

# Fully Wired Hot Topics #8: MVS Free Tools and Tips Update!

## Session 2861



SHARE 99

San Francisco, CA

MVS/SCP Project

August 20, 2002

Sam Knutson



12700 Sunrise Valley Drive

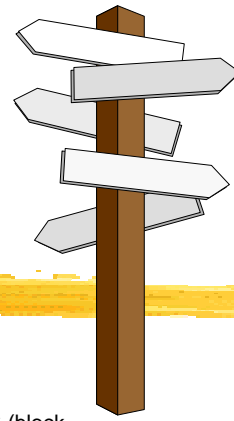
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# Handouts



- Paper Copy of foils from this presentation which have also been submitted to the proceedings
- 2 extra pages from David Bond
- CBT CD-ROM #10 MVS freeware, tools, information of all kinds for mainframe craftsmen
- Volker's MVS 3.8 Turnkey CD-ROM #3 for Hercules
- CBT Tape 449 July - 21 - 2002 on 3480 cartridge

# CBT Tapes



- CBT Tape on 3480 tape cartridge w/ IDRC
- Unload File 1 using IEBGENER for documentation on the contents and advice on getting started finding useful tools on the tape.
- Visit <http://www.cbttape.org> for updates and other goodies
- Updated frequently

CBT Tape Version 449 July - 21 - 2002

available here today!

# Getting started with CBT Tape



JCL to unload File 1 (Documentation) and File 3 (Unload JCL)

```
//COPY      EXEC PGM=IEBGENER
//SYSPRINT DD  SYSOUT=*
//SYSUDUMP  DD  SYSOUT=*
//SYSUT1    DD  DSN=FX,DISP=OLD,UNIT=uuuu,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=32720),
//          VOL=SER=CBTnnn,LABEL=(n,NL,EXPDT=98000)
//SYSUT2    DD  DSN=userid.CBTnnn.FILEn,
//          DISP=(NEW,CATLG,DELETE),UNIT=SYSDA,VOL=SER=vvvvvvv,
//          SPACE=(TRK,(5,5),RLSE),
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=6320)
//SYSIN     DD  DUMMY
```

- Explore File 1
- Unload the whole tape to disk for easy use (12330 3390 tracks)

# Getting started with CBT CD-ROM



The CD should automatically open CBT.htm in your default web browser from the CD when inserted on most Windows computers. If this does not happen or you are using Linux, Macintosh, etc you can open it manually.

The CD should be useable on most modern OS it is not limited to Windows although some of the PC freeware is Windows specific.

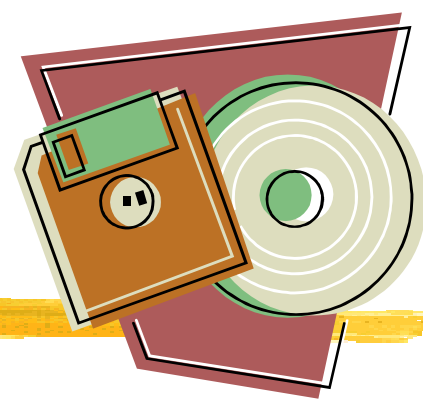
You may give the CD away but don't assume because something is on the CD you have carte blanche to redistribute or resell. Respect copyrights and beyond legal necessities respect the author

# CBT CD-ROM Contents



- CBT Tape V449 July - 21 - 2002
- CBT Overflow Tape V428 July - 14 - 00
- Updates pending for V450 through August - 15 - 2002
- Softcopy books from Bob Ducharme and Steve Samson
- PC Tools to work with XMIT files
- Blue Zone FTP client free for personal or commercial use
- Historic OS(s) MVS 3.8, VM/370 R6, OS/360
- Hercules emulator and related resources
- Web sites from Volker Bandke, Lionel Dyck, David Alcock
- JES3 free tools and mods
- Explore for more including MVT mods starting at `x:\histmods\histmods.htm`
- Much more!

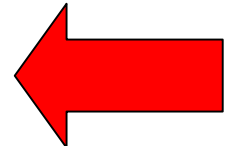
# Getting started with Volker's MVS Turnkey CD for Hercules



The CD supports installation under Windows and Linux. Use the web browser of your choice to open the file `readme.html` and then review the New User Cookbook.

This revision of the CD does not autoplay in Windows so nothing will happen when you insert the CD till you want to start the installation and run the setup program.

Jay Maynard will demonstrate the installation and initial system operation in session 2880 The Hercules 370, 390, and z/Architecture Emulator at 6pm in Continental Ballroom 8.





# e-Books, e-Magazines, and other e-publications



"Using the Internet today is like trying to use a library where all the books have been dumped on the floor and the lights turned out."  
A.J. Vendeland, in Review of The Software Publishers Association Europe Conference, Conference Analysis June 28, 1996

One starting place <http://www.cbttape.org/links.phtml>

**IMPORTANT**

# MVS Performance



MVS Performance Management  
OS/390 Edition with MVS/ESA SP  
Version 5 by Stephen L. Samson

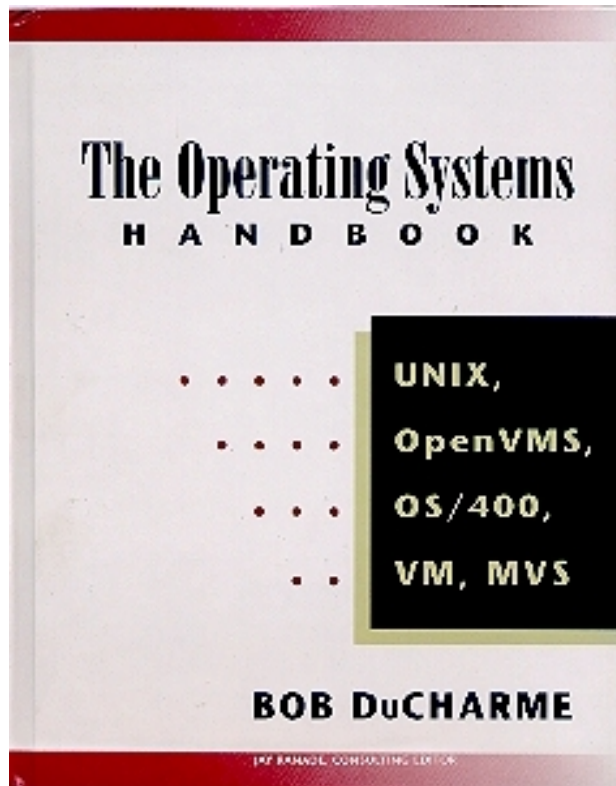
Released as a free e-book

Updates planned may not be free

Good Resource especially for WLM  
COMPAT mode while it lasts

<http://www.cbttape.org/samson.htm>

# The Operating Systems Handbook



The Operating Systems Handbook  
by Bob DuCharme

Released as a free e-book

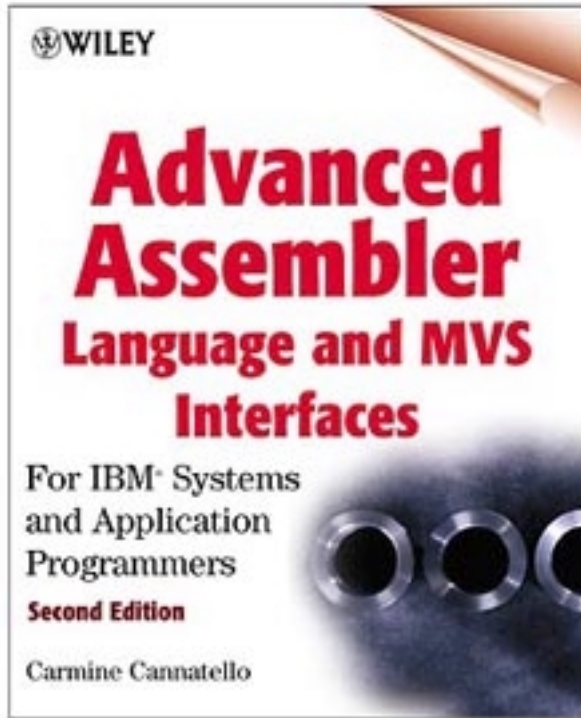
"Working Knowledge of UNIX, VMS, OS/400,  
VM/CMS, and MVS."

Wouldn't that look great on **your** resume?

I wanted to call it "Fake Your Way Through Minis  
and Mainframes," but McGraw-Hill wanted  
something that sounded more respectable...

<http://www.snee.com/bob/opsys.html>

# Advanced Assembler Source



Advanced Assembler Language and MVS Interfaces: For IBM Systems and Application Programmers, Second Edition

Carmine A. Cannatello  
ISBN 0471361763  
848 pages

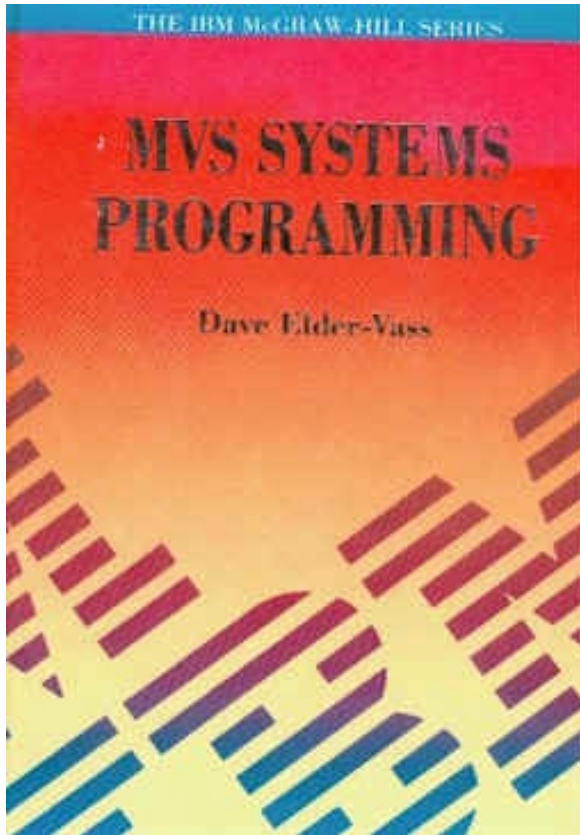
Where to buy the book?

<http://www.isbn.nu/0471361763>

Source Code on  
CBT Tape File 69

*I purchased the first edition and examples on diskette in 1991 for about \$50 each*

# MVS Systems Programming



*MVS Systems Programming*

by David Elder-Vass

ISBN: 0-07-707767-9

Out of Print

Written in 1993 before OS/390

e-Book now available on the web  
at

<http://www.mvsbook.fsnet.co.uk/>

Reprint now available through  
[Amazon.com](http://Amazon.com) or [iuniverse.com](http://iuniverse.com)

# IBM Hot Topics



## Tom Rosamilia bids farewell...



It has to inform you that I've accepted a new position as Vice President, Worldwide Data Management Development and Content Manager, Silicon Valley (all in San Jose, California), managing IBM's data management products. As I begin my new assignment, I wanted to take a moment to thank everyone that has made my experience at SHARE so rewarding and productive. In particular, I'd like to thank the

SHARE Board, Ribbon Owners and many customers who have taught me so much over my many years as a SHARE participant.

I wish all of you much continued success. Please say hi for me at SHARE!

*Tom*

## Greetings from Paul Loftus...

I'm sure that many of you are asking 'who is he?' as you read this. Although I am the new Vice President of Systems Software, I am not new to SHARE. In the late 80s and early 90s, I was an active SHARE member while I managed the VM organizations in Kingston, NY and Franklin, NY. Since that time, I've held various positions within corporate IBM. Now I'm back to development, managing

both zSeries and System z software, and eager to rekindle my past SHARE relationships and contribute new ones.

I look forward to seeing many new and familiar faces in Minneapolis in July.

*Paul*



Published twice a year

Articles by IBM developers and others

Produced by IBM Publications in Poughkeepsie

Available in hardcopy at user groups like SHARE and on the web

Recent issues include  
z/Favorites biz card CD-ROM

[http://www.ibm.com/servers/s390/os390/bkserv/hot\\_topics.html](http://www.ibm.com/servers/s390/os390/bkserv/hot_topics.html)

# IBM Redbooks



IBM has released a new Redbook series entitled the

"ABC's of Systems Programming" and is a

"five-volume set that is designed to introduce the structure of an OS/390 and S/390 operating environment. The set will help you install, tailor, and configure an OS/390 operating system, and is intended for system programmers who are new to an OS/390 environment."

Check out IBM Redbooks <http://www.redbooks.ibm.com/> or:

- Volume 1 <http://www.redbooks.ibm.com/abstracts/sg245597.html>
- Volume 2 <http://www.redbooks.ibm.com/abstracts/sg245852.html>
- Volume 3 <http://www.redbooks.ibm.com/abstracts/sg245853.html>
- Volume 4 <http://www.redbooks.ibm.com/abstracts/sg245654.html>
- Volume 5 <http://www.redbooks.ibm.com/abstracts/sg245655.html>



# SHARE Proceedings



Located at <http://www.share.org>

- Proceedings from most recent SHARE conference
- View on-line and save individual Adobe Acrobat files (.PDF) or download if available a complete .ISO (CD image)
  - Windows Freeware ISO Buster allows viewing extraction of contents <http://www.isobuster.com>
  - Windows Shareware WinImage <http://www.winimage.com/>
- Past archives in members only area

To get a SHARE Proceedings CD contact SHARE Headquarters here or after SHARE at 888-574-2735. They are no longer shipped automatically to all attendees.





# IBM References

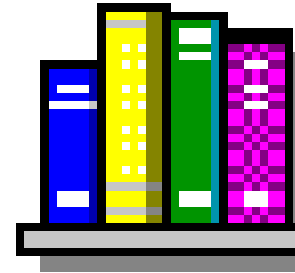


## IBM Internet Library

<http://www.s390.ibm.com/os390/bkserv>

which still forwards to reorganized URL

<http://www.ibm.com/servers/s390/os390/bkserv/>



**LOOKAT** IBM tool to quickly lookup messages

<http://www.ibm.com/servers/s390/os390/bkserv/lookat/lookat.html>



**IBM Catalog and VSAM Knowledge Base**

<http://knowledge.storage.ibm.com>



# Magazines



Archives 1996 - 2002 <http://www.naspa.com/tsyellow.htm>

<http://www.naspa.com/> is home site for NaSPA

## MAINFRAME WEEK

<http://www.mainframeweek.com>

Free Xephon weekly email newsletter focused on IBM mainframes

<http://www.esj.com>

Free access to current and back issues of Enterprise Systems Journal. Subscribe  
Free to the printed magazine on-line. **Reduced MVS content in recent issues.**



# More out there



[http://dmoz.org/Computers/Software/Operating\\_Systems/Mainframe/IBM/z-OS/](http://dmoz.org/Computers/Software/Operating_Systems/Mainframe/IBM/z-OS/)



**dmoz Open Directory Project**  
is the largest, most  
comprehensive human-edited  
directory of the Web

<http://www.xephon.com>



Free backs issues of Xephon MVS,  
DB2, RACF, CICS, and other Update  
publications from prior to 1998. Now  
a weekly email newsletter is availble  
which has been well received.

# On-Line Computer Dictionaries



-  Terminology

<http://www.ibm.com/ibm/terminology/>



Free On-Line Dictionary  
of Computing

<http://www.foldoc.org>

This standard  
one is handy and  
no pop-up ads!



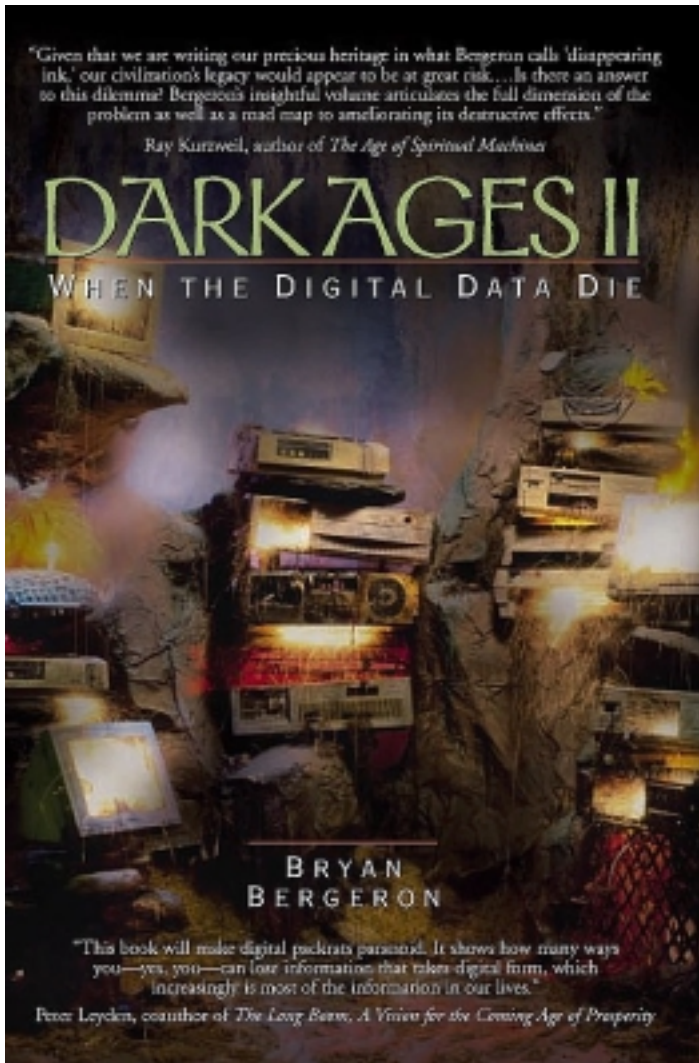
<http://www.m-w.com>

# Software Archaeology



- Old software may still have value but it's harder to find than you think. Don't expect the original vendor to have a pristine copy of unsupported software
- Longevity of the media IOS000I w/ DCK or NCA bad sign
- Magnetic Tape typical life 5-20 years, ideal 30-100
  - Recently someone sent me two boxes of round tapes almost none were readable. Use it or lose it!
- Platform Obsolescence 800bpi tape, 5 1/4" or 8" diskettes, etc.

# Digital Dark Ages II

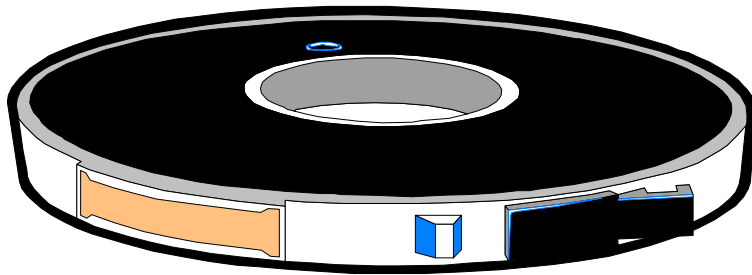


Dark Ages II: When the Digital Data Die  
by Bryan Bergeron

<http://isbn.nu/0-13-066107-4>

Much like Bryan I have found that the legacy of mainframe systems is being written in digital disappearing ink!

# Help Still Wanted



**WANTED:** working 800bpi capable tape drive preferred attached to MVS, willing to copy data to help recover old public domain or freely distributed materials.

Email me at [sknutson@cbttape.org](mailto:sknutson@cbttape.org) if you can help

# Why Tools?



The difference between an amateur and a professional is often mastery of the tools of the trade. If you take the time to prepare and grow comfortable with your tools when required you will be able to quickly and efficiently accomplish tasks that others consider impossible or too large to complete in the available time.

"Whatever tools you have, learn to use them. Over and over. Better and better. You'll surprise yourself if you are patient, stick to an organized schedule, and keep working at it." Sam Golob



# Free Software



“Sharing of software was not limited to our particular community; it is as old as computers, just as sharing of recipes is as old as cooking. But we did it more than most.” Richard Stallman

**SHARE:** “It’s not an acronym. It’s **what we do.**”

# Bring home the Tools!



Take home at least one tool and solve a problem. If you do this someone may actually believe you worked at SHARE. Probably not since everyone at your shop KNOWS that the only reason you come to SHARE is because “THEY HAVE AN 8 HOUR OPEN BAR AT SCIDS EVERY NIGHT!”

# New PDS 8.5 Update 22



PDS was originally written in 1972 at Fireman's Fund Insurance.

Bruce Leland, Steve Smith, and others built PDS into the utility “Battle Wagon” that it is today.

John Kalinich has worked to keep PDS alive and continues to enhance it. PDS 8.5 is the current version of this most popular, free PDS utility.

PDS incorporates functions from IBM ISPF Options 3.2, 3.4 3.14, Utility programs IEBCOPY, IDCAMS, and much, much, more! PDS has been extended to integrate many other free tools such as DSAT, VTOC, MXI, COMPARE, REVIEW, and more.

**Free PDS 8.5 update 22 is available now on the CD and the CBT Tape web site in (Updates)**

# PDS 8.5 MEMLIST

```
CMD ----- MEMLIST Source Member List 1 ----- Row 1 to 16 of 34
COMMAND ==> SCROLL ==> CSR
Enter an ISPF command, a PDS subcommand or a special control code:
  8 View log      1 Suspend ISPF      6 MEMLIST all      F Find      R Recall
 LA Lista        4 Sublist =          7 Output table    L Locate    SO Sort
 LV Listv        5 Check aliases    9 Swap panels    O Options    X Above/Below/All
- DSN=CSSJK.UTIL.CNTL,VOL=SER=LS0008 MEM=CBT/ -----
CMD  NAME      DATA      VER.MOD    CREATED    LAST MODIFIED  SIZE  INIT  ID
     CBT$ANY    01.42     95/07/25  00/02/28  10:13         278   208   CSSJK
     CBTAUDIT   01.00     00/02/28  00/02/28  10:46         445   445   CSSJK
     CBTBXMI    01.01     98/10/16  98/10/16  13:36          23    13    CSSJK
     CBTf1     01.09     00/02/28  00/02/28  13:38       38249 38249  CSSJK
```

PDS MEMLIST is where you will probably spend most of your time. PDS 8.5.22 the “V” command now invokes ISPF View rather than the VERIFY command. VE invokes VERIFY.

# PDS 8.5 LISTF Options

```
CMD ----- Build LISTFILE using VTOC command -----  
OPTION  ===>
```

```
Enter volume list for VTOC  
VOLUMEs===> LSMS      ===>          ===>
```

```
Catalog search for each DSNAME ===> NO (Yes/No)
```

```
Optional filtering:  
LEVELs      ===> OMVS                      ===>  
More LEVELs===>                            ===>          ===>  
Containing  ===>                            ===>          ===>  
Ending      ===>                            ===>          ===>
```

Strings for the above filtering must conform to dataset naming conventions. The userid will not be appended, do not use quotes.

**Carol Sma say's PDS 8.5 is "AWSOME!! I LOVE IT!!"**

# PDS 8.5 LISTF

```
CMD ----- List files ----- Row 1 to 17 of 59
COMMAND ===>                                SCROLL ===> CSR
```

Enter an ISPF command or a special control code:

```
LV Listv      7 Output table    9 Swap panels    0 Options
ML Memlist    8 View log        F Find          X Above/Below/All
```

```
-----
```

CMD	C	V	DATA/MSG	DO	RECFM	LRECL	BLKSI	VOLUME	-----DATA	SET NAME	---
	-	Y		HF	U	0	0	LSMS02	OMVS.DEV.NFS		
	-	Y		HF	U	0	0	LSMS03	OMVS.DEV.UCD-SNMP.NFS		
	-	Y		HF	U	0	0	LSMS01	OMVS.S390R4.DCEASHFS.USR		
	-	Y		HF	U	0	0	LSMS01	OMVS.S390R4.DFSHFS.GLOBAL		
	-	Y		HF	U	0	0	LSMS01	OMVS.S390R4.DFSHFS.LOCAL		
	-	Y		HF	U	0	0	LSMS01	OMVS.S390R4.ECN.ECN		
	-	Y		HF	U	0	0	LSMS01	OMVS.S390R4.EPH.EPH		
	-	Y		HF	U	0	0	LSMS01	OMVS.S390R4.HFS.DCEBASE		

**PDS 8.5 is one of the most frequently recommended free tools on IBM-MAIN**

# PDS 8.5 LISTA

CMD ----- List Allocations ----- Row 1 to 17 of 114  
COMMAND ==> SCROLL ==> CSR

Enter an ISPF command or a special control code:

LV Listv        7 Output table    9 Swap panels    0 Options  
ML Memlist     8 View log         F Find            X Above/Below/All

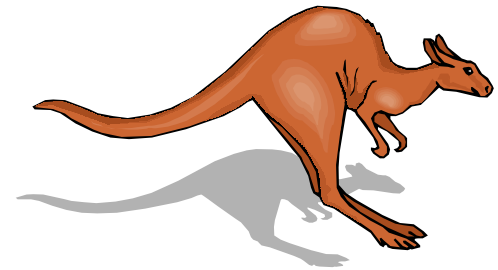
```
-----  
CMD  DDNAME      DATA          TYPE O# VOLUME  MEMBER      ----- DATA SET NAME -----  
    STEPLIB                1  LS0008      CSSJK.LOAD  
    #      2                1  LS0016      CSSJK.CBT423.FILE035  
    SYSHELP                0  S3906R      ISP.SISPHELP  
    #      2                0  S3906R      SYS1.HELP  
    #      3                0  S3906R      SYS1.HELPEXP  
    #      4                0  CATPAK      LSC.TOOLS.HELP  
    #      5                0  S3903R      REXX.V1R3M0.SEAGHENU  
    SYSEXEC                0  S3906R      ISP.SISPEXEC  
    #      2                0  S3906R      ISF.SISFEXEC  
    SYSLBC                 0  S3906D      SYS1.PROD.BROADCAST  
    SYSUADS                 0  SYS002      SYS1.UADS  
    SYSPRINT                TERM 0          NULLFILE  
    SYSTEM                  TERM 0          NULLFILE  
    CONLIB                  0  SYS001      SYS1.ENDV37.CONLIB  
    SORTWK01                0  WORK52      SYS00063.T084748.RA000.CSSJK.R01
```

# A better file browser

---



ISPF Browse and Edit  
sometimes need a little  
help.



Greg Price is here to help!

What we see depends on mainly what we look for.

-John Lubbock



# REVIEW

## Now supports HFS files!



- REVIEW is a Quick Viewer for almost any type of data on OS/390 including PKZIP and even some graphic formats
- REVIEW provides optionally formatted displays for SMF, LOGREC, VTOC, and more
- REVIEW is a TSO command processor and does not need ISPF.
- REVIEW source code is in CBT Tape File 134 and a ready to use load module is in CBT Tape File 135. Greg Price regularly updates REVIEW and has a great collection of other useful tools as well which can be found in the same files.



# REVIEW a volumes VVDS



```
SYS1.VVDS.VUSER05 ON USER05 ----- LINE 1 COL 1 80
COMMAND ===>                               SCROLL ===> CS
1      10      20      30      40      50      60      70      80
+---+-----+-----+-----+-----+-----+-----+-----+-----+
.8..VVCR.....CATALOG.LSC.AUX.....
...Z.....SYS1.VVDS.VUSER05 .SYS1.VVDS.VUSER05 ..SYS1.VVDS.VUSER05 ... 0.....
.1.~Q.....NVPLV012.TDVRAZ.VNVGCNTL.INDEX..NVPLV012.TDVRAZ.VNVGCNTL..CATALOG.TSO
.$..Z.....SYS1.IODF84.WORK..SYS1.IODF84.WORK.CLUSTER..CATALOG.S39024.MASTER.SYS
.h..Q.....INFO.V3.DICT.INDEX..INFO.V3.DICT..CATALOG.VTSOPAK.INFO.V3.DICT.....
.j.÷Q.....INFO.V3.RPANELS.INDEX..INFO.V3.RPANELS..CATALOG.VTSOPAK.INFO.V3.RPANE
.?..Z.....SYS1.IODF82.WORK..SYS1.IODF82.WORK.CLUSTER..CATALOG.S39013.MASTER.SYS
...Z.....TMON.CICS322.DFHXRCTL.DATA..TMON.CICS322.DFHXRCTL..CATALOG.VTSOPAK.TM
...Z.....TMON.CICS322.DFHXRMSG.DATA..TMON.CICS322.DFHXRMSG..CATALOG.VTSOPAK.TM
```

Update IKJSTO00 to make REVIEW  
authorized and it can quickly examine a VVDS  
instead of running Batch IDCAMS PRINT

# REVIEW on-line SMF data



```
----- LINE 475 COL 1 80
SYS1.PROD.MAN2 ON S3906R -----
COMMAND ===>                                SCROLL ===> CS
1      10      20      30      40      50      60      70      80
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
75 14:45:01 00.063 PROD RMF 143E PAGE.VPAGE12.PROD.LOCA      1.1io/s      6.0xfr/s
78 14:45:01 00.063 PROD RMF      subtype      2
15 14:45:01 00.063 PROD CSSJW      CSSJW.PS9932G.INSTLIB      B=6320      1 LS0022
77 14:45:01 00.063 PROD RMF      subtype      1
72 14:45:01 00.063 PROD RMF pg 0      1167srv/sec
72 14:45:01 00.063 PROD RMF pg20      618srv/sec      129srv/sec      347srv/sec
30214:45:06 00.063 PROD RMF      STC04053 IEFPROC      CPU-00:00:02 I/O-----2
14 14:45:09 00.063 PROD CSSJW      CSSJW.PS9932G.INSTLIB      B=6320      3 LS0022
30214:45:10 00.063 PROD FARLG      TSU04109 $TSFACCS      CPU-00:00:05 I/O-----1027
80 14:45:12 00.063 PROD CSABS      CSABS      TSOHOLD      TPXGR244
62014:45:45 00.063 PROD CSSJK      SYS1.PROD.MAN1                                S3906R
```

REVIEW formats useful SMF information for  
a quick review of recent past

# REVIEW Tips



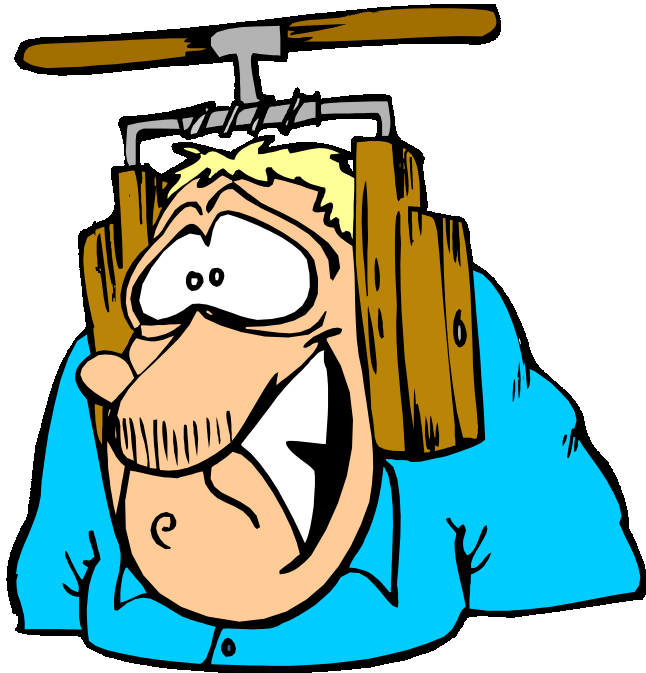
Update your ISPF configuration table using the ISPCCONF dialog to allow ISPF to automatically invoke REVIEW for VSAM files.

```
VSAM_BROWSE_ENABLED           = YES
VSAM_BROWSE_COMMAND           = REVIEW /
```

- REVIEW can be interrupted during a long browse down
- See REVNOTES member, the source code (now more than 30K line!), and Greg's web site for more information

**Explore the CBT CD to  
[www.prycroft6.com.au/index.html](http://www.prycroft6.com.au/index.html) to find an  
offline copy of Greg's web site**

# Recovery Tools



IBM Hot-Topics Issue 7  
“Outage number five:  
No back-up system”

“In peace prepare for war, in war prepare for peace. The art of war is of vital importance to the state. It is a matter of life and death, a road to safety or to ruin. Hence under no circumstances can it be neglected. . . .” Sun Tzu

# ZZSA

Standalone Utilities from Jan Jaeger



IPL from tape, disk, card reader,  
CD-ROM, or VM saved system

Free, Fast, **OCO**

<http://home-2.tiscali.nl/~jen>

***CBT CD #10 boots to ZZSA  
in HMC using Load  
from CD-ROM***

- Sense and list all devices in the IOCDs or assigned to the logical partition IPL-ed with this program
- Browse MVS sequential dataset or PDS member
- Edit MVS sequential dataset or PDS member (inplace update only)
- List VTOC of a DASD volume
- List PDS directory
- Display DASD volume serial
- Dump any DASD record
- Alter any DASD record



# ZZSA How to IPL CD-ROM

HMC 1: Hardware Management Console Workplace (Version 1.7.3)

**Single Object Operations Task Confirmation**

About to establish a session with a single CPC console.  
Do you want to continue with this task?

Object names

P44021

Yes No Help

**CPC Recovery**

- Hardware Messages
- Operating System Messages
- Single Object Operations
- Start
- Stop
- Reset Normal
- PSW Restart
- Reset Clear

The image shows a screenshot of the HMC software interface. On the left, a dialog box titled 'Single Object Operations Task Confirmation' is open. It contains the text 'About to establish a session with a single CPC console. Do you want to continue with this task?' and a list of 'Object names' containing 'P44021'. At the bottom of the dialog are three buttons: 'Yes', 'No', and 'Help'. The 'No' button is highlighted with a black border. To the right of the dialog is a large green rectangular area. On the far right, a sidebar titled 'CPC Recovery' contains several menu items with corresponding icons: 'Hardware Messages', 'Operating System Messages', 'Single Object Operations', 'Start', 'Stop', 'Reset Normal', 'PSW Restart', and 'Reset Clear'. A mouse cursor is pointing at the top of the green area.

Use Single Object Operations from CPC Recovery for the processor that has the LPAR you want to IPL

# ZZSA How to IPL CD-ROM



Desktop On-Call - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://172.22.9.42/cgi-bin/dtoc/dtocctrl/control>

Google console Load from CD-ROM Search Web Search Site PageRank Page Info Up Highlight Hardware Management Console Load

### Images Work Area

CFP1	EDUC (DEVL52:EDUC)	ESH	PROD (DEVL52:PROD)
SYS	SYSB (DEVL52:SYSB)	SYS	
SYS	VM (ZVMV4R10)		

- Stop all
- Reset Normal
- Reset Clear
- Load
- Power-on Reset
- Load from CD-ROM or Server
- Help

Display details by double-clicking, start a task by dragging. Use right-mouse button to show CPs or CHPIDs.

Ctrl Alt Ins



# ZZSA pwd is ZZSECRET



ZZSAPSWD

Stand Alone Utilities

Enter Password:

===> \_

Jan Jaeger - Version 12/07/98-12.15



# ZZSA Stand Alone Utilities

ZZSAPRIM

Stand Alone Utilities

Option ==> \_

0 ListDev	- List all devices		
1 Browse	- Browse dataset or member	Console	0010/3278
2 Edit	- Edit dataset or member	IPL Device	000D/3505
3 ListVTOC	- List Volume Table Of Contents	IPL CPU	0000
4 ListPDS	- List PDS directory	CPU Version	00
5 DispVol	- Display DASD volume label	CPU Serial	000611
6 Dump	- Dump DASD record by CCHHR	CPU Model	3090
7 Zap	- Alter DASD record by CCHHR	Date (TOD)	19/08/2002
X Exit	- Terminate program	Time (TOD)	21:38:46

Jan Jaeger - Version 12/07/98-12.15

# ZZSA sense all devices



## ZZSABROW Device List

Command ==> \_

Line 0000 Col 0001

```
***** Top of Data *****
SCH=0000 DEV=000D CHP=00 C/T=2821-01 D/T=3505-01
SCH=0001 DEV=030E CHP=03 C/T=2821-01 D/T=1403-01
SCH=0002 DEV=0010 CHP=00 C/T=3274-1D D/T=3278-02
SCH=0003 DEV=0131 CHP=01 C/T=2841
SCH=0004 DEV=0132 CHP=01 C/T=2841
SCH=0005 DEV=0133 CHP=01 C/T=2841
SCH=0006 DEV=0134 CHP=01 C/T=2841
SCH=0007 DEV=0135 CHP=01 C/T=2841
SCH=0008 DEV=0136 CHP=01 C/T=2841
SCH=0009 DEV=0140 CHP=01 C/T=3830-02 D/T=3350
SCH=000A DEV=0148 CHP=01 C/T=3830-02 D/T=3350
SCH=000B DEV=0152 CHP=01 C/T=3830-02 D/T=3330-01 VOL=HASPO0
SCH=000C DEV=0160 CHP=01 C/T=3830-02 D/T=3340
SCH=000D DEV=0161 CHP=01 C/T=3830-02 D/T=3340
SCH=000E DEV=0170 CHP=01 C/T=3880-03 D/T=3375-02 VOL=WORK01
SCH=000F DEV=0180 CHP=01 C/T=3880-03 D/T=3380-02 VOL=WORK02
SCH=0010 DEV=0190 CHP=01 C/T=3990-C2 D/T=3390-02 VOL=WORK03
SCH=0011 DEV=0191 CHP=01 C/T=3990-C2 D/T=3390-02 VOL=MVSCAT
SCH=0012 DEV=0240 CHP=02 C/T=3830-02 D/T=3350
SCH=0013 DEV=0248 CHP=02 C/T=3830-02 D/T=3350
```

F3=End

F5=RFind

F7=Up

F8=Down

F10=Left

F11=Right

Once you have done this you can refer to volumes by VOLSER

# ZZSA Edit



Z: Copy selected text to clipboard SYS1.PARMLIB (IEASYS00)

Command ==> \_

Line 0000 Col 0001

\*\*\*\*\* Top of Data \*\*\*\*\*

```
HARDCPY=(SYSLOG,ALL,NOCMDS),           00003020
WTOBFRS=100,                             00003030
CVIO,                                     00003040
CSA=400,                                  00003050
MAXUSER=20,                               00003060
PAGE=(SYS1.STARTER.PAGE.SPACE1,SYS1.STARTER.PAGE.SPACE2,  *00003070
      SYS1.STARTER.PAGE.SPACE3)         00003080
```

\*\*\*\*\* Bottom of Data \*\*\*\*\*

F2=Save

F3=End

F5=RFind

F7=Up

F8=Down

F10=Left

F11=Right

# Resurrection System



IBM recommends in Hot Topics Issue 7 that

For emergency recovery capabilities, it is recommended that every installation have a small isolated “Get-Well” system to help in situations of finger checks or corrupted shared system data sets.

***IBM does not tell you how to build one of these  
IBM does not supply by default a starter system  
although one can be ordered with ServerPac and other  
offerings***

# Resurrection System



Who tells you how? Other systems programmers!

David Alcock

- Dave's MVS Tips at <http://www.planetmvs.com> JCL and instructions

Thierry Falissard

- CBT Tape File 432 provides his JCL for a one pack "Rescue system", called MINISYST. Also on his web site <http://os390-mvs.hypermart.net/minisys.htm>

Mark Zeldan at <http://home.flash.net/~mzelden/mvsutil.html>

- ONEPAK43 in CBT Tape File 434  
circa MVS/ESA 4.3 but still a useful guide



**All On CBT CD!**

# Standalone Restore



FDR and DFSMSdss provide stand-alone restore tools

Do you have a copy ready to run?

Have you practiced with it?

Does the current version you installed work?

- FDR install tape can be IPLed.
- multiple LOAD commands required to bypass SL
- FDRSARLR utility can prepare tape or disk to IPL SAR
- DFSMSdss BUILDSEA command builds IPL text for tape, disk, or card reader

# Other things to try



- TSSO to run SUB=MSTR with freeware PDS
- LOGON PROC with no datasets to reach TSO READY quickly when trouble strikes (\$RESCUE)
- LOGON PROC with only IBM vanilla ISPF (\$IBMISPF)
- TSO to LOGON under MSTR without JES using Ed Jaffe's CBT Tape File 377

*You need to be prepared with what David Elder-Vass called in his excellent book on systems programming 'belt and braces'.*



# Belt and braces



Source: <http://c2.com/cgi/wiki?BeltAndBraces>

'Belt and Braces' is a Britishism.

In the USA Braces hold your teeth in place as you grow up and suspenders hold up your pants.

In the UK braces hold your trousers up - just like your belt does. (Pants are under your trousers, suspenders hold up ladies stockings.)

So 'belt and braces' is a British term for pessimistic planning. It describes a design or plan that has several ready made alternate parts and if any one of them works then the whole works as well.

# Security Tools



Current IBM Hot-Topics focus on security and security on the mainframe has been called “the neglected beast”. It is potentially better than most platforms but requires TLC.

- Passwords
  - Strong Passwords are often not
- Password Crackers
  - John the Ripper and tools for MVS too
- ACEE manipulation
  - APF authorized programs can bypass RACF controls

**Don't write your password on this!**

# Tape Tools

---



- Map contents
- Copy tapes
- Virtual Tape Images and utilities
- Examine data
- File Manipulation

# TAPEMAP



The tape mapping program called TAPEMAP supplied as source on file 299 of the CBT tape, is widely used. It includes special support for mapping the CBT Tape and other common file formats. *64k blocksize supported*

Does not require BLP but BLP allows you to analyze a volume without changes to JCL or any prior knowledge of that tape volume.

Leonard Woren's web page

<http://www.best.com/~ldw/mvs>

has his original version of TAPEMAP. **oco**

```
//TAPEMAP EXEC PGM=TAPEMAP,REGION=6M
//SYSUDUMP DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSPRNT2 DD SYSOUT=*
//SYSUT1 DD DISP=OLD,
// DSN=MOUNT.TAPE,
// LABEL=(,BLP,EXPDT=98000),
// UNIT=3490,
// VOL=SER=(TAPEIN)
```

# TAPEMAP sample output



1VOL=OS360S                      CART ANALYSIS PROGRAM    (T A P E M A P)  V2.1                      TUESDAY    NOV 03, 1998    (98.307)    14:14:03

---

RELOAD	FILE	PSWD	INFO	BLOCK	BLOCK	LNTH	TOTL	CREATOR
FORMAT	SEQ#	DATASET NAME	REQD C-DATE E-DATE SOURCE RECFM LRECL SIZE COUNT DEN TRT (FT) LNTH	JOBNAME/STEPNAME				
0	1	0360S001	98.012 00.000 LABELS VB	94	32716	107	N/A	SBGOLOB6/STEPYYY
CBT973	2		SCAN V		32716	107	N/A	8 8
	2	0360S002	98.012 00.000 LABELS VB	94	32716	107	N/A	SBGOLOB6/STEPYYY
CBT973	5		SCAN V		32716	107	N/A	8 17
	3	0360S003	98.012 00.000 LABELS VB	94	32716	26	N/A	SBGOLOB6/STEPYYY
CBT973	8		SCAN V		32714	26	N/A	2 19

EOV \*\*\*

ONOTE: LENGTH(S) ARE COMPUTED, (BASED ON BLKSIZE, BLKCOUNT, AND DENSITY), AND ARE THEREFORE ONLY APPROXIMATE.

1VOL=OS360S                      CART ANALYSIS PROGRAM    (T A P E M A P)  V2.1                      TUESDAY    NOV 03, 1998    (98.307)    14:14:03

---

-O360S001                      (FILE 0001) IS A CBT973 COMPRESSED FILE:    A-ADD    C-CHANGE    R-REPLACE    > = SUBORDINATE NAME

0                      FOLLOWING MEMBERS UNLOADED:

0                      A-IEMAA    A-IEMAB    A-IEMAC    A-IEMAD    A-IEMAE    A-IEMAG    A-IEMAH    A-IEMAI    A-IEMAJ    A-IEMAK

                    A-IEMAL    A-IEMAM    A-IEMAN    A-IEMAP    A-IEMAS    A-IEMAT    A-IEMAV    A-IEMBC    A-IEMBE    A-IEMBF

                    A-IEMBG    A-IEMBI    A-IEMBJ    A-IEMBM    A-IEMBN    A-IEMBO    A-IEMBP    A-IEMBR    A-IEMBS    A-IEMBT

                    A-IEMBU    A-IEMBV    A-IEMBW    A-IEMBX    A-IEMCA    A-IEMCC    A-IEMCE    A-IEMCG    A-IEMCI    A-IEMCK

                    A-IEMCL    A-IEMCM    A-IEMCN    A-IEMCO    A-IEMCP    A-IEMCR    A-IEMCS    A-IEMCT    A-IEMCV    A-IEMCW

                    A-IEMED    A-IEMEF    A-IEMEG    A-IEMEH    A-IEMEI    A-IEMEJ    A-IEMEK    A-IEMEL    A-IEMEM

# COPYMODS

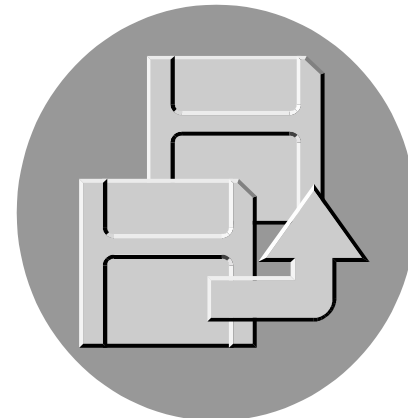


The tape copying program called "COPYMODS" on file 229 of the CBT tape, is useful for making byte-for-byte copies of the CBT tape, and other tapes. Up to 10 copies may be made at one time.

COPYMODS is very reliable and is the recommended program for making copies of the CBT Tape.

Normal use requires BLP privileges.

*Updated by Sam Golob for 64k blocks  
and serious tape label manipulation!*



# COPYMODS JCL



```
//* COPYMODS IS A FREWARE TAPE COPIER WHICH CAN CREATE
//* MULTIPLE COPIES OF A TAPE IN A SINGLE PASS. IT CAN USE
//* UNLIKE DRIVES FOR INPUT AND OUTPUT E.G. 3480 <--> 3490
//*
//* WARNING!!!! THIS WILL OVERWRITE ANYTHING YOU PUT IN THE
//* OUTPUT DRIVE.
//*
//COPY EXEC PGM=COPYMODS,REGION=6M
//STEPLIB DD DISP=SHR,DSN=IBMUSER.LOAD
//SYSPRINT DD SYSOUT=*
//IN DD DSN=IBMUSER.INPUT.TAPE,DISP=OLD,LABEL=(,BLP),UNIT=3490,
// VOL=SER=INPUT
//OUT1 DD DSN=IBMUSER.WRITE.TAPE1,UNIT=3480,VOL=SER=OUTPU1,
// LABEL=(,BLP,EXPDT=98000),DCB=TRTCH=COMP
//OUT2 DD DSN=IBMUSER.WRITE.TAPE2,UNIT=3480,VOL=SER=OUTPU2,
// LABEL=(,BLP,EXPDT=98000),DCB=TRTCH=COMP
```

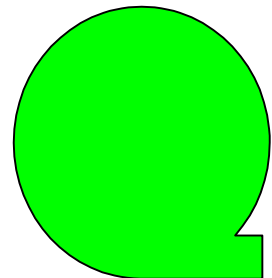
Tip: Use MOUNT command when running multiple jobs i.e.

```
M uuu,VOL=(NL,INPUT),USE=PRIVATE
```

# AWSTAPE



- AWSTAPE format defined by IBM can be used on platforms with emulated I/O such as P390, Multiprise, Hercules. Sequential file seen as a tape by OS but only when seen through the emulated I/O layer. No native access on MVS, VM, etc.
- CBT Tape and many historic volumes available in AWSTAPE format
- Utilities available for MVS and VM to create AWSTAPE files
  - Used as part of the process to create a new CBT Tape





# AWSTAPE Utilities

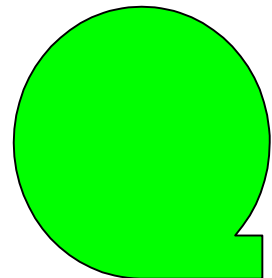


- **AWSUTIL**

- found on CBT tape file 477, released under the GPL by Brandon Hill
- read a tape and create a binary archive in AWSTAPE format output is formatted RECFM VB LRECL 4100

- **VTT2\*** tools found on CBT tape file 533 in source and prebuilt load modules on CBT Tape File 35, written by Sam Golob released for free personal or commercial use

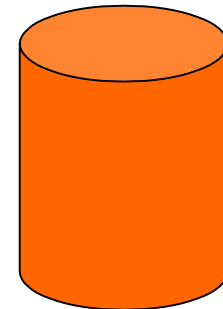
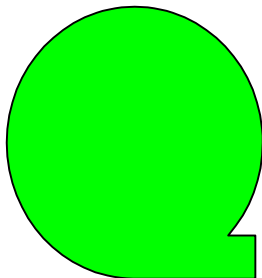
- VTT2DISK read a tape and create a binary archive in AWSTAPE format output is
- VTT2TAPE read a AWSTAPE file and output a real tape on media of your choice so long as it is large enough
- VTT2CNVU convert VB AWSUTIL to FB VTT2\* format
- See Sam Golob December 2001 column in NaSPA technical SUPPORT magazine (CM0112DE CBT file 120)



# AWSTAPE VTT2DISK



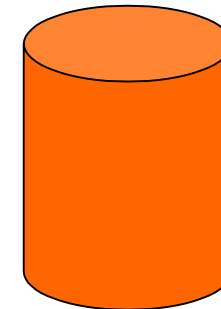
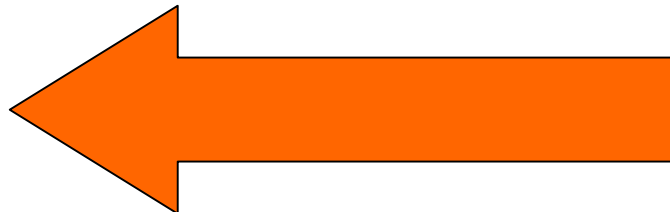
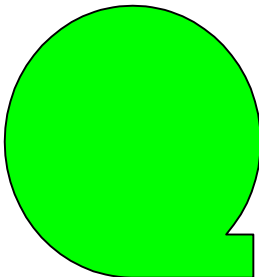
```
//AWSWRIT EXEC PGM=VTT2DISK
//STEPLIB DD DISP=SHR,DSN=IBMUSER.LOAD
//AWSOUT DD DISP=(NEW,CATLG),DSN=IBMUSER.C439MU,UNIT=SYSDA,
// VOL=SER=SCPV05,DCB=(RECFM=FB,LRECL=80,BLKSIZE=27920),
// SPACE=(CYL,(302,10),RLSE)
//TAPIN DD DISP=OLD,UNIT=582,VOL=SER=C439MU,
// LABEL=(1,BLP,EXPDT=98000)
//SYSPRINT DD SYSOUT=*
//SYSFILES DD SYSOUT=*
//SYSTRACE DD SYSOUT=*
//SYSMOVED DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
```



# AWSTAPE VTT2TAPE



```
//AWSREAD EXEC PGM=VTT2TAPE
//STEPLIB DD DISP=SHR,DSN=IBMUSER.LOAD
//AWSIN DD DISP=SHR,DSN=IBMUSER.TAPE
//TAPOUT DD DISP=OLD,UNIT=3420,VOL=SER=TTTTTT,
// LABEL=(1,BLP,EXPDT=98000)
//SYSPRINT DD SYSOUT=*
//SYSFILES DD SYSOUT=*
//SYSTRACE DD SYSOUT=*
//SYSMOVED DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
```

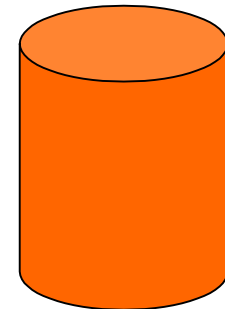
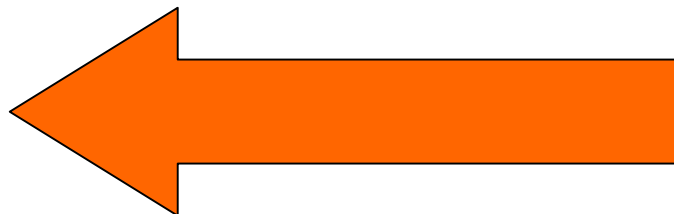
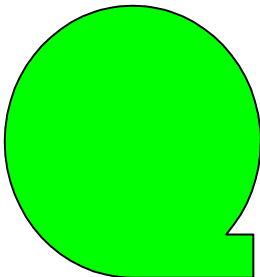


# AWSTAPE AWSSL v1.1



New utility from Reed H. Petty allows you to quickly take a sequential file and MVS and create an AWSTAPE virtual tape file directly without creating a real tape and using one of the image utilities.

Available now in hercules-390 Forum Download Area and will be added to CBT Tape next week at Updates and AwsTape pages!



# PC Tools for Dinosaurs



A personal computer is a necessary evil for most of us. A few good tools can help make it more useful.

If you say Java again I'm going to puke.

-Dave Winer

# Book Explorer



John Moore's has produced a nifty add-on for IBM Reader software that allows you to open books quickly on any drive. Book Explorer is easy to use, makes life with Library Reader better and is so small and efficient the download is only 1000k! Source code now available!

Get it here <http://home.attbi.com/~bookex/index.html>

Book Explorer provides a Windows Explorer-like interface for browsing and managing IBM BookManager shelves and books. It works with BookManager Read for Windows and Library Reader for Windows.

- Copy Shelves, Books
- Now supports .PDF Books
- It's on the CBT CD

**Current version 1.1.0.115**  
(Updated 07/09/2002) on CD

# Book Explorer



Book Explorer - All-MVS Disc 2 Bookshelf (System Control 2)

File Edit Options View Help

Shelf Title	Books	Name	Date	Attr	Filename
ADSM for MVS & VM V1 Bookshelf	10	ANSABK05	1/25/1996 12:22 pm	R	U:\SHEL
ADSM V2R1 MVS Bookshelf	18	A31AMB11	3/25/1997 3:38 pm	R	U:\SHEL
All-MVS Disc 2 Bookshelf (System Control 2)	375	EZ2MV216	8/8/1997 10:10 pm	R	U:\SHEL
AOC/MVS CICS Automation V1R3 Bookshelf	3	AOFCAF00	7/21/1994 4:40 pm	R	U:\SHEL
AOC/MVS IMS Automation V1R3 Bookshelf	3	AOFIAF00	7/15/1994 11:35 am	R	U:\SHEL
AOC/MVS OPC Automation V1R3 Bookshelf	3	AOFOAF00	7/21/1994 4:40 pm	R	U:\SHEL
AOC/MVS V1R4 Bookshelf	6	AOFR404	8/9/1996 9:55 am	R	U:\SHEL

Book Title	Date	Size	Name	D
Abstract Syntax Checker	7/27/1994 5:03 pm	3MB	CMEP0000	S
Administrator's Guide and Reference	1/9/1996 2:14 pm	3MB	DBNC1M00	S
ADSM UNIX V2 Backup-Archive Client	2/19/1996 7:00 pm	772KB	A31EC501	S
ADSM V2 Apple Macintosh Backup-Archive Client	2/19/1996 6:29 pm	448KB	A31EC101	S
ADSM V2 DOS Backup-Archive Client	2/19/1996 7:47 pm	404KB	A31EC201	S
ADSM V2 Installing the Clients	8/15/1996 10:32 pm	708KB	A31ECI03	S
ADSM V2 Microsoft Windows Backup-Archive Clients	2/19/1996 8:06 pm	1MB	A31EC601	S
ADSM V2 Novell NetWare Backup-Archive Client	2/19/1996 8:05 pm	264KB	A31EC302	S
ADSM V2 OS/2 Backup-Archive Client	2/19/1996 7:49 pm	1MB	A31EC401	S
ADSM V2 Trace Facility Guide	2/19/1996 6:58 pm	56KB	A31ECT01	S
ADSM V2 UNIX Hierarchical Storage Management Clients	2/16/1996 11:24 pm	2MB	A31ECH01	S
ADSM V2 Using the Application Programming Interface	2/19/1996 6:56 pm	364KB	A31ECA01	S
ADSM V2 Using the Lotus Notes Backup Agent	2/19/1996 7:46 pm	112KB	A31ECL01	S
ADSM V2R1 and V2R6 Messages	1/28/1997 6:09 pm	2MB	A31EMC06	S

61 Shelves    375 Books    1 Shelf Selected    U:\

# BlueZone FTP



BlueZone FTP is a mainframe friendly Windows FTP client from Seagull Software which is *free for personal or commercial use*.

The new version 3 allows you to bypass registration if you choose and does not expire. You may register you email address to get a key to get rid of the registration splash screen.

You can purchase a SSL enabled version from SEAGULL



**BlueZoneFTP™**

## MVS Features

- MVS list formats

## VM Features

- BFS support
- SFS support
- Minidisk support



# BlueZone FTP



BlueZone FTP - T1

File Edit Session Transfer Commands View Help

MVS PROD

C:\TEMP

Name	Size	Date	Type
..			

'CSSJK.UTIL.CNTL'


Name	VV.MM	Date	Size	Init	Mod	Id
..						
\$\$\$1111	01.01	1995/07/02 17:06	601	606	0	U35T07
\$\$\$MSG	01.00	1994/01/11 12:47	111	111	0	U35T07
\$\$HLIST	01.46	1992/06/18 10:41	61	56	0	U35T07
\$APADD	01.00	1997/01/15 18:12	35	35	0	CSSJK
\$APINIT	01.01	1997/01/15 16:45	54	53	0	CSSJK
\$APUTIL	01.02	1999/07/27 09:10	14	13	0	CSSJK
\$AVRBKPR	01.02	1991/10/10 08:57	46	35	14	U35T07
\$AVRBKUP	01.00	1991/09/18 22:16	18	18	0	U35T07
\$AVRDBRP	01.00	1991/10/24 10:20	19	19	0	U35T07
\$AVREORG	01.05	1994/12/14 05:43	47	40	0	U35T07
\$AVRDEK	01.00	1991/10/07 21:22	77	77	0	U35T07

230 CSSJK is logged on. Working directory is "CSSJK."  
SYST  
215 MVS is the operating system of this server. FTP Server is the C-server running on OE.

T1 Connected MVS PROD 172.22.2.74 Binary

Visit <http://www.seagullsw.com/> to download latest or get it from CBT CD

# Ftp2Jes



## What is Ftp2Jes?

- Ftp2Jes is a Free Windows based utility which provides a GUI interface to submit jobs and view the output using FTP.
- Currently uses level 1 interface so jobnames are limited to userid + 1 but Neal is planning on enhancing it to use the newer, more flexible interface

Written by Neal Johnston-Ward

It is on the CBT CD & Web Site too!

<http://www.data-aid.co.uk>

# Ftp2Jes

Ftp 2 Jes

File View Host Go Help

Main  
Views

JCL

Local Output

Remote Spool

## JCL

Jobs on spool for CSSJK on MVSPROD

Job Number	Job Name	Status	Output Files
JOB02542	CSSJKA	COMPLETED	3

Last refreshed : 8/20/2002 6:50:09 AM

Auto refresh

Refresh now

Open

Download

Delete

### Jes messages for JOB02542

```
1          J E S 2  J O B  L O G  --  S Y S T E M  P R O D  --  N O D E  J E S 2  M V S
0
09.49.27 JOB02542 ---- TUESDAY, 20 AUG 2002 ----
09.49.27 JOB02542 IRR010I USERID CSSJK  IS ASSIGNED TO THIS JOB.
09.49.27 JOB02542 ICH70001I CSSJK   LAST ACCESS AT 09:49:00 ON TUESDAY, AUGUST 20, 2002
09.49.27 JOB02542 $HASP373 CSSJKA  STARTED - INIT 5    - CLASS A - SYS PROD
09.49.27 JOB02542 IEF403I CSSJKA - STARTED - TIME=09.49.27
09.49.27 JOB02542 -
09.49.27 JOB02542 -JOBNAME  STEPNAME  PROCSTEP   RC   EXCP   CONN   TCB   SRB   CLOCK  SERV  PG  PAGE  SWAP  V
09.49.27 JOB02542 -CSSJKA   JS001           00    0     0     .00   .00   .0    177  1   0     0
09.49.27 JOB02542 IEF404I CSSJKA - ENDED - TIME=09.49.27
09.49.27 JOB02542 -CSSJKA  ENDED.  NAME=IEFBR14.SAM.KNUTSON  TOTAL TCB CPU TIME= .00  TOTAL ELAPSED TIME=
09.49.28 JOB02542 $HASP395 CSSJKA  ENDED
0----- JES2 JOB STATISTICS -----
- 20 AUG 2002 JOB EXECUTION DATE
- 7 CARDS READ
- 38 SYSOUT PRINT RECORDS
- 0 SYSOUT PUNCH RECORDS
- 2 SYSOUT SPOOL KBYTES
- 0.00 MINUTES EXECUTION TIME
```

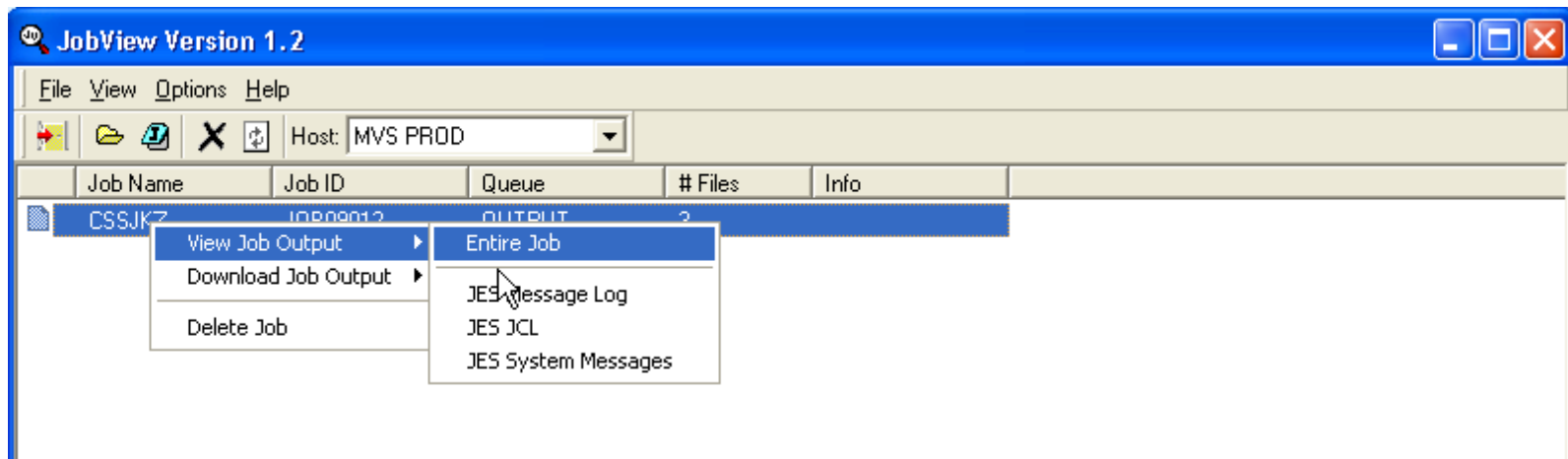
# Jobview



Jobview is a freeware, graphical windows program that allows you to submit jobs to MVS using FTP, view the results, and optionally download or delete the output. Perhaps useful for a z/OS.e or other TSO limited environment?

- Windows binary not open source
- Need to input your RACF userid and password
- Currently limited to jobs of userid + 1 character

Download from DIACOM Software <http://www.diacomsoftware.com>



# AWS File Browser



Rob Story wrote a nice Windows utility to browse the contents of an AWSTAPE file. This is handy freeware to manage your virtual tape library.

- Delphi Source Included
- Public Domain
- Download from <http://www.cbttape.org/awstape.htm>

The screenshot shows a Windows-style application window titled "AWS File Browser - C:\Knutson\AWS Browser\GSCTSU.AWS". The window has a menu bar with "Exit", "Open", and "Help/About". The main area is split into two panes. The left pane displays a list of records with columns for record number, type, and size. The right pane shows the raw hexadecimal and ASCII data for the selected record (774).

Record #	Type	Size
0	Full Record	Size=80
86	Full Record	Size=80
172	Full Record	Size=80
258	Full Record	Size=80
344	Full Record	Size=80
430	Full Record	Size=80
516	Full Record	Size=80
602	Full Record	Size=80
688	Full Record	Size=80
774	Full Record	Size=80
860	Full Record	Size=80
946	Full Record	Size=80
1032	Full Record	Size=80
1118	Full Record	Size=80

0000	E3C8C9E2	40C6C9D3	C540C8C1	E240C4C3	THIS FILE HAS DC
0010	C240C1E3	E3D9C9C2	E4E3C5E2	40D6C640	B ATTRIBUTES OF
0020	4DD9C5C3	C6D47EC6	6BD3D9C5	C3D37EF8	(RECFM=F. LRECL=8
0030	F06BC2D3	D2E2C9E9	C57EF8F0	5D404040	0.BLKSIZE=80)
0040	40404040	40404040	40404040	40404040	

# Quick Picks PC Tools



## **VNC - Virtual Network Computing**

- Free remote control software from AT&T
- <http://www.uk.research.att.com/vnc/>

## **LDAP Browser/Editor**

- User-friendly Windows Explorer-like interface to LDAP directories with tightly integrated browsing and editing capabilities. It is entirely written in Java
- Often recommend on MVS-OE list
- <http://www-unix.mcs.anl.gov/~gawor/ldap/>

## **Where to find other Windows tools**

- <http://www.tinyapps.org> “Small is beautiful”
- <http://www.nonags.com> “no disabled features, nags, time limits”

# Quick Picks PC Tools



**THE - The Hessling Editor**      <http://www.lightlink.com/hessling/>

- XEDIT like with more ISPF features being added
- Open Source, Freeware

**UltraEdit**    <http://www.ultraedit.com>

- shareware (you must register and pay \$35 after 45 day trial period)
- Best Windows editor I have found

**Other TN3270 clients (shareware , not Free)**

- Vista <http://www.tombrennansoftware.com>
- QWS3270 Plus <http://www.jollygiant.com/>
- TN3270 Plus SDI <http://sdisw.com.au/>

# Anything but Windows



## Why?

- Network Tools, Professional Growth, just for fun

## **Cygwin (GNU) UNIX Tools on Windows**

- Easy way to get started <http://www.cygwin.com/>

## **Linux**

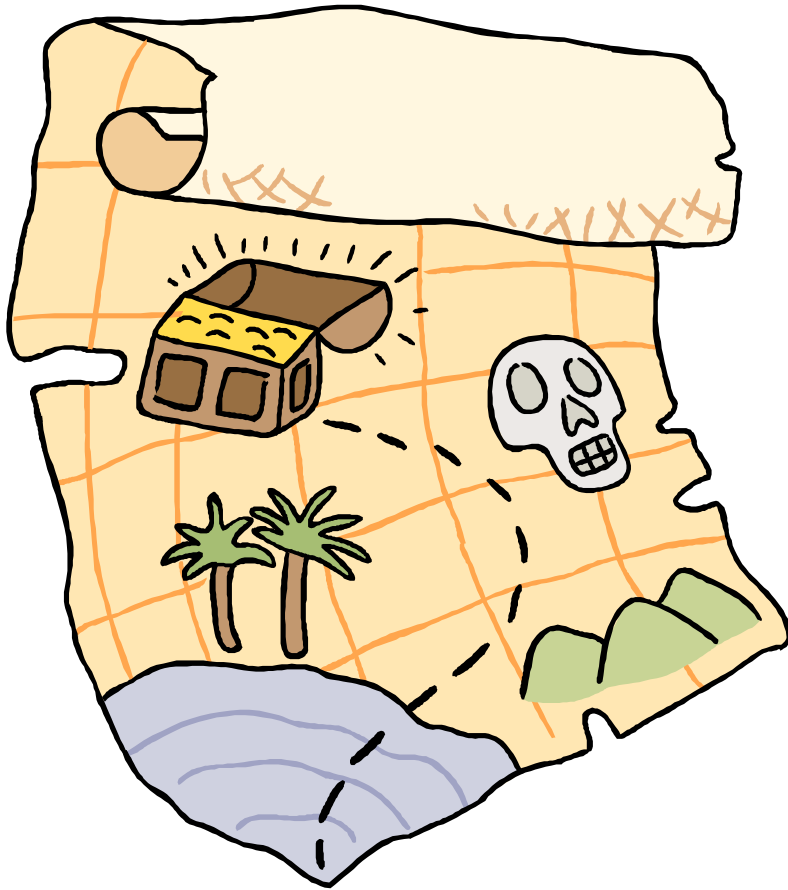
- IBM resources <http://www.ibm.com/linux>
- Information Centralized <http://www.linuxdoc.org/>
- I often buy mine here <http://www.cheapbytes.com>

## **BSD**

- OpenBSD <http://www.openbsd.org>
- It's UNIX-like very UNIX-like and secure too



# System Information Tools



Several tools provide so much information they let you quickly map out an OS/390 system.

# SHOWMVS



- One Stop shopping for system configuration information. The format allows you to quickly review everything on-line or in Batch. Output weather in batch or on-line is monolithic with all data produced all the time.
- Originally developed by Gilbert Saint-flour
- The Source code for SHOWMVS can teach you a lot! STRING macro is EXCELLENT formatting tool for assembler programs.
- SHOWMVS currently maintained by Roland Schiradin on CBT Tape file 492 and a very active development and beta test team
- Future development plans being explored include a TCP/IP client and a menu to make the output more accessible in ISPF

**SHOWMVS 6.29 & 7.03 (current) are on the CBT CD**



# SHOWMVS (Short)



## Operating System:

OS/390 02.06.00

CVTOSLVL: FF FF F0 00 00 00 00 00

DFSMS/MVS 1.4.0

Dynamic Linklist is supported

Dynamic LPA is available

DFSMS Loader Fork Exit is present

JES2 Level: OS 2.5.0

NJE Node: JES2MVS

DSNID: 01

## Last IPL:

Date: Monday 2000-02-07 (25 days ago)      Time: 19.23      Julian:  
2000.038

From: S3906R/1209      NUC Id: 1      Type: Cold Start      CVTUSER: 00000000

SYSPLEX name: DEVL52      SYSPLEX ID: OD      OpenMVS available: YES

Timezone: W 05.00.00

# SHOWMVS



SHOWMVS displays two different types of data:

- Data related to the MVS operating system
  - Operating System Release and status, Subsystems, XCF, GRS, DAE, DASD, Linkage Index (LX) Table, more...
- Data related to the current address space
  - TCB Tree, TSO Information, REXX Environment, more..

SHOWMVS can be invoked as a program, as a TSO command, or as an edit macro and can run authorized or non-authorized. Some of the displays are only produced when SHOWMVS runs authorized.

# SHOWMVS many displays!



MVS LEVEL, DFP LEVEL, OSLVL FLAGS, JES2 LEVEL  
IPL DATE, TIME, VOLSER, NUC-ID, CLPA, CVTUSER  
Date and time of last CLPA (auth)  
Time Zone, Primary sub-system name and type  
Software Level: TSO/E, ISPF, DSS, HSM, RACF, VTAM, SORT,  
DSF, DB2, CICS, MQ Series  
Run-time Environments (CBL, PLI, FORTRAN, C/370, LE)  
SMF Information: SID, JWT, data sets, exits  
SMS Configuration: SCDS, system names, last update  
GRS Configuration  
XCF Configuration (auth)  
PATH data  
Coupling Facility Data  
External Time Reference (ETR)  
Hardware configuration  
    Central Processing Complex Node Description (CPC ND)  
    On-line CPUs and storage  
    Performance (SU/sec, estimated MIPS)  
    Service Processor data  
    I/O configuration Definition (IODF)  
    LPAR configuration  
VM host information (auth)  
VIRTUAL STORAGE MAP (CSA, SQA, LPA, etc)  
SRM data (IPS/ICS/OPT, APG, etc)  
WLM data (MODE, ETC)  
Resource Recovery Manager (RRS)  
Automatic Restart Manager (ARM)  
OPEN catalogs  
PAGE data sets in use  
Dump data sets status and dump options  
Dump data sets date, time and title (auth)  
Automatically-allocated dump data sets (auth)  
DAE Parameters (auth)  
GTF status and options  
Initialization Parameters (IPA)  
Master JCL (IEEMSJCL)  
Sub-system vector table with functions processed  
Primary Sub-system JCL (auth)  
TSO PARMLIB data (IKJTSOxx)  
TSO Exits and Tables  
TCAS parameters (auth)

RACF options, data sets and tables  
Address space usage:  
    Batch Jobs  
    TSO users  
    Started tasks  
JES2 Initiators and corresponding jobs  
Link-list data sets, with creation date  
LPA-list data sets, with creation date  
List of authorized libraries  
Dynamic Exit Facility  
Static system symbols  
LLA parameters and managed libraries (auth)  
ACTIVE LPA QUEUE  
SVC Table with name of the corresponding module  
T1, T2, T3 and T6 ESR tables  
Linkage Index (LX) Table (auth)  
Program Properties Table (PPT) (auth)  
I/O Appendage Table  
Resource Manager List (IEAVTRML)  
Device Classes and corresponding unit names  
On-line devices, with unit-name, VOLSER, owning j  
ob,use attribute, storage group  
System consoles, with status & Routcde list  
Message Processing Facility (MPF)  
Command Prefix Table (CPFT)  
Device Allocation Defaults (ALLOCxx)  
Addresses of selected global control blocks  
JCL information for current JOB/STEP  
RACF profile (from ACEE)  
TSO profile (from PSCB & UPT)  
REXX environments, host cmd tables and func pkg  
directories  
Allocated Data sets (from TIOT, SWA, TCT)  
TCB tree and PRB chain  
Attention Routines  
Enhanced view of the JPAQ and Load-lists  
Recovery exits and timers  
Addresses of selected local control blocks  
MORE!!!!

# SHOWMVS



Roland Schiradin

Where do you want  
to look in MVS today?

<http://www.schiradin.de>



**UPDATE!**



# MXI **New Version 4.1 released to public**



- MXI (MVS eXtended Information) is an ISPF-based application that enables the MVS Systems Programmer to display important configuration information about the active MVS system.
- Although primarily used online, MXI can be run in batch and also has a REXX interface.
- Most of the displays can be filtered using ISPF-like masking characters and many display fields are 'point-and-shoot'.
- Some displays only available if MXI is authorized
- Internal or SAF based security
- MXI is very easy to install but does not include source **OCO**
- Some displays clearly tied closely to system internals
- Rob Scott's solid code and an active and persistent Beta test team continues to field stable releases
- MXI does more than just look if you run it authorized you need to secure it

CBT Tape Files 409, 410 (Rob also has MORE utilities on file 411)

or <http://www.mximvs.com>

# MXI many displays!



MXI - PROD - MVS Extended Information Primary Option Menu ----- Row 1 of 47  
Command ==> Scroll ==> PAGE

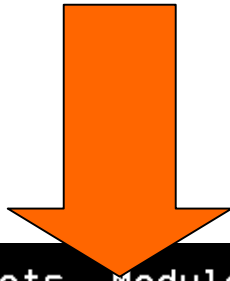
AGRP	SMS Aggregate Group Information	MPF	MPF Information
APF	APF List Dataset Information	NTOK	System Name/Token Information
ASID	Address Space Usage Information	NUC	Display System Nucleus Modules
CAT	Catalog Information	OMVS	OpenEdition Configuration
CA1	CA-1 Configuration Information	PAGE	Page Dataset Information
CDE	JPAQ and TCB loaded modules	PARM	Active PARMLIB Information
CF	Coupling Facility Information	PEEK	Show ISPF Screens
CHP	Online Channel Paths	PID	OpenEdition Processes
CPF	Command Prefix Table	PLEX	Display Sysplex Information
CPU	CPU and LPAR Information	PPT	Program Properties Information
CS	Common Storage Usage	RACF	RACF Information
CSR	Common Storage Remaining	RCLS	RACF Class Information
DA	Active Address Space Information	RL	RACF Profile Information
DAE	Dump Elimination Information	RS	Real Storage Usage Information
DASD	Online DASD Information	SCLS	SMS Storage Class Information
DCLS	SMS Data Class Information	SGRP	SMS Storage Group Information
DDNS	Allocated Dataset Information	SMF	SMF General Information
DEV	DASD Activity	SMFD	SMF Dataset Information
DS	Personal Dataset List	SMS	SMS Configuration Information



# MXI remote display



Logged onto PROD display from remote SYSA



```
File Datasets Modules Units System Sysplex SMS Storage Tools RACF
-----
MXI - PAGE - PROD - SYSA ----- CPU 35 UIC 2540 PAG 0 ----- Row 1 of 7
Command ==> _ Scroll ==> PAGE

Type      Slots      Used %Use Volser Dataset
PLPA      17999      14551 80 PAGE12 PAGE.VPAGE12.SYSA.PLPA
Common    71999      050 0 PAGE10 PAGE.VPAGE10.SYSA.COMMON
Local     53999      000 0 PAGE12 PAGE.VPAGE12.SYSA.LOCAL1
Local     53999      000 0 PAGE10 PAGE.VPAGE10.SYSA.LOCAL2
Local     161999     000 0 PAGE11 PAGE.VPAGE11.SYSA.LOCAL3
Local     161999     000 0 PAGE10 PAGE.VPAGE10.SYSA.LOCAL4
Local     599759     000 0 PAGEA1 PAGE.VPAGEA1.SYSA.LARGE
```

# MXI LLA command



LLA command uses LLA exit LLA EXIT CSVLLIX1 to get statistics. Useful, Interesting, no problems running on every system in my sysplex. **NEW in v4.1**

```
File Datasets Modules Units System Sysplex SMS Storage Tools RACF
MXI - LLA -- PROD SYSA ----- CPU 13 UIC 2540 PAG 0 ----- Row 1 of 751
Command ==> _ Scroll ==> PAGE
```

Module	Alias	Size	LF	LastDur	PGMF-Req	PGMF-Avg	LLAF-Req	LLAF-Avg
<u>CSQNL28E</u>	<u>CSQ3ECMX</u>	930	LLA	0.028			1593	0.027
<u>CSQ3ID00</u>		558	LLA	0.052	248	2.600	872	0.082
<u>IEFIB600</u>		B670	LLA	0.290	177	100.485	547	0.244
<u>CSQBSRV</u>		3760	LLA	0.104	11	5.646	507	0.114
<u>IKJEFD30</u>	<u>ALLOC</u>	D400	LLA	0.211	14	111.808	495	0.214
<u>CSQBCON</u>		2E30	LLA	0.096	101	4.403	416	0.156
<u>CEEPLPKA</u>		1C4680	LLA	9.063	12	3801.330	357	9.078
<u>CEEEV003</u>		3201F0	LLA	16.835	11	5880.649	353	16.938
<u>IEFNB903</u>		FB90	LLA	0.299	32	296.839	341	0.272
<u>IEANTRT</u>		48	LLA	0.040	10	8.132	331	0.039
<u>CEEBINIT</u>		ECB8	LLA	0.311	111	169.159	242	0.289

# MXI Allocated Dataset Info



MXI - PROD - Allocated Dataset Information: JES2 ----- Row 1 of 13  
Command ==> Scroll ==> PAGE

DD Name	Cat	Volume	EXCP Count	Dataset Name
	Seq	Unit	Serial	
STEPLIB	+00	1209	S3906R	0 SYS1.V2R5M0.SHASLINK
PROC00	+00	122A	S3906T	460 SYS4.PROD.PROCLIB
PROC00	+01	1209	S3906R	14 SYS1.PROCLIB
PROC00	+02	1209	S3906R	0 CPAC.PROCLIB
PROC00	+03	1209	S3906R	0 SYS1.IBM.PROCLIB
PROC02	+00	1C4B	CATPAK	288 SYS1.PRODPK.PROCLIB
PRT1	+00	050F		0 SYS00062.T090946.RA000.JES2.R0116242
ALTPARM	+00	1209	S3906R	0 SYS1.PROD.PARMLIB.NEW
SYS00001	+00	122A	S3906T	192747 SYS1.PROD.HASPCKPT
\$SPOOL1	+00	141A	SPOOL1	0 SYS1.PROD.HASPACE

- Peek into other ASID(s) and look at I/O same as OEM MVS Monitors
- Displays the current allocated DDNAMEs and their associated data sets.
- Command Syntax DDNS dd-mask JOB(jobname) ASID(asid)

# MXI Common Storage Usage



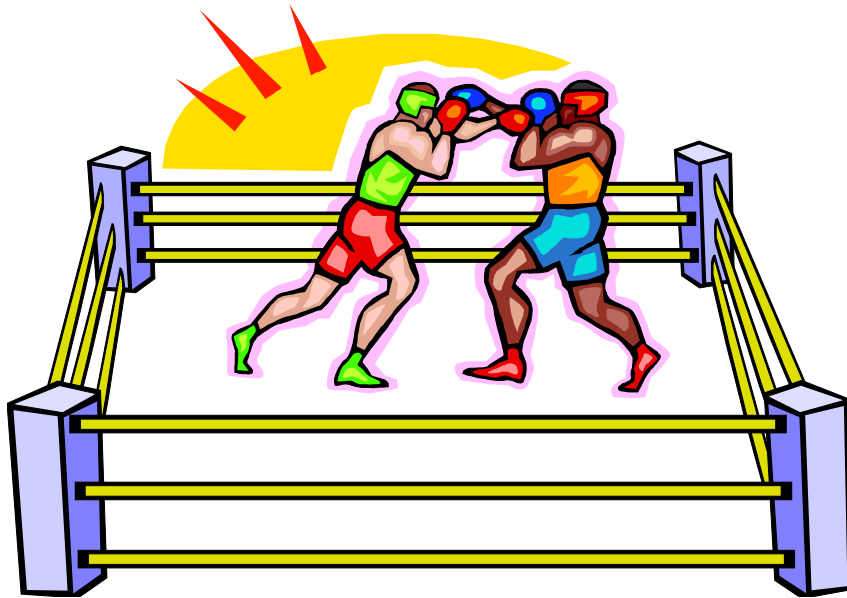
MXI - PROD - Common Storage Usage  
 Command ==>

Scroll = PAGE

Active	JES2	----Job Started----		-----Storage Allocated-----			
Jobname	JobID	Date	Time	CSA	E-CSA	SQA	E-SQA
*TOTAL*				326080	26169032	369752	7806880
*MASTER*		2000/02/07	19.25.27	94792	841704	55656	907208
*SYSTEM*				62520	10851000	259552	4662408
DSN6MSTR	STC09981	2000/02/07	19.25.57	32704	1534800	896	4848
RACF		2000/02/07	19.25.27	31912	51776	64	416
JES2				27992	3270120	64	1584
CPTCECSM	STC09970	2000/02/07	19.25.53	12952	132624	4072	768
CPTMVTAM	STC09972	2000/02/07	19.25.53	11144	175184	4616	384
NET	STC09945	2000/02/07	19.25.25	9976	3124488	0	352
CATALOG				8464	32144	2816	41904
TPX	STC03114	2000/02/12	18.05.47	7056	22840	9664	352

- Uses IBM Common Storage Tracking Data (PARMLIB DIAGxx)
- Same information as RMF III and OEM MVS Monitors

# SHOWMVS vs. MXI



- Different but both have unique strengths. I use both!
- Both are updated frequently so stay current to have access to the latest features and information specific to the most recent z/OS releases.

# TASID System Information and more



TASID (pronounced tas-eye-dee) is a program that provides, among other things, information on system configuration, what is running on an OS/390 system (jobs, users, tasks, etc), ENQ contention information, current ENQs, Initiator information (JES2 only), DASD Space information, Allocated DD names, and storage displays. It is a free tool supplied by Doug Nadel (IBM)

- ISRDDN now includes many featured first seen in TASID
- TASID is very easy to install and is never APF authorized
- Many years distributed OCO only
- Not on web page but Doug has made assembler source built from PL/X available likely would do so again it cannot hurt to ask

The most current copy of TASID and many other useful Tools and Toys from Doug Nadel are always available through the web at <http://www.sillysot.com/mvs/>



# TASID



File Navigate Settings

---

TASID option menu

Limited ENQ data

Option ==>

Select one of the following options:

Version 5.06c

- |                             |                                 |
|-----------------------------|---------------------------------|
| 1 - Address space list      | 5 - Miscellaneous displays      |
| 2 - System ENQ contention   | 6 - Current dataset allocations |
| 3 - Total system ENQ status | 7 - Storage View Facility       |
| 4 - Initiator Status List   | 8 - Snapshot                    |

More: +

Current time 15:40 on 2000/03/07	TSO users 47
Last IPL time 19:23 on 2000/02/07	Started tasks 34
IPL Parameters 1C4B PT 1	Jobs 3
OS/390 02.06.00 JES version JES2	System addrs 25
SMF ID PROD JES level 2.5.0	Free initiators 9
User ID CSSJK RACF level 2.6.0	-----
Node JES2MVS TSO version 2.6.0	Total 118
VTAM Adr TPXGR206 VTAM Level 4.5	-----
Proc \$SJKTEST DFSMS level 1.4.0	CPU utilization 27%
Region 255000K DSS Level 1.4.0	CPU 9672-R44 ( 2 CPUs)
RACF Grp TSOHOLD DSF level 1.16.	ENQ Contention None

# Xmit Manager

## What is Xmit Manager?

Xmit Manager is a Free Windows based utility which decodes IBM Mainframe based Xmit files and allows for viewing or extraction of the content data.

Supports PDS, SEQ content, FTP to MVS or Internet, Zipped files. Written by Neal Johnston-Ward

It is on the CBT CD & Web Site too!

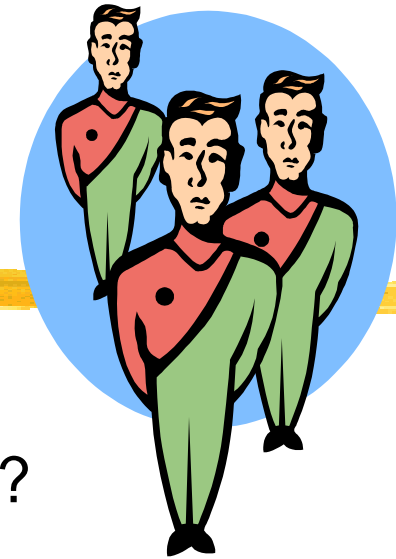
Xmit Manager Home Page

<http://www.data-aid.co.uk>





# LOGON TSO same user



How to I modify my system to allow me to LOGON to multiple systems with the same userid?

**IKJ56425I LOGON rejected, UserId CSSJK already  
logged on to system PROD  
IKJ56400A ENTER LOGON OR LOGOFF-**

- GRS or CA-MIM/MII enqueue handling of SYSIKJUA/userid

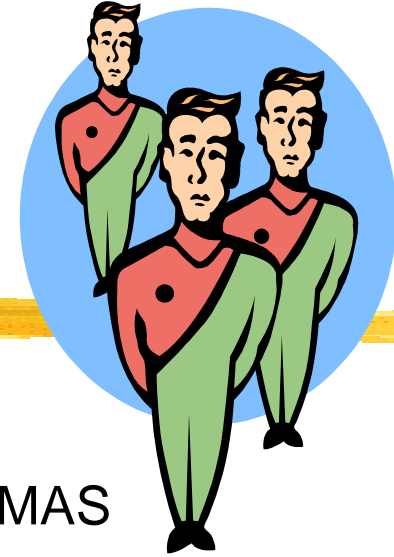
For GRS check GR SRNL00 you may have a statement like this causing you to propagate SYSIKJUA sysplex wide.

```
RNLDEF RNL(INCL) TYPE(GENERIC)  
QNAME(SYSIKJUA)
```



- **z/OS R4 JES2 no longer checks for duplicate TSO logons**

# LOGON TSO same user



- JES2 MAS considerations HASPCNVT simple USERMOD or Exit 44 required if you wish to do this in a MAS
  - JES3 complex considerations USERMOD to IATGRJS required
  - ISPF data sets PROFILE, ISPF LIST, LOG, ISPCTL, and ISPWK.
  - SDSF "Options" menu to set your console name to avoid collision
- PROFILE can be allocated differently on each system. How you do it depends on your needs. Other ISPF data sets can be addressed in ISPF Exits.

IBM Item RTA000089663 documents and provides sample code

Mark Zelden provides nice samples in his CBT Tape file # 434 which is included on the CD in the /cbt directory

# Hercules - What is it?

- Hercules is a System/370, ESA/390 and z/Architecture emulator which can IPL and execute most of the instructions defined for these architectures. It can also emulate CKD and FBA DASD, printer, card reader, tape, channel-to-channel adapter, and local non-SNA 3270 devices.
- Currently runs under Linux or Windows experimental ports for other platforms
- Capable of running MVS/ESA, OS/390, VM/ESA, VSE/ESA and older Operating Systems such as MVT, MVS 3.8 and VM/370
- Session 2880 follows this one at 6PM!
- Included on the CBT CD or download from the Internet

Hercules Home Page

<http://www.conmicro.cx/hercules>



# Hercules - Where to get it?



Active User Community on Yahoo.

<http://groups.yahoo.com/group/hercules-390>

- Post message: [hercules-390@yahoogroups.com](mailto:hercules-390@yahoogroups.com)
- Subscribe: [hercules-390-subscribe@yahoogroups.com](mailto:hercules-390-subscribe@yahoogroups.com)
- Unsubscribe: [hercules-390-unsubscribe@yahoogroups.com](mailto:hercules-390-unsubscribe@yahoogroups.com)
- List owner: [hercules-390-owner@yahoogroups.com](mailto:hercules-390-owner@yahoogroups.com)

New Users Documentation Effort for Hercules

<http://www.kiyoinc.com/hercdoc.html>

My Hercules links at:

<http://www.cbttape.org/links.phtml#Hercules>

# Tachyon Legacy Assembler & LIB390



David Bond from Tachyon Software  
<http://www.tachyonsoft.com>

- **Tachyon Legacy Assembler**

- Fast on Wintel compared to batch job. Fast is what Andy Grove from Intel said means 'whatever you want to happen, happens in the blink of an eye.'
- Free but requires a license code to operate currently issued for one year

- **LIB390 - C Runtime Library for S/390**

(See /Tachyon directory on CBT CD for current downloads)

# Tachyon Legacy Assembler

- Free HLASM-compatible assembler
- Full macro support
- Generates code for all IBM proprietary operating systems (z/OS, OS/390, VSE, VM/CMS, TPF, MVS 3.8...)
- All instruction sets, from S/360 through z/Architecture



# Tachyon Legacy Assembler

- Inputs:
  - EBCDIC, ASCII and UNICODE
  - Text files, ZIP files, TAR files and CMS MACLIBs
  - HLASM and GNU assembler syntax
- Outputs:
  - EBCDIC or ASCII listing
  - SYSPUNCH file is text
  - GOFF and OMF object files



# Tachyon Legacy Assembler

- Runs on Linux for S/390 and zSeries today
  - Planned for z/OS, OS/390 and MVS 3.8
- Not a hobbyist license
  - No “noncommercial” restrictions
  - Available to companies and individuals



Visit

<http://www.tachyonsoft.com/legacy.html>



# LIB390



- GCC is a collection of excellent compilers for C, C++, FORTRAN, ADA and other languages
- As part of the Linux/390 port, IBM contributed has provided a back-end that produces excellent code
- Why not take advantage of this great compiler to produce OS/390 programs?

# LIB390



- For GCC to be used to generate OS/390 programs, the GNU Library for C (GLIBC) needs to be replaced with a library of functions to interface to OS/390 services.
- LIB390 is an open-source library allowing the unmodified GCC compiler to build C programs for OS/390.
- Language Environment (LE) interfaces are not used, allowing GCC to build programs that avoid LE.

# LIB390



- LIB390 is written in C and assembler. Some of the C code was borrowed from GLIBC, other parts are original.
- The free Tachyon z/Assembler for GCC is included with the Tachyon Legacy Assembler. It converts the output of the GCC compiler (GNU Assembler syntax) to standard object code that can be linked and run on OS/390.

# LIB390



- LIB390 can already allow real-world OS/390 UNIX Systems Services (USS) programs to be built. As a result, there will soon be an OS/390 port of the Tachyon z/Assembler and the Tachyon Legacy Assembler.
- Work is underway to allow MVS 3.8 to run GCC/LIB390 programs.

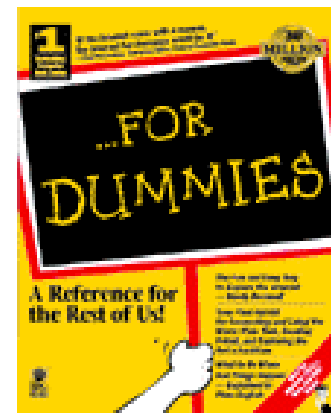
# LIB390



- Hercules, MVS 3.8, Linux for S/390 and zSeries, GCC, LIB390 and Tachyon Legacy Assembler are all free. There is now a complete set of C and assembler programming tools for the mainframe environment.
- LIB390 source and pre-compiled objects are available from:  
<http://www.tachyonsoft.com/lib390.html>
- Tachyon z/Assembler for GCC is at:  
<http://www.tachyonsoft.com/gcc.html>

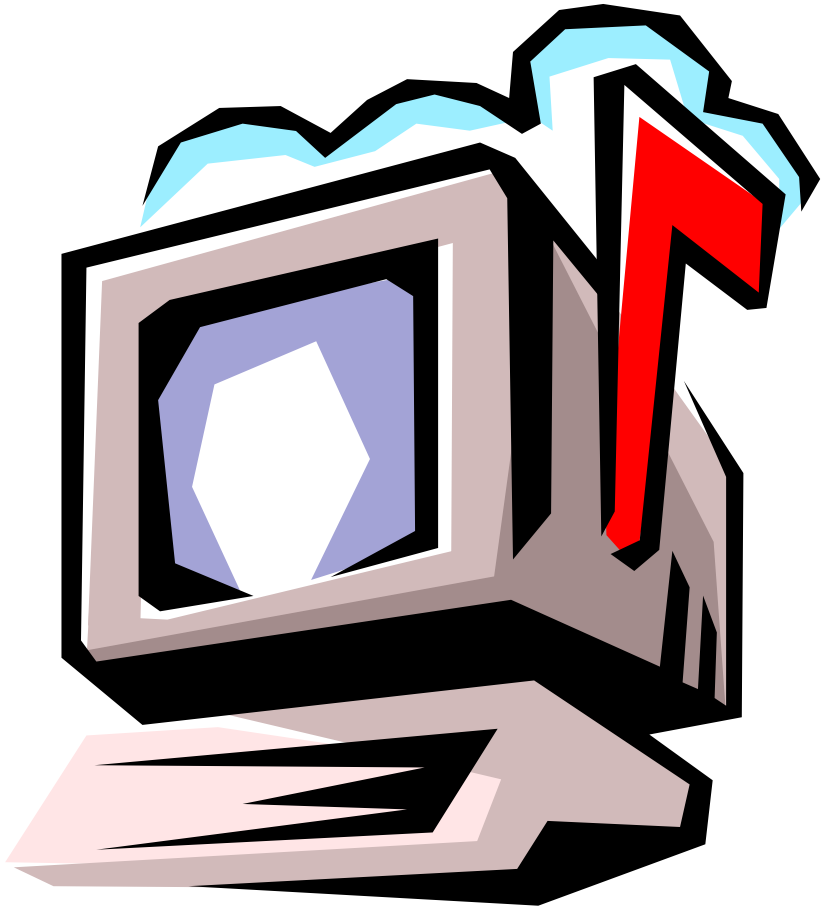
# What is a mailing list and how do I find mailing lists?

- A mailing list is a free service you subscribe to that allows you to exchange email with others on a topic of mutual interest. For more information check out popular resources like Internet For Dummies® ISBN: 0-7645-0700-1.



- There are several catalogs of lists available on the web.
  - My list <http://www.knutson.org/internet.htm>
  - Catalog of LISTSERV lists <http://www.lsoft.com/lists/listref.html>
  - Catalog of many lists including some other list servers i.e. majodomo, listproc, and listserv. <http://www.liszt.com>

# Mail Lists



“To sum it all up, **SHARE** is now **365 days a year** rather than 4 times a year.” Melinda Varian in “VM and VM Community: Past, Present, and Future” speaking about **VMSHARE**. **VMSHARE** is gone but lives on in spirit in the discussion groups which stretch across the globe using the Internet.

# Mailing Lists



- Almost everyone knows how to send email so networking through email is a natural use for the Internet.
- A big part of networking is finding other people interested in the same things you are especially those who might be willing to help you. Mailing lists help people interested in the same thing exchange email.
- A mailing list works by allowing people to join the and then send a single email message that is relayed to all the list members. Responses to messages are also relayed to all list members.
- A list server program does the work of keeping track of list members and relaying the email messages. A real human being administers the list server and helps to resolve problems



# How do I join or leave a mailing list?



- To join a LISTSERV mailing list you start by sending the list server an email message asking to be subscribed with the text “subscribe listname Joe User”
- So to join the IBM-MAIN mailing list I send a message like this one:

To: LISTSERV@bama.ua.edu

From: Sam Knutson <sknutson@cbttape.org>

Subject: listserv

**subscribe ibm-main Sam Knutson**

To stop the mail from the list just send an email to LISTSERV@bama.ua.edu with the text **signoff ibm-main**

**IMPORTANT**

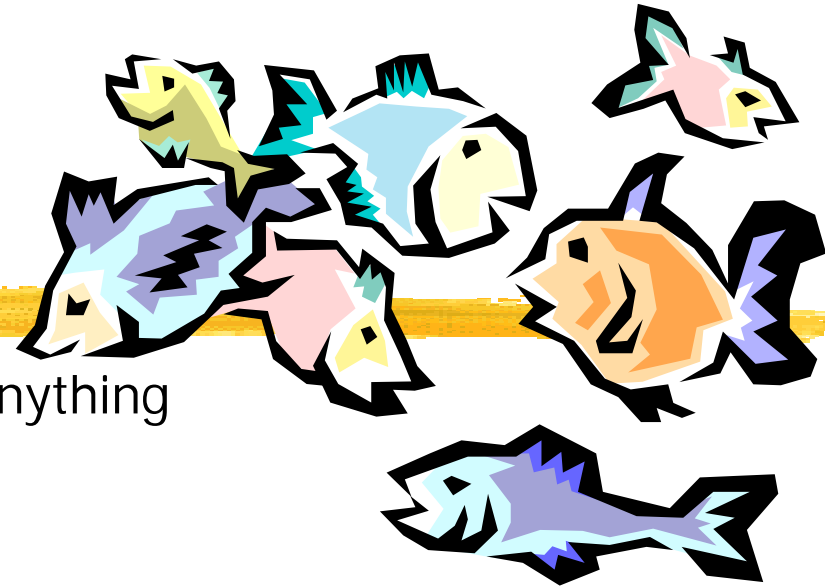
# IBM-MAIN Archives



- You can also read and search on past messages on IBM-MAIN. This is a fabulous research tool easily as valuable as IBMLink even for those who do not care to follow the list antics on a daily basis.
- LISTSERV web interface an University of Alabama  
<http://bama.ua.edu/archives/ibm-main.html>
- You can also read and search on past messages on IBM-MAIN using email and the SEARCH command i.e. Search IBM-MAIN "IGD0099E"
- Last and perhaps best you can use Google™ Groups to search the archives of bit.listserv.ibm-main (Hint this link is on the CBT links page)

[http://groups.google.com/groups?oi=djq&as\\_ugroup=bit.listserv.ibm-main](http://groups.google.com/groups?oi=djq&as_ugroup=bit.listserv.ibm-main)

# IBM-MAIN



- Topic: IBM S/390 Computing almost anything  
Name: IBM-MAIN  
Type: LISTSERV  
Listserv: [LISTSERV@bama.ua.edu](mailto:LISTSERV@bama.ua.edu)  
List: IBM-MAIN@bama.ua.edu  
Web: <http://bama.ua.edu/archives/ibm-main.html>  
News: [bit.listserv.ibm-main](mailto:bit.listserv.ibm-main)  
Weekday Message Volume: 100 - 200 (**High** consider setting DIGEST option)  
More information: David Alcock's excellent Unofficial IBM-MAIN FAQ  
<http://www.planetmvs.com/ibm-main/index.html>  
  
Sam Knutson's LISTSERV Page <http://www.cbttape.org/internet.phtml>  
and IBM-MAIN page <http://www.cbttape.org/ibm-main.htm>
- Notes: 20% - 40% off topic posts are not unusual i.e. high signal to noise ratio, however, the remaining content is great!

# IBM-MAIN



“Thanks to all for the great replies. Having such talent available and willing to help is the best thing since sliced bread!”

Fred Schmidt

Posted Wed, 6 Dec 2000 on IBM-MAIN



Jerrie Stewart (IBM) quoted posts to IBM-MAIN in SHARE session 2412 in Nashville z/OS Announcement Review to demonstrate customer experience. IBM-MAIN is not an official channel to IBM but clearly they do listen.

Google™



Google™ groups is a web site which allows you to read newsgroups with a web browser instead of using special newsreader software and finding a news server. You can also search the web for text, images, and use a Yahoo™ style directory.

Google™ <http://www.google.com> fast, good, unbiased search engine

Google™ Groups <http://groups.google.com>

In order to post messages to many of the lists through these sites you still need to subscribe to the mail list and set to “nomail” if you don’t want email.

Google™ toolbar is an enhancement for your MS Internet Explorer web browser and I find it a highly useful one. It does not currently support anything other than MSIE. Find it <http://toolbar.google.com/>

# Who me? Contribute to the CBT Tape or CD-ROM? Why not!



Send contributions to the CBT Tape to Sam Golob and call or email him. Send contributions only suited for the CD-ROM to Sam Knutson.

Most contributions are now made via email over the Internet. To contribute, it is preferred that you make a PDS on an MVS system, including documentation member(s), put the pds into TSO XMIT OUTDSN format, download it in binary to the PC (if you need to), and attach it to an email to Sam at: [sbgolob@attglobal.net](mailto:sbgolob@attglobal.net)

If the file is large, you can PKZIP it on the PC, before attaching it to the email. That's all there is to it!

If you want to send anything any other way, Sam Golob's address is:

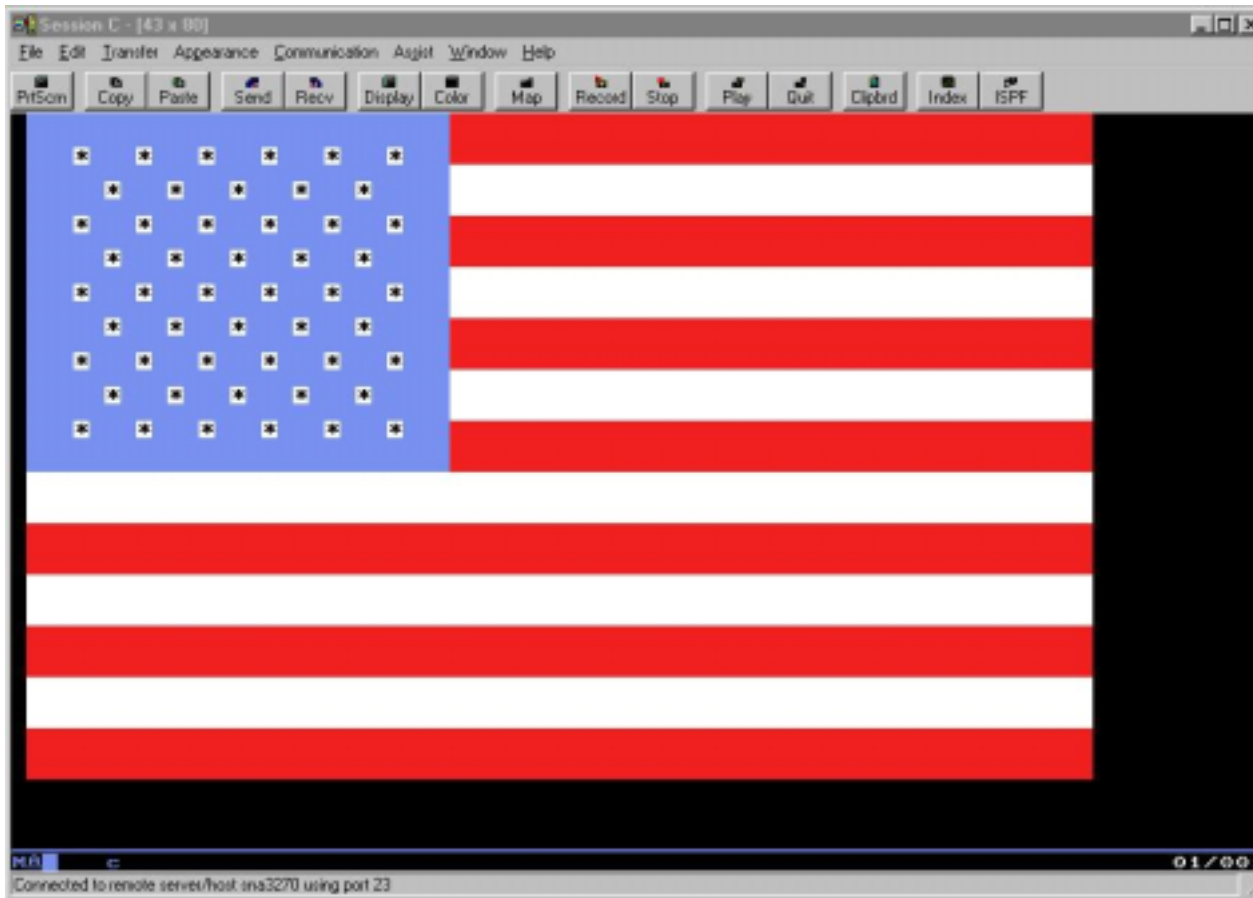
Sam Golob, P.O. Box 906, Tallman, NY 10982-0906 USA

# Errata and more information after SHARE



- The foils from this presentation as well as any additions or corrections will be posted at my web site following the SHARE conference and will be in the proceedings.
- <http://www.knutson.org/share99.htm>
- Feel free to call me at (703) 464-1615 or email me at [sam.knutson@asg.com](mailto:sam.knutson@asg.com) or [sknutson@cbttape.org](mailto:sknutson@cbttape.org)  
Please send any additions or corrections I would be glad to include them.

# Just for fun!



Ed Jaffe  
built a  
USA Flag  
with 3270  
buffer  
orders



Download <ftp://ftp.phoenixsoftware.com/pub/demo/flagtso.xmi>

Screen capture <http://www.cbttape.org/ftp/adhoc/flagtso.jpg>



# Just for fun!

## Buy Geek Stuff

- <http://www.thinkgeek.com>
- <http://www.copyleft.net>
- <http://www.mainframesareback.com>

## A fun way to give old books new life

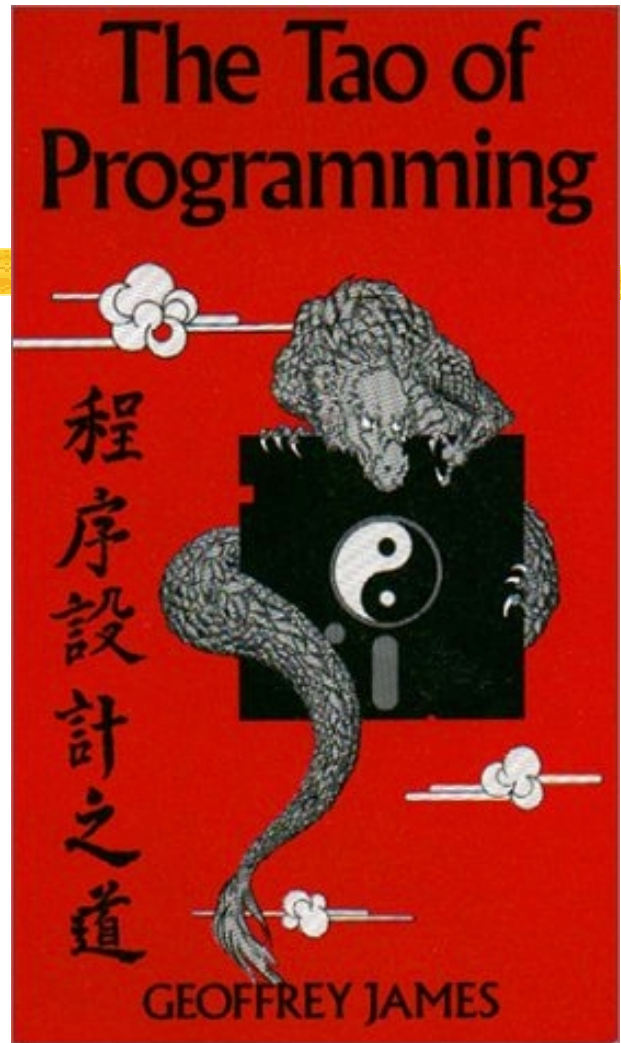
- <http://www.bookcrossing.com>

## Cool Digital Art!

- <http://www.ekholbrook.com/>

## Some funny cartoons

- <http://www.userfriendly.org/static/>
- <http://www.dilbert.com/>



<http://www.isbn.nu/0931137071>

Thus spake the master programmer: "Time for you to leave."

The End

**THANK YOU**



***Please fill out your session evaluations.***