Emmaus Development Group, LLC.

- Emerald Server
- Emerald Client
- Tape Manager (TM)
- Disk Manager (DM)
- File Independence (FI)
- Console Manager (CM)

Emmaus Development Group, LLC

- http://www.emeraldsoftwaresystems.com
- email: sales@emeraldsoftwaresystems.com
- 205-681-0087, 205-681-7938 (fax)

Emerald Server Features

- Runs in Dynamic or Static partition
- Multiple CPU support via TCP/IP or VSE Lock file
- Uses VSAM for database which allows easier expansion as database usage increases
- Internal security feature through a defined user list

Emerald Server Features

- Optional Journaling capability records all updates made to database
- Recovery program to process journal records and recover database
- Full online access to Emserver database and information
- Uses IBM vendor exits - no hooks into operating system

Emerald Server Features

- Partition by Partition control for DM / TM functions
- Control parameters are maintained online
- Supplied $JOBEXIT emulates other Tape / Disk systems job control - allowing replacement without re-coding JCL

Emerald Server Features

- Program check / abend recovery in Server
- Easy to install - all products installed on single distribution file - activated by product code

Emerald Server JCL Emulation

- Space Manager
- Epic (under development)
- Dynam (under development)

Emerald Server System Requirements

- Use of IBM vendor exits
- SVA usage 24 bit - 3K -- 31 bit 154K + 2/3K per open file under Emserver control

Emerald Server Online

- Traditional 3270 access through the use of CICS / ICCF / CMS / TN3270
- CMS / TN3270 allows users to access Emserver when CICS is down
- EmClient allows PC savvy users Windows based graphical user interface (GUI) access to Emserver database information

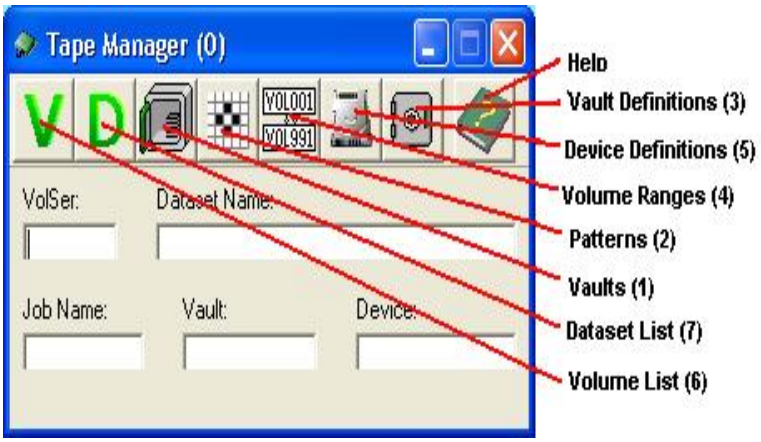
EmClient

- Uses MDI (multiple document interface) Windows programming interface
- Multiple Link Technology allows multiple server connections simultaneously
- User interface administration allows tailoring specific to each user

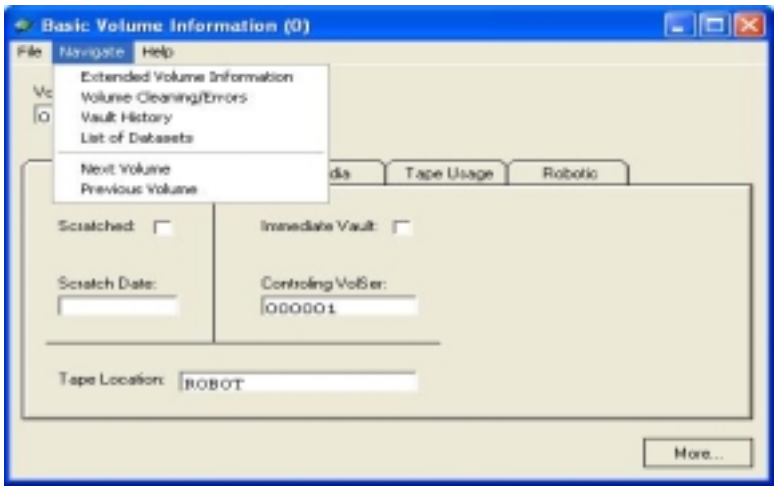
EmClient

- Integrated help facility allows users to find answers quickly

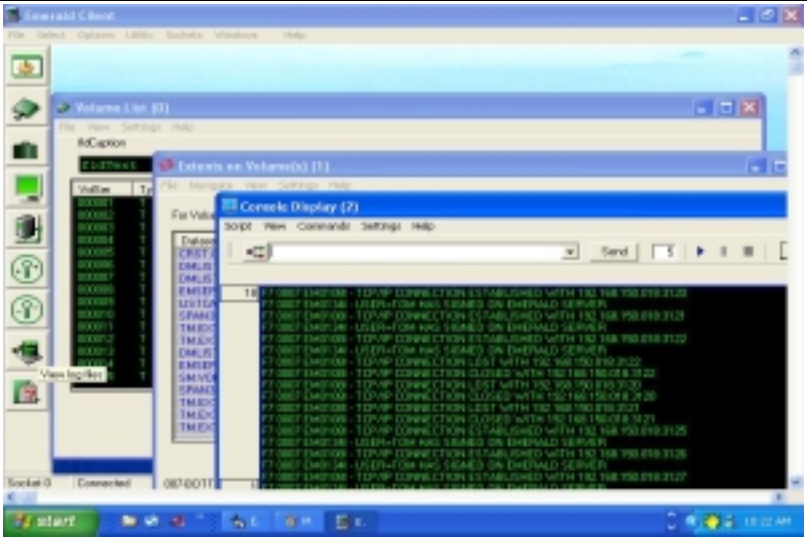
EmClient TM Main Menu



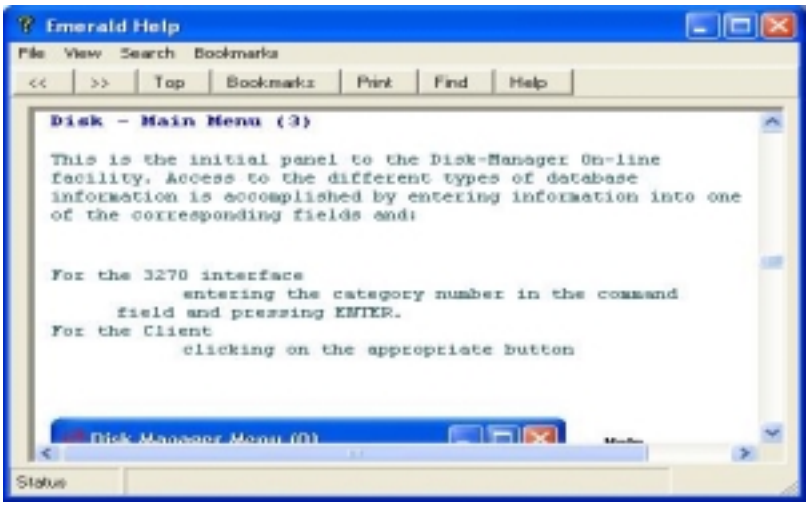
EmClient TM Volume Display



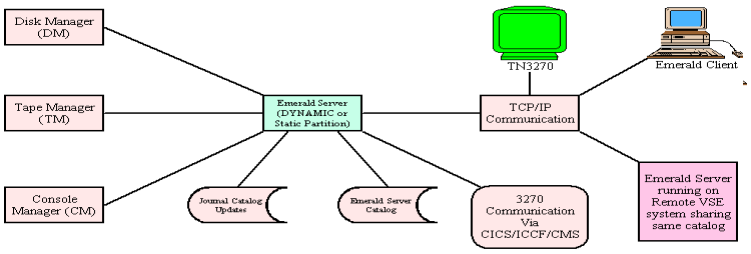
EmClient Sample Display



EmClient Sample Display



Emerald Server System Flow



Tape Manager Features

- Parallel processing - can co-exist with existing Tape Management systems for parallel testing / comparison (with restrictions)
- Scratch volume verification and overwrite protection
- Full support and tracking of multi-file volumes and multi-volume datasets

Tape Manager Features

- Support for robotic systems (including OPTITAPE)
- Dynamic Tape Assignment
- Centralized multi-host processing with Emservers multiple CPU option
- TM control of both dataset and volumes
- Tape Pooling

Tape Manager Features

- Control Unit pooling
- Tape Vaulting
- Scratch processing / Tape Pull Reports
- Retention information can be specified online at the dataset and / or job level
- Special JCL commands to interface with TM (/ / EMPARM)

Tape Manager Features

- No JCL changes are required when converting from another system
- Utilities are supplied to assist in the conversion process
- Full online access via EmClient or one of the 3270 interfaces allow real-time inquiry / update to TM information.

Tape Manager Features

- Full database reporting (Scratch pull, Vault movement, Dataset, Volume, etc).
- No JCL changes required if you are a new user of Tape Management.
- NL tape support
- Standard IBM exits used for OPEN / CLOSE / EOV / EOT -- no hooks used

Tape Manager Features

- Tape Initialization utility (includes scratch protection)
- Tape families (multi-dataset and multi-volume) can be loaded into TM database by use of utility programs
- User Information fields allow datasets to be updated with site specific info

Creating an output Tape

```
// JOB CREATE - TEST TAPE CREATION
// TLBL OFS,'JEFF.TEST.FILE1',5
// EMPARM OFS='UNLOAD=Y'
// EXEC TPMDOSTP,SIZE=AUTO,PARM='OFS'
/*
/&
```

Sample Console output

```
BG 0000 // JOB CREATE  - TEST TAPE CREATION
        DATE 04/07/2003, CLOCK 15/21/06
BG 0000 1T20I  SYS015 HAS BEEN ASSIGNED TO X'FEE' (TEMP)
BG 0000 TM0001I - DTF=OFS MOUNT SCRTCH ON DEVICE(JEFF )
BG-0000           VOLSERDEF(N/A ) VAULTDEF(VDEF001 ) LABEL(SL)
*** tape loaded here ***
BG 0000 TM0006I - DTF=OFS VOLSER=JDM007 LU=SYS010 FS=0001 CUU=0580
BG 0000           OPENED VAULTDEF=VDEF001
BG 0000           LABEL(SL)
BG 0000 TM0006I - DTF=OFS VOLSER=JDM007 LU=SYS010 FS=0001 CUU=0580
BG 0000           CLOSED NOREWIND NOHOLD VAULTDEF=VDEF001
BG 0000           LABEL(SL) UNLOADED
EOJ CREATE    MAX.RETURN CODE=0000
```

Reading an Input Tape

```
// JOB READ - TEST TAPE CREATION
// TLBL IFS,'JEFF.TEST.FILE1'
// EXEC TPMDOSTP,SIZE=AUTO,PARM='IFS'
/*
/&
```

Sample Console output

```
BG 0000 // JOB READ - TEST TAPE CREATION
        DATE 04/07/2003, CLOCK 15/43/39
BG 0000 TM0001I - DTF=IFS MOUNT JDM007 ON DEVICE(JEFF )
BG-0000           VOLSERDEF(N/A ) VAULTDEF(VDEF001 ) LABEL(SL)
*** tape loaded here ***
BG 0000 TM0006I - DTF=IFS VOLSER=JDM007 LU=SYS010 FS=0001 CUU=0580
BG 0000           OPENED VAULTDEF=VDEF001
BG 0000           LABEL(SL)
BG 0000 TM0006I - DTF=IFS VOLSER=JDM007 LU=SYS010 FS=0001 CUU=0580
BG 0000           CLOSED NOREWIND NOHOLD VAULTDEF=VDEF001
BG 0000           LABEL(SL) NOUNLOAD
EOJ READ      MAX.RETURN CODE=0000
```

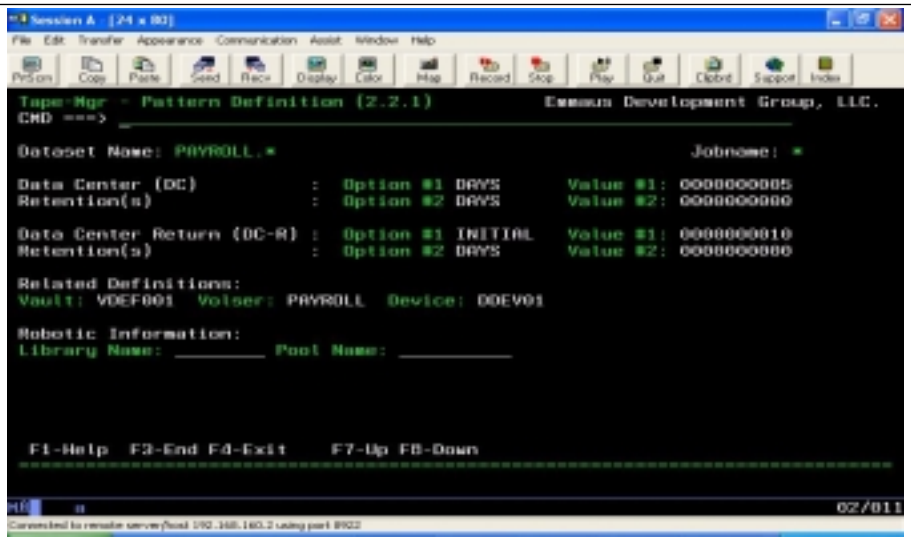
Tape Retention types (controlling output datasets)

- Days
- Expdt
- Last Used
- Permanent
- Versions
- Initial
- Skip

Tape Manager Online Displays

- Vaults
- Patterns
- Vault definitions
- Volser definitions
- Device definitions
- Volume
- Dataset

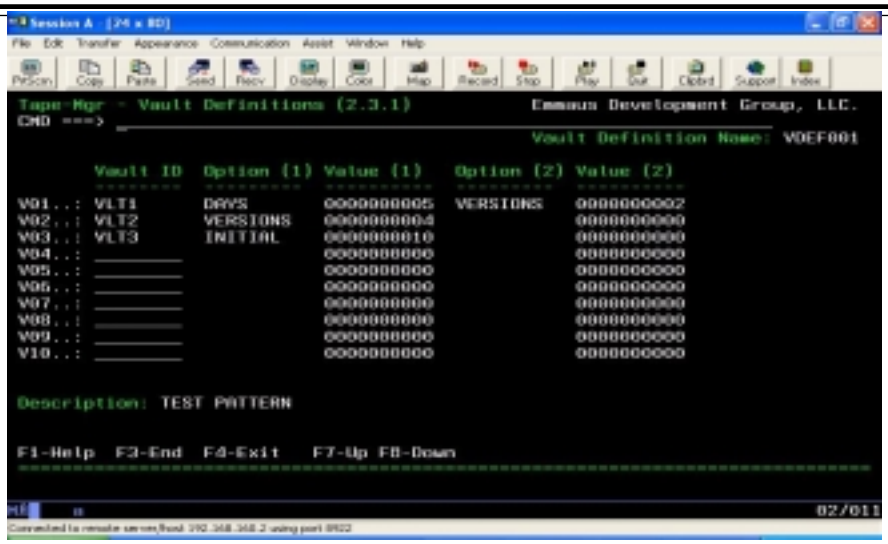
Tape Patterns



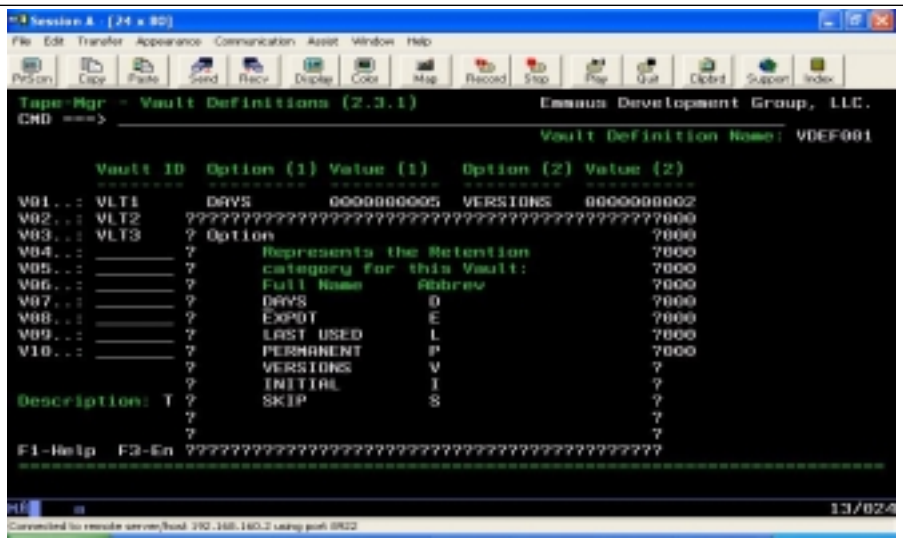
Tape Vaulting

- Unlimited number of user vaults can be defined
- A vaulting path of up to 10 vaults can be defined (with dual retentions at each vault)
- 1st dataset on volume controls vaulting for all subsequent datasets

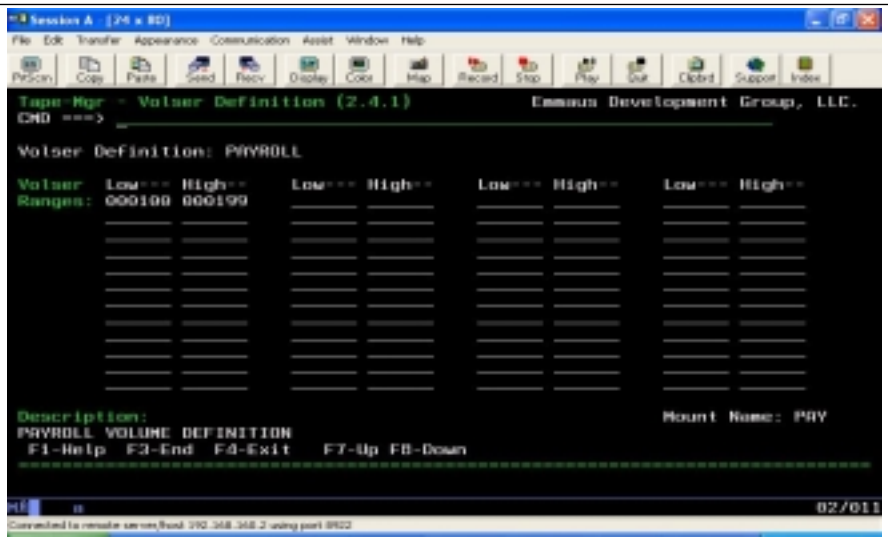
Tape Vault Definition



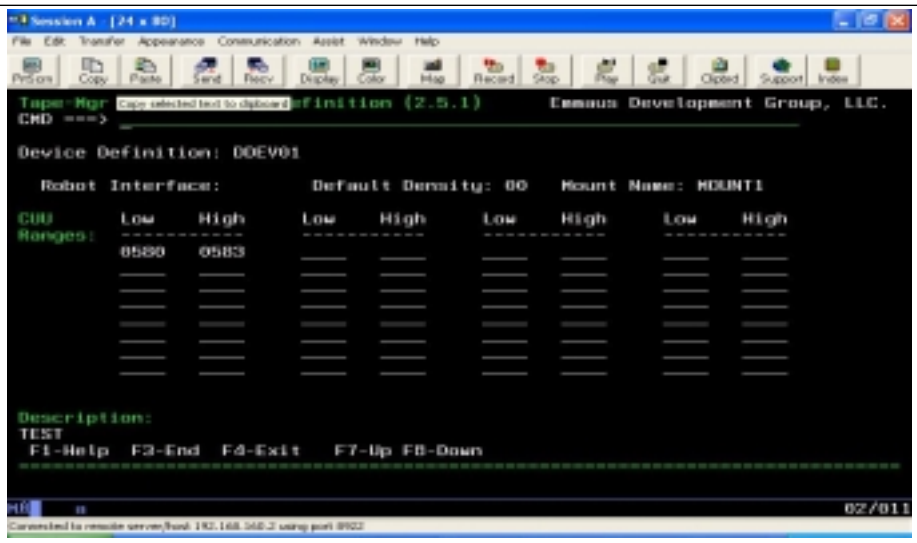
Tape Vault Definition



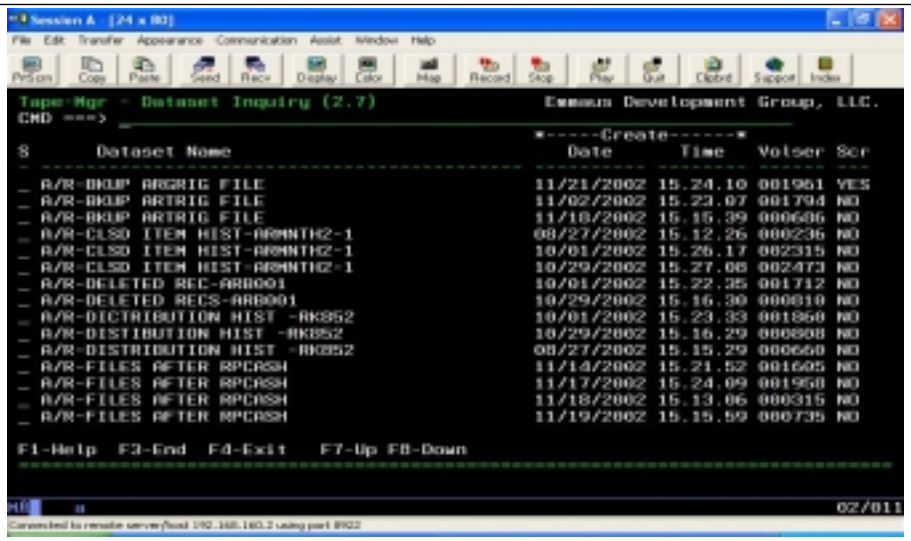
Volser Definitions



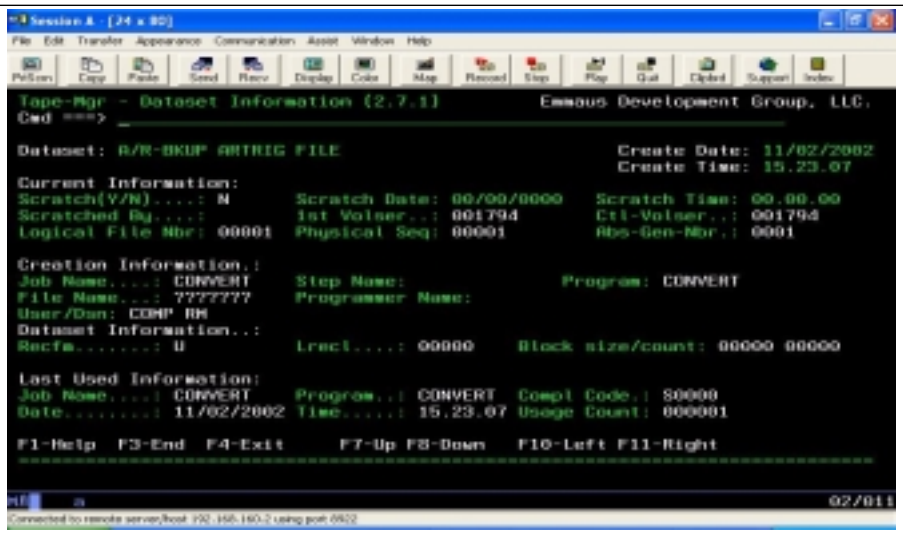
Device Definition



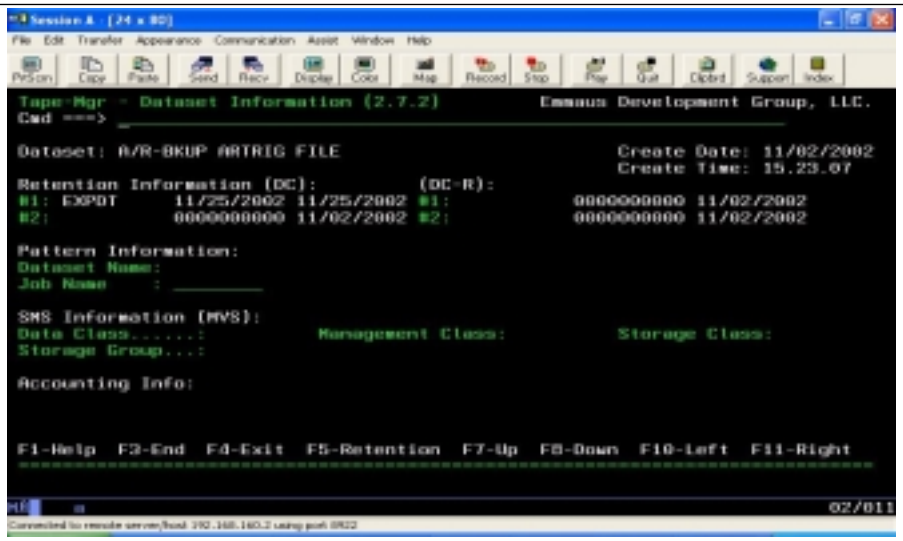
Tape Dataset Inquiry



Tape Dataset Display (1)

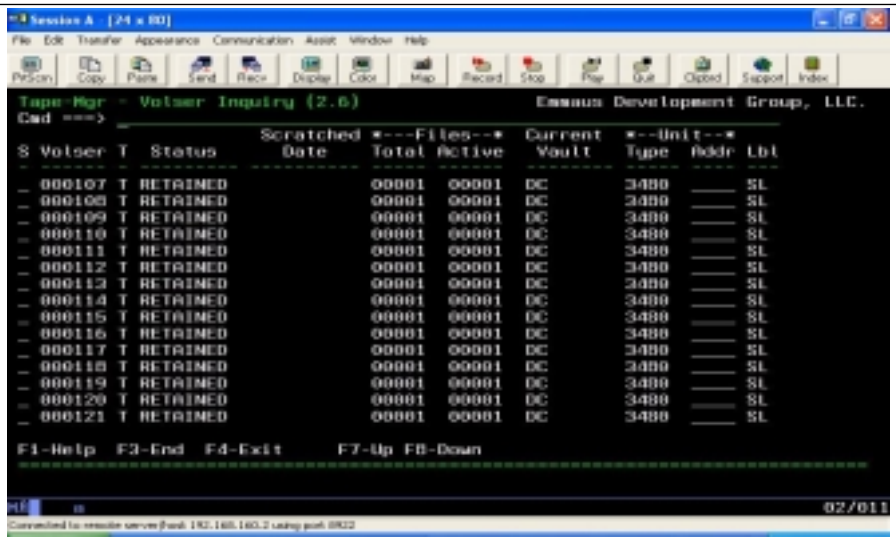


Tape Dataset Display (2)

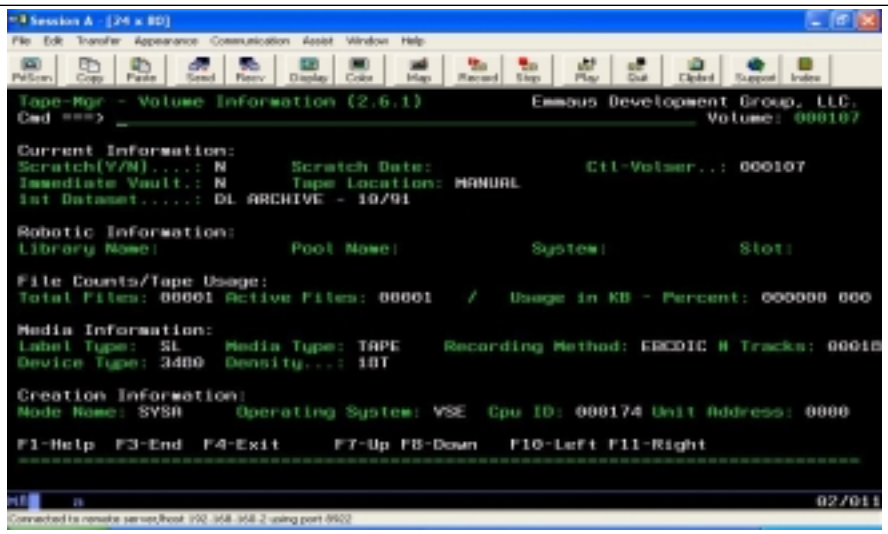


Tape Dataset Display (3)

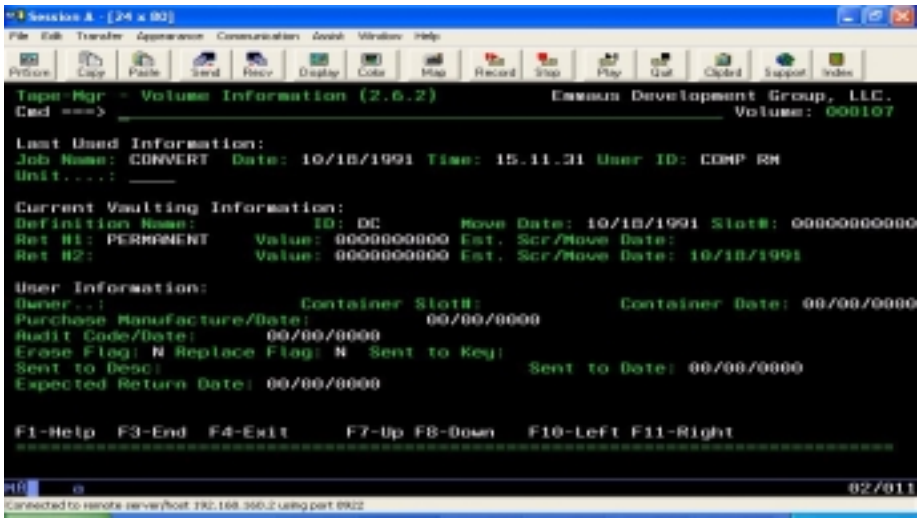
Volume Inquiry



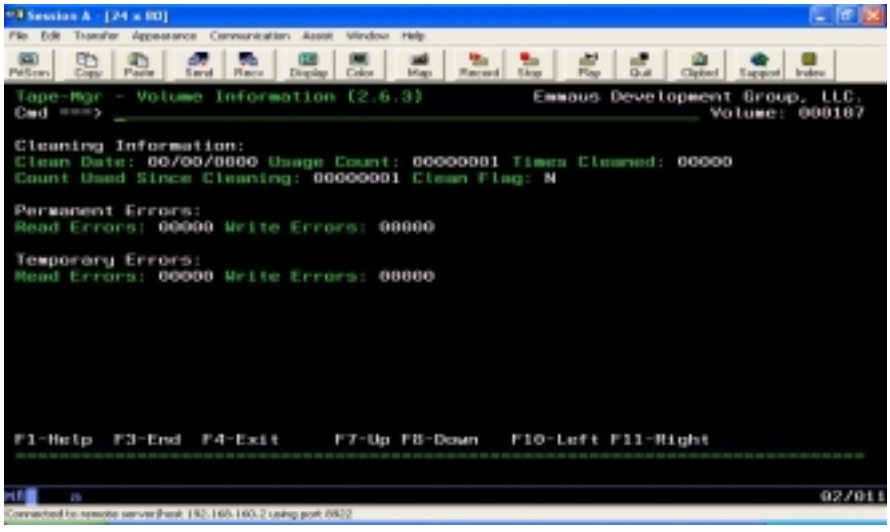
Volume Display (1)



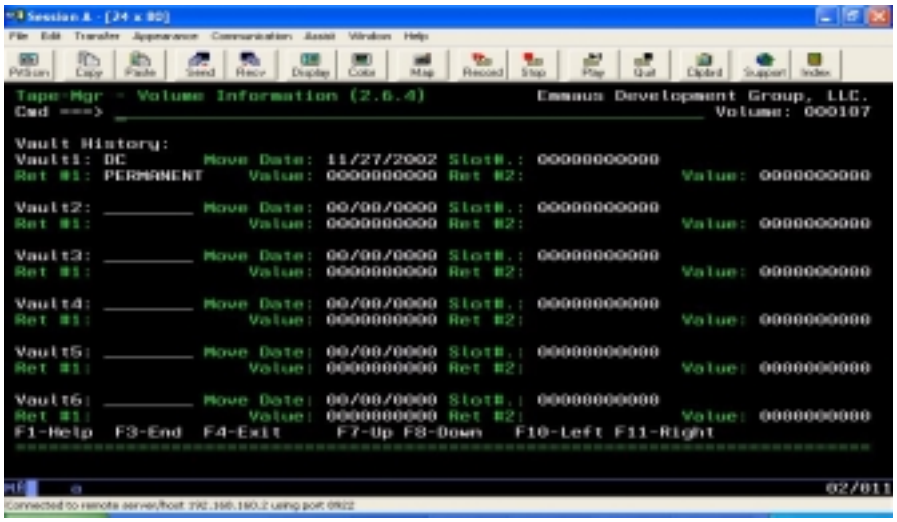
Volume Display (2)



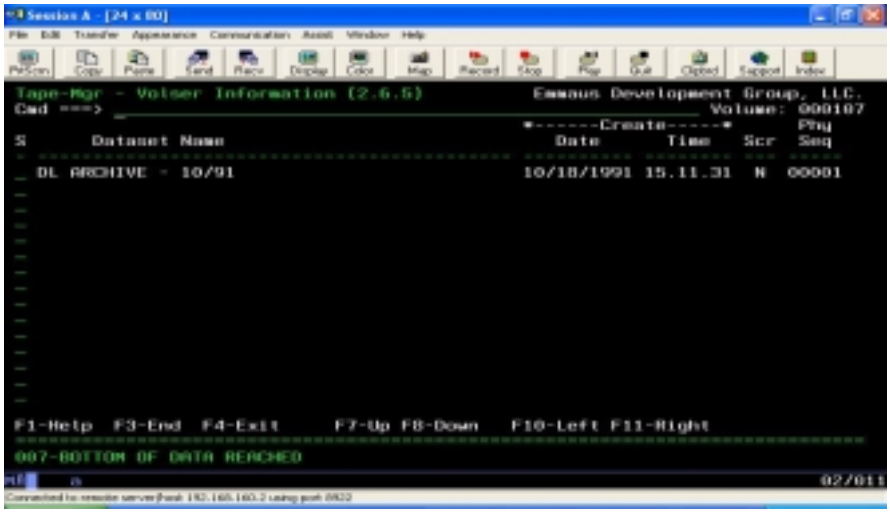
Volume Display (3)



Volume Display (4)



Volume Display (5)



Optitape Interface

- Change / Add to BSOTMAIN
- MANAGER EMERALD
- TAPEOPEN DISABLED
- Define a VOLSERDEF with the RESERVED name of “OPTITAPE”
- use an / / ASSGN SYSxxx,OPTITAPE

TM Reports

- 01 TMBRDV01 - FAMILY REPORT
- 02 TMBRDV02 - VOLSER REPORT
- 03 TMBRDV03 - DATASET REPORT
- 04 TMBRDV04 - SCRATCH VOLUMES REPORT
- 05 TMBRDV05 - RETAINED VOLSERS REPORT

TM Reports

- 06 TMBRDV06 - VAULTED VOLUMES REPORT
- 07 TMBRDV07 - CLEANING REPORT
- 52 TMBSCR05 - SCRATCH PULL REPORT
- 55 TMBVLT05 - VAULT MOVEMENT REPORT

Disk Manager Features

- Parallel processing - can co-exist with existing Tape Management systems for parallel testing/comparison (with restrictions)
- Centralized multi-host processing with Emservers multiple CPU option
- Scratch verification for Datasets

Disk Manager Features

- Tracks both Datasets and Volumes under its control
- Disk Pooling
- Automatic Scratching of Expired Datasets
- Online Dataset Retention information
- New Datasets can be created via JCL

Disk Manager Features

- Special JCL commands to interface with TM (/ / EMPARM)
- No JCL changes are required when converting from another system
- Utilities can load entire volumes or selected datasets from VTOC's

Disk Manager Features

- Utilities for Vtoc Manipulation (such as Delete/Add)
- Standard IBM exits used for operating system interface points -- no hooks used
- Online access allows full control of dataset information
- Browse function allows browsing of Datasets

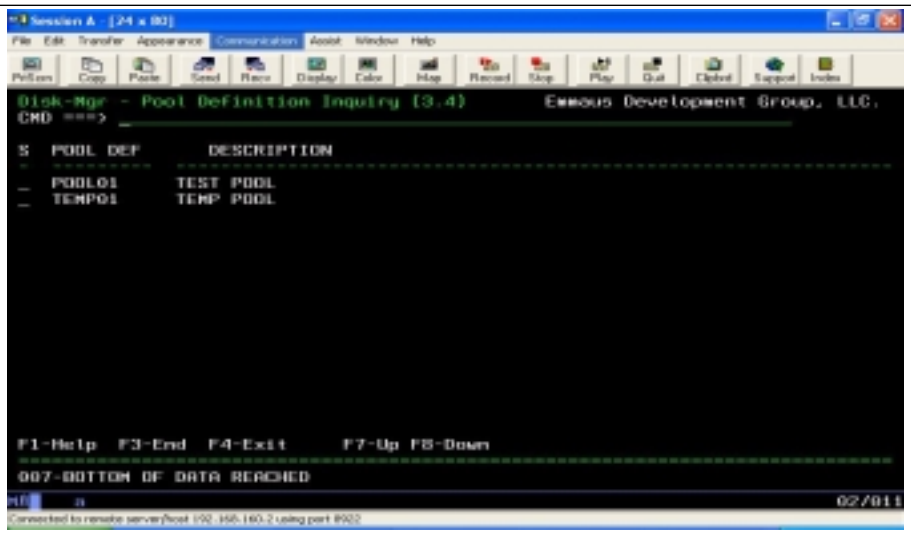
Disk Retention types

- Days
- EXPDT
- Last Used
- Permanent
- Versions

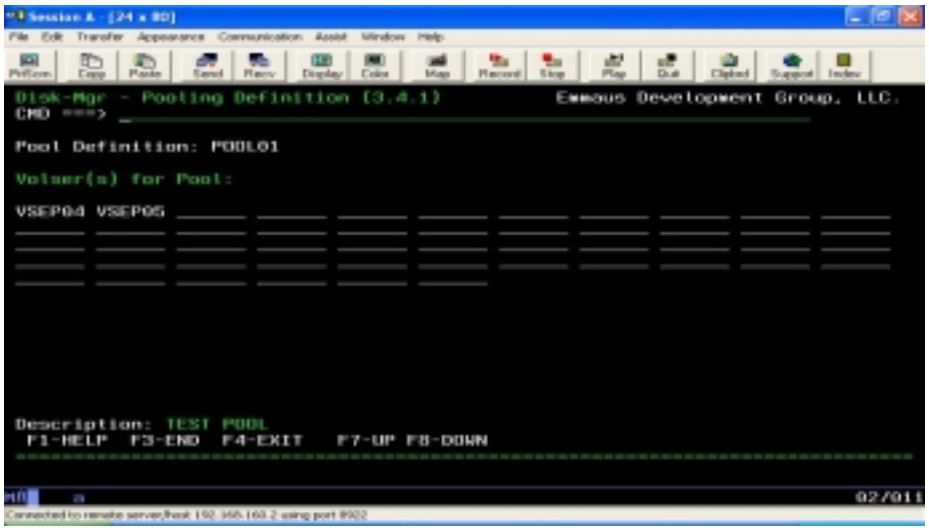
Disk Manager Online Displays

- Pool Definition
- Patterns
- Dataset
- Volume
- Device Display

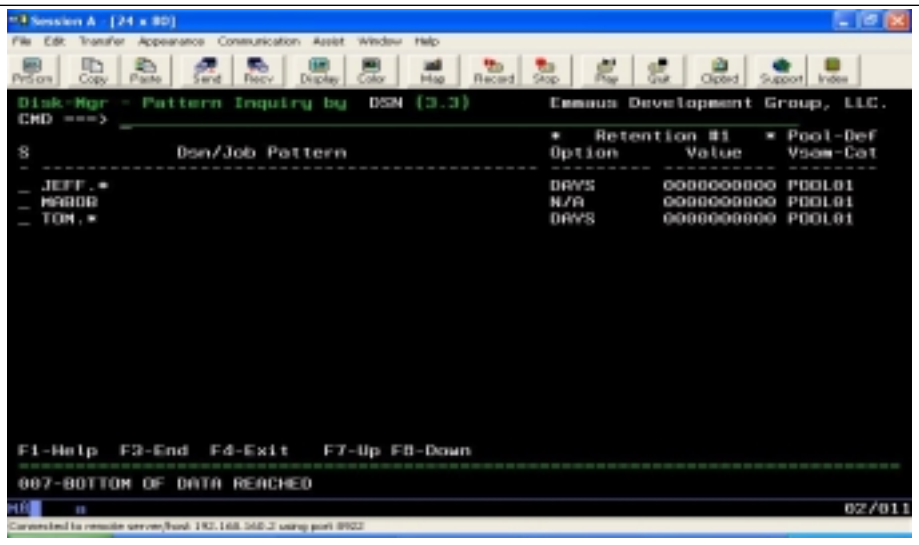
Pool Definition Inquiry



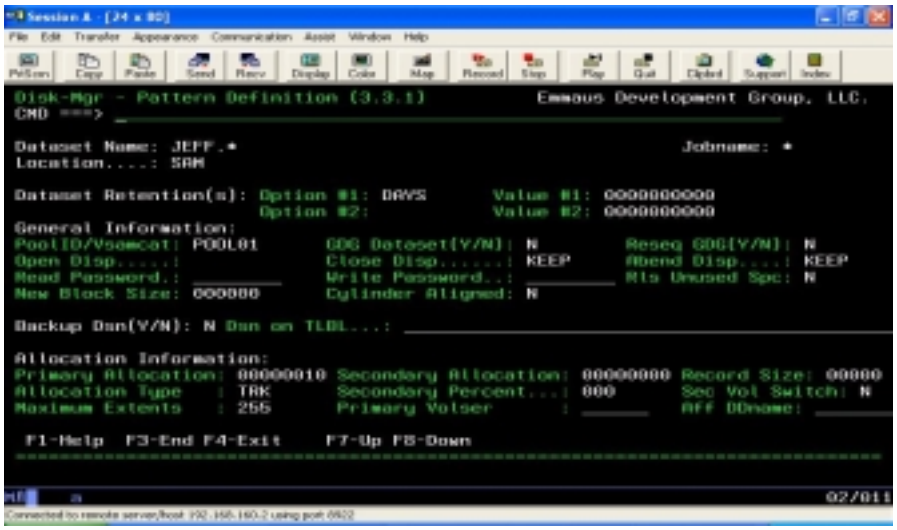
Pool Display



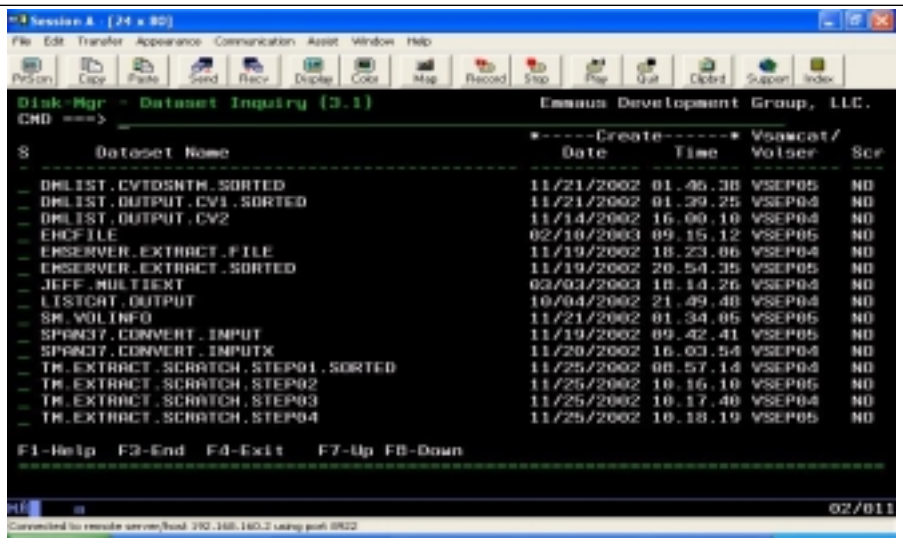
Pattern Inquiry



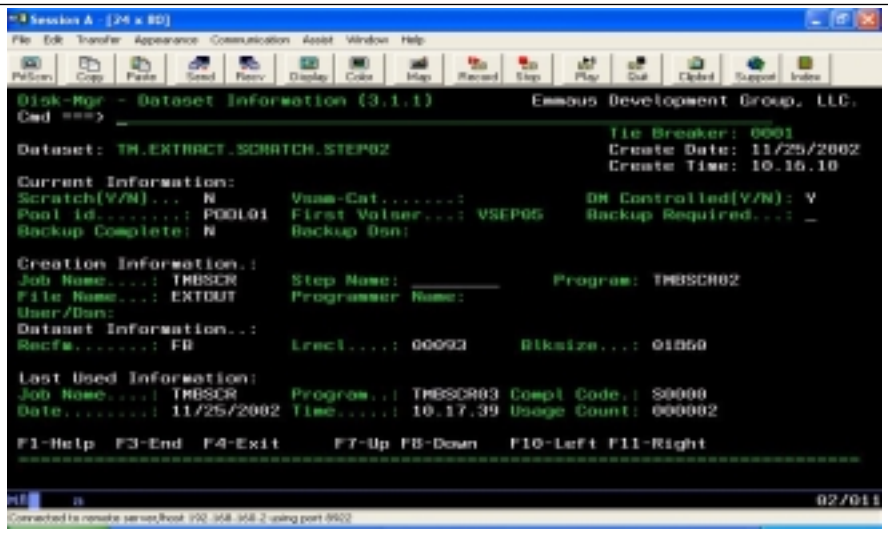
Pattern Display



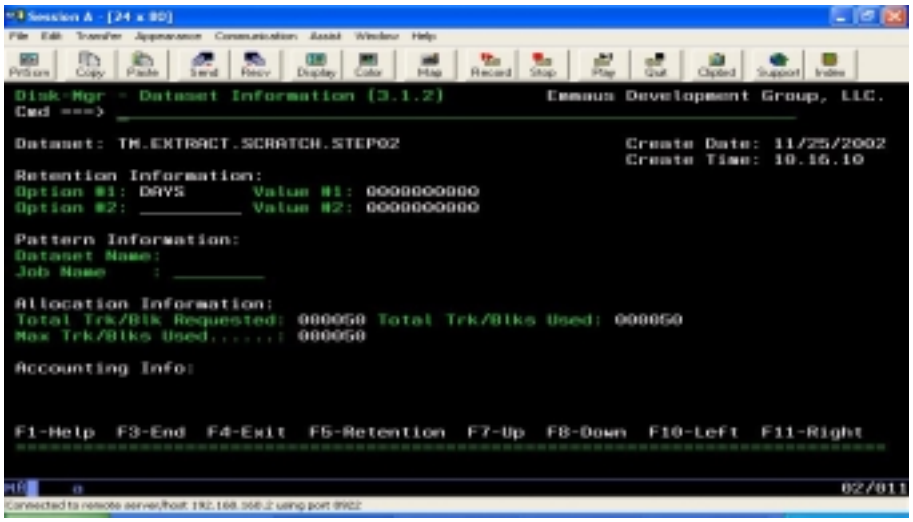
Dataset Inquiry



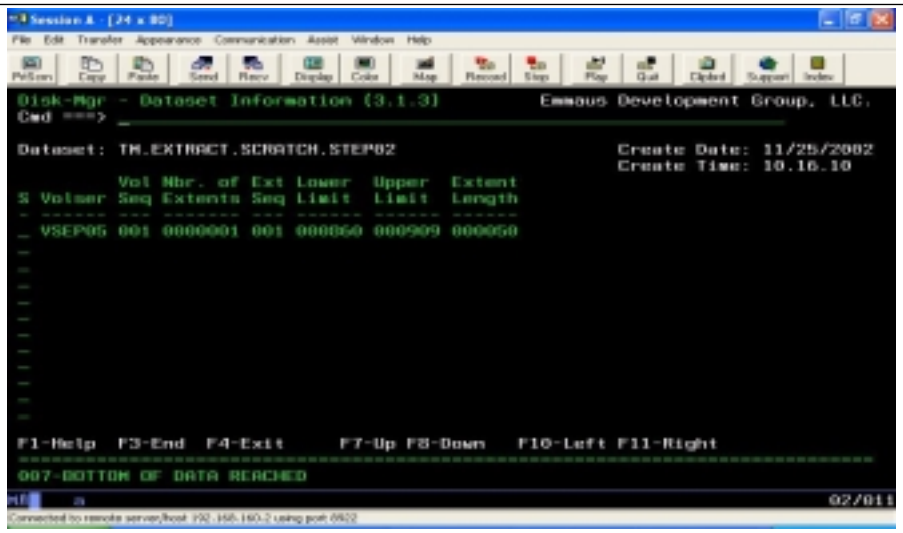
Dataset Display (1)



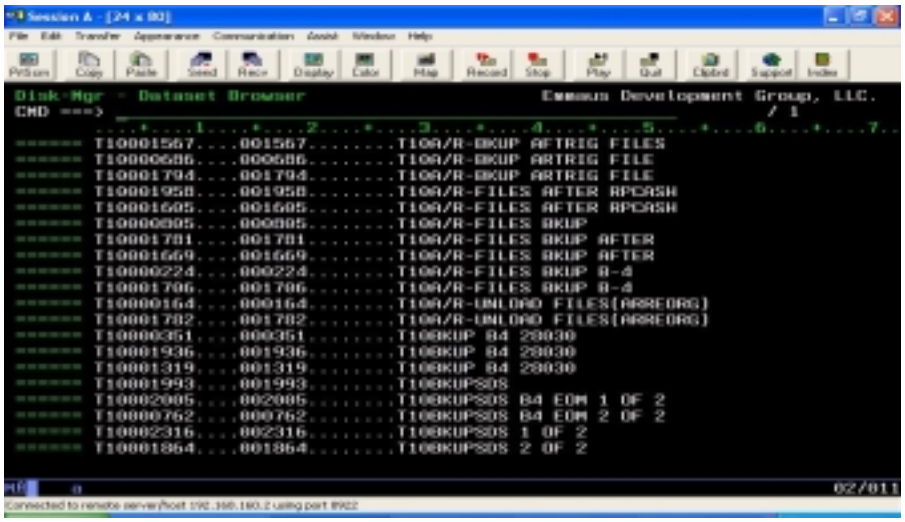
Dataset Display (2)



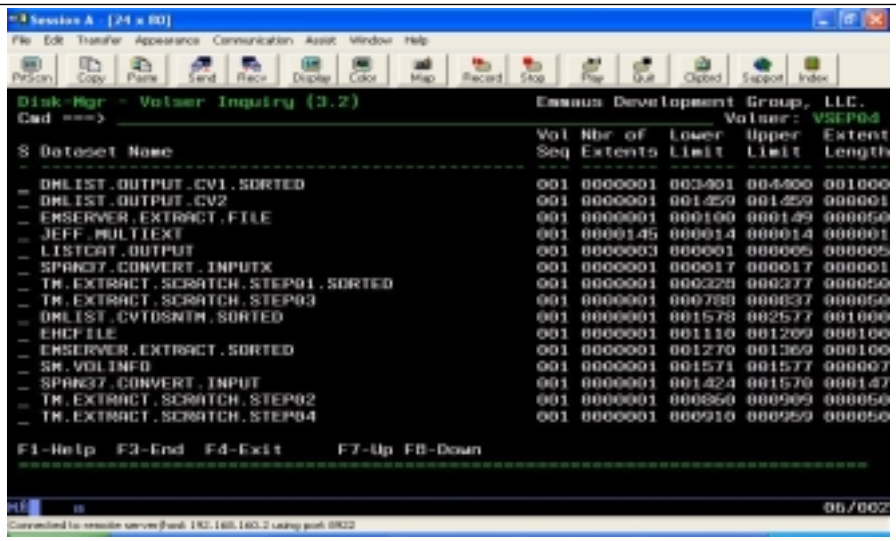
Dataset Display (3)



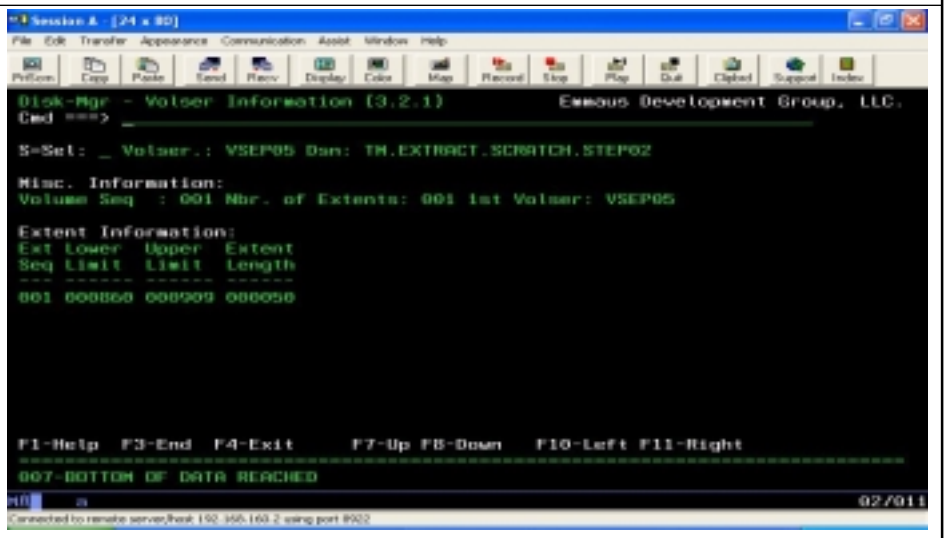
Dataset Browse



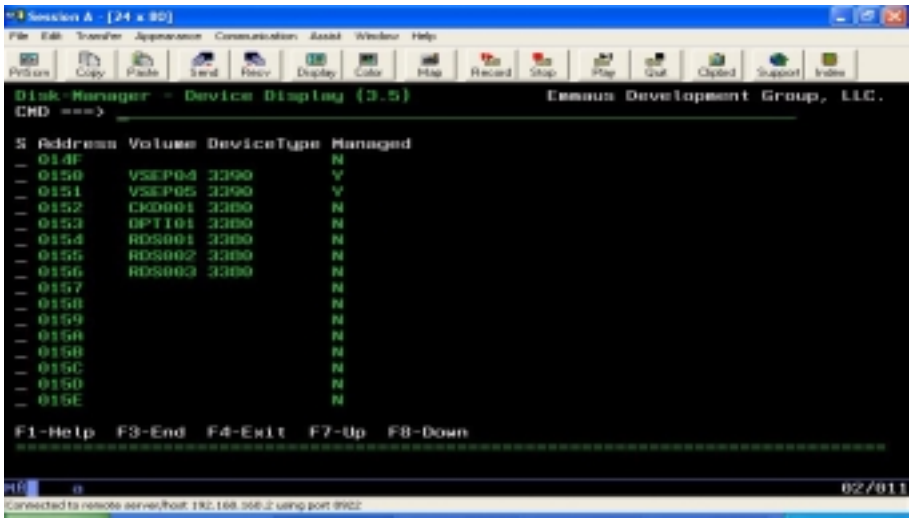
Volume Inquiry



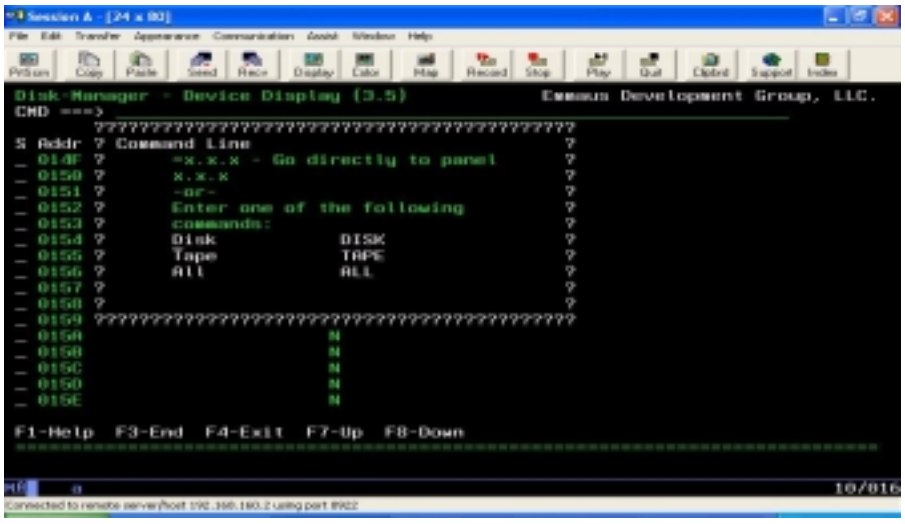
Volume Display (1)



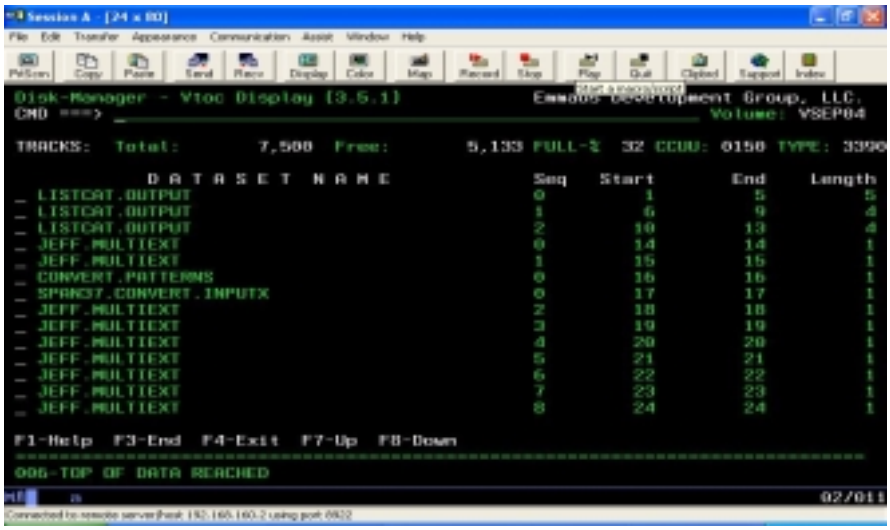
Device Display Inquiry



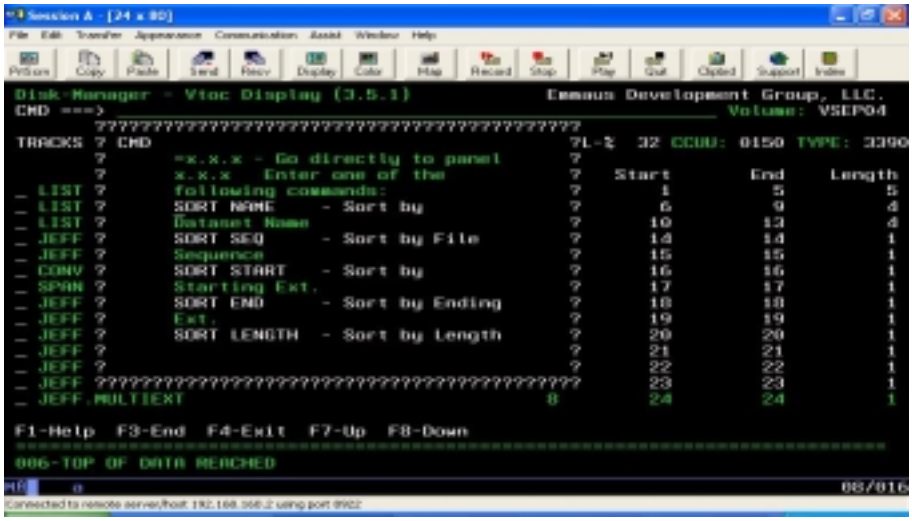
Device Display Inquiry



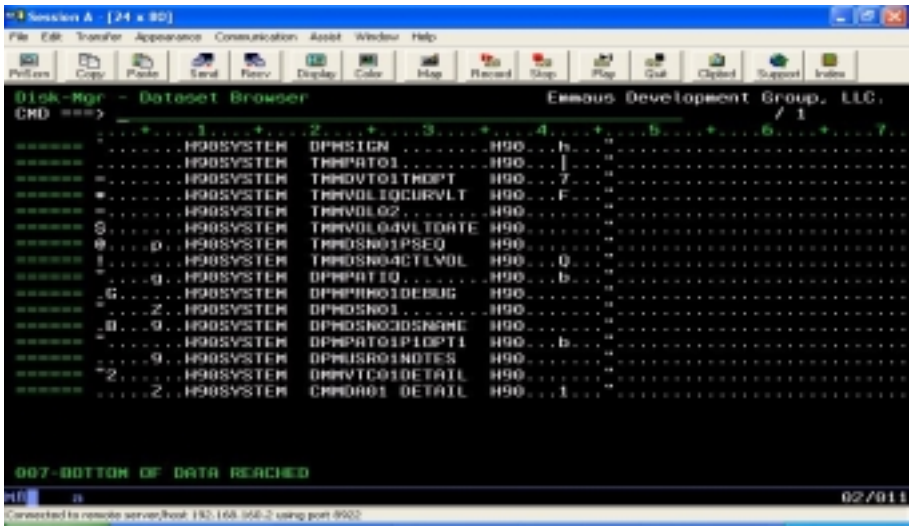
Device Display (1)



Device Display (1)



Browse Display



Console Manager Features

- Realtime display / update capability
- Autorefresh capability
- Security limits users access based on profile
- Full online display capability of VSE / POWER Queues

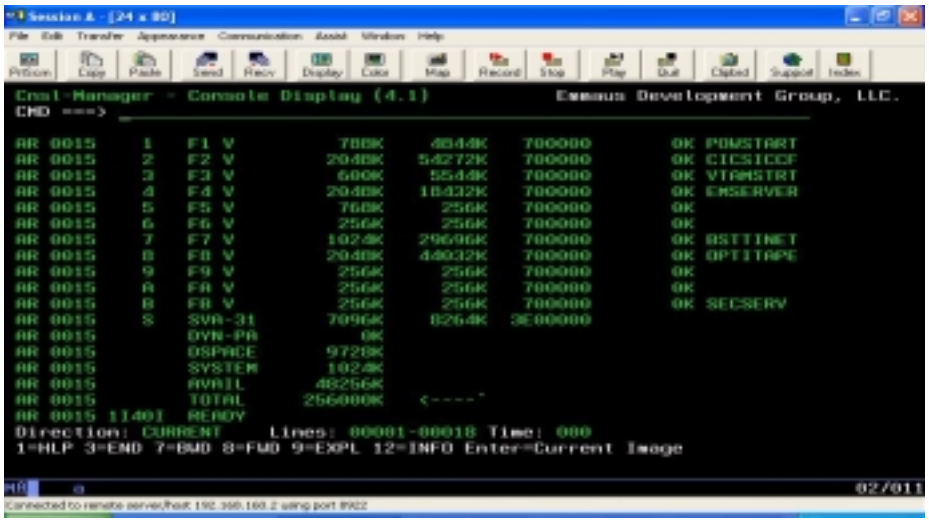
Console Manager Features

- System Activity Displays
- Storage viewing by partition (update capability for authorized users)
- Displays for system control blocks (COMREG / SYSCOM / PUB / PCB)

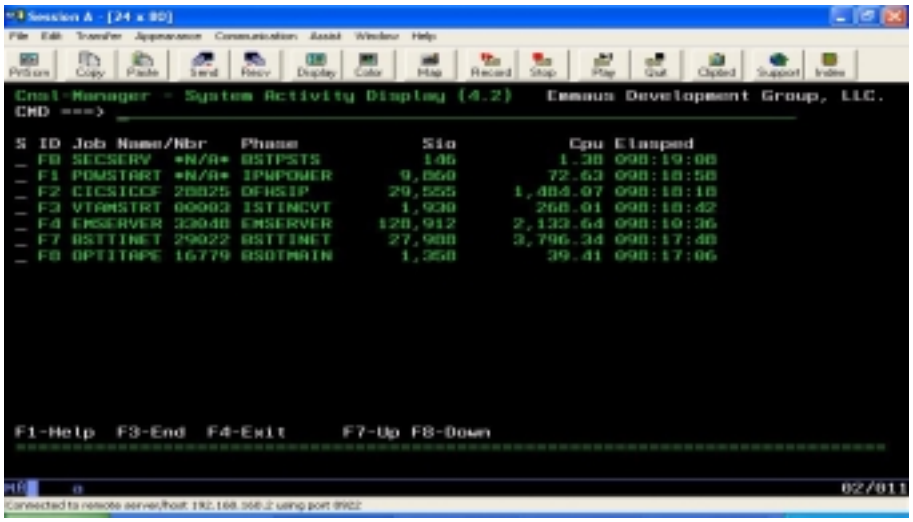
Console Manager Online Displays

- VSE Console
- System Activity
- Vse / Power Queue Display
- Storage Display

VSE Console Display

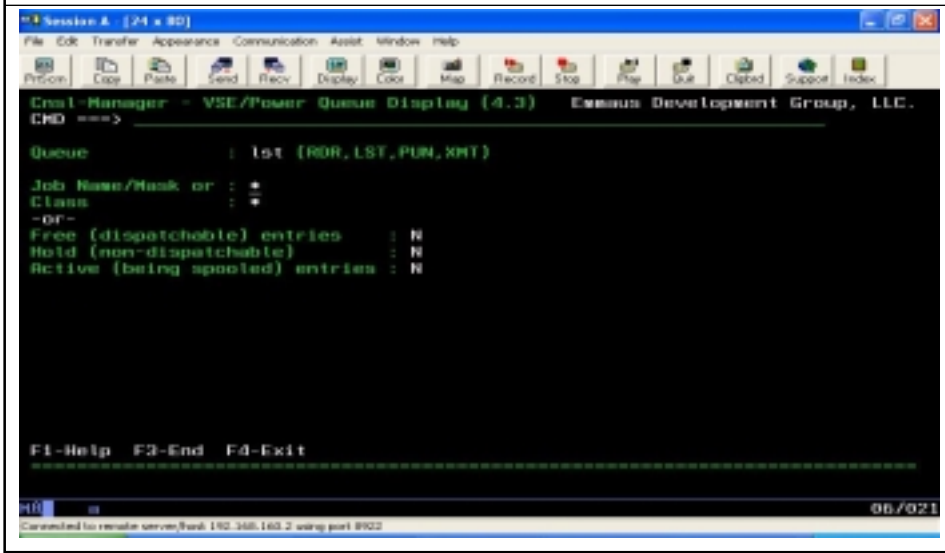


System Activity Display

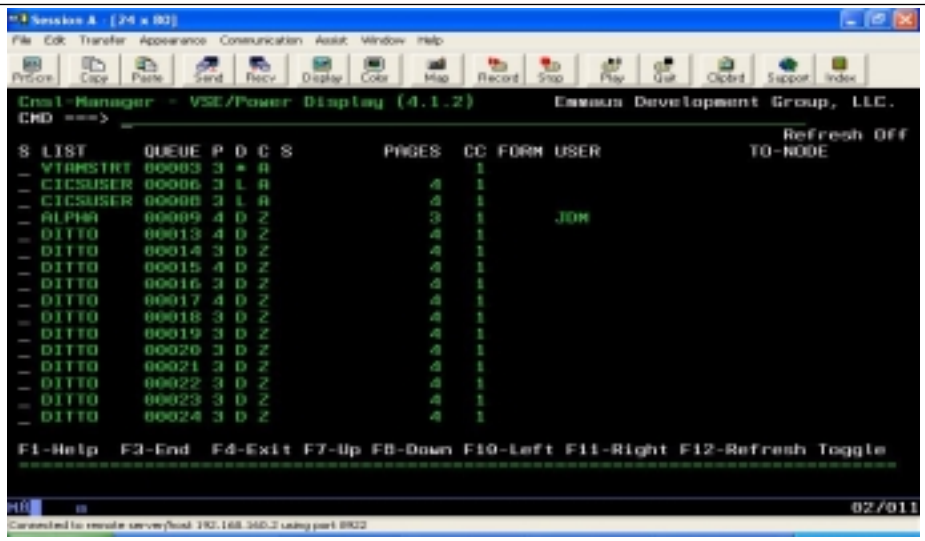


Device SIO Counts

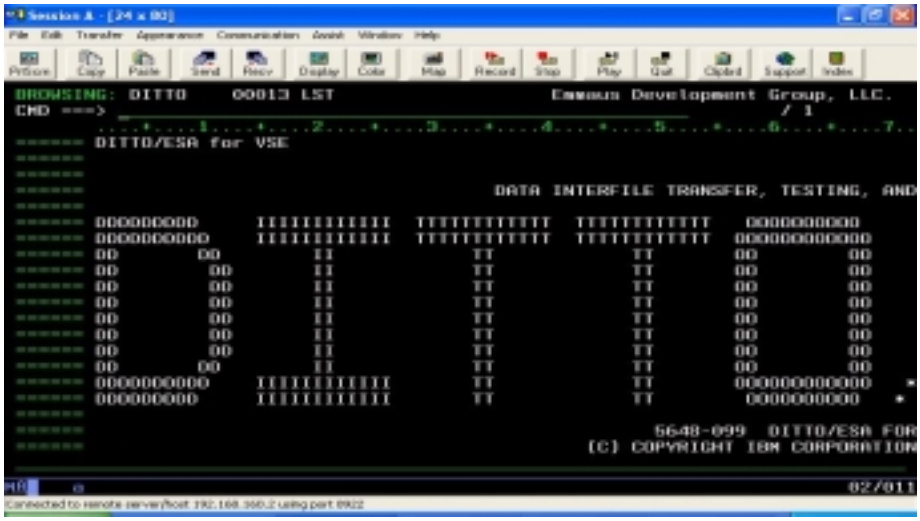
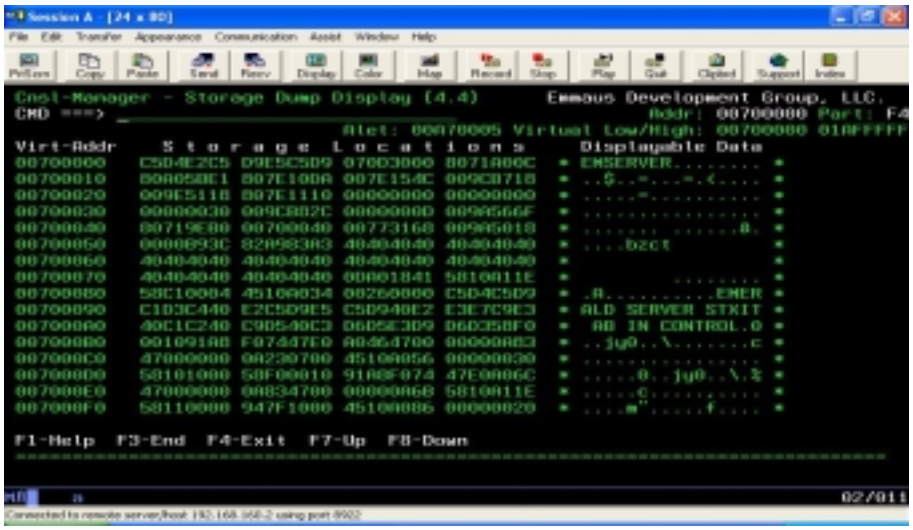
Vse/Power Queue Display



Vse/Power Queue Display



Vse/Power Queue Display



Storage Display