

Rexx for CICS TS

User Experience
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Rexx for CICS TS

- Setting up REXX in CICS TS
 - The “CICS Transaction Server – REXX Guide” (SC34-5764-00)
 - Everything you ever wanted to know...
 - Chapter 2 “Writing and running a REXX Program”
 - The place to start

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- “What you need to run a REXX Program”

- The laundry list is documented Chapter 2.1

Create the RFS Filepools	Update CICS startup JCL
Install Resource Definitions	Format the RFS Filepools
Update LSRPOOL Definitions	Create the Help Files
Rename supplied Procedures	Verify the Installation
Update CICSTART.PROC	Config the DB2 Interface

(See Appendix K, “Post-Installation Configuration”)

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- What they don’t tell in VSE/ESA 2.6...

- Two default RFS Filepools are already defined
- Resource Definitions are already installed
- LSRPOOL Definitions are already updated

- What you ultimately need to do...

- Copy some LIBR members
- Check/Update the CICSTART.PROC
- Modify the LIBDEF search chain for CICS

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- Appendix K
 - K.4 Rename supplied procedures
 - Copy members from the shipped sublibrary to a User defined sublibrary
 - 36 members are copied
 - K.5 Update the copied CICSTART.PROC
 - In the User defined sublibrary
 - If you're using a default user like SYSA, nothing needs to be touched

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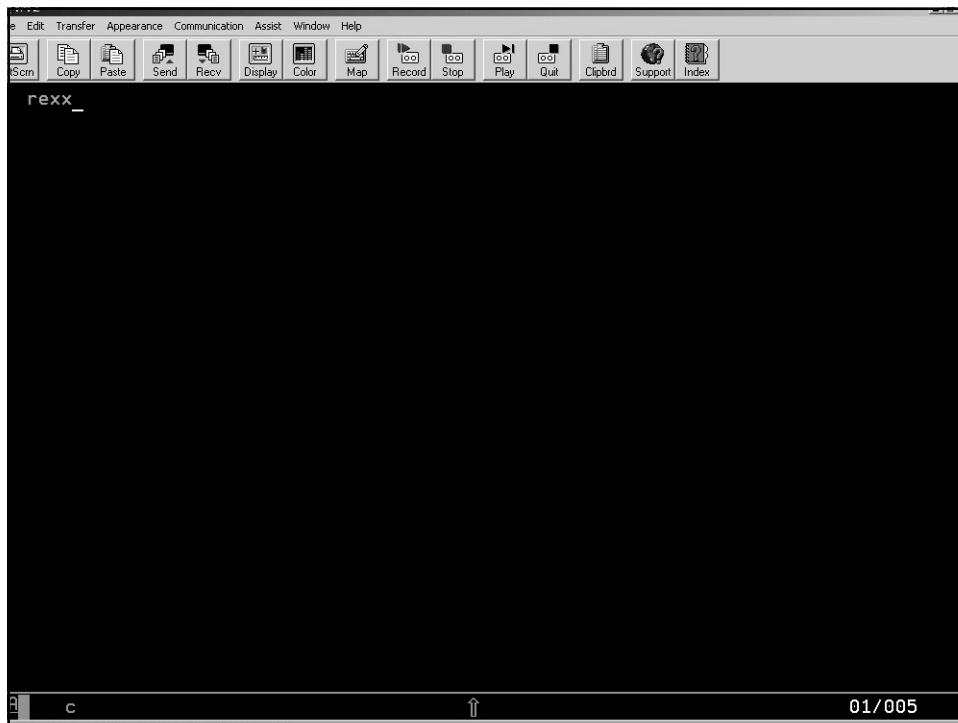
- Appendix K
 - K.6 Update CICS Initialization JCL
 - Update the LIBDEF search chain to pick up the User defined sublibrary
 - ***Before you recycle CICS with the new search chain!***
 - Check Appendix K.8 for the Extended DSA requirements to create the REXX Help files (10 meg free of EDSA)
 - Modify EDSALIM as required in startup JCL

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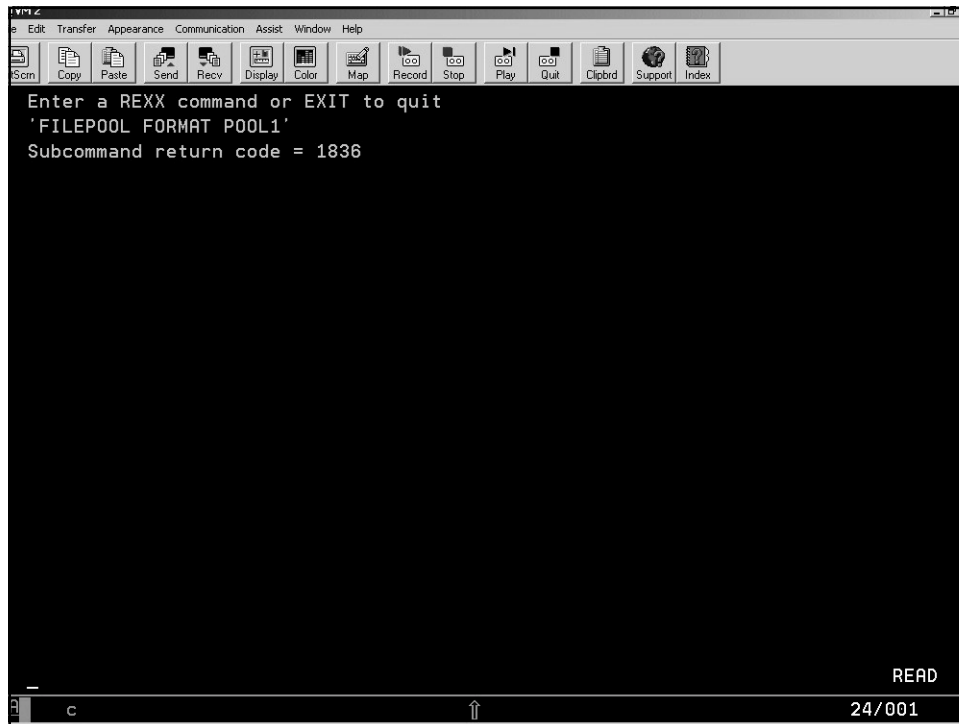
- Appendix K

- K.7 Format the RFS Filepools

- The manual suggests using either single (') or double quotes (") to delimit REXX commands.
 - The canned shipped Filepools format instantaneously
 - If you attempt to reformat a filepool, you'll receive:
"Subcommand return code = 1836"





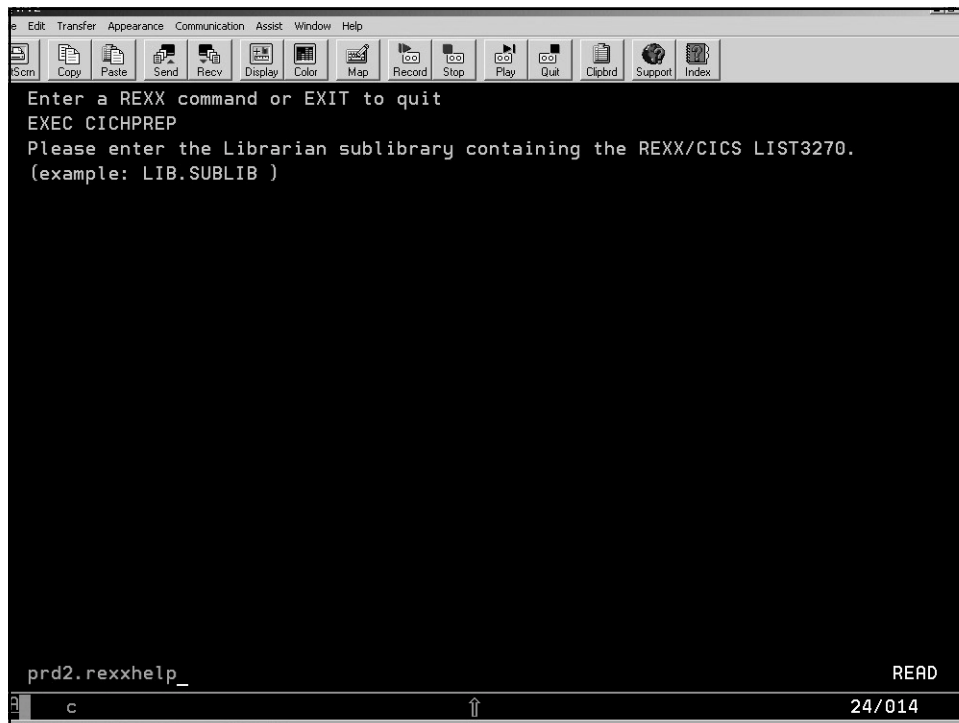


The screenshot shows a terminal window with a menu bar (Edit, Transfer, Appearance, Communication, Assist, Window, Help) and a toolbar with icons for various functions like Copy, Paste, Send, Recv, Display, Color, Map, Record, Stop, Play, Quit, Clipboard, Support, and Index. The terminal text reads: "Enter a REXX command or EXIT to quit", "'FILEPOOL FORMAT POOL1'", and "Subcommand return code = 1836". At the bottom right, it says "READ" and "24/001".

```
Enter a REXX command or EXIT to quit
'FILEPOOL FORMAT POOL1'
Subcommand return code = 1836
```

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- Appendix K
 - K.8 Create the Help files
 - Check your EDSA to insure that 10 Meg is free
 - Copy four members to the User defined sublibrary
 - COPY CICR3270.Y : CICR3270.BOOK
(This is actually the full CICS TS REXX Guide)
 - COPY CICINDEX.N : CICINDEX.PANSRC
 - COPY CICSNDX.N : CICSNDX.PANSRC
 - COPY CICCHAP.N : CICCHAP.PANSRC



```
Enter a REXX command or EXIT to quit
EXEC CICHPREP
Please enter the Librarian sublibrary containing the REXX/CICS LIST3270.
(example: LIB.SUBLIB )
Please enter the Librarian sublibrary containing the HELP panels.
(example: LIB.SUBLIB )
11:37:30 Building INDEX and CHAPTER files. Please be patient.
11:37:37 INDEX file built.
11:37:37 Building Chapter files
11:38:04 Chapter files are built
11:38:04 Building Appendix files.
11:38:10 Appendix files are built
11:38:10 36 Files built, all done !!
```

READ

c ↑ 24/001

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- Appendix K
 - K.9 Verify the Installation
 - Ran quick and Clean
 - K.10 Configure the REXX DB2 Interface
 - Optional and did not perform


```
e Edit Transfer Appearance Communication Assist Window Help
[Icons: IScm, Copy, Paste, Send, Recv, Display, Color, Map, Record, Stop, Play, Quit, Clipboard, Support, Index]
Enter a REXX command or EXIT to quit
CALL CICIVP1
***-----***
*** This is a test REXX program running under CICS/ESA ***
*** It was loaded from AUTHCLIB-PRD2.KD(CICIVP1) ***
***-----***

What is your name?

READ
c ↑ 24/001
```

```
e Edit Transfer Appearance Communication Assist Window Help
[Icons: IScm, Copy, Paste, Send, Recv, Display, Color, Map, Record, Stop, Play, Quit, Clipboard, Support, Index]
Enter a REXX command or EXIT to quit
CALL CICIVP1
***-----***
*** This is a test REXX program running under CICS/ESA ***
*** It was loaded from AUTHCLIB-PRD2.KD(CICIVP1) ***
***-----***

What is your name?

Johann Bach
READ
c ↑ 24/012
```

```
e Edit Transfer Appearance Communication Assist Window Help
[Icons: IScrn, Copy, Paste, Send, Recv, Display, Color, Map, Record, Stop, Play, Quit, Clpbrd, Support, Index]

Enter a REXX command or EXIT to quit
CALL CICIVP1
***-----***
*** This is a test REXX program running under CICS/ESA ***
*** It was loaded from AUTHCLIB-PRD2.KD(CICIVP1) ***
***-----***

What is your name?

Welcome to REXX/CICS for CICS/ESA , JOHANN BACH

Invoking nested exec CICIVP2 (which has tracing on)
  11 *-* say 'You entered CICIVP2 exec'
  >>> "You entered CICIVP2 exec"
You entered CICIVP2 exec
  12 *-* call CICIVP3
You entered CICIVP3 exec which has tracing off
  13 *-* exit
Back to CICIVP1 exec

This is fullscreen output to terminal A001
Now input some data and press ENTER or a PF key

c ↑ 24/001
```

```
e Edit Transfer Appearance Communication Assist Window Help
[Icons: IScrn, Copy, Paste, Send, Recv, Display, Color, Map, Record, Stop, Play, Quit, Clpbrd, Support, Index]

Enter a REXX command or EXIT to quit
CALL CICIVP1
***-----***
*** This is a test REXX program running under CICS/ESA ***
*** It was loaded from AUTHCLIB-PRD2.KD(CICIVP1) ***
***-----***

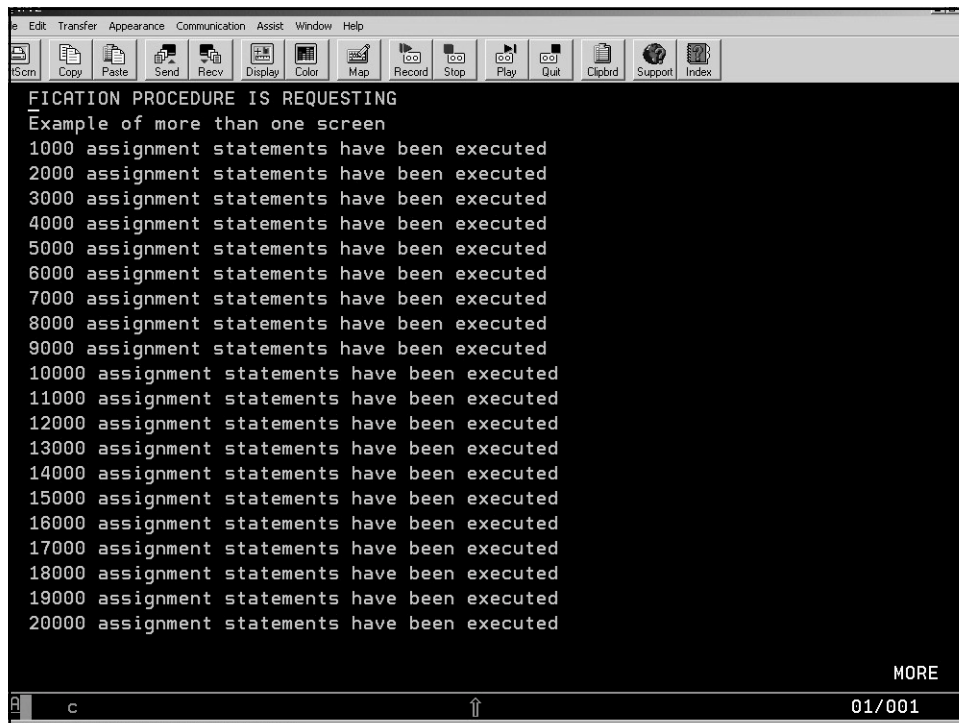
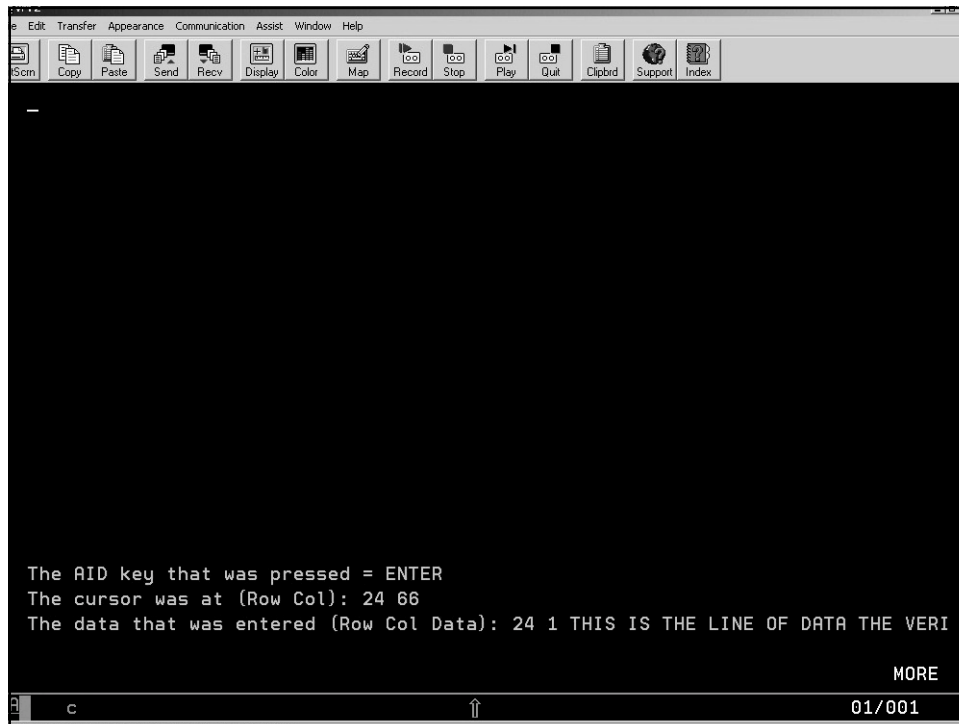
What is your name?

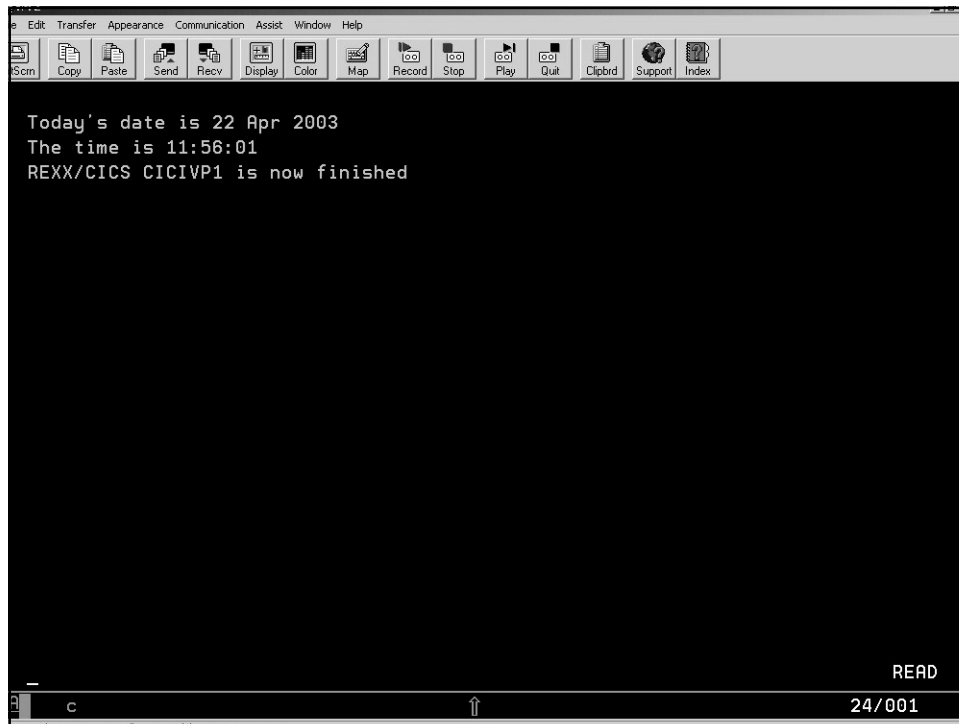
Welcome to REXX/CICS for CICS/ESA , JOHANN BACH

Invoking nested exec CICIVP2 (which has tracing on)
  11 *-* say 'You entered CICIVP2 exec'
  >>> "You entered CICIVP2 exec"
You entered CICIVP2 exec
  12 *-* call CICIVP3
You entered CICIVP3 exec which has tracing off
  13 *-* exit
Back to CICIVP1 exec

This is fullscreen output to terminal A001
Now input some data and press ENTER or a PF key
This is the line of data the verification procedure is requesting_

c ↑ 24/066
```





The screenshot shows a terminal window with a menu bar (Edit, Transfer, Appearance, Communication, Assist, Window, Help) and a toolbar with icons for various functions like Copy, Paste, Send, Recv, Display, Color, Map, Record, Stop, Play, Quit, Clipboard, Support, and Index. The main area of the terminal is black with white text that reads: "Today's date is 22 Apr 2003", "The time is 11:56:01", and "REXX/CICS CICIVP1 is now finished". At the bottom right of the terminal, the word "READ" is visible. The status bar at the very bottom shows a cursor, the letter "c", an upward arrow, and the page number "24/001".

```
Today's date is 22 Apr 2003
The time is 11:56:01
REXX/CICS CICIVP1 is now finished
```

READ

c ↑ 24/001

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- Appendixes

- A. Error Numbers and Messages
- B. Return Codes
- C. DBCS Support
- D. Reserved words and special variables
- E. Debug Aids
- F. REXXCICS Business Value Discussion

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- Appendixes
 - G. System Definition, Customization and Administration
 - H. Security
 - I. Performance considerations
 - States that an EXEC CICS SUSPEND is automatically issued every 1024 clauses so that a REXX application doesn't monopolize the system
 - J. Basic Mapping Support
- Contain a wealth of information

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- REXX EDITOR
 - Editor built and invoked by “EDIT”
 - Syntax: `EDIT poolid:\dir1\dir2\fn.ft`
 - Can edit either:
 - Members that reside in REXX Filepool
 - Members that reside in a VSE sublibrary

```
e Edit Transfer Appearance Communication Assist Window Help
[Icons: Scrn, Copy, Paste, Send, Recv, Display, Color, Map, Record, Stop, Play, Quit, Clpbrd, Support, Index]
EDIT ---- POOL1:\USERS\SYSA\TEST.EXEC ----- File not found (RC=203)
COMMAND ==> _
00000 ***** TOP OF DATA *****
00001 ***** BOTTOM OF DATA *****

F1=HELP F2=LADD F3=FIL F4=SPLT F5=F F6=JN F7=BA F8=FWD F10=LFT F11=RGF F12=QUI

c ↑ 02/015
```

```
e Edit Transfer Appearance Communication Assist Window Help
[Icons: Scrn, Copy, Paste, Send, Recv, Display, Color, Map, Record, Stop, Play, Quit, Clpbrd, Support, Index]
edit prd2.kd(test4.proc) lib_

c ↑ 01/029
```

```
EDIT ---- PRD2.KD(TEST4.PROC) ----- COLUMNS 1 73
COMMAND ==>
00000 ***** TOP OF DATA *****
00001 /* REXX TEST4 EXEC */
00002 /* */
00003 number_one=0
00004 number_two=0
00005 number_three=0
00006
00007 answer_1=0
00008 answer_2=0
00009
00010 say "Specify first number to be added"
00011 pull number_one
00012 say number_one
00013
00014 say "Specify second number to be added"
00015 pull number_two
00016 say number_two
00017
00018 say "Specify third number to use as a multiplier"
00019 pull number_three
00020 say number_three
F1=HELP F2=LADD F3=FIL F4=SPLT F5=F F6=JN F7=BA F8=FWD F10=LFT F11=RG T F12=QUI
c ↑ 02/015
```

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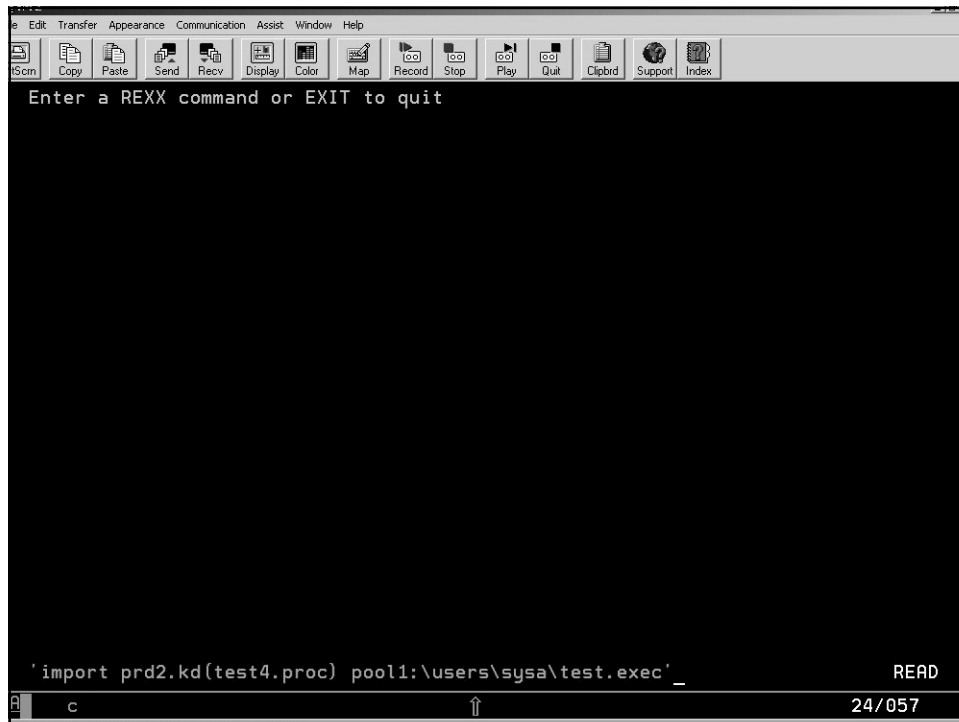
- File list transaction
 - There is a transaction name FLST
 - Similar to the XEDIT Filelist function in VM
 - Displays members within a Filepool
 - Allows
 - Direct Editing of a member via a PF key
 - Allows member manipulation via Commands entered on the Command line

```
e Edit Transfer Appearance Communication Assist Window Help
[Icons: Scan, Copy, Paste, Send, Recv, Display, Color, Map, Record, Stop, Play, Quit, Clipboard, Support, Index]
USER=SYSA - DIRECTORY=POOL1:\USERS\SYSA\
CMD  FILENAME FILETYPE ATTRIBUTES RECORDS      SIZE  DATE      TIME
HELLO EXEC     FILE      10          146  2003/04/22 14:49:29
TEST  EXEC     FILE      17         1139  2003/04/22 16:09:32
TEST2 EXEC     FILE      17         1360  2003/04/22 15:54:32

COMMAND ==>> _
F1=HELP F2=REFRESH F3=END F7=UP 18 F8=DOWN 18 F11=EDIT F12=CANCEL
c ↑ 22/015
```

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- Import & Export Commands
 - Import members from a VSE sublibrary
 - Export members to a VSE sublibrary
 - Suggest checking your CICS TS REXX maintenance to make sure it's up to snuff before trying to Export...



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- Sample of a simple REXX program
 - Issues CEMT commands
 - Displays results on screen
 - Variables exist so that you could redirect output to a file
 - REXXCICS environment – Exec invocation
 - Outside environment issue “REXX execname”
 - Within environment issue “CALL execname”


```
Enter a REXX command or EXIT to quit
CALL TEST7

----- TEST7 from sublibrary PRD2.KD -----
The TEST7 proc(exec) performs an inquiry and open for RFSDIR2
using CEMT commands, returning the results to variable CEMTEOUT.

***** Issuing CEMT I FILE (RFSDIR2) *****

Ē      FILE(RFSDIR2) ACCESSMETHOD(VSAM) OPENSTATUS( CLOSED ) ENABLESTATUS( U
NENABLED ) READSTATUS( READ ) UPDATESTATUS( UPDATE ) ADDSTATUS( ADDABLE ) BR
OWSESTATUS( BROWSE ) DELETSTATUS( DELETE ) EXCLSTATUS(          ) EMPTYS
TATUS( NOEMPTYREQ ) DSNAME( VSE.CICREX.FP02.DIR          ) CAT
NAME() MAXNUMRECS( 00000000 ) TABLE( NOTTABLE )

***** Issuing CEMT S FILE (RFSDIR2) OPEN *****

Î      FILE(RFSDIR2) ACCESSMETHOD(VSAM) OPENSTATUS( OPEN ) ENABLESTATUS( ENA
BLED ) READSTATUS( READ ) UPDATESTATUS( UPDATE ) ADDSTATUS( ADDABLE ) BROWSE
STATUS( BROWSE ) DELETSTATUS( DELETE ) EXCLSTATUS(          ) EMPTYSSTATU
S( NOEMPTYREQ ) DSNAME( VSE.CICREX.FP02.DIR          ) CATNAME
() MAXNUMRECS( 00000000 ) TABLE( NOTTABLE ) NORMAL

-
c                                     24/001
```

REXX for CICS TS

- REXX filepools and sublibraries
 - Entering only “REXX”, just opens the *Filepool Directory* (first reference)
 - Invocation of a REXX EXEC, opens the *Filepool* (first reference)
 - EXECs can be invoked from either a filepool or sublibrary
 - Calls work in either direction between filepools and sublibraries

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- A multitude of Environments
 - REXXCICS CICS (EXEC CICS)
 - EXECSQL EDISVR
 - FLSTSVR RFS
 - RLS
 - Extensive discussion about using the “Address” command and the use of the variable “curenv”, which returns the current environment

Rexx for CICS TS

- Summary
 - Minimal Setup
 - Easy to use
 - Documentation is good
 - Make sure REXX maintenance is current