FY 2000

DECISION SUPPORT SYSTEM (DSS)
FY 2000 EXTRACTS

TECHNICAL MANUAL

Version 3.0

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VIST**A** Technical Services

Table of Contents

Introduction

Overview

The Decision Support System (DSS) Extracts V. 3.0 software provides a means of exporting data from selected **V**IST**A** software modules and transmitting it to a Decision Support System (DSS) database residing at the Austin Automation Center (AAC). This transfer is accomplished through a set of extract routines, intermediate files, and transmission routines. Data from **V**IST**A** packages is stored by the extract routines in the intermediate files, where it is temporarily available for local use and auditing. The data is then transmitted to the AAC, where it is formatted and uploaded into commercial software. After the data has been successfully uploaded into the commercial software, it is purged from the intermediate files.

Functions of the Software

The DSS Extracts V. 3.0 software provides the following functions:

- Implements extracts process.
- Schedules extracts.
- Verifies extracts against other **V**IST**A** reports.
- Transmits extracts to commercial software.
- Verifies transmission.
- Allows purging of extracts.

Related Manuals

DSS Extracts V. 3.0 Extract Formats and Data Definitions Guide
DSS Extracts V. 3.0 Extracts Installation Guide
DSS Extracts V. 3.0 Extracts Release Notes
DSS Extracts V. 3.0 Extracts User Manual

Orientation

This manual is recommended for use as a reference document for technical users of the software (e.g., ADPACs and IRM Staff). You can find information concerning package security in the Security Section of this manual.

User Responses

User responses in the examples presented in this manual are shown in bold type.

General Information

Namespace Information

The namespace assigned to the DSS Extracts V. 3.0 software is ECX.

Background Job Options

There are no routine background jobs that must be run to maintain normal package operation for DSS Extracts V. 3.0; however, if you choose to perform a DSS data extract, it <u>must be</u> queued as a background task (through TaskManager). You can stop the extract background task while it is running by using the *TaskMan User* [XUTM USER] option. Data in this incomplete extract should then be purged using the *Purge Data from Extract Files* [ECXPURG] option. For more information about data purging, please refer to the Archiving and Purging Section of this manual.

Both SAS and Extract Audit reports can be printed to the screen, printed directly to a print device, or queued to a print device. If queued as a background task, you can stop the background task while it is running by using the *TaskMan User* [XUTM USER] option. All other reports can only be printed as queued background jobs and cannot be stopped through the *TaskMan User* [XUTM USER] option.

The following functions must be queued as background tasks:

Function	Menu Option
Transmission of extract data	*Transmit Data from Extract Files* [ECXTRANS]. (Can be stopped through the *TaskMan User* [XUTM USER] option.)
Purging of extract data	*Purge Data from Extract Files* [ECXPURG]. (Cannot be stopped.)

Resource Requirements

Size Estimates for Extracts

Extract Name	Bytes per Record (Estimated Mean Size)
ADM Admissions Extract	250
CLI Clinic I Extract	275
CLJ Clinic II Extract	275
DEN Dental Extract	200
ECS Event Capture Extract	225
ECQ QUASAR Extract	200
IVP IV Pharmacy Extract	225
LAB Laboratory Extract	200
LAR Lab Results Extract	200
MTL Mental Health Extract	200
MOV Physical Movement Extract (Transfer and Discharge)	200
NOS Clinic No-Show Extract	200
NUR Nursing Extract	175
PAS PAI File Extract	175
PRE Prescription Extract	250
PRO Prosthetics Extract	250
RAD Radiology Extract	200
SUR Surgery Extract	225
TRT Treating Specialty Change Extract	200
UDP Unit Dose Extract	225

One cross-reference is exported with the extract files. The bytes per record estimates seen in this table include the file cross-reference. Any locally created cross-references will also add to the size of the files.

Special Note on Files #728.113 & #728.904

Once the software is installed, IV orders will accumulate in the IV EXTRACT DATA file (#728.113) and Unit Dose orders will begin to accumulate in the UNIT DOSE EXTRACT DATA file (#728.904). These files are loaded dynamically as Pharmacy orders for unit dose and intravenous medicines are processed. Each entry in these files uses approximately 100 bytes.

Extreme caution must be used in maintenance of files #728.113 and #728.904. If data in either file is deleted or purged, it *cannot* be regenerated. Therefore, the IVP or UDP monthly extract may be either incomplete or impossible to generate. It is strongly recommended that, at a minimum, sites maintain all data from the *current fiscal year.*

On the other hand, both files can become quite large if appropriate purging is not performed. The file purge option, Purge Data from Extract Files [ECXPURG], deletes from files #728.113 and #728.904 by date range. It is recommended that records over two fiscal years old be purged from files #728.113 and #728.904

Time Estimates for Extracts

Extracts generally require 2 to 4 minutes per 1000 records extracted on an Alpha/AXP system, and should be queued to run during a nonpeak system usage period. The following table contains examples of approximate run times for extracts.

Extract Name	Approximate Length of Time
Admission (ADM) Treating Specialty Change (TRT) Physical Movement (MOV)	Less than ten minutes
Clinic (CLI/CLJ)	3 hours for 48,000 records
Laboratory (LAB)	4 ½ hours for 100,000 records
Nursing (NUR)	1 hour for 18,000 records
Prescription (PRE)	2 hours for 49,000 records

Data Transmission

- Data is sent to the AAC in VA MailMan mail messages. The first line of each message is a header identifying the site, the extract, the year and month, and SAS version identifier in the following format: 521RAD199710007.

Site	Extract	Year and Month	Version ID
521	RAD	199710	007

- By default, messages are limited to 200 lines. After the header line each of the next 199 lines contains one extract record. It may be necessary to use Set Maximum Line Count for Transmissions [ECX SET MAX LINES] option to lower the line count in transmission messages for a particular extract.

- As a message is sent, its internal entry number (IEN) is entered in the MESSAGE NUMBER field (#301) of the DSS EXTRACT LOG file (#727). There are options that allow the Extract Manager or designee to monitor this file. As confirmation messages are received from AAC, entries in the Field #301 multiple are deleted.

Implementation and Maintenance

The Maintenance Menu provides a variety of menu options that allow the Extract Manager or designee to:

- Create schedules for running the extracts.
- Print a list of feeder keys sorted by feeder system.
- Print a list of feeder locations sorted by feeder system.
- Define DSS clinic information.
- Define DSS Lab Results Extract information.
- Define and create DSS Inpatient Census information.
- Define DSS Inpatient Medications Pharmacy information.

Please refer to the DSS Extracts V. 3.0 Installation Guide for more information about installing and implementing the software.

Routines

Routine List

Take the following steps to obtain routines contained in the Event Capture package:

1. Programmer Options Menu
2. Routine Tools Menu
3. First Line Routine Print Option
4. Routine Selector: **ECX***

Callable Routines/Entry Points/Application Programmer Interfaces (APIs)

The DSS Extracts software has no callable application programmer interfaces.

Routines to Map

There are no routines in DSS Extracts V. 3.0 that are recommended for mapping.

External Interfaces

There are no external interfaces used by DSS Extracts V. 3.0.

Files

Global Placement

DSS Extracts V. 3.0 uses one global for data storage: ^ECX. If you are installing DSS Extracts for the first time, global protection and placement should be made as appropriate.

File List

The DSS Extracts V. 3.0 software with all patches installed exports the following files. VHA Directive 10-93-142 prohibits local modification of these files. Use the *List File Attributes* option in VA FileMan to print the DDs.

File Number	File Name
727	DSS EXTRACT LOG
727.1	EXTRACT DEFINITIONS
727.2	DSS LAB TESTS
727.3	DSS DIVISION IDENTIFIER
727.4	DSS WARD
727.5	DSS MH TESTS
727.802	ADMISSION EXTRACT
727.804	CLINIC NOSHOW EXTRACT
727.805	NURSING EXTRACT
727.806	DENTAL EXTRACT
727.808	PHYSICAL MOVEMENT EXTRACT
727.809	UNIT DOSE LOCAL EXTRACT
727.81	PRESCRIPTION EXTRACT
727.811	SURGERY EXTRACT
727.812	MENTAL HEALTH EXTRACT
727.813	LABORATORY EXTRACT
727.814	RADIOLOGY EXTRACT
727.815	EVENT CAPTURE LOCAL EXTRACT
727.816	CLINIC I EXTRACT
727.817	TREATING SPECIALTY CHANGE EXTRACT
727.818	CLINIC II EXTRACT
727.819	IV DETAIL EXTRACT
727.82	ADMISSION SETUP EXTRACT
727.821	PHYSICAL MOVEMENT SETUP EXTRACT
727.822	TREATING SPECIALTY CHANGE SETUP EXTRACT
727.823	PAI EXTRACT
727.824	LAB RESULTS EXTRACT
727.825	QUASAR EXTRACT
727.826	PROSTHETICS EXTRACT
728	DSS EXTRACTS
728.113	IV EXTRACT DATA
728.44	CLINICS AND STOP CODES

728.441	NATIONAL CLINIC
728.904	UNIT DOSE EXTRACT DATA
729	DSS PRODUCTION UNIT
730	NATIONAL SERVICE

Templates and File Flow

Take the following steps to obtain information about the templates and map the file flow relationships for DSS Extracts V. 3.0 with all patches installed.

Templates	File Flow (Relationships Between Files)
1. VA FileMan Menu	1. VA FileMan Menu
2. Print File Entries Option	2. Data Dictionary Utilities Menu
3. Output from what File: **Print Template Sort Template**	3. Map Pointer Relations
	4. Select PACKAGE NAME: **DSS**
4. Sort by: **Name**	5. Remove FILE: **<RET>**
5. Start with name: **ECX**	6. Add FILE: (**Enter name or number for files you want to include in the output. This prompt will repeat.**)
6. **Go to name: ECXZ**	
7. Within name, sort by: **<RET>**	
8. First print field: **Name**	7. Enter name of file group for optional graph header: DSS EXTRACTS//**<RET>**

Exported Options

Menu Outline

The DSS Extracts V. 3.0 software contains one primary menu option, *Extract Manager's Options*, which contains the following five submenus. They are fixed, and are not subject to modification, except by the software developer(s).

M   Maintenance ...
P   Package Extracts ...
S   SAS Extract Audit Reports ...
E   Extract Source Audit Menu ...
T   Transmission Management ...

Menu Diagrams

Take the following steps to obtain information concerning the menus exported with the DSS Extracts V. 3.0 software:

1.   Programmers Options
2.   Menu Management Menu
3.   Display Menus and Options Menu
4.   Diagram Menus
5.   Select User or Option Name: **O.ECXMGR**

Standalone Options

All of the DSS Extracts V. 3.0 options are designed to stand alone.

Security

VA FileMan Access Codes

File Name	File Number	DD Access	RD Access	WR Access	DEL Access	LAYGO Access
DSS EXTRACT LOG	727	@		@	@	@
EXTRACT DEFINITIONS	727.1	^		^	^	^
DSS LAB TESTS	727.2	^		^	^	^
DSS DIVISION IDENTIFIER	727.3	^		^	^	^
DSS WARD	727.4	^		^	^	^
DSS MH TESTS	727.5	^		^	^	^
ADMISSION EXTRACT	727.802	@	@	@	@	@
CLINIC NOSHOW EXTRACT	727.804	@	@	@	@	@
NURSING EXTRACT	727.805	@	@	@	@	@
DENTAL EXTRACT	727.806	@	@	@	@	@
PHYSICAL MOVEMENT EXTRACT	727.808	@	@	@	@	@
UNIT DOSE LOCAL EXTRACT	727.809	@	@	@	@	@
PRESCRIPTION EXTRACT	727.81	@	@	@	@	@
SURGERY EXTRACT	727.811	@	@	@	@	@
MENTAL HEALTH EXTRACT	727.812	@	@	@	@	@
LABORATORY EXTRACT	727.813	@	@	@	@	@
RADIOLOGY EXTRACT	727.814	@	@	@	@	@
EVENT CAPTURE LOCAL EXTRACT	727.815	@	@	@	@	@
CLINIC EXTRACT I	727.816	@	@	@	@	@
TREATING SPECIALTY CHANGE EXTRACT	727.817	@	@	@	@	@
CLINIC EXTRACT II	727.818	@	@	@	@	@
IV DETAIL EXTRACT	727.819	@	@	@	@	@
ADMISSION SETUP EXTRACT	727.82	@	@	@	@	@
PHYSICAL MOVEMENT SETUP EXTRACT	727.821	@	@	@	@	@
TREATING SPECIALTY CHANGE SETUP	727.822	@	@	@	@	@
PAI EXTRACT	727.823	@	@	@	@	@
LAB RESULTS EXTRACT	727.824	@	@	@	@	@
QUASAR EXTRACT	727.825	@	@	@	@	@
PROSTHETICS EXTRACT	727.826	@	@	@	@	@
DSS EXTRACTS	728	@		@	@	@
IV EXTRACT DATA	728.113	@	@	@	@	@
CLINICS AND STOP CODES	728.44	@		@	@	@
NATIONAL CLINIC	728.441	@		@	@	@
UNIT DOSE EXTRACT DATA	728.904	@	@	@	@	@
DSS PRODCUTION UNIT	729	^		^	^	^
NATIONAL SERVICE	730	^		^	^	^

Security Management

The DSS Extracts V. 3.0 software does not impose any additional legal requirements on the user, nor does it relieve the user of any legal requirements.

Security Keys

Take the following steps to obtain information about the security keys contained in the DSS Extracts package:

1. VA FileMan Menu
2. Print File Entries Option
3. Output from what File: **SECURITY KEY**
4. Sort by: **NAME**
5. START WITH NAME: FIRST// **ECX**
6. Go to name: last// ECXZ
7. Within name, sort by: **<RET>**
8. First print field: **NAME**
9. Then print field: **DESCRIPTION**   (word-processing)
10. Then print field: **<RET>**
11. Heading (S/C): SECURITY KEY LIST// **<RET>**
12. Start at page: 1// **<RET>**
13. Device: **PRINTER NAME**

Mail Groups and Alerts

DSS Extracts V. 3.0 utilizes a number of mail groups. The name of each mail group is prefaced with the letters "DSS". There is a mail group for each type of data extract (e.g., DSS-ADMS, DSS-NURS, etc.) for the purpose of receiving messages when extracts are run and when data is transmitted to the AAC. DSS also utilizes mail groups DMS, DMV, and DMU for the purpose of receiving confirmation messages from the AAC. DSS Extracts V. 3.0 does not utilize alerts.

Remote Systems

DSS Extracts V. 3.0 transmits messages containing extracted data to a specified queue located at the AAC. Data is transmitted via VA MailMan at the site's discretion. Confirmation messages are received from the AAC indicating that the extract messages were successfully transmitted.

Contingency Planning

Using services should have a local contingency plan to be used in the event of application problems in a live environment. The plan should identify the procedure(s) for maintaining the functionality provided by the DSS Extracts V. 3.0 software in the event of system outage. Field station Information Security Officers (ISOs) can get assistance from the Regional ISO (RISO).

Interfacing

There is no special interfacing required for the **V***IST***A** DSS Extracts v3.0 software.

Electronic Signatures

The DSS Extracts V. 3.0 software does not use electronic signatures.

Archiving and Purging

Archiving

DSS Extracts v3.0 has no archiving capability. There is an option to purge the local extract files after transmission to the commercial software.

Purging

DSS Extracts V. 3.0 exports the Purge Data from Extract Files [ECXPURG] option which can be used to purge individual extracts residing in files #727.802 through #727.826, a range of extracts, or data that resides in the intermediate files for the IVP (IV EXTRACT DATA file, #728.113) and UDP (UNIT DOSE EXTARCT DATA file, #728.904) extracts.

You should exercise extreme caution when purging data for the following reasons:

- *Any* existing extract may be purged, including transmitted, untransmitted, and extracts that did not run to completion due to errors or system problems.

- Choosing a range of extracts (or a broad date range for the intermediate files) could mean an excessively large number of records to be deleted and may be very resource intensive. Please be sure to queue this purge for non-peak hours and limit the number of extracts to be purged in a single queued session.

- Extreme caution should be used in maintenance of the IV EXTRACT DATA file (#728.113) and the UNIT DOSE EXTRACT DATA file (#728.904). If data in either file is deleted or purged, it *cannot* be regenerated. Therefore, the IVP pr UDP monthly extract may be incomplete or impossible to generate. It is strongly recommended that, at a minimum, sites maintain all data from the *current fiscal year*.

- You can only purge divisions that are defined for your entry in the NEW PERSON file (#200).

Purge Recommendations

Purging of any local **V***IST***A** extract data or **V***IST***A** source of extract data (i.e., lab data, etc.) is not recommended until your facility has successfully created extracts, transmitted them to the AAC, audited the counts, loaded the data into DSS, and are content with the results.

The IV EXTRACT DATA file (#728.113) and the UNIT DOSE EXTRACT DATA file (#728.904) can become quite large if appropriate purging is not performed. The file purge option, Purge Data from Extract Files [ECXPURG], deletes records from

these files by date range. It is recommended that records over two fiscal years old be purged from files #728.113 and #728.904.

External Relations

Minimum Software Versions Required

At a minimum, the DSS Extracts package relies on the following external packages:

Software Product Name	Minimum Version Required
Kernel	8.0
VA FileMan	21.0
PIMS	5.3 *
Inpatient Medications	4.5 **
Outpatient Pharmacy	6.0
Event Capture	2.0
Laboratory	5.2 ***
QUASAR	2.0 ****
Surgery	3.0
VA MailMan	7.1
Dental	1.2
Nursing	4.0
Radiology	4.0
Prosthetics	3.0
Mental Health	5.01*****

* Patch (SD*5.3*41) to the Scheduling portion of PIMS is required to be installed. This patch creates the Primary Care Management Module (PCMM).

** The IV Extract will continue to collect data even if a facility is <u>not</u> running Inpatient Medications Version 4.5; however, the DSS Extracts software will not reflect the new Pharmacy product IDs for IV workload. For this reason, the Bedford Technical Support Office (BTSO) recommends that Inpatient Medications Version 4.5 be installed.

*** The new LAB extract using LMIP codes requires the installation of Lab patch LR*5.2*127.

**** The new QUASAR Extract will function only for facilities using the QUASAR software. Please refer to Section G of the DSS Extracts V. 3.0 Installation Guide for additional information.

*****The Mental Health extract can only be obtained if the site is running Mental Health Version 5.01, since patch YS*5.01*56 provides the API needed for the data extraction.

Several MailMan patches were issued to create the necessary entries in the DOMAIN file (#4.2) for the AAC queues. Each facility must ensure that the following patches are installed

  XM*DBA*85
  XM*DBA*86
  XM*DBA*87
  XM*DBA*88
  XM*DBA*89

Database Integration Agreements (DBIAs)

Take the following steps to obtain the DBIAs for DSS Extracts V. 3.0:

Custodial Package	Subscriber Package
1. FORUM	1. FORUM
2. DBA Menu	2. DBA Menu
3. Integration Agreements Menu	3. Integration Agreements Menu
4. Custodial Package Menu	4. Subscriber Package Menu
5. Active by Custodial Package Option	5. Print Active by Subscriber Package Option
6. Select Package Name: **DSS**	6. Start with subscriber package: **DSS**

Internal Relations

All of the DSS Extracts options have been designed to stand-alone. Each option may be independently invoked.

Package-Wide Variables

The DSS Extracts software does not contain any package-wide variables that must be defined or required for the package to run.

How to Generate Online Documentation

This section describes some of the various methods by which users may secure DSS technical documentation. On-line technical documentation pertaining to the DSS software, in addition to that, which is, located in the help prompts and on the help screens that are found throughout the DSS package, may be generated through utilization of several KERNEL options. These include but are not limited to *XINDEX, Menu Management Inquire Option File, Print Option File, and FileMan List File Attributes.*

Entering question marks at the "Select ... Option:" prompt may also provide users with valuable technical information. For example, a single question mark (?) lists all options which can be accessed from the current option. Entering two question marks (??) lists all options accessible from the current one, showing the formal name and lock for each. Three question marks (???) displays a brief description for each option in a menu while an option name proceeded by a question mark (?OPTION) shows extended help, if available, for that option.

For a more exhaustive option listing and further information about other utilities which supply on-line technical information, please consult the **V***IST***A** Kernel Reference Manual.

XINDEX

This option analyzes the structure of a routine(s) to determine in part if the routine(s) adheres to **V***IST***A** Programming Standards. The XINDEX output may include the following components: compiled list of errors and warnings, routine listing, local variables, global variables, naked globals, label references, and external references. By running XINDEX for a specified set of routines, the user is afforded the opportunity to discover any deviations from **V***IST***A** Programming Standards which exist in the selected routine(s) and to see how routines interact with one another, that is, which routines call or are called by other routines.

To run XINDEX for the DSS software, specify the following namespaces at the "routine(s) ?>" prompt: ECX*.

DSS initialization routines that reside in the UCI in which XINDEX is being run, compiled template routines, and local routines found within the ECX namespace should be omitted at the "routine(s) ?>" prompt. To omit routines from selection, preface the namespace with a minus sign (-).

Inquire To Option File

To secure information about DSS options, you must specify the name or namespace of the option(s) desired. This Menu Manager option provides the following information about user-specified option(s):

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

Print Options File

Use this utility to generate a listing of options from the OPTION file. You can choose to print all of the entries in this file, or specify a single option or range of options. To obtain a list of DSS options, specify the ECX option namespace.

List File Attributes

Use this FileMan option to generate documentation pertaining to files and file structure. Use the Standard format to obtain the following data dictionary information for a specified file(s):

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

Additionally, the following information is supplied for each field in the file:

- Field name and number
- Global location
- Description
- Help prompt
- Cross-reference(s)
- Input transform
- Date last edited
- Notes

Use the Global Map format of this option to generate an output that lists:

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

Glossary

AAC	Acronym for **A**ustin **A**utomation **C**enter.
BTSO	Acronym for **B**edford **T**echnical **S**upport **O**ffice.
Default Action Codes	Codes entered for all clinics based on the existence of a Medical Administration Service (MAS) credit stop code.
DSS	Acronym for **D**ecision **S**upport **S**ystem.
Extract	Management tool used to track and account for procedures and delivered services that are not handled in any existing **V**_IST_**A** package.
Interactive Language	The dialogue that takes place between the computer and the user in the form of words in the screen.
MAS	Acronym for **M**edical **A**dministration **S**ervice.
Medical Specialty	Medical Specialty is the specialty section associated with the DSS Unit.
QUASAR	Acronym for Audiology and Speech software.
V_IST_**A**	Acronym for **V**eterans Health **I**nformation **S**ystems and **T**echnology **A**rchitecture.