (File 2)	Batch Messages	Entries Added to file 409.6	Run Time
Bay Pines	410,263	77	380,795	3.5 days
El Paso	72,589	21	102,425	1 day
Prescott	71,295	18	88,933	1 day
Salisbury	213,732	27	133,397	1.5 days

## GLOBAL GROWTH

Each entry added to file 409.6 takes approximately 250 bytes. A medium to large site will require at least 120MB of available space on the volume set containing the ^SDWL(409.6 global to accommodate the initial seeding process.

HL7 messages generated by the seeding process take approximately 4 Mb per batch message. A medium to large site will generate 60 to 100 batches on the initial seeding run which corresponds to at least 240Mb of available space on the volume set containing the HL7 globals.

^XMTP globals are created and used to record acknowledgment processing and have been defined to remain in the system for three days.

^XTMP("SDRPA-"\_BATCHNUMBER, [Diagnostics]

## Appendix A – HL7 Specifications

# HL7 Interface Specification for Patient Appointment Information Transmission

## Introduction

This interface specification details the information needed for the Patient Appointment Information Transmission data reporting. This data transmission will be triggered by a TaskMan queued job in **VistA**. The basic communication protocol will be addressed, as well as the information that will be made available and how it will be obtained.

## General

The formats of these messages conform to the Version 2.4 HL7 Interface Standards where applicable. HL7 custom message formats (“Z” segments) are used only when necessary.

## 1.2 Message Content

The table below describes the data fields and HL7 mappings:

Data item	Length	Type	Definition	HL7
Integration Control Number	10	Alpha-numeric	ICN is a VHA wide internal key, uniquely assigned to each PATIENT. The ICN is a 10 digit.	PID.3
Patient's DFN	8	Numeric	The internal number of the patient from within the Patient file.	PID.3
Patient's SSN	10	9 Numeric, 1 Alpha	The social security number or the generated pseudo SSN of the patient.	PID.19
Last Name First Name Middle Name	45	Text	The name of the patient. Held as three distinct names with a combined maximum length of 45 characters	PID.5
Date Of Birth	8	Date	The date of birth of the patient.	PID.7
Current SC status	1	Text	Current service connected status, Y/N	ZSP.2

Current SC percentage	3	Numeric	Current service connected percentage	ZSP.3
Date Appointment Created	8	Date	The date the appointment was created	SCH.11
Desired Appointment Date	8	Date	The date the appointment was requested to take place.	SCH.11
Appointment Date	12	Date/time	The date the appointment was scheduled to be kept.	SCH.11
Appointment status	3	Text	See table 0278	SCH.25
Next Available Request Flags	1	Numeric	See table 0276	SCH.7
Cancellation Date	12	Date/time	If the appointment was cancelled by the clinic or the patient, the date of cancellation.	SCH.11
Reschedule Date	12	Date/time	The date an appointment was rescheduled for without auto-rebooking	SCH.11
Auto-rebook Flag	1	Numeric	See table 0276	SCH.7
Auto-rebook Date	12	Date/time	Date of the auto-rebooked appointment	SCH.11
New to Facility/Clinic Flag	1	Text	NTF if the patient did not have a prior appointment at this facility in the past 24 months. SHB otherwise.	PV2.24
Enrollment Priority	1	Alpha numeric	See table VA0021	ZEN
Service Connection Condition Flag	1	Numeric	See table SD008	ZCL.2
Agent Orange Exposure	1	Numeric	See table SD008	ZCL.2
Ionizing Radiation Exposure	1	Numeric	See table SD008	ZCL.2

Environmental Contaminants	1	Numeric	See table SD008	ZCL.2
Military Sexual Trauma	1	Numeric	See table SD008	ZCL.2
Head and/or Neck Cancer	1	Numeric	See table SD008	ZCL.2
Clinic IEN Number	6	Numeric	Internal Identifier of the Hospital Location the appointment was scheduled for.	AIL.3.1
Clinic Name	30	Text	Name of Clinic from file 44	AIL.3.9
DSS Identifier of Clinic	3	Numeric	Stop code of the Hospital Location file the appointment was scheduled for.	AIL.4
DSS Credit Stop of Clinic	3	Numeric	Credit stop code of the Hospital Location file	AIL.5
Facility Number	6	Three digit numeric station number plus any modifiers	Station Number, field #99 from the Institution file	PV1.39
Provider		Text	IEN and name of provider associated with the Hospital Location	AIP.3
Check out Date	12	Date/time	Date of appointment checkout. It is considered to be a kept appointment.	SCH.11
Appointment Type	3	Alpha	See Table 0277	SCH.8
Scheduling Event Reason	3	Alpha	See Table VA087	SCH.6

Admission Type	4	Numeric	See table SD009	PV1.4
Consult Request Date	12	Date	The request date and time of the related consult if applicable – the DATE OF REQUEST field (#3) of the REQUEST/CONSULTATION file (#123).	SCH.11

Note: If the appointment is SC (Service Connected) related then only MST and Head and/or Neck cancer may be identified as well. All other classifications can be claimed only if the appointment is not SC.

SIU	SIU Message	Section
BSH	Batch Header	2.3.2
{MSH}	Message Header	2.3.1
SCH	Schedule Activity Information	2.3.9
PID	Patient Identification	2.3.4
PV1	Patient Visit	2.3.5
PV2	Patient Visit	2.3.6
{AIP;}	Appointment information - personnel resource segment	2.3.7
{AIL}	Appointment Information	2.3.8
{ZCL}	VA-Specific Outpatient Classification	2.3.10
{ZEN}	VA Specific Enrollment	2.3.11
{ZSP}	VA-Specific Service Period	2.3.12
BTS	Batch Trailer	2.3.3

## 1.2.0 Data Capture and Transmission

A Taskman background job will be scheduled to run at specified intervals. The background job will collect and format data for HL7 batch transmission.

A determined number of appointments is generated into a temporary file. That file is sent to create HL7 transmission in a batch format. As soon as the batch is put into a queue, the temporary file is deleted and the process of generating data for transmission continues until all required data is generated and transmitted. That design allows for an immediate transmission after generation of a partial data, and prevents the temporary file from growing tremendously before it is sent for transmission. The process is repeated until all required data is generated and transmitted.

The follow up transmissions will be created as batch messages with all appointments made starting from the next date to the last scanned appointment creation date of the last transmission, and with previously sent appointments, if their statuses turn out to have one of the final values, see SCH.25. Filler Status in SIU Event Mapping Table. The previously sent appointments are evaluated for a possible final transmission from the Patient Transmission Info Log file (#409.6). Appointments entries in that file that were sent with the final status will be deleted after an acknowledgement of the successful transmission is received.

### **1.2.1 Batch Messages**

Batch messages will be used to transmit patient appointment information. Each batch message may contain up to 5000 messages. One message will represent one patient appointment.

### **1.2.2 Batch Acknowledgements**

Each batch message sent will be acknowledged at the application level.

### **1.2.3 Lower Level Protocol**

TCP/IP will be used.



## 2 HL7 Control Segments

This section defines the HL7 control segments supported by **VistA** and implemented in this transmission. The messages are presented separately and defined by category. Segments are also described.

### 2.1 Message Definitions

Each message is composed of segments. Segments contain logical groupings of data. Segments may be optional or repeatable. A [ ] indicates the segment is optional, the {} indicates the segment is repeatable. For each message category there will be a list of HL7 standard segments or "Z" segments used for the message.

### 2.2 Segment Table Definitions

For each segment, the data elements are described in table format. The table includes the sequence number (SEQ), maximum length (LEN), data type (DT), required or optional (R/O), repeatable (RP/#), the table number (TBL #), the element name, and the **VistA** description. Each segment is described in the following sections.

### 2.3 Message Control Segments

This section describes the message control segments which are contained in message types described in this document. These are generic descriptions. Any time any of the segments described in this section are included in a message in this document, the **VistA** descriptions and mappings will be as specified here, unless otherwise specified in that section.

### 2.3.1 MSH - Message Header Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VISTA DESCRIPTION
1	1	ST	R			Field Separator	Recommended value is ^ (caret)
2	4	ST	R			Encoding Characters	Recommended delimiter values: Component = ~ (tilde) Repeat =   (bar) Escape = \ (back slash) Subcomponent = & (ampersand)
3	15	ST				Sending Application	When originating from facility: <b>SD-SITE-PAIT</b> When originating from ACC: <b>SD-AAC-PAIT</b>
4	20	ST				Sending Facility	When originating from facility: Station's facility number
5	30	ST				Receiving Application	<b>SD-AAC-PAIT</b>
6	30	ST				Receiving Facility	200
7	26	TS				Date/Time Of Message	Not used
8	40	ST				Security	Not used
9	7	CM	R		0076 0003	Message Type	<u>2 Components</u> 1. Message type 2. Trigger event
10	20	ST	R			Message Control ID	Batch and sequence number automatically generated by <b>VISTA HL7 Package</b>
11	1	ID	R			Processing ID	<b>P</b> (production)
12	8	ID	R			Version ID	<b>2.4</b> (Version 2.4)
13	15	NM				Sequence Number	Not used
14	180	ST				Continuation Pointer	Not used
15	2	ID				Accept Acknowledgment Type	<b>AL</b> (always acknowledge)
16	2	ID				Application Acknowledgment Type	<b>AL</b> (always acknowledge)
17	3	ID				Country Code	USA

### 2.3.2 BHS – Batch Header Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VISTA DESCRIPTION
1	1	ST	R			Batch Field Separator	Recommended value is ^
2	4	ST	R			Batch Encoding Characters	Delimiter values: Component = ~ (tilde) Repeat =   (bar) Escape = \ (back slash) Subcomponent = &
3	15	ST				Batch Sending Application	When originating from facility: <b>SD-SITE-PAIT</b> When originating from AAC: <b>SD-ACC-PAIT</b>
4	20	ST				Batch Sending Facility	When originating from facility: Station's facility number when originating from AAC: <b>200</b>
5	15	ST				Batch Receiving Application	When originating from facility: <b>SD-ACC-PAIT</b> When originating from AAC: <b>SD-SITE-PAIT</b>
6	20	ST				Batch Receiving Facility	When originating from facility: Station's facility number When originating from AAC: <b>200</b>
7	26	TS				Batch Creation Date/Time	Date and time batch message was created
8	40	ST				Batch Security	Not used
9	20	ST				Batch Name/ID/Type	Components 1. Not used 2. P 3. SIU,S12 4. 2.4 5. AL 6. AL
10	80	ST			0008	Batch Comment	<u>Components</u> 1. Acknowledgement Code 2. Text Message
11	20	ST				Batch Control ID	When originating from facility: Automatically generated by <b>VISTA HL7 Package</b> When Originating from AAC: Acknowledgement msg #
12	20	ST				Reference Batch Control ID	When originating from facility: Null When originating from AAC: Batch Control ID of batch message being acknowledged

### 2.3.3 BTS - Batch Trailer Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VISTA DESCRIPTION
1	10	ST				Batch Message Count	Number of messages within batch
2	80	ST				Batch Comment	Not used
3	100	CM		Y		Batch Totals	Not used

### 2.3.4 PID - Patient Identification Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VISTA DESCRIPTION
1	4	SI				Set ID - Patient ID	Sequential Number
2	17	CK				Patient ID (External ID)	Primary Long ID
3	21	CM	R			Patient ID (Internal ID)	Component 1. ICN 2. NULL 3. NULL 4. USVHA&&L 5. NI  Repetition 1. DFN 2. Null 3. Null 4. USVHA&&L 5. PI
4	12	ST				Alternate Patient ID	Not used
5	48	PN	R			Patient Name	Component 1. Family name 2. Given name 3. Middle initial 4. Suffix
6	30	ST				Mother's Maiden Name	Not used
7	26	TS				Date of Birth	Date of birth
8	1	ID				Sex	Not used
9	48	PN				Patient Alias	Not used
10	1	ID				Race	Not used
11	106	AD				Patient Address	Zip Code

### 2.3.4 PID - Patient Identification Segment (continued)

12	4	ID				County Code	Not used
13	40	TN				Phone Number - Home	Not used
14	40	TN				Phone Number - Business	Not used
15	25	ST				Language - Patient	Not used
16	1	ID				Marital Status	Not used
17	3	ID				Religion	Not used
18	20	CK				Patient Account Number	Not used
19	16	ST				SSN Number - Patient	Social security number and pseudo indicator
20	25	CM				Driver's Lic Num - Patient	Not used
21	20	CK				Mother's Identifier	Not used
22	1	ID				Ethnic Group	Not used
23	25	ST				Birth Place	Not used
24	2	ID				Multiple Birth Indicator	Not used
25	2	NM				Birth Order	Not used
26	3	ID				Citizenship	Not used
27	60	CE				Veterans Military Status	Not used

### 2.3.5 PV1 - Patient Visit Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VISTA DESCRIPTION
1	4	SI				Set ID - Patient Visit	Sequential Number
2	1	ID			0004	Patient Class	Patient Class
3	12	CM				Assigned Patient Location	Not used
4	4	ID			0007	Admission Type	Refer to table SD009 (Purpose of Visit/Appointment Type)
5	20	ST				Preadmit Number	Not used
6	12	CM				Prior Patient Location	Not used
7	60	CN				Attending Doctor	Not used
8	60	CN				Referring Doctor	Not used
9	60	CN				Consulting Doctor	Not used
10	3	ID				Hospital Service	Not used
11	12	CM				Temporary Location	Not used
12	2	ID				Preadmit Test Indicator	Not used
13	2	ID				Readmission Indicator	Not used
14	3	ID				Admit Source	Not used
15	2	ID				Ambulatory Status	Not used
16	2	ID				VIP Indicator	Not used
17	60	CN				Admitting Doctor	Not used
18	2	ID				Patient Type	Not used
19	15	NM				Visit Number	Not used
20	50	CM				Financial Class	Not used
21	2	ID				Charge Price Indicator	Not used
22	2	ID				Courtesy Code	Not used
23	2	ID				Credit Rating	Not used
24	2	ID				Contract Code	Not used

**PV1 - Patient Visit Segment (continued)**

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VISTA DESCRIPTION
25	8	DT				Contract Effective Date	Not used
26	12	NM				Contract Amount	Not used
27	3	NM				Contract Period	Not used
28	2	ID				Interest Code	Not used
29	1	ID				Transfer to Bad Debt Code	Not used
30	8	DT				Transfer to Bad Debt Date	Not used
31	10	ID				Bad Debt Agency Code	Not used
32	12	NM				Bad Debt Transfer Amount	Not used
33	12	NM				Bad Debt Recovery Amount	Not used
34	1	ID				Delete Account Indicator	Not used
35	8	DT				Delete Account Date	Not used
36	3	ID				Discharge Disposition	Not used
37	25	CM				Discharged to Location	Not used
38	2	ID				Diet Type	Not used
39	7	ID				Servicing Facility	Facility number or Facility number+ suffix
40	1	ID				Bed Status	Not used
41	2	ID				Account Status	Not used
42	12	CM				Pending Location	Not used
43	12	CM				Prior Temporary Location	Not used
44	26	TS				Admit Date/Time	Not used
45	26	TS				Discharge Date/Time	Not used
46	12	NM				Current Patient Balance	Not used
47	12	NM				Total Charges	Not used
48	12	NM				Total Adjustments	Not used
49	12	NM				Total Payments	Not used
50	20	CM				Alternate Visit ID	Not used

### 2.3.6 PV2 Patient Visit

SEQ	LE N	DT	R/	RP/ #	TB L#	ITE M#	ELEMENT NAME	VISTA DESCRIPTI ON
1	80	PL	C			0011	Prior Pending Location	Not used
2	60	CE	O			0012	Accommodation Code	Not used
3	60	CE	O			0013	Admit Reason	Not used
4	60	CE	O			0014	Transfer Reason	Not used
5	25	ST	O			0015	Patient Valuables	Not used
6	25	ST	O			0016	Patient Valuables Location	Not used
7	2	IS	O			0017	Visit User Code	Not used
8	26	TS	O			0018	Expected Admit Date/Time	Not used
9	26	TS	O			0019	Expected Discharge Date/Time	Not used
10	3	NM	O			0071	Estimated Length of Inpatient Stay	Not used
11	3	NM	O			0072	Actual Length of Inpatient Stay	Not used
12	50	ST	O			0073	Visit Description	Not used
13	90	XCN	O			0074	Referral Source Code	Not used
14	8	DT	O			0075	Previous Service Date	Not used
15	1	ID	O			0076	Employment Illness Related Indicator	Not used
16	1	IS	O			0077	Purge Status Code	Not used
17	8	DT	O			0078	Purge Status Date	Not used
18	2	IS	O			0079	Special Program Code	Not used
19	1	ID	O			0070	Retention Indicator	Not used
20	1	NM	O			0071	Expected Number of Insurance Plans	Not used
21	1	IS	O			0072	Visit Publicity Code	Not used
22	1	ID	O			0073	Visit Protection Indicator	Not used
23	90	XO N	O			0074	Clinic Organization Name	Not used
24	2	IS	O		021 6	0075	Patient Status Code	New to Facility/ Clinic
25	1	IS	O			0076	Visit Priority Code	Not used
26	8	DT	O			0077	Previous Treatment Date	Not used
27	2	IS	O			0078	Expected Discharge Disposition	Not used
28	8	DT	O			0079	Signature on File Date	Not used
29	8	DT	O			0070	First Similar Illness Date	Not used
30	3	IS	O			0071	Patient Charge Adjustment Code	Not used
31	2	IS	O			0072	Recurring Service Code	Not used
32	1	ID	O			0073	Billing Media Code	Not used
33	26	TS	O			0074	Expected Surgery Date & Time	Not used
34	2	ID	O			0075	Military Partnership Code	Not used

SEQ	LEN	DT	R/	RP/#	TBL#	ITEM#	ELEMENT NAME	VISTA DESCRIPTION
35	2	ID	O			0076	Military Non-Availability Code	Not used
36	1	ID	O			0077	Newborn Baby Indicator	Not used
37	1	ID	O			0078	Baby Detained Indicator	Not used

### 2.3.7 AIP - Appointment Information - Personnel Resource Segment

SEQ	LEN	DT	R/O/C	RP/#	TBL#	ITEM#	ELEMENT NAME	VISTA DESCRIPTION
1	4	SI	R			00906	Set ID - AIP	Sequential Number
2	3	ID	C			00763	Segment Action code	Not used
3	80	XCN	C	Y		00913	Personnel Resource ID	Component 1. Provider IEN 2. Family name 3. Given name 4. Middle name or initial 5. Suffix
4	200	CE	R			00907	Resource Role	Provider
5	200	CE	O			00899	Resource Group	Not used
6	26	TS	C			01202	Start Date/Time	Not used
7	20	NM	C			00891	Start Date/Time Offset	Not used
8	200	CE	C			00892	Start Date/Time Offset Units	Not used



### 2.3.8 AIL Appointment Information

SEQ	LEN	DT	R/O/ C	RP/ #	TBL#	ITE M#	ELEMENT NAME	VISTA DESCRIPTION
1	4	SI	R			0090 2	Set ID - AIL	Sequential Number
2	1	ID	C			0076 3	Segment Action Code	Not used
3	90	PL	C			0090 3	Location Resource ID	Clinic Name Components <ol style="list-style-type: none"> <li>1. Clinic IEN (20)</li> <li>2. Null</li> <li>3. Null</li> <li>4. Null</li> <li>5. Null</li> <li>6. Null</li> <li>7. Null</li> <li>8. Null</li> <li>9. Clinic name (60)</li> </ol>
4	100	CE	R		VA088	0090 4	Location Type	DSS ID Components <ol style="list-style-type: none"> <li>1. DSS Clinic ID code (3)</li> <li>2. Description (40)</li> <li>3. "DSS Clinic ID" (13)</li> </ol>
5	100	CE	O		VA088	0090 5	Location Group	DSS credit stop <ol style="list-style-type: none"> <li>1. DSS credit stop code (3)</li> <li>2. Description (40)</li> <li>3. "DSS Credit Stop" (15)</li> </ol>
6	26	TS	C			0120 2	Start Date/Time	Not used
7	20	NM	C			0089 1	Start Date/Time Offset	Not used
8	200	CE	C			0089 2	Start Date/Time Offset Units	Not used
9	20	NM	O			0089 3	Duration	Not used
10	200	CE	O			0089 4	Duration Units	Not used
11	10	IS	C			0089 5	Allow Substitution Code	Not used
12	200	CE	C			0088 9	Filler Status Code	Not used

### 2.3.9 SCH Schedule Activity Information

SEQ	LE N	DT	R/O/C	RP #	TBL#	ITEM #	ELEMENT NAME	VISTA DESCRIPTION
1	75	EI	R			00860	Placer Appointment ID	Sequential Number
2	75	EI	C			00861	Filler Appointment ID	Not used
3	5	NM	C			00862	Occurrence Number	Not used
4	75	EI	O			00863	Placer Group Number	Not used
5	200	CE	O			00864	Schedule ID	Not used
6	3	CE	O		VA087	00883	Event Reason	Component Scheduling Event Reason codes.
7	1	CE	O		0276	00866	Appointment Reason	Appointment Reason
8	3	CE	O		0277	00867	Appointment Type	Appointment Type Codes
9	20	NM	O			00868	Appointment Duration	Not used
10	200	CE	O			01304	Appointment Duration Units	Not used
11	200	TQ	O	Y		00884	Appointment Timing Quantity	In the following order: Date Appt Created Desired Date Appt Date (time) Checkout Date (time) Cancellation Date (time) Auto-rebook Date(time) Resched Date(time)
12	48	XC N	O			00874	Placer Contact Person	Not used
13	40	XTN	O			00875	Placer Contact Phone Number	Not used
14	106	XAD	O			00876	Placer Contact Address	Not used
15	80	PL	O			00877	Placer Contact Location	Not used
16	38	XC N	R			00885	Filler Contact Person	Not used
17	40	XTN	O			00886	Filler Contact Phone Number	Not used
18	106	XAD	O			00887	Filler Contact Address	Not used
19	80	PL	O			00888	Filler Contact Location	Not used
20	48	XC N	R			00878	Entered by Person	Not used
21	40	XTN	O			00879	Entered by Phone Number	Not used
22	80	PL	O			00880	Entered by Location	Not used
23	75	EI	O			00881	Parent Placer Appointment ID	Not used
24	75	EI	O			00882	Parent Filler Appointment ID	Not used
25	200	CE	R		0278	00889	Filler Status Code	Appointment Status

### 2.3.10 ZCL - VA-Specific Outpatient Classification Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	VISTA ELEMENT NAME
1	4	SI	R			SET ID
2	2	ID	R		SD008	OUTPATIENT CLASSIFICATION TYPE
3	50	ST				VALUE

### 2.3.11 ZEN - VA-Specific Enrollment Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	VISTA ELEMENT NAME
1	4	SI	R			SET ID
2	8	DT				NOT USED
3	1	ID				NOT USED
4	1	ID				NOT USED
5	1	ID				NOT USED
6	60	TX				NOT USED
7	7	ID				NOT USED
8	7	ID				NOT USED
9	1	ID			VA002 1	ENROLLMENT PRIORITY
10	8	DT				NOT USED

### 2.3.12 ZSP - VA-Specific Service Period Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	VISTA ELEMENT NAME
1	4	SI	R			SET ID
2	1	ID	R		VA01	SERVICE CONNECTED?
3	3	NM				SERVICE CONNECTED PERCENTAGE
4	2	ID				NOT USED
5	1	ID				NOT USED

### 3.0 SUPPORTED AND USER-DEFINED HL7 TABLES

**Table 0003 - Event type**

VALUE	DESCRIPTION
S12	SIU/ACK - Notification of new appointment booking
S14	SIU/ACK - Notification of appointment modification
S15	SIU/ACK - Notification of appointment cancellation
S26	SIU/ACK Notification that patient did not show up for schedule appointment

**Table 0004 – Patient Class**

VALUE	DESCRIPTION
I	INPATIENT
O	OUTPATIENT
U	UNKNOWN

**Table 0008 - Acknowledgment Code**

VALUE	DESCRIPTION
AA	APPLICATION ACKNOWLEDGMENT: ACCEPT
AE	APPLICATION ACKNOWLEDGMENT: ERROR
AR	APPLICATION ACKNOWLEDGMENT: REJECT
MR	APPLICATION ACKNOWLEDGMENT: MANUAL REJECT
CA	ACCEPT ACKNOWLEDGMENT: COMMIT ACCEPT
CE	ACCEPT ACKNOWLEDGMENT: COMMIT ERROR
CR	ACCEPT ACKNOWLEDGMENT: COMMIT REJECT

The patch is prepared for 'AR' – THE WHOLE BATCH REJECTION but It has not been expected to receive that code from the AAC at this time. 'MR' may be used instead.

**Table 0076 - Message Type**

VALUE	DESCRIPTION
SIU	SIU MESSAGE
ACK	GENERAL ACKNOWLEDGMENT

**Table 0216 - Patient Status Codes**

VALUE	DESCRIPTION
NTF	Patient did not have a prior appointment at this Facility in the past 24 months; New to parent and substation.
SHB	Patient did have a prior appointment at this parent and substation in the past 24 months; Registered here before.
OPN	Patient did not have a prior appointment at this substation but was registered with parent station.

The patient status code indicates if a patient is new to the facility or not. Both the parent station and the substations are evaluated as the facility. The parent station is evaluated with the primary DSS ID only; the substation is evaluated with both DSS ID stop code and the DSS credit stop code. The patient is considered new to the facility if he/she did not have another scheduled appointment in the same facility during the previous 24 months. The facility's station number is determined from the Division (field #3.5) of the clinic's Hospital Location file #44 entry. The division is retrieved from the Medical Center Division file #40.8 from which the Institution File Pointer field (#.07) is used to look up the Institution file #4 entry where the Station Number field (#99) is stored.

**Table 0276 - Appointment Reason Codes**

VALUE	DESCRIPTION
1	Next Ava. Appt. Indicated by User
2	Next Ava. Appt. Indicated by Calculation
3	Next Ava. Appt. Indicated by User & Calculation
4	Not Next Available with AutoRebook
5	Not Next Available No AutoRebook
6	Null (All others)

**Table 0277 - Appointment Type Codes**

VALUE	DESCRIPTION
AR	Action required
NAT	No action taken
F	Future
NC	Non count
NCF	Non count future
ABK	Auto re-book
O	Outpatient
I	Inpatient
RS	Re-schedule

**Table 0278 Filler Status Codes**

VALUE	DESCRIPTION
P	Pending
F	Final

**Table VA01 - Yes/No**

VALUE	DESCRIPTION
0	NO
1	YES
N	NO
Y	YES
U	UNKNOWN

**Table SD008 - Outpatient Classification Type**

VALUE	DESCRIPTION
1	AGENT ORANGE
2	IONIZING RADIATION
3	SERVICE CONNECTED
4	ENVIRONMENTAL CONTAMINANTS
5	MILITARY SEXUAL TRAUMA
6	HEAD AND/OR NECK CANCER

**Table SD009 - Purpose of Visit & Appointment Type**

VALUE	PURPOSE OF VISIT	APPOINTMENT TYPE
0101	C&P	COMPENSATION & PENSION
0102	C&P	CLASS II DENTAL
0103	C&P	ORGAN DONORS
0104	C&P	EMPLOYEE
0105	C&P	PRIMA FACIA
0106	C&P	RESEARCH
0107	C&P	COLLATERAL OF VET.
0108	C&P	SHARING AGREEMENT
0109	C&P	REGULAR
0111	C&P	SERVICE CONNECTED
0201	10-10	COMPENSATION & PENSION
0202	10-10	CLASS II DENTAL
0203	10-10	ORGAN DONORS
0204	10-10	EMPLOYEE
0205	10-10	PRIMA FACIA
0206	10-10	RESEARCH
0207	10-10	COLLATERAL OF VET.
0208	10-10	SHARING AGREEMENT
0209	10-10	REGULAR
0211	10-10	SERVICE CONNECTED

0301	SCHEDULED VISIT	COMPENSATION & PENSION
0302	SCHEDULED VISIT	CLASS II DENTAL
0303	SCHEDULED VISIT	ORGAN DONORS
0304	SCHEDULED VISIT	EMPLOYEE
0305	SCHEDULED VISIT	PRIMA FACIA
0306	SCHEDULED VISIT	RESEARCH
0307	SCHEDULED VISIT	COLLATERAL OF VET.
0308	SCHEDULED VISIT	SHARING AGREEMENT
0309	SCHEDULED VISIT	REGULAR
0311	SCHEDULED VISIT	SERVICE CONNECTED
0401	UNSCHED. VISIT	COMPENSATION & PENSION
0402	UNSCHED. VISIT	CLASS II DENTAL
0403	UNSCHED. VISIT	ORGAN DONORS
0404	UNSCHED. VISIT	EMPLOYEE
0405	UNSCHED. VISIT	PRIMA FACIA
0406	UNSCHED. VISIT	RESEARCH
0407	UNSCHED. VISIT	COLLATERAL OF VET.
0408	UNSCHED. VISIT	SHARING AGREEMENT
0409	UNSCHED. VISIT	REGULAR
0411	UNSCHED. VISIT	SERVICE CONNECTED

Value denotes a combination of Purpose of Visit & Appointment Type, which is known as “Admission Type” for the purposes of data transmission. This table is used in processing the ACRP HL7 transmission.

*Note:*

*It has been determined that PV1 segment can contain the ‘empty’ value for sequence P1.4 and it has to be treated as **acceptable**. That might happen when a new appointment is scheduled in place of a previously canceled appointment, and if the original appointment has been already transmitted by PAIT.*

**Table VA0021 – Enrollment Priority**

VALUE	DESCRIPTION
1	Priority 1
2	Priority 2
3	Priority 3
4	Priority 4
5	Priority 5
6	Priority 6
7	Priority 7
8	Priority 8

**Table VA087 - Scheduling Event Reason**

VALUE	DESCRIPTION
CI	Check-in
CO	Check-out
NS	No Show
CC	Cancel by clinic
CP	Cancel by patient
COE	Check-out by encounter
NM	No Match
CT	Cancelled Terminated

**Table AAC001 - Error Code Set**

VALUE	DESCRIPTION
100	PATIENT DFN IS NOT NUMERIC OR IS MISSING
150	CLINIC IEN IS NOT NUMERIC OR IS MISSING
200	BHS STATION NUMBER AND STA3N ARE NOT EQUAL
250	INVALID OR MISSING BHS STATION NUMBER
300	INVALID OR MISSING STA3N
350	HL7 DATE IS NOT IN PROPER FORMAT OR IS MISSING.
400	DOB IS MISSING OR INVALID
450	CREATE DATE OR APPT DATE IS MISSING
500	CREATION DATE IS BEFORE SEPTEMBER 1, 2002
600	RESCHEDULED DATE AND APPT TYPE ARE NOT IN AGREEMENT - Rescheduled date requires SCH.8 Appt type = 'RS' and vice versa
650	CHECK OUT DATE AND EVENT REASON ARE NOT IN AGREEMENT - Check out date requires either SCH.6 Event reason = 'CO' or 'COE'
700	CANCELLATION DATE AND EVENT REASON ARE NOT IN AGREEMENT - Cancellation date requires SCH.6 Event reason = 'CC' or 'CP' or 'NS'
750	EVENT REASON AND FILLER STATUS ARE NOT IN AGREEMENT - All SCH.6 Event reason codes, except 'CI' require SCH.25 Filler status to be 'F' Final and accordingly only 'CI' and NULL should have SCH.25 Filler status to be 'P' Pending
800	FILLER STATUS IS MISSING OR IS INVALID
850	ADMIT TYPE IS INVALID (table SD009)
R	WHOLE BATCH REJECTED

R – whole batch reject may be currently generated only by manual batch rejection.



**Table VA088 – DSS ID and DSS Credit Stop**

Please note that this table is updated yearly and the current set up should be evaluated.

VALUE	DESCRIPTION	Allow Either	Primar y	Secondar y	Inactive Date
101	EMERGENCY UNIT			S	
102	ADMITTING/SCREENING	E			
103	TELEPHONE TRIAGE		P		
104	PULMONARY FUNCTION	E			
105	X-RAY	E			
106	EEG	E			
107	EKG		P		
108	LABORATORY	E			
109	NUCLEAR MEDICINE	E			
110	CARDIOVASCULAR NUCLEAR MED	E			OCT 1,1998
111	ONCOLOGICAL NUCLEAR MED	E			OCT 1,1998
112	INFECTIOUS DISEASE NUCLEAR MED	E			OCT 1,1998
113	RADIONUCLIDE TREATMENT	E			OCT 1,1998
114	SING PHOTON EMISS TOMOGRAPHY	E			OCT 1,1998
115	ULTRASOUND	E			
116	RESPIRATORY THERAPY	E			
117	NURSING (2ND ONLY)			S	
118	HOME TREATMENT SERVICES		P		
119	COMM NURSING HOME FOLLOW-UP	E			
120	HEALTH SCREENING	E			
121	RESIDENTIAL CARE (NON-MH)	E			
122	PUBLIC HEALTH NURSING	E			
123	NUTRITION/DIETETICS- INDIVIDUAL	E			
124	NUTRITION/DIETETICS-GROUP	E			
125	SOCIAL WORK SERVICE	E			
126	EVOKED POTENTIAL	E			
127	TOPOGRAPHICAL BRAIN MAPPING	E			
128	PROLONGED VIDEO-EEG MONITORING	E			
129	HYPERTENSION SCREENING	E			OCT 1,1991
130	CHOLESTEROL SCREENING	E			OCT 1,1991
131	BREAST CANCER SCREENING	E			OCT 1,1991
132	MAMMOGRAM	E			OCT 1,1991
133	CERVICAL CANCER SCREENING	E			OCT 1,1991
134	PAP TEST	E			OCT 1,1991

135	COLORECTAL CANCER SCREENING	E			OCT 1,1991
136	FOBT - GUIAC SCREENING	E			OCT 1,1991
137	ALCOHOL COUNSELING - MED CARE	E			OCT 1,1991
138	SMOKING CESSATION	E			OCT 1,1991
139	WEIGHT CONTROL	E			OCT 1,1991
140	PHYS FITNESS/EXERCISE COUNSEL	E			OCT 1,1991
141	VET IMMUNIZATION	E			OCT 1,1991
142	COLORECTAL CA SCREEN DIG EXAM	E			OCT 1,1991
143	PERSIAN GULF READJUST COUNSEL	E			JAN 1,1988
144	RADIONUCLIDE THERAPY	E			
145	PHARM/PHYSIO NMP STUDIES	E			
146	PET	E			
147	TELEPHONE/ANCILLARY			P	
148	TELEPHONE/DIAGNOSTIC			P	
149	RADIATION THERAPY TREATMENT	E			
150	COMPUTERIZED TOMOGRAPHY (CT)	E			
151	MAGNETIC RESONANCE IMAGING/MRI	E			
152	ANGIOGRAM CATHETERIZATION	E			
153	INTERVENTIONAL RADIOGRAPHY	E			
154	MEG (MAGNETOENCEPHALOGRAPHY)	E			
155	INFO ASSISTS TECHNOLOGY	E			
160	CLINICAL PHARMACY				S
161	TRANSITIONAL PHARMACY			P	
163	CHAPLAIN-CLINICAL SVCS-INDIV	E			OCT 1,2002
164	CHAPLAIN-CLINICAL SVCS-GROUP	E			OCT 1,2002
165	BEREAVEMENT COUNSELING	E			
166	CHAPLAIN SERVICE - INDIVIDUAL	E			
167	CHAPLAIN SERVICE - GROUP	E			
168	CHAPLAIN SERVICE - COLLATERAL	E			
169	TELEPHONE/CHAPLAIN			P	
170	HBPC - PHYSICIAN			P	
171	HBPC - RN/RNP/PA			P	
172	HBPC - NURSE EXTENDER			P	

173	HBPC - SOCIAL WORKER		P		
174	HBPC - THERAPIST		P		
175	HBPC - DIETITIAN		P		
176	HBPC - CLINICAL PHARMACIST		P		
177	HBPC - OTHER		P		
178	HBPC/TELEPHONE		P		
179	HOME TELEVIDEO CARE			S	
180	DENTAL	E			
181	TELEPHONE/DENTAL		P		
185	PHYS EXTND NP (NRS PRCNR) 2ND			S	
186	PHYS EXTND PA (PHYS ASST) 2ND			S	
187	PHYS EXTND CNS (CLN RN SPC)2ND			S	
190	ADULT DAY HEALTH CARE	E			
201	PHYSICAL MED & REHAB SVC	E			
202	RECREATION THERAPY SERVICE	E			
203	AUDIOLOGY	E			
204	SPEECH PATHOLOGY	E			
205	PHYSICAL THERAPY	E			
206	OCCUPATIONAL THERAPY	E			
207	PM&RS INCENTIVE THERAPY	E			
208	PM&RS COMPENSATED WORK THERAPY	E			
209	VIST COORDINATOR	E			
210	SPINAL CORD INJURY	E			
211	AMPUTATION FOLLOW-UP CLINIC	E			
212	EMG - ELECTROMYOGRAM	E			
213	PM&RS VOCATIONAL ASSISTANCE	E			
214	KINESIOTHERAPY	E			
215	SCI HOME CARE PROGRAM	E			
216	TELEPHONE/REHAB AND SUPPORT		P		
217	BROS (BLIND REHAB O/P SPEC)	E			
218	CAT BLIND REHAB	E			
219	TBI (TRAUMATIC BRAIN INJURY)	E			
220	VISOR (VISUAL IMPAIRMENT OUTPA	E			
290	OBSERVATION MEDICINE		P		
291	OBSERVATION SURGERY		P		
292	OBSERVATION PSYCHIATRY		P		
293	OBSERVATION NEUROLOGY		P		
294	OBSERVATION BLIND REHAB		P		

295	OBSERVATION SPINAL CORD		P		
296	OBSERVATION REHABILITATION		P		
301	GENERAL INTERNAL MEDICINE	E			
302	ALLERGY IMMUNOLOGY	E			
303	CARDIOLOGY	E			
304	DERMATOLOGY	E			
305	ENDO./METAB (EXCEPT DIABETES)	E			
306	DIABETES	E			
307	GASTROENTEROLOGY	E			
308	HEMATOLOGY	E			
309	HYPERTENSION	E			
310	INFECTIOUS DISEASE	E			
311	PACEMAKER	E			
312	PULMONARY/CHEST	E			
313	RENAL/NEPHROL(EXCEPT DIALYSIS)	E			
314	RHEUMATOLOGY/ARTHRITIS	E			
315	NEUROLOGY	E			
316	ONCOLOGY/TUMOR	E			
317	COUMADIN CLINIC	E			
318	GERIATRIC CLINIC	E			
319	GERIATRIC EVAL. & MGMT. (GEM)	E			
320	ALZHEIMER'S/DEMENTIA CLINIC	E			
321	GI ENDOSCOPY	E			
322	WOMEN'S CLINIC	E			
323	PRIMARY CARE/MEDICINE	E			
324	TELEPHONE/MEDICINE		P		
325	TELEPHONE/NEUROLOGY		P		
326	TELEPHONE/GERIATRICS		P		
327	MED MD PERFORM INVASVE OR PROC		P		
328	MEDICAL/SURGICAL DAY UNIT MSDU	E			
329	MEDICAL PROCEDURE UNIT	E			
330	CHEMOTHERAPY PROC. UNIT-MED.	E			
331	PRE-BED CARE MD (MEDICINE)	E			
332	PRE-BED CARE RN (MEDICINE)	E			
333	CARDIAC CATHETERIZATION	E			
334	CARDIAC STRESS TEST/ETT	E			
335	PADRECC PARKINSON'SDISEASERECC	E			
350	GERIATRIC PRIMARY CARE	E			

351	ADVNC D ILLNESS COOR CARE(AICC)	E			
370	LTC SCREENING (2ND ONLY)			S	
401	GENERAL SURGERY	E			
402	CARDIAC SURGERY	E			
403	ENT	E			
404	GYNECOLOGY	E			
405	HAND SURGERY	E			
406	NEUROSURGERY	E			
407	OPHTHALMOLOGY	E			
408	OPTOMETRY	E			
409	ORTHOPEDICS	E			
410	PLASTIC SURGERY	E			
411	PODIATRY	E			
412	PROCTOLOGY	E			
413	THORACIC SURGERY	E			
414	UROLOGY	E			
415	VASCULAR SURGERY	E			
416	AMB SURGERY EVAL BY NON-MD	E			
417	PROSTHETICS/ORTHOTICS	E			
418	AMPUTATION CLINIC	E			
419	ANESTHESIA PRE/POST-OP CONSULT	E			
420	PAIN CLINIC	E			
421	VASCULAR LABORATORY	E			
422	CAST CLINIC	E			
423	PROSTHETIC SUPPLY DISPENSED	E			
424	TELEPHONE/SURGERY			P	
425	TELEPHONE/PROSTHETICS/ORTHOTIC			P	
426	WOMEN SURGERY	E			
427	PRIMARY CARE/SURGERY	E			OCT 1,1997
428	TELEPHONE/OPTOMETRY			P	
429	OUTPATIENT CARE IN OR			P	
430	CYSTO ROOM UNIT FOR OUTPATIENT	E			
431	CHEMOTHERAPY PROC. UNIT-SURG.	E			
432	PRE-BED CARE MD (SURGERY)	E			
433	PRE-BED CARE RN (SURGERY)	E			
435	SURGICAL PROCEDURE UNIT	E			
436	CHIROPRACTIC CARE IN MED CTR	E			
449	FITTING & ADJSTMNTS 2ND ONLY				S
450	COMPENSATION & PENSION				S

451 to 456	Local use			S	
457	TRANSPLANT			S	
458 to 473	Local use (delete 473 TBPPD SHOT)			S	
474	RESEARCH			S	
475 to 479	Local use			S	
480	COMPREHENSIVE FUNDOSCOPY			S	
481	BRONCHOSCOPY			S	
482 to 485	Local use			S	
501	HOMELESS MENTALLY ILL OUTREACH	E			OCT 1,1994
502	MENTAL HEALTH CLINIC - IND	E			
503	MH RESIDENTIAL CARE IND	E			
504	IPCC MEDICAL CENTER VISIT	E			APR 1,1997
505	DAY TREATMENT-INDIVIDUAL	E			
506	DAY HOSPITAL-INDIVIDUAL	E			
507	DRUG DEPENDENCE- INDIVIDUAL	E			APR 1,1997
508	ALCOHOL TREATMENT- INDIVIDUAL	E			APR 1,1997
509	PSYCHIATRY-MD INDIVIDUAL	E			
510	PSYCHOLOGY-INDIVIDUAL	E			
511	NEUROBEHAVIORAL- INDIVIDUAL	E			OCT 1,1993
512	PSYCHIATRY CONSULTATION	E			
513	SUBSTANCE ABUSE - INDIVIDUAL	E			
514	SUBSTANCE ABUSE - HOME VISIT	E			
515	CWT/TR-HCMI	E			APR 1,1997
516	PTSD - GROUP	E			
516	PTSD - GROUP	E			
517	CWT SUBSTANCE ABUSE	E			APR 1,1997
518	CWT/TR-SUBSTANCE ABUSE	E			APR 1,1997
519	SUBST USE DISORDER/PTSD TEAMS	E			
520	LONG-TERM ENHANCEMENT, INDIVID	E			
521	LONG-TERM ENHANCEMENT, GROUP	E			
522	HUD/VASH	E			
523	OPIOID SUBSTITUTION	E			
524	ACTIVE DUTY SEX TRAUMA	E			
525	WOMEN'S STRESS DISORDER TEAMS	E			

526	TELEPHONE/SPECIAL PSYCHIATRY	E			APR 1,1997
527	TELEPHONE/GENERAL PSYCHIATRY		P		
528	TELE/HOMELESS MENTALLY ILL		P		
529	HCHV/HMI		P		
530	TELEPHONE/HUD-VASH		P		
531	MH PRIMARY CARE TEAM - IND	E			
532	PSYCHOSOCIAL REHAB - IND	E			
533	MH INTERVNTION BIOMED CARE IND	E			
535	MH VOCATIONAL ASSISTANCE - IND	E			
536	TELEPHONE/MH VOC ASSISTANCE		P		
537	TELEPHONE/PSYCHOSOCIAL REHAB		P		
538	PSYCHOLOGICAL TESTING	E			
540	PCT POST-TRAUMATIC STRESS-IND		P		
541	PTSD POST-TRAUMATIC STRESS	E			JAN 1,1991
542	TELEPHONE/PTSD		P		
543	TELEPHONE/ALCOHOL DEPENDENCE	E			APR 1,1997
544	TELEPHONE/DRUG DEPENDENCE	E			APR 1,1997
545	TELEPHONE/SUBSTANCE ABUSE		P		
546	TELEPHONE/MHICM		P		
547	INTENSIVE SUBSTANCE ABUSE TRMT	E			
550	MENTAL HEALTH CLINIC-GROUP	E			
551	IPCC COMM CLN/DAY PROGRAM VST	E			APR 1,1997
552	MENTAL HLT INT CASE MGT(MHICM)		P		
553	DAY TREATMENT-GROUP	E			
554	DAY HOSPITAL-GROUP	E			
555	DRUG DEPENDENCE-GROUP	E			APR 1,1997
555	DRUG DEPENDENCE-GROUP	E			APR 1,1997
556	ALCOHOL TREATMENT-GROUP	E			APR 1,1997
557	PSYCHIATRY - MD GROUP	E			
558	PSYCHOLOGY-GROUP	E			
559	PSYCHOSOCIAL REHAB - GROUP	E			
560	SUBSTANCE ABUSE - GROUP	E			

561	PCT-POST TRAUMATIC STRESS-GRP		P		
562	PTSD - INDIVIDUAL	E			
562	PTSD - INDIVIDUAL	E			
563	MH PRIMARY CARE TEAM - GROUP	E			
564	MH TEAM CASE MANAGEMENT	E			
565	MH MEDICAL CARE ONLY-GROUP	E			
566	MH RISK-FACTOR-REDUCTION ED GR	E			
567	MHICM GRP MTLHLTH INTSV CS MGT		P		
571	READJUSTMENT COUNSELING-INDIV	E			JAN 31,1994
572	READJUSTMENT COUNSELING-GROUP	E			JAN 31,1994
573	MH INCENTIVE THERAPY - GROUP	E			
574	MH COMP WORK THERAPY (CWT) GRP	E			
575	MH VOCATIONAL ASSISTANCE-GRP	E			
576	PSYCHOGERIATRIC - INDIVIDUAL	E			
577	PSYCHOGERIATRIC CLINIC - GROUP	E			
578	PSYCHOGERIATRIC DAY PROGRAM	E			
579	TELEPHONE/PSYCHOGERIATRICS		P		
580	PTSD DAY HOSPITAL	E			
581	PTSD DAY TREATMENT	E			
589	NON-ACTIVE DUTY SEX TRAUMA	E			
590	COMM OUTREACH HOMELESS VETS	E			
601	ACUTE HEMODIAL TREATMENT	E			OCT 1,1990
602	CHRON ASSISTED HEMODIAL TREAT		P		
603	LIM SELF CARE HEMODIAL TREAT		P		
604	HOME/SELF HEMODIAL TRAIN TREAT		P		
605	ACUTE PERITONEAL DIAL TREAT		P		OCT 1,1990
606	CHRON ASSISTED PERIT DIALYSIS		P		
607	LIM SELF CARE PERIT		P		



	DIALYSIS				
608	HOME/SELF PERIT DIALYSIS TRAIN		P		
610	CONTRACT DIALYSIS		P		
611	TELEPHONE/DIALYSIS		P		
640	SEND-OUT PROCS NOT FEE		P		
641	SEND-OUT PROCS-DOD NOT FEE		P		
642	SEND-OUT PROCS FEE		P		
650	CONTRACT NURSING HOME DAYS		P		
651	STATE NURSING HOME DAYS		P		
652	STATE DOMICILIARY HOME DAYS		P		
653	STATE HOSPITAL CARE		P		
654	NON VA RESIDENTIAL CARE DAYS		P		
655	COMMUNITY NON-VA CARE		P		
656	DOD NON-VA CARE		P		
657	ASSIST LIVING VENDOR WORK		P		
660	CHIROPRACTIC CARE OUTSIDE VA		P		
670	ASSIST LIVING, VHA-PAID STAFF		P		
680	HOME/COMMUN HEALTHCARE ASSESS	E			
681	VA-PAID HOME/COMMUN HEALTHCARE		P		
682	VA-REFER HOME/COMMUN CARE PROV		P		
683	NONVIDEO HOME TELEHEALTH MONIT		P		
684	NONVIDEO HOME TELEHEALTH INTER			S	
690	TELEMEDICINE			S	
691	PRE-EMP PHYS MILITARY PERSONNEL	E			
692	TELMD CNSLT SM STA 2ND ONLY			S	
693	TELMD CNSLT NOT SM STA 2NDONLY			S	
701	BLOOD PRESSURE CHECK			S	
702	CHOLESTEROL SCREENING			S	OCT 1,2002
703	MAMMOGRAM (CAN BE PRIMARY)	E			
704	PAP TEST			S	
705	FOBT - GUIAC SCREENING			S	OCT 1,2002
706	ALCOHOL SCREENING			S	
707	SMOKING CESSATION			S	

708	NUTRITION			S	OCT 1,2002
709	PHY FIT/EXERCISE COUNSELING			S	OCT 1,2002
710	INFLUENZA IMMUNIZATION			S	
711	INJURY COUNSEL/SEAT BELT USAGE			S	OCT 1,2002
712	HEP C REGISTRY PATIENT			S	
713	GAMBLING ADDICTION (2ND ONLY)			S	
714	OTHER EDUCATION 2ND ONLY			S	
715	ONGOING TRTMT (NON-MH) 2ND			S	
716	POST SURG RTINE AFTRCARE 2ND			S	
725	DOMICILIARY OUTREACH SERVICES	E			
726	DOM AFTERCARE - COMMUNITY	E			
727	DOMICILIARY AFTERCARE - VA	E			
728	DOMICILIARY ADM SCREENING SVCS	E			
729	TELEPHONE/DOMICILIARY		P		
730	DOM GENERAL CARE	E			
731	PRRTP GENERAL CARE	E			
801	IN-VISN, OTHER VAMC 2ND ONLY			S	
802	OUT OF VISN, VA 2NDARY ONLY			S	
803	COMMERCIAL 2NDARY ONLY			S	
900	SPECIAL SERVICES	E			OCT 1,1998
902	COMPUTED TOMOGRAPHY SCANS	E			APR 1,1989
903	RADIATION THERAPY	E			APR 1,1989
904	CHEMOTHERAPY	E			MAR 1,1989
905	AMBULATORY SURGERY SERVICES	E			APR 1,1989
906	BLOOD/BLOOD PRODUCTS TRANS.	E			APR 1,1989
907	NUCLEAR MAGNETIC RESONANCE	E			APR 1,1989
999	EMPLOYEE HEALTH		P		

## 4.0 Appointment Selection Logic

The initial run of the Patient Appointment Information Transmission logic will review and select all pending patient appointments created one year prior to the run date. That date was determined to be Sep 1<sup>st</sup>, 2002. Additionally, pending appointments created since Sep 1<sup>st</sup> 2002 are submitted as well. There are two appointment statuses: pending and final. The appointment can be sent only once for a pending and once for a final status, for example, an appointment sent for the first time with a pending status will be sent again if its status is changed to final. An appointment with a final status, sent for the first time, will not be sent again. The Patient Appointment Info Log file (#409.6) is created to track the transmitted appointments.

On subsequent transmissions all appointments with the Date Appointment Created after the prior transmission are added to the new transmission. The Patient Appointment Info Log file is examined for appointments whose statuses have changed from pending to final and they are also added to the new transmission by creating new entries in the Patient Appointment Info Log file. Those new entries are created with the Retention Flag field equals “N”, corresponding to the Final status. The Retention Flag in the original entry is changed from “Y” to “S” – Sent as Final or to “R” – Sent as Rejected if the original entry was rejected.

The final or pending status of an appointment is determined by its associated primary and secondary identifiers, Defined as SCH6 Event Reason and SCH.8 Appt Type. Please note that all ‘check-out (CO)’ appointments are considered to be final, including those that are still ‘action required (AR)’. That decision has been made on an assumption that the appointment is final when the ‘check-out’ process is initiated, meaning a patient is present for the appointment. The identifiers, SCH.6 Event Reason and SCH.8 Appointment Type, as well as pending versus final status, represented by SCH.25 Filler status, are mapped in the SIU Event Mapping Table.

The identifiers were determined to reflect the existing computed appointment status in **VistA** application. Additionally several new identifiers are defined, for allowing to trace continuity of canceled and rescheduled appointments, and for selecting proper appointments from the scheduled ‘non-count’ clinic group.

All update records should be Final and their previous base records, if any, should be Pending. With the update transmission you receive Pending and Final records but Finals may be new ones or updates to the previously sent Pending appointments. All new Pending records are generated starting from the last creation date from the previous transmission.

**SIU Event Mapping Table**

SIU Event	SCH.25 Filler status	SCH.6 Event Reason	SCH.8 Appt Type
S12	Pending	Check-in (CI)	Action required (AR)
S12	Pending		No Action Taken (NAT)
S12	Pending		Future (F)
S12	Pending		Non Count (NC)
S12	Pending		Inpatient (I)
S12	Pending		Non Count Future (NCF)
S26	Final	No Show (NS)	
S26	Final	No Show (NS)	Auto Rebook (ABK)
S15	Final	Cancelled by Clinic (CC)	Re-schedule (RS)
S 15	Final	Cancelled by Clinic (CC)	
S15	Final	Cancelled by Clinic (CC)	Auto Rebook (ABK)
S15	Final	Cancelled by Patient (CP)	Re-schedule (RS)
S15	Final	Cancelled by Patient (CP)	
S15	Final	Cancelled by Patient (CP)	Auto Rebook (ABK)
S12 or S14	Final	Check Out by Encounter (COE)	Non Count (NC)
S12 or S14	Final	No Match (NM)	Non Count (NC)
S12 or S14	Final	Check-out (CO)	Action required (AR)
S12 or S14	Final	Check-out (CO)	Inpatient (I)
S12 or S14	Final	Check-out (CO)	Out patient (O)
S15	Final	Cancelled Terminated (CT)	

The above table expresses all of the appointment attributes required for a given appointment state. Event reason and appointment type are interpreted as the primary and alternate identifiers.

Auto Rebook (ABK) – This appointment type represents an appointment that has been recently or originally rebooked. We may have appointments originally finalized in VistA as No Show with Auto Rebooking, but their status may be changed into any other status if No Show status is canceled in VistA. In this way the originally entered Auto Rebooking Date may be sent with different Event Reason and/or Appointment Type, not related to the Auto Rebooked Date.

Re-scheduled (RS) – This appointment type is assigned to each canceled appointment if another appointment for a clinic with the same DSS ID (stop code) was scheduled on the same date as the cancellation took place. That situation

occurs very often when the auto-rebooking feature is not used. There is an assumption that the newly scheduled appointment is a continuation of the canceled one.

Cancelled Terminated (CT) – This is the Even Reason identifier used to finalize an appointment that was sent as pending and then, during the update process it has been determined that a new appointment is created for the same date and time. That situation causes the previous appointment record to be overridden by the new appointment record with a new creation date.

Future (F) – This Appointment Type applies to all appointments except created for non-count Hospital Locations, that have Type: Non Count Future (NCF).

#### Non-count clinic appointments.

In the current **VistA** functionality, there are many non-count clinics that have scheduled appointments for valid patient care. Any site that is using Event Capture and/or the Surgery packages set up NON COUNT clinics for scheduled appointments. The encounters for these appointments are passed through a SEPARATE COUNT CLINIC with a status of CHECKED OUT. The process to capture those appointments has been established and it is described below.

Non Count Future (NCF) - Scheduled for non-count clinic for the future days starting from the next date to the running date

Check Out By Encounter (COE). If there is an outpatient encounter entry with the Originating Process Type field (#.08) value equal 2 – Stop code Addition for the same date, and both DSS Clinic Id and DSS Credit Stop match in non-count and count clinic then COE is assigned to the appointment and the count clinic data is returned with this final transmission for this appointment.

No Match (NM) This Event Reason is assigned if a related outpatient encounter, see above, has not been found. If this appointment is evaluated for the first time it is not sent at all. It will be sent with its final status if it was sent before as pending.

Non Count (NC) – This Appt Type without any value of the Event Reason is sent if its scheduled date already passed but not more than 2 days. That time is left because of a possible delay in updating a potential matching encounter.

## **4.1 Acknowledgement Processing Logic**

Acknowledgements are processed in enhanced mode, full two-phased commit. A commit acknowledgement is requested and processed automatically by the **VistA** HL7 application. Application acknowledgements from the receiving AAC

application may generate three types of messages: whole batch accept, whole batch accept with rejections, and whole batch reject. That last type has not been generated at this time and instead the SD-PAIT Manual Batch Rejection may be used.

## **4.2 Whole Batch Accept**

The batch message and all included messages are accepted by the receiving AAC application. Upon receipt of this message the sending **VistA** application executes program logic to update entries in file 409.6, PATIENT APPOINTMENT INFO LOG, associated with the batch message. Internal cross-references are examined and those entries in which field #4, RETENTION FLAG, do not equal “Y” ( For YES - to be sent when 'Final') are deleted from the file.

## **4.3 Whole Batch Reject**

The batch message and all included messages may be rejected by manual rejection and in the future by the receiving AAC application. Upon receipt of this message the sending **VistA** application executes program logic to update entries in file 409.6, PATIENT APPOINTMENT INFO LOG, associated with the batch message. Field #7, ERROR MESSAGE, is updated with the rejection code “R”. If Field #4, RETENTION FLAG, equals “Y” ( For YES - to be sent when 'Final') entry updates are complete. The sending application will send those records again, even if they are final,,based on the rejection identified in the Error Message field (# 7).

If the RETENTION FLAG equals “N” (For NO - was sent as 'Final') then the RETENTION FLAG is changed to “Y”, making that entry available for resending, and entry updates are complete. No entries in file 409.6 are deleted.

## **4.4 Whole Batch Accept with Rejections**

The batch message is accepted, but some individual messages are rejected by the receiving AAC application. Upon receipt of this message the sending **VistA** application executes program logic to update entries in file 409.6, PATIENT APPOINTMENT INFO LOG, associated with the batch message. Individual message rejections are processed in the same fashion as a whole batch rejection and the remaining messages, those accepted, are processed as a whole batch accept. Messages rejected individually may have the Error Message field (#7) updated with a pointer to one of rejection codes from table AAC001 –Error Code Set.

## **4.5 Rejected Appointments Processing**

All entries in the PATIENT APPOINTMENT INFO LOG that were marked as rejected by the Acknowledgement processing, are evaluated during transmission as follows.

1. There is not a verification if the rejected entry was corrected. The acknowledgement sends a notification about rejects and if the rejection codes are listed, they should be corrected before the follow-up transmission. Option SD-PAIT REJECTED should be used to generate a report of rejected appointments. If only a rejection code of "R" code was entered, nothing has to be done because such a message means that the whole batch was rejected and all related appointments will be sent again.
2. The rejected appointment is transmitted, again it does not matter if has been corrected or not, and a new entry is created in the PATIENT APPOINTMENT INFO LOG with the current appointment status. The original entry marked as rejected is updated with "R" – Resent as Rejected in the Retention Flag field.

## 5.0 Messages Examples

### Example Batch Message with the Consult Request Date – SCH.11

```
BHS^~|\&^SD-AAC-PAIT^200^SD-SITE-PAIT^500^20040408140937^^~P~ACK~2.4~AL~NE^AE^200404-5003^5003
MSH^~|\&^SD-SITE-PAIT^500^SD-AAC-PAIT^200^^^SIU~S12^5003236-1^D^2.4^^AL^AL^USA
SCH^1^^^^^4^NAT^^^^~20030908~~~Date Appt Created|~~~~~Desired Date|~~~200309180800~~~Appt
Date|~~~~~Checkout Date|~~~~~Cancellation Date|~~~~~Auto-rebook Date|~~~~~Resched
Date|~~~200309010930~~~Consult Request Date^^^^^^^^^^^^^P
PID^1^^"~~~USVHA&&L~NI|7171938~~~USVHA&&L~PI^^WOLFIK~EDZIU^^19301212^^^^~19107^^^^^^2081212
30P
PV1^1^O^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^500
PV2^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^SHB
AIP^1^^1934~PETERSON~JAMES~R^Provider
AIL^1^^422~CECELIA'S CLINIC^402~CARDIAC SURGERY~DSS Clinic ID^418~AMPUTATION CLINIC~DSS
Credit Stop
ZEN^1^^^^^^^^^5
ZSP^1^N^
MSH^~|\&^SD-SITE-PAIT^500^SD-AAC-PAIT^200^^^SIU~S15^5003236-2^D^2.4^^AL^AL^USA
SCH^1^^^^^CC^3^RS^^^^~20030829~~~Date Appt Created|~~~20030829~~~Desired
Date|~~~200308291330~~~Appt Date|~~~~~Checkout Date|~~~200308290940~~~Cancellation
Date|~~~~~Auto-rebook Date|~~~200308291030~~~Resched Date|~~~200308200820~~~Consult Request Date
^^^^^^^^^^^^^^^^^F
PID^1^^"~~~USVHA&&L~NI|7172069~~~USVHA&&L~PI^^YORTY~OUTPATIENT^^19710604^^^^~17042^^^^^^509
060471P
PV1^1^U^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^500
PV2^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^SHB
AIP^1^^1934~PETERSON~JAMES~R^Provider
AIL^1^^614~YORTY'S CLINIC^329~MEDICAL PROCEDURE UNIT~DSS Clinic ID^^DSS
Credit Stop
ZEN^1^^^^^^^^^1
ZSP^1^Y^60
MSH^~|\&^SD-SITE-PAIT^500^SD-AAC-PAIT^200^^^SIU~S15^5003236-3^D^2.4^^AL^AL^USA
SCH^1^^^^^CP^3^RS^^^^~20030829~~~Date Appt Created|~~~20030829~~~Desired
Date|~~~200309010815~~~Appt Date|~~~~~Checkout Date|~~~200308290856~~~Cancellation
Date|~~~~~Auto-rebook Date|~~~200309010815~~~Resched Date|~~~200308010710~~~Consult Request Date
^^^^^^^^^^^^^^^^^F
PID^1^^"~~~USVHA&&L~NI|7172424~~~USVHA&&L~PI^^VILELLA~JOEY~ASHLEY~III~MR^^19490
416^^^^~33354^^^^^^244990005
PV1^1^U^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^500
PV2^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^NTF
AIL^1^^312~XXXXX^102~ADMITTING/SCREENING~DSS Clinic ID^104~PULMONARY FUNCTION~DSS Credit
Stop
ZSP^1^N^
BTS^3
```

### Example Application Acknowledgement Message:

```
BHS^~|\&^SD-AAC-PAIT^200^SD-SITE-PAIT^500^20030918085247-0500^^~P~ACK|S12~2.4~AL~NE^AA~^104^5001738
MSA^AA^5001738^
BTS^1
```



## **Appendix B - VistA Interface Engine Site I.P. Addresses**

You should know IP address from your messaging team, to be entered with SD-PAIT Logical Link. This is address to send PAIT in HL7 format to your local VIE box.

## Appendix C – Trouble Shooting

File 409.6 ( PATIENT APPOINTMENT INFO LOG) is populated with SDPAIT transmission records and is self maintaining. Entries are purged automatically when a final status appointment is transmitted and acknowledgements received. No user or programmer intervention is required.

Members of the SD-PAIT mail group will receive notifications when batch transmissions are complete. Mail group members will also be notified when acknowledgements to the batch messages are received.

### Mail Notifications

If mail message notifications are not received by members of the SD-PAIT mail group check the following:

Insure the SD-PAIT link is active by doing the following from the HL7 Main Menu

Select HL7 Main Menu Option:

- Systems Link Monitor
- Filer and Link Management Options ...
- Message Management Options ...
- Interface Developer Options ...
- Site Parameter Edit

Select HL7 Main Menu Option: Filer and Link Management Options

- SM Systems Link Monitor
- FM Monitor, Start, Stop Filers
- LM TCP Link Manager Start/Stop
- SA Stop All Messaging Background Processes
- RA Restart/Start All Links and Filers
- DF Default Filers Startup
- SL Start/Stop Links
- PI Ping (TCP Only)
- ED Link Edit
- ER Link Errors ...

Select Filer and Link Management Options Option: SL Start/Stop Links

This option is used to launch the lower level protocol for the appropriate device. Please select the node with which you want to communicate

Select HL LOGICAL LINK NODE: SD-PAIT

This LLP has been enabled!

```
SM      Systems Link Monitor
FM      Monitor, Start, Stop Filers
LM      TCP Link Manager Start/Stop
SA      Stop All Messaging Background Processes
RA      Restart/Start All Links and Filers
DF      Default Filers Startup
SL      Start/Stop Links
PI      Ping (TCP Only)
ED      Link Edit
ER      Link Errors ...

Select Filer and Link Management Options Option: SL Start/Stop Links

This option is used to launch the lower level protocol for the
appropriate device. Please select the node with which you want
to communicate

Select HL LOGICAL LINK NODE: SD-PAIT

This LLP has been enabled!
```

## HL7 System Monitor

All outgoing HL7 messages are sent over this link. You can verify activity on this link with the System Monitor Utility of the HL7 package:

<u>NODE</u>	<u>MESSAGES RECEIVED</u>	<u>MESSAGES PROCESSED</u>	<u>MESSAGES TO SEND</u>	<u>MESSAGES SENT</u>	<u>DEVICE TYPE</u>	<u>STATE</u>
SD-PAIT	1	1	12	1	NC	Enabled

Incoming filers running => 5  
 Outgoing filers running => 5

TaskMan running  
 Link Manager running

Select a Command:  
 (N)EXT (B)ACKUP (A)LL LINKS (S)CREENED (V)IEWS (Q)UIT (?) HELP:

In the example screen above the TO SEND column lists 12 messages and the SENT column 1. If your SENT column does not increment to match the TO SEND column it may be necessary to stop and then start the SD-PAIT link as mentioned above.

### VistA Interface Engine

The VistA interface engines located at each site are maintained by Messaging & Interface Services (<<[http://vista.med.va.gov/messaging/vie/vie\\_projectdocs.asp](http://vista.med.va.gov/messaging/vie/vie_projectdocs.asp)>>) and not by local resources. If any problems are suspected with the VistA interface engine please call the national help desk at 1-888-596-4357 or log a Remedy Ticket to VistA Interface Engine.

### XTMP Global

A temporary snapshot of each record deleted by the HL7 acknowledgement processing logic is created in Global ^XTMP("SDRPA-"\_BATCHNUMBER, You may view this global to confirm acknowledgement processing.

### VistA Reporting

Figure 1 indicates the reports that may be generated at each site after transmission has completed. By entering the first three letters of the desired report will initiate that report.

Acknowledgement Summary  
 Pending Transmissions  
 Rejected Transmissions  
 Transmission Summary

Figure 1

**Acknowledgement Summary:**

The Acknowledgement Summary may be used to verify the batch numbers generated from a particular site (Figure 2). This report lists all batches in Batch Control ID order. The report also indicates the Message Control ID, the Acknowledgement Date, and Acknowledgement Type. The following Acknowledgement Types are indicated:

Application Accept - AA  
 Application Error - AE  
 Application Reject - AR  
 Manual Rejection - MR

PAIT ACK SUMMARY		FEB 27,2004 11:26 PAGE 1	
BATCH CONTROL ID	MESSAGE CONTROL ID	APPLICATION ACK DATE/TIME	APPLICATION ACK TYPE
-----			
TRANSMISSION FINISHED: FEB 20,2004 20:45			
75611134952	75615626811	FEB 24,2004 08:38	APPLICATION ACCEPT
75611135142	75615627064	FEB 24,2004 08:39	APPLICATION ACCEPT
75611135273	75615627292	FEB 24,2004 08:40	APPLICATION ACCEPT
75611135591	75615627625	FEB 24,2004 08:41	APPLICATION ACCEPT
75611135943	75615628077	FEB 24,2004 08:42	APPLICATION ACCEPT
75611136242	75615628454	FEB 24,2004 08:43	APPLICATION ACCEPT
75611136597	75615628914	FEB 24,2004 08:44	APPLICATION ACCEPT
75611136841	75615629306	FEB 24,2004 08:45	APPLICATION ACCEPT
75611137250	75615629892	FEB 24,2004 08:46	APPLICATION ACCEPT
75611137757	75615630556	FEB 24,2004 12:49	APPLICATION ERROR
75611138197	75615631071	FEB 24,2004 12:50	APPLICATION ACCEPT
75611138675	75615631643	FEB 24,2004 12:50	APPLICATION ACCEPT
75611138981	75615632257	FEB 24,2004 12:51	APPLICATION ACCEPT
75611139225	75615632561	FEB 24,2004 12:52	APPLICATION ACCEPT
75611139441	75615632855	FEB 24,2004 12:53	APPLICATION ACCEPT
75611139687	75615633142	FEB 24,2004 12:54	APPLICATION ACCEPT
75611139729	75615633201	FEB 24,2004 12:54	APPLICATION ACCEPT
75611139775	75615633241	FEB 24,2004 12:55	APPLICATION ERROR
75611139829	75615633301	FEB 24,2004 12:56	APPLICATION ACCEPT
75611139855	75615633327	FEB 24,2004 12:56	APPLICATION ACCEPT
75611140007	75615633495	FEB 24,2004 12:57	APPLICATION ACCEPT
75611140038	75615633536	FEB 24,2004 12:58	APPLICATION ACCEPT
75611140066	75615633568	FEB 24,2004 12:59	APPLICATION ACCEPT
75611140072	75615633574	FEB 24,2004 13:00	APPLICATION ACCEPT
75611140100	75615633634	FEB 24,2004 13:00	APPLICATION ACCEPT
75611140118	75615633652	FEB 24,2004 13:01	APPLICATION ACCEPT
75611140124	75615633658	FEB 24,2004 13:02	APPLICATION ACCEPT
75611140140	75615633672	FEB 24,2004 13:02	APPLICATION ACCEPT

75611140150	75615633683	FEB 24,2004 13:03	APPLICATION ACCEPT
75611140160	75615633693	FEB 24,2004 13:04	APPLICATION ACCEPT
75611140170	75615633704	FEB 24,2004 13:04	APPLICATION ACCEPT
75611140176	75615633710	FEB 24,2004 13:05	APPLICATION ACCEPT
75611140188	75615633722	FEB 24,2004 13:05	APPLICATION ACCEPT
75611140190	75615633724	FEB 24,2004 13:05	APPLICATION ACCEPT
TRANSMISSION FINISHED: FEB 25,2004 16:02			
75611182041	75615685674	FEB 26,2004 10:41	APPLICATION ACCEPT
75611182938	75615686799	FEB 26,2004 10:42	APPLICATION ERROR

Figure 2

Note: AR – The whole batch rejection from the AAC has not been implemented at this time and will be future enhancement. Figure 2 shows acknowledgements received for two transmissions.

Pending Transmission:

The Pending Transmission report (Figure 3) is to be used by VistA sites only to take an action of finalizing appointments with the appointment scheduled date (APPT\_DATE) already in the past. These records should be “Check Out” or Cancelled. This report lists all Patient Pending records by Date Appointment Made. A print of the report is not included due to sensitive information.

Rejected Transmission:

The Rejected Transmission report should be used to review and correct patient records that the AAC rejected. Rejections can occur due to incomplete dates, invalid site/facility codes not matching the site sending the information, etc. for a particular site (Figure 3). See table AAC001 - Error Code Set for rejection code definition.

The VistA should use this report for correcting their patient appointment records. Once the VistA has corrected the record it will be sent to the National Data Base in the next bi-monthly update run and loaded into the National Database. The correction of rejected records is the VistA site’s responsibility.

REJECTED TRANSMISSION LOG		FEB 27,2004 11:34 PAGE 1	
PATIENT CLINIC	APPT DATE	SHORT DESCRIPTION	ERROR MESSAGE
-----			
ERROR MESSAGE: 350			
PUBLIC,JOHN Q FLU SHOT CLINIC	OCT 6,2003 15:56	HL7 date is not in proper format or is missing	350

Figure 3

Note: The most commonly expected rejection codes are 350 and 200, see TABLE AAC001-Error Code Set. Error 350 is mostly caused by too old desired date of appointment, filed in VistA sub file 1900 of the Patient File.

**Error 350**

It has been also determined that in some situation the Rescheduled date has not acceptable date starting from 1800. That Rescheduled date is identified by PAIT if the following process:

1. An appointment is canceled without re-booking.
2. If there is another appointment created on the same day as the cancellation date, and for the same clinic there is an assumption that this is continuation of that scheduling, and that new scheduled date/time is included with the original appointment as the Reschedule Date.
3. The first available appointment meeting criteria listed in 2. is processed.
4. It came out that randomly some appointments have their scheduled date/time starting from 1800, and this date is causing rejection by the AAC as well.
5. If you cannot find an "odd" date with your original appointment you should look for "ADSAM" cross reference in the Patient file with the cancellation date and the patient DFN, to see what "odd" appointments were scheduled, and if so to remove them after evaluation what else needs to be done.
6. Removal of that "odd" appointment would prevent the original appointment from being sent with The "bad", not acceptable Rescheduled Date.

**Error 200**

Error 200 indicates that an entry in the Hospital Location file #44 is configured with the DIVISION field (3.5) pointing to a Medical Center Division entry whose Institution pointer conflicts with the facility station number.

Hint: Correct the Hospital Location entry's Division field (3.5) to point to the correct Medical Center Division, or correct the Institution pointer of the Medical Center Division.

**Transmission Summary:**

The Transmission Summary report may be used to determine the total number of patient appointment records, the run date, total number of batches, Batch Control ID, Message Control ID, and date/time stamp (Figure 4). It can be requested by EVS, National Help Desk and /or AAC for matching transmitted batches with those received. at the AAC.

TRANSMISSION SUMMARY			FEB 27,2004 11:35 PAGE 1			
RUN DATE	LAST SCANNED DATE	# OF APPOINTMENTS	# OF BATCHES	BATCH CREATE BATCH CONTROL ID	DATE/TIME	MESSAGE CONTROL ID
FEB 20,2004	FEB 19,2004	165317				

34	75611134952	FEB 20,2004 12:20	75615626811
	75611135142	FEB 20,2004 12:36	75615627064
	75611135273	FEB 20,2004 12:51	75615627292
	75611135591	FEB 20,2004 13:09	75615627625
	75611135943	FEB 20,2004 13:28	75615628077
	75611136242	FEB 20,2004 13:42	75615628454
	75611136597	FEB 20,2004 13:58	75615628914
	75611136841	FEB 20,2004 14:14	75615629306
	75611137250	FEB 20,2004 14:36	75615629892
	75611137757	FEB 20,2004 14:59	75615630556
	75611138197	FEB 20,2004 15:21	75615631071
	75611138675	FEB 20,2004 15:42	75615631643
	75611138981	FEB 20,2004 16:01	75615632257
	75611139225	FEB 20,2004 16:18	75615632561
	75611139441	FEB 20,2004 16:35	75615632855
	75611139687	FEB 20,2004 16:51	75615633142
	75611139729	FEB 20,2004 17:04	75615633201
	75611139775	FEB 20,2004 17:17	75615633241
	75611139829	FEB 20,2004 17:34	75615633301
	75611139855	FEB 20,2004 17:48	75615633327
	75611140007	FEB 20,2004 18:03	75615633495
	75611140038	FEB 20,2004 18:17	75615633536
	75611140066	FEB 20,2004 18:31	75615633568
	75611140072	FEB 20,2004 18:44	75615633574
	75611140100	FEB 20,2004 18:58	75615633634
	75611140118	FEB 20,2004 19:13	75615633652
	75611140124	FEB 20,2004 19:26	75615633658
	75611140140	FEB 20,2004 19:36	75615633672
	75611140150	FEB 20,2004 19:46	75615633683
	75611140160	FEB 20,2004 19:56	75615633693
	75611140170	FEB 20,2004 20:08	75615633704
	75611140176	FEB 20,2004 20:25	75615633710
	75611140188	FEB 20,2004 20:41	75615633722
	75611140190	FEB 20,2004 20:45	75615633724
FEB 25,2004	FEB 24,2004	8405	
2	75611182041	FEB 25,2004 15:22	75615685674
	75611182938	FEB 25,2004 15:59	75615686799

Figure 4



## FORUM Server Reporting

The intended audience for the remainder of the document is Office of Information staff and included for information purposes.

### EVS:

On the FORUM server there is a menu for running and viewing the reports for VistA totals, ACK message status, Missing Sites, and Transmitted Sites. These reports may be used to monitor the seeding and bi-monthly updates. These reports will indicate specific activity from each site. The following figure is the menu option available on the FORUM server. Currently there are three more options, and that menu looks as follows:

1	Completed Background Job Report
2	All Ack's Received Report
3	Missing Sites Report
4	Transmitted Sites Report
5	ACK Status Report
6	Site Message History
7	PAIT SUMMARY REPORT

Figure 1

### Option 1 Completed Background Job Report

When the program completes at each VistA the “Completed Background Job Report” is populated with the number of patient appointment records that were transmitted to the National Database in Austin (Figure 2). Since the program sends this information in batches (5,000 records maximum) the total batch count is recorded. These two figures should be matched with the AAC Transmitted Site report (Option 4). If they do not match then there is reason to investigate the difference.

Sites - Completed Background Job		FEB 27,2004 13:36	PAGE 1
SITE NUMBER	RUN COMPLETION DATE	# OF BATCHES	# OF APPOINTMENTS
656	FEB 20,2004 14:53	59	294917
756	FEB 21,2004 01:30	34	165317
659	FEB 21,2004 02:09	43	210278
649	FEB 22,2004 03:21	30	147223
649	FEB 25,2004 15:02	1	4985
756	FEB 25,2004 16:02	2	8405
656	FEB 26,2004 06:16	4	18691
659	FEB 26,2004 09:55	3	12708
-----			
COUNT	8		

Figure 2

Note: The above table includes both seeding and the update transmission from four VistA sites.

In the case they do not match, the Vitria IE monitoring reports will provide information on whether or not the patient appointment records were received and passed along to the Austin Automation Center (AAC). Use the following URL, ID, and password to connect to Messaging and Interface System's site. The ID and password are case sensitive.

URL: <http://vhaaacviev4:8080/ciev/hbase>  
 ID =  
 Password =

Check with your site's Information Resources Management (IRM) officer for access.

Option 2 All Ack's Received Report

The "All ACK's Received Report" indicates at the summary level the number of ACK messages processed for each site and the date the process was completed (Figure 3). There is a count figure that indicates the number of sites reported. If in the event the site's ACK message count do not match this can be an indicator that the AAC either did not receive the batch from VistA via the Vitria IE or AAC experienced a problem when processing the batch. In either case, the missing batch(es) will need to be identified and, at this time, the manual batch rejection initiated at the VistA site. To determine the missing batch(es) proceed to Option 5 to view the detailed ACK message status report and a related VistA site has to be contacted to run the Acknowledgement Summary report (VistA Reporting section) with Batch Control ID. They must be compared to the Batch Control ID's received by the AAC.

All ACKs Received Report		FEB 27,2004 13:40	PAGE 1
Site	Run Completed	Ack's	
649	FEB 22,2004	30 of 30	
649	FEB 25,2004	1 of 1	
656	FEB 20,2004	59 of 59	
656	FEB 26,2004	4 of 4	
659	FEB 21,2004	43 of 43	
659	FEB 26,2004	3 of 3	
756	FEB 20,2004	34 of 34	
756	FEB 25,2004	2 of 2	
-----			
COUNT	8		

Figure 3

### Option 3 Missing Sites Report

This option allows EVS and HSD&D to view which site transmissions were not received at the AAC during the seeding or specific update run. The report lists the sites that did not transmit by alphabetical order of Site Name.

Missing Site Report		MAR 1,2004 15:23		PAGE 1
MISSING SITE				
#	SITE NAME	REPORT DATE		
502	ALEXANDRIA	FEB 27,2004		
671	ALM MEM VA MEDICAL CENTER	FEB 27,2004		
503	ALTOONA	FEB 27,2004		
504	AMARILLO VA HS	FEB 27,2004		
463	ANCHORAGE	FEB 27,2004		
506	ANN ARBOR	FEB 27,2004		
637	ASHEVILLE	FEB 27,2004		
509	AUGUSTA	FEB 27,2004		
512	BALTIMORE	FEB 27,2004		
519	W.TEXAS VA HS	FEB 27,2004		
687	WALLA WALLA	FEB 27,2004		
688	WASHINGTON	FEB 27,2004		
689	WEST HAVEN	FEB 27,2004		
405	WHITE RIVER JUNCTION	FEB 27,2004		
693	WILKES BARRE	FEB 27,2004		
460	WILMINGTON	FEB 27,2004		
-----				
COUNT	122			

Figure 4

### Option 4 Transmitted Sites Report

This report indicates the total number of patient appointment records and batch counts received at the AAC for each transmitted site along with the date received. This report should be used with “Completed Background Job Report” (Option 1) to determine if there are differences between what the VistA sites reported as transmitted and what the AAC reports as being received. In the case they do not match refer to the instructions outlined in Option 1.

Transmitted Sites Report		MAR 1,2004 15:28		PAGE 1
SITE				
#	SITE NAME	TOTAL RECORDS	TOTAL BATCHES	REPORT DATE
756	EL PASO	165317	34	FEB 25,2004
649	PRESCOTT	147223	30	FEB 25,2004
659	SALISBURY	210278	43	FEB 25,2004
656	ST CLOUD	294917	59	FEB 25,2004
-----				
COUNT	4			

Figure 5

Option 5 ACK Status Report

The “ACK Status Report” indicates at the detail level the receipt of each ACK message for each site (Figure 6). The last detail ACK message record indicates whether the site’s ACK message processing is complete (“Yes”). There is a sub count for each site indicating the number of ACK messages processed and count that indicates total ACK messages processed for all sites.

ACK STATUS REPORT		FEB 27,2004 13:41		PAGE 1
SITE NUMBER	RUN	ACK STATUS	ACKS COMPLETE DATE/TIME	
649	1 of 30		FEB 24,2004	10:44
649	3 of 30		FEB 24,2004	11:56
649	4 of 30		FEB 24,2004	11:56
649	5 of 30		FEB 24,2004	11:56
649	6 of 30		FEB 24,2004	11:56
649	7 of 30		FEB 24,2004	11:56
649	8 of 30		FEB 24,2004	11:56
649	9 of 30		FEB 24,2004	11:56
649	10 of 30		FEB 24,2004	11:56
649	11 of 30		FEB 24,2004	11:56
649	12 of 30		FEB 24,2004	11:56
649	13 of 30		FEB 24,2004	11:56
649	14 of 30		FEB 24,2004	11:56
649	15 of 30		FEB 24,2004	11:56
649	16 of 30		FEB 24,2004	11:57
649	17 of 30		FEB 24,2004	11:57
649	18 of 30		FEB 24,2004	11:57
ACK STATUS REPORT		FEB 27,2004 13:41		PAGE 2
SITE NUMBER	RUN	ACK STATUS	ACKS COMPLETE DATE/TIME	
649	2 of 30		FEB 24,2004	11:57
649	19 of 30		FEB 24,2004	14:49
649	20 of 30		FEB 24,2004	14:49
649	21 of 30		FEB 24,2004	14:50
649	22 of 30		FEB 24,2004	14:51
649	23 of 30		FEB 24,2004	14:52
649	24 of 30		FEB 24,2004	14:52
649	25 of 30		FEB 24,2004	14:53
649	26 of 30		FEB 24,2004	14:53
649	27 of 30		FEB 24,2004	14:54
649	28 of 30		FEB 24,2004	14:54
649	29 of 30		FEB 24,2004	14:55
649	30 of 30	YES	FEB 24,2004	14:55
-----				
SUBCOUNT 30				

Figure 6

NOTE: An example in Figure 6 shows only one station. Please note that Acknowledgements may be received in different order to the transmitted batches.

Each batch has a unique number making it easy to locate should a site's VistA count not equal the count from the AAC. Once the batch control number(s) are located the investigator will need to access the VistA site's Acknowledgement Summary report for the actual Batch Control ID(s) that will need to be manually rejected. The Austin Automation Center generate a summary report of batches received from all sites with a number of appointments and a number of rejections.

### Option 6. Site Message History

PAIT TRANSMISSION LOG LIST		JUL 13,2006 09:39	
PAGE 1			
SITE			
NUMBER	MESSAGE TYPE	DATE/TIME	
-----			
358	STARTED TRANSMISSION	JUL 1,2006	10:00
358	BACKGROUND JOB COMPLETE	JUL 1,2006	10:12
358	ACKNOWLEDGMENT	JUL 10,2006	13:59
402	STARTED TRANSMISSION	JUL 1,2006	04:00
402	BACKGROUND JOB COMPLETE	JUL 1,2006	04:48
402	ACKNOWLEDGMENT	JUL 10,2006	14:01
402	ACKNOWLEDGMENT	JUL 10,2006	14:01
402	ACKNOWLEDGMENT	JUL 10,2006	14:01
402	ACKNOWLEDGMENT	JUL 10,2006	14:01
402	ACKNOWLEDGMENT	JUL 10,2006	14:02
402	ACKNOWLEDGMENT	JUL 10,2006	14:02
402	ACKNOWLEDGMENT	JUL 10,2006	14:03
402	ACKNOWLEDGMENT	JUL 10,2006	14:03

You can follow up a history of PAIT for each site from its start to receiving acknowledgements.

### Option 7. PAIT Summary Report

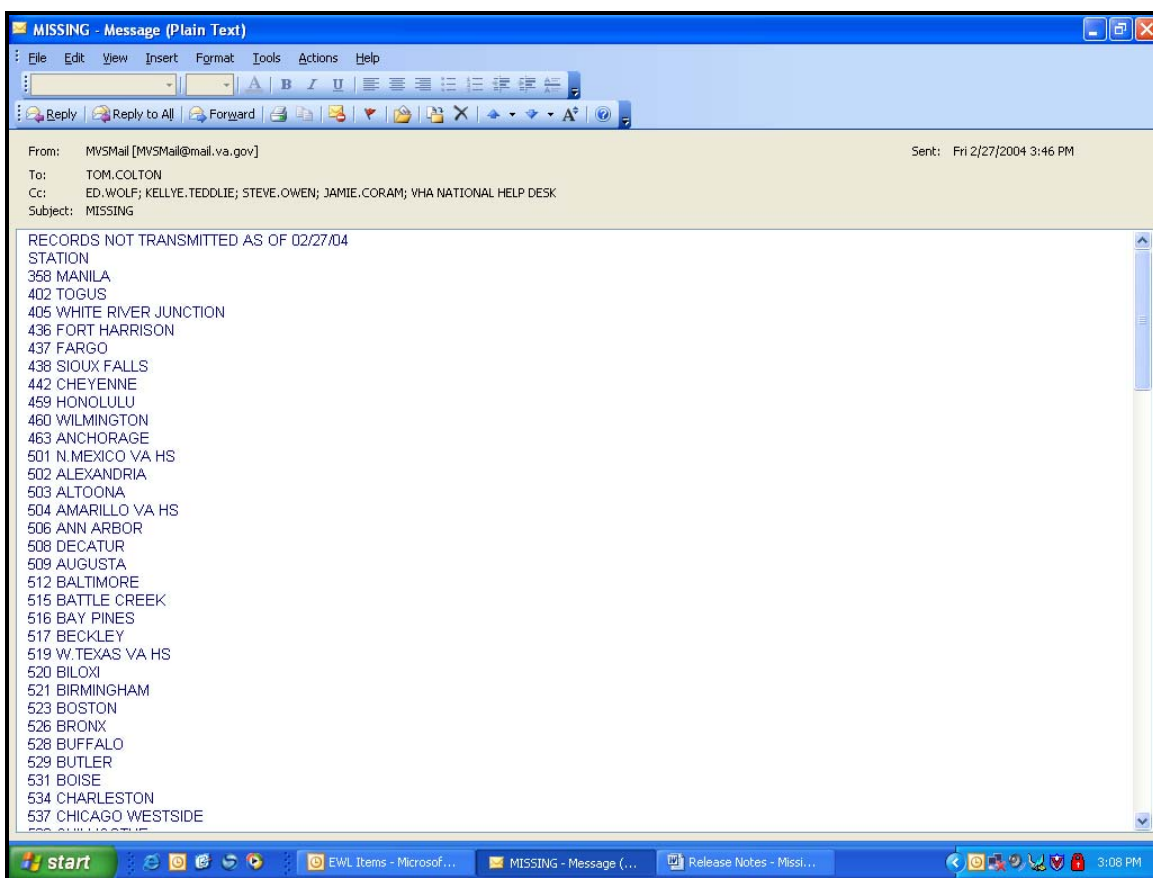
This report is a compilation of all messaging activity from VistA through VIE to the AAC, and gives the best overview of each PAIT activity.

## National Help Desk Reporting

### Missing Site Reporting

#### From the AAC:

One the 5<sup>th</sup> and 19<sup>th</sup> of every month the AAC will send to VHA National Help Desk an email message indicating those sites that the AAC did not receive patient appointment information transmissions. This report will include the site (facility) number and name. The corresponding report is also sent by the AAC to the Forum Server (see Option 3 in Forum Server Reporting).



#### VHA National Help Desk

Upon receipt of the email from “MVS Mail” listing the sites that did not transmit (Missing Site Report) the VHA National Help Desk will enter a Remedy Ticket the sites that did not transmit. The Remedy Ticket should be assigned to EVS who will begin the investigation process.

## EVS

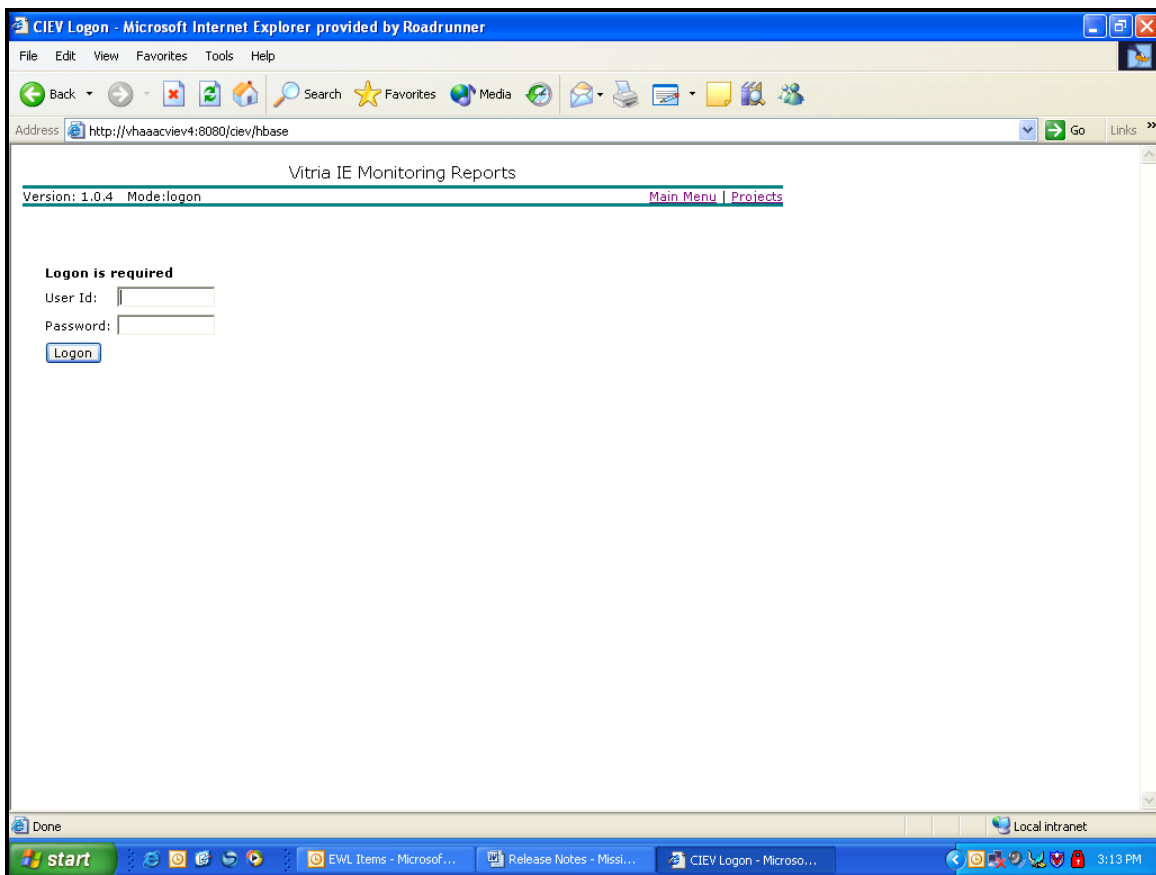
EVS will act upon the receipt of the Remedy Ticket by running the Complete Background Job Report on the FORUM server. This report will indicate whether the site actually gathered data and passed it to the local Vitria IE machine. If the report indicates no activity from the site, EVS will contact the site to determine why the site did not run. Based on the reason, EVS may need to contact other groups to provide assistance. In the case the report indicates there was activity, EVS may need to access the M&IS URL to review the Vitria IE activity reports. The M&IS URL, ID, and password are:

URL: <http://vhaaacvie4:8080/ciev/hbase>

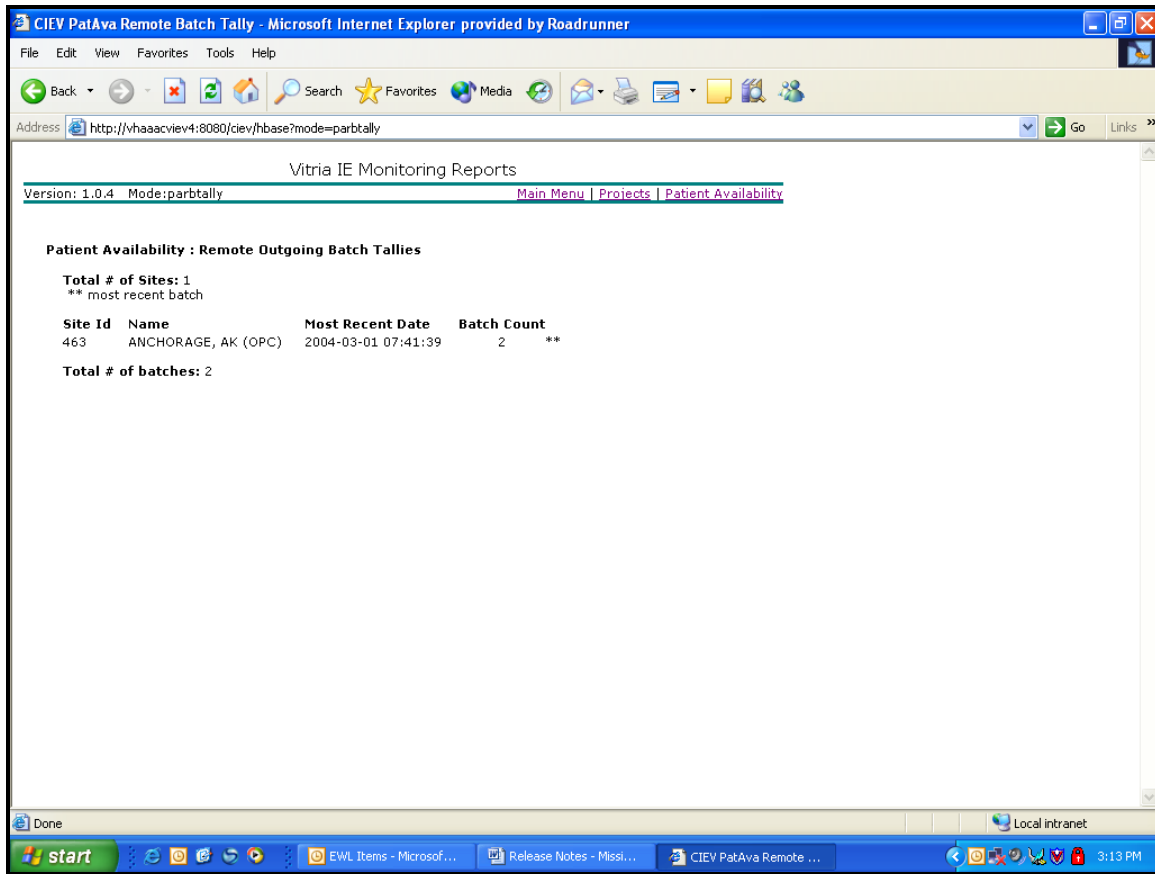
ID =

Password =

Check with your site's Information Resources Management (IRM) officer for access

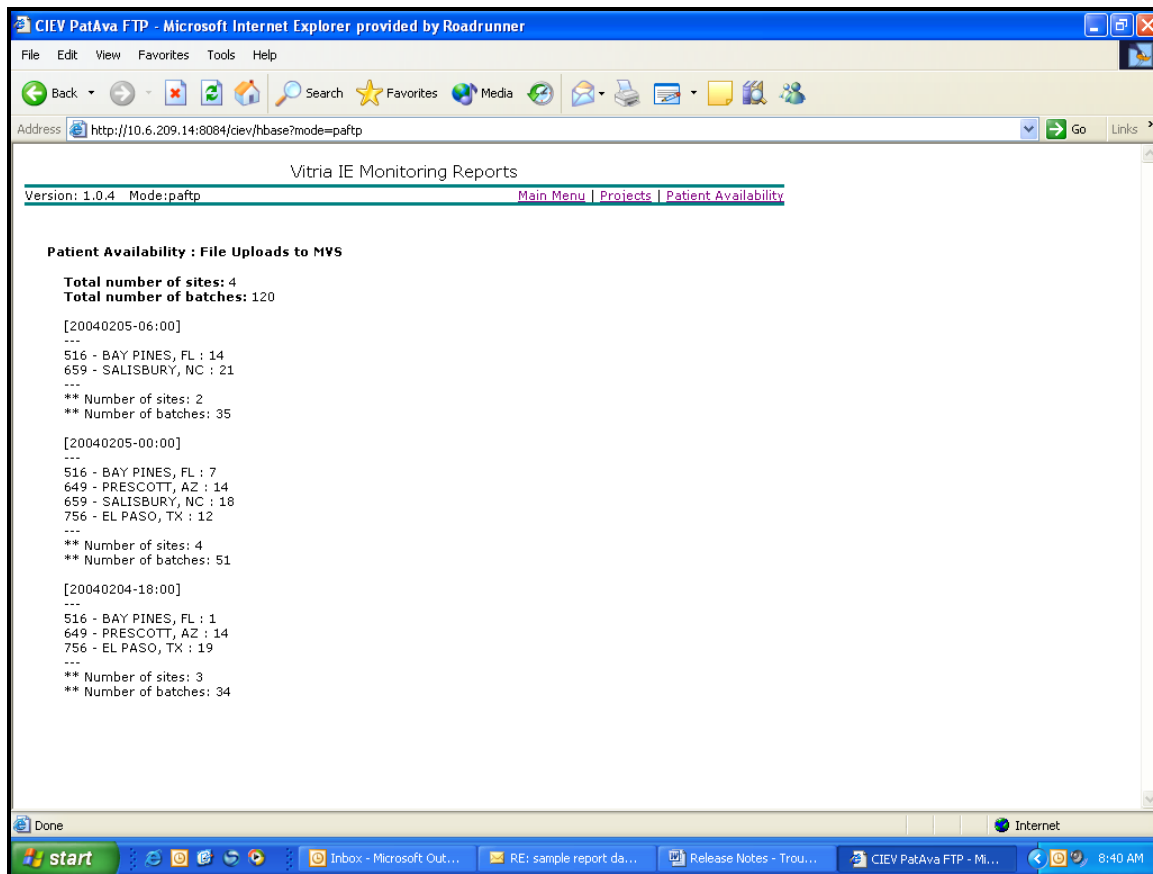


There are two reports that indicate activity of patient appointment records being sent to the AAC. The first indicates activity at the VistA site's local Vitria IE (Remote Outgoing Batch Tallies). The report presents the Site ID, Name, Most Recent Date, and Batch Count.



The second report indicates the files transferred (FTP) to the mainframe at the AAC (File Uploads to MVS). This report demonstrates the Site(s) ID, Name, and Batch Count that were included in the file transfer. It should be noted that the batch count indicated in a file sent to the AAC may not be the total batch count for that site.





Examination of all files transferred will need to be performed and manually adding the batch counts for all files to determine if the site's total batch count matches the count on the FORUM server.

- If the reports on the FORUM server indicate the site did not generate batches EVS will need to contact the site to find the responsible person who can determine or explain why the program did not run.
- If the reports on the FORUM server indicate the site did generate batches but did not transmit and the Vitria IE reports do not indicate the site's activity, then EVS will need to contact M&IS for assistance..
- If the reports on the FORUM server and the Vitria IE reports indicate the site did transmit, then EVS will need to contact the AAC for assistance.

NOTE: The primary trouble shooting to determine the problem in communications should be done by following directions in the Trouble Shooting chapter.

## VistA Communication Problems

### VHA National Help Desk:

The VHA National Help Desk will be notified directly from VistA sites with their Transmission Summary report if there is an indication that there is a problem in communication with the Local Vitria IE. The problem may be detected immediately, after the Patient Appointment Information Transmission (PAIT) generates all data (batches). At that point, the transmission is finished but the generated batch messages may not have been transmitted to the Local Vitria IE. The VHA National Help Desk will receive the following report with warning related to the status of generated batches and those batches sent.

Upon receipt of this notification, VHA National Help Desk should:

- Create a Remedy Ticket for EVS to begin investigation

EVS upon receipt of Remedy Ticket should contact the VistA site and M&IS to determine the communication breakdown.

```
Subj: 649 - PAIT BACKGROUND JOB [#165481] 02/22/04@03:21 13 lines
From: POSTMASTER In 'IN' basket. Page 1
-----
The PAIT job has completed - TASK #: 771577 Log #: 1 on 2/22/04@03:21

Pending appointments: 58744
Final appointments: 88479
-----
Total appointments: 147223          Number of batches: 30

Fac Log Bch Appt # Date finished IP Address Gen Sent Com R Com P Status
-----
649| 1| 30| 147223|2/22/04@03:21|10.149.252.225| 181| 151| 151 | 151 | Inactive

WARNING:30 out of 30 batches have to be still transmitted.
National Help Desk has been notified
```

Figure 2

The above message, Figure 2 shows that the communication with Vitria was not established at all and none of generated batches were transmitted.