

# Fully Wired Hot Topics #10: MVS Free Tools and Tips Update!

## Session 2861



SHARE 101

Washington, DC

MVS/SCP Project

August 14, 2003

Sam Knutson

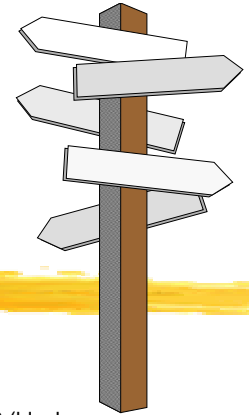


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# Handouts



- Paper Copy of foils from this presentation which have also been submitted to the proceedings
- CBT CD-ROM #11 MVS freeware, tools, information of all kinds for mainframe craftsmen
- Volker's MVS 3.8 Turnkey CD-ROM #3 for Hercules
- CBT Base Tape 461 July – 17 – 2003 on 3480 cartridge
- CBT Overflow Tape 461 July - 15 - 2003 on 3480 cartridge

# CBT Tapes



- Unload File 1 using IEBGENER for documentation on the contents and advice on getting started finding useful tools on the tape.

CBT Tape# 431 BASE TAPE

Created July - 17 - 2003

File 1 describes contents

RECFM=FB, LRECL=30,  
BLKSIZE=32720, LABEL=31  
3480 DDSC

TAPE MAY BE FREELY COPIED

Visit <http://www.cbttape.org>  
for the latest updates

CBT Tape# 461 OVERFLOW  
TAPE

Created: July - 15 - 2003

File 1 describes contents

RECFM=FB, LRECL=30,  
BLKSIZE=32720, LABEL=31  
3480 DDSC

TAPE MAY BE FREELY COPIED

Visit <http://www.cbttape.org>  
for the latest updates

# Getting started with CBT Tapes



- Explore File 1 it contains many sections and detailed information about every file on the tape
- Unload the whole tape to disk for easy use. Browsing at the library contrast with special ordering based on a card catalog.

## DASD Requirements

(CBT461 12971 3390 tracks)

(COV461 11324 3390 tracks)

NB DASD Requirements computed quickly using TALLY REXX  
from CBT File #183 by Gilbert Saint-flour

# Getting started with CBT Tapes



MOUNT command or placing in ATL is useful

M uuu,VOL=(NL,CBTnnn),USE=PRIVATE

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
```

# 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 cart blanche to redistribute or resell. Respect copyrights and beyond legal necessities respect the author

# CBT CD-ROM #11 Contents



- CBT Tape V457 January - 15 - 2003
- CBT Overflow Tape V428 July - 14 - 00
- Updates pending for V458 through February - 22 - 2003
- 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
- Hercules emulator and related resources
- Web sites from Lionel Dyck, David Alcock, others
- JES3 free tools and mods
- OpenOffice.org 1.02
- Explore for the CD for much more!



# 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
- Included on the CBT CD, Volker CD, download from the Internet to upgrade to the current version

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)

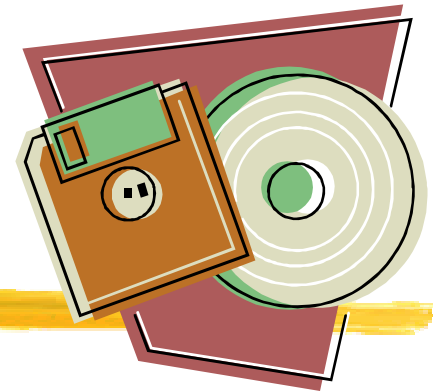
New Users Documentation Effort for Hercules

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

My Hercules links at:

<http://www.cbttape.org>

# Getting started with Volker's MVS Turnkey CD #3



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.



# Doing work with Volker's MVS Turnkey CD #3



“Mainframe on a PC, its as easy as pie.” Edwin Handschuh

My current client hired me in January of this year (I won't mention names). I was tasked to develop a multi-threaded application which automates/facelifts FTP. My only problem was that I didn't have a userid for the mainframe (imagine writing Assembler without logging on!). I ordered the CD (Hercules is on the CD along with MVS 3.8.j), installed it, and began developing, assembling, linking, and testing the code. I was writing assembler code from early March all the way through to the end of June. In early July (when I got my id... I won't go into the many reasons why they weren't able to provide me with an id), I copied the code to z/OS 1.2, assembled it (without errors) and haven't looked back since. I'm not going to lie to you and tell you that the MVS 3.8.j "F" assembler is the most up to date assembler (HA!), but it didn't limit my ability to write 99% of what I had to write. All in all, the MVS 3.8.j OS provided on the CD is a very useable system. I highly recommend it for someone who's trying to learn the ropes and doesn't have access to a mainframe.

# OS/360 MVT CD(s)



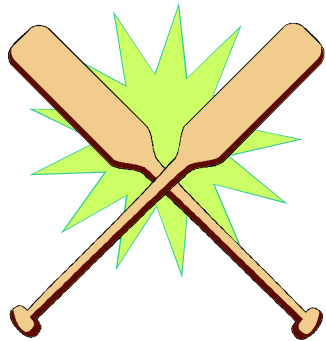
***OS/360 n. A small free operating system that took IBM to total dominance of the global computing market.***

**See Linux** From <http://www.isham-research.com/dd.html>

- OS/360 Distribution by Rich Fochtman (limited#) How could we thank Rick?

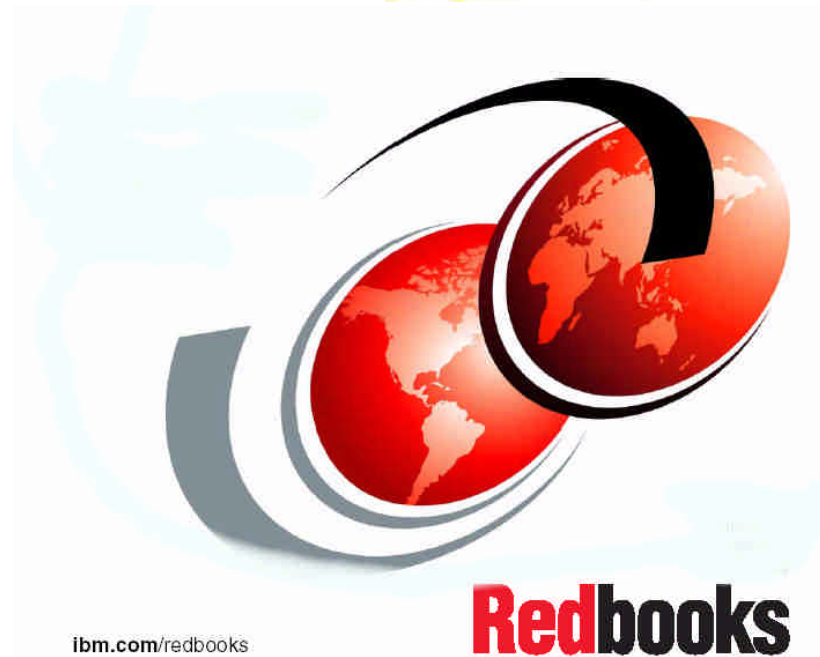
These Can be ordered from [cbttape.org](http://cbttape.org)  
CD Mailing program if you don't get one today.

- Turnkey OS/360 MVT for Hercules by Jay Maynard (more limited#)



# IBM DFSMS Classics ///

## Redbooks CD



IBM has released over the years many useful Redbooks related to DFSMS.

Tony Pearson (IBM) has been kind enough to get a CD made up with many of them for distribution here!

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

# 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

z/OS Version 1 Edition available now. Steve updated this for z/OS R4 in July and made the updated version available free to those who purchased the z/OS upgrade.

Free version Good Resource especially for WLM COMPAT mode while it lasts and

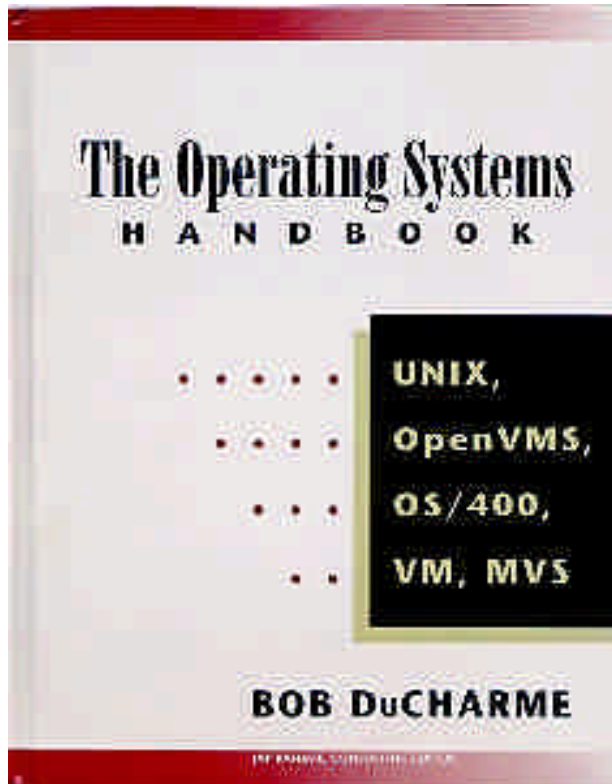
You can buy the PDF for download for \$50 or on a CD for a bit more at

<https://www.setsystems.com/cgi-bin/buy-mvs>

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



# The Operating Systems Handbook



The Operating Systems Handbook  
by Bob DuCharme

Released as a free e-book

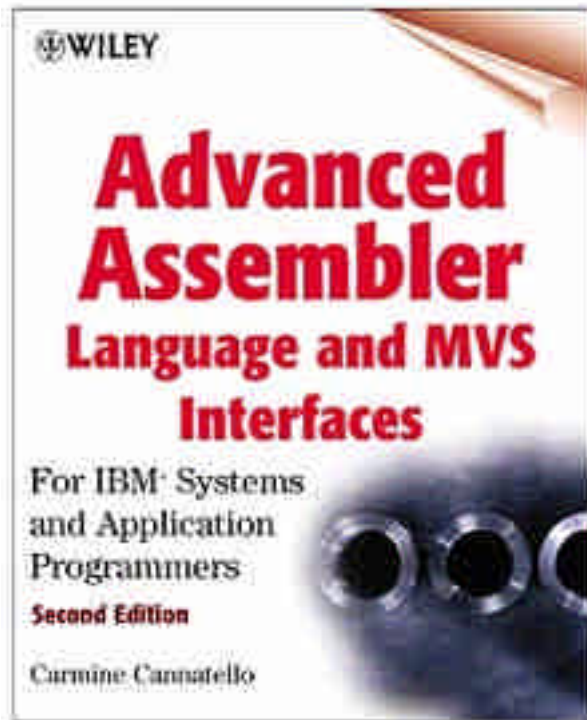
"Working Knowledge of UNIX, VMS, OS/400,  
VM/CMS, and MVS."

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

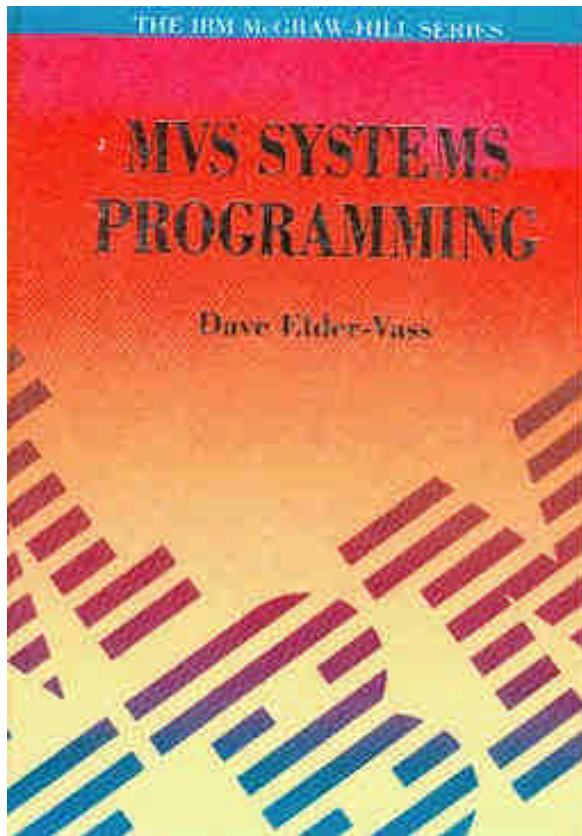
Where to buy the book?

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

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

Source Code on  
CBT Tape File 69

# MVS Systems Programming



*MVS Systems Programming*

by David Elder-Vass

ISBN: 0-07-707767-9

Out of Print

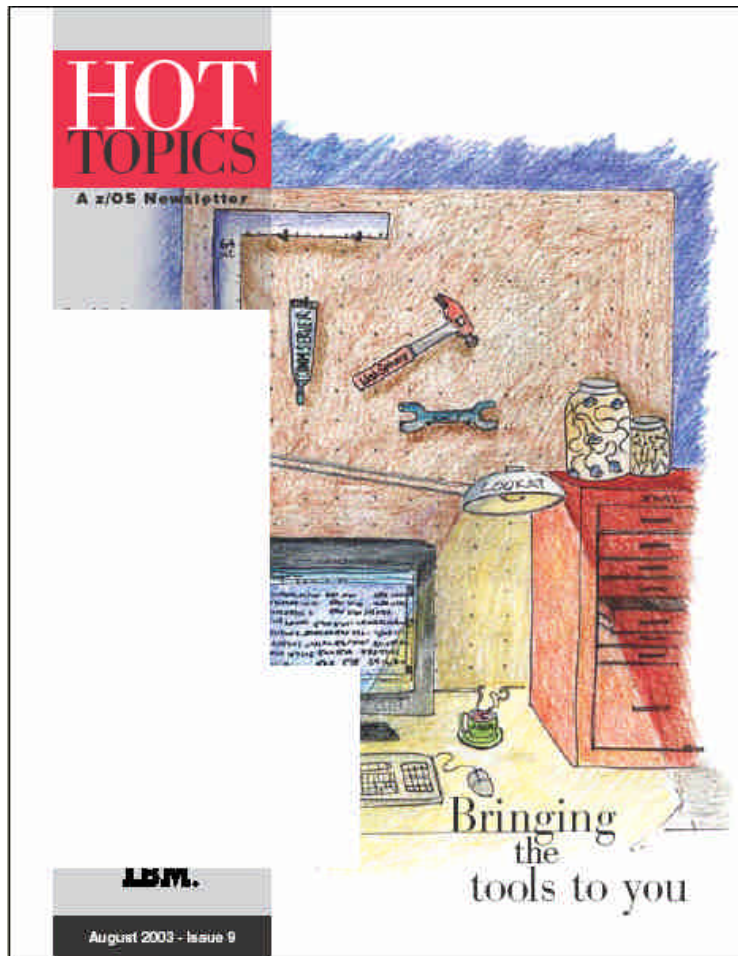
Written in 1993 before OS/390

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



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 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/>

and search on “**ABCs of System Programming**”

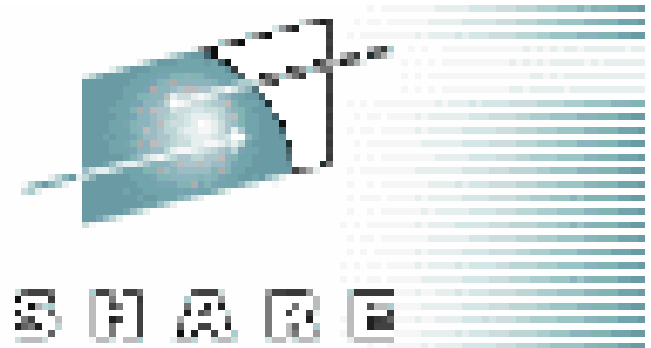


# Conference Proceedings



<http://www.share.org>

- Proceedings in Adobe Acrobat .PDF
- Free userid/password required



<http://www.usenix.org/publications/library/proceedings>

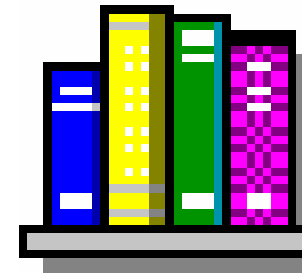
Online proceedings of conferences from previous years are now freely available to everyone. The full papers of the past twelve months are available only to USENIX members.

# IBM References



## IBM Internet Library

OS/390 <http://www.s390.ibm.com/os390/bkserv>



z/OS <http://www.ibm.com/servers/eserver/zseries/zos/bkserv/>

**LOOKAT** IBM tool to quickly lookup messages



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

## IBM Catalog and VSAM Knowledge Base

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





# Magazines



Archives 1996 - 2003 <http://www.naspa.com/tsyellow.htm>

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

# MAINFRAME MONTH

<http://www.xephon.com/mfm/>

Free Xephon monthly email newsletter focused on IBM mainframes

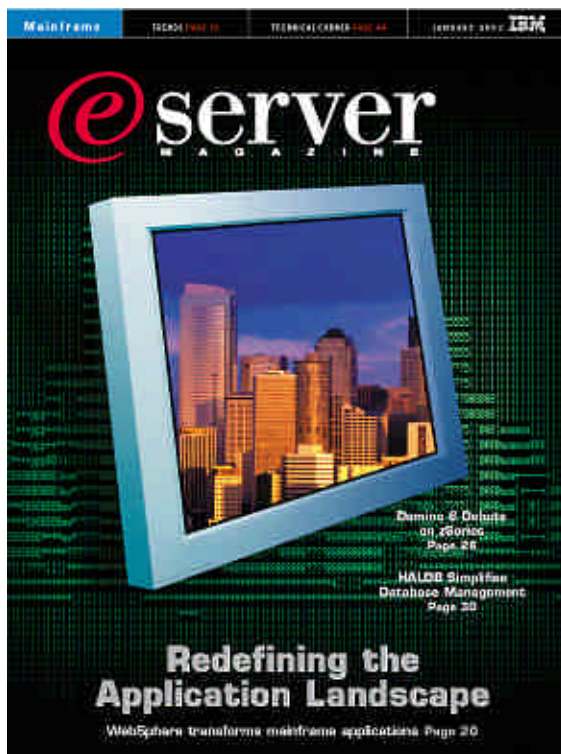


# Free Magazines



<http://www.zjournal.com/>

Bob Thomas (Founder ESJ) is back.



eServer Magazine is published in three flavors — eServer Magazine, iSeries edition; eServer Magazine, Mainframe edition, and; eServer Magazine, IBM edition for UNIX

<http://www.eservercomputing.com/mainframe/>

# 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.

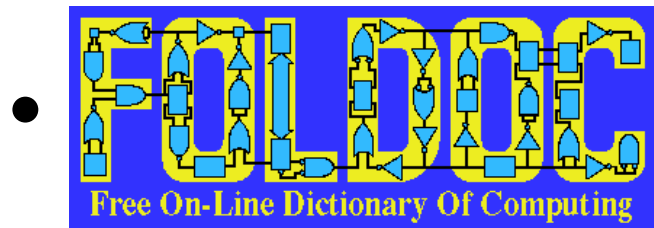
# On-Line Computer Dictionaries



**UPDATE!** 

-  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>**

# 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.**”

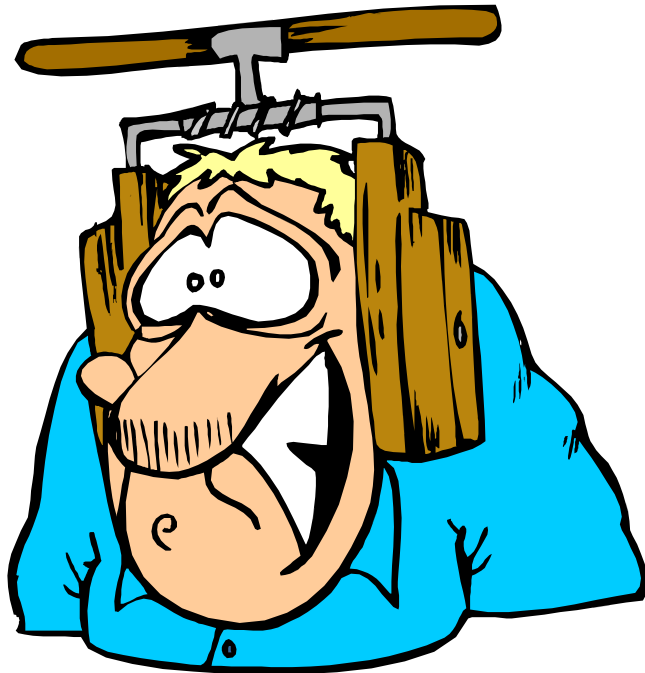
# Bring home the Tools!



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 they only reason you come to SHARE is because “THEY HAVE AN 8 HOUR OPEN BAR AT SCIDS EVERY NIGHT!”

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

# 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://www.cbttape.org/~jjaeger>

***CBT CD #11 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

The screenshot shows the HMC1 Hardware Management Console Workplace (Version 1.7.3) 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?" Below this, under "Object names", a text field contains "P44021". At the bottom of the dialog are three buttons: "Yes", "No", and "Help". To the right of the dialog is a large green rectangular area. On the far right, a vertical menu titled "CPC Recovery" is visible, containing several options with icons: "Hardware Messages", "Operating System Messages", "Single Object Operations" (which is highlighted with a blue bar), "Start", "Stop", "Reset Normal", "PSW Restart", and "Reset Clear".

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

Back Forward Stop Home Search Favorites Media

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

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)	ESHP	PROD (DEVL52:PROD)
SYSA (DEVL52:SYSA)	SYSB (DEVL52:SYSB)	SYSC (DEVL52:SYSC)	
SYSD (DEVL52:SYSD)	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

2 Edit - Edit dataset or member

3 ListVTOC - List Volume Table Of Contents

4 ListPDS - List PDS directory

5 DispVol - Display DASD volume label

6 Dump - Dump DASD record by CCHHR

7 Zap - Alter DASD record by CCHHR

X Exit - Terminate program

Console 0010/3278

IPL Device 000D/3505

IPL CPU 0000

CPU Version 00

CPU Serial 000611

CPU Model 3090

Date (TOD) 19/08/2002

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



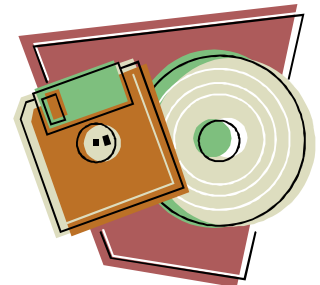
Who tells you how? Other systems programmers!

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'.*

# Avoid the outage with Health Checker



15 minute project!

Free, Fast, IBM

IBM Health Checker for z/OS and Sysplex

<http://www.ibm.com/servers/eserver/zseries/zos/downloads/>

# 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.

# Passwords



- Strong nee obscure Passwords can be troublesome
- Too many passwords can be difficult for users to remember
- Forced frequent changes may Increase risk of unsafe behavior
- Password files include the MVS RACF database vulnerable to Password cracking tools

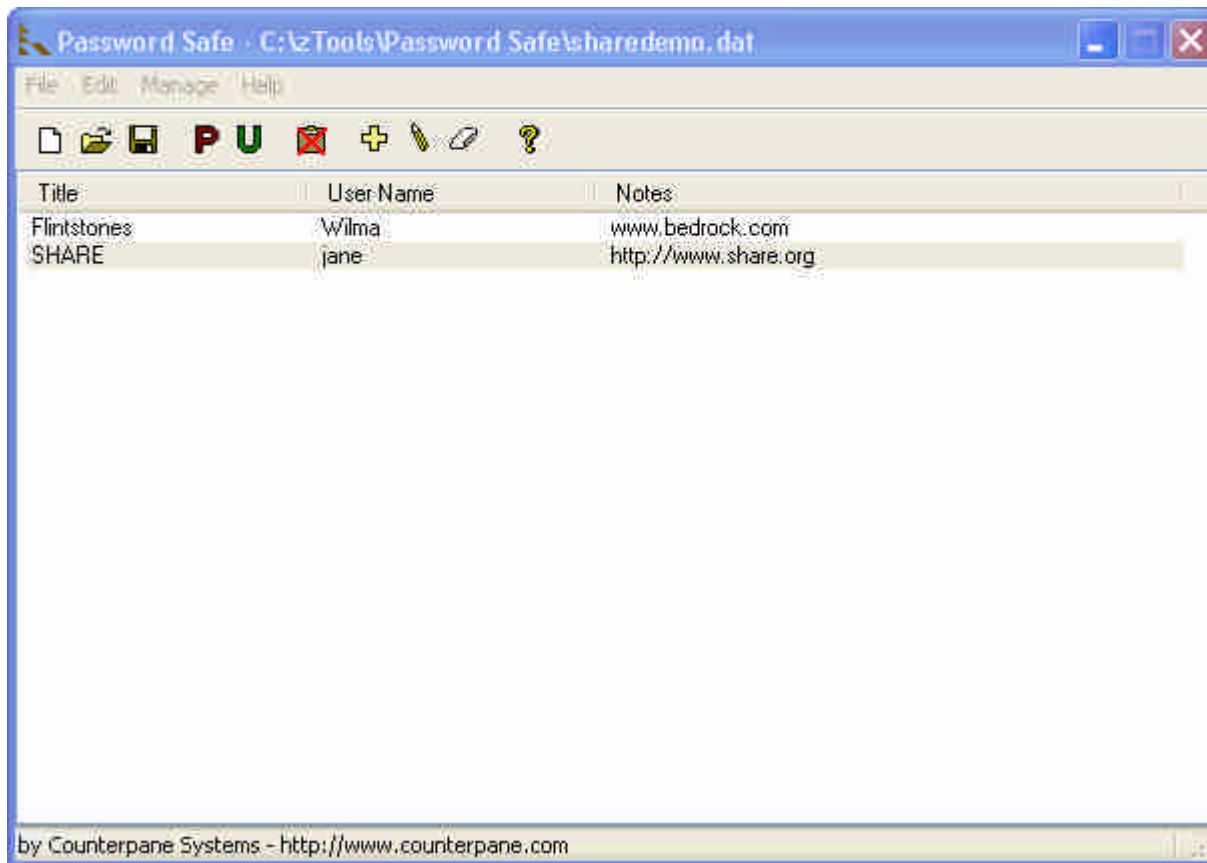
A survery commissioned by Rainbow Technologies found 2/3 of respondents admitted they had written down their passwords, and 8 percent said they always wrote them down “because they are too complicated to remember”.

Subscribe to Information Security magazine  
[www.infosecurymag.com](http://www.infosecurymag.com) it doesn't stink....

UPDATED: Acquired by Tech Target hopefully the past quality will continue

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

# Password Safe



- Free
- Open Source
- Blowfish Algorithm
- Windows, Pocket PC, more to follow

<http://passwordsafe.sourceforge.net/>

# Security



## CRYPTO-GRAM Newsletter by Bruce Schneier

- <http://www.counterpane.com/crypto-gram.html>
- Free, security and cryptography news and reviews LOTS of FUD busting!



<http://blackhat.com>

- multimedia archives free of charge as a service to the world wide computer security community

# PC Tools for Dinosaurs



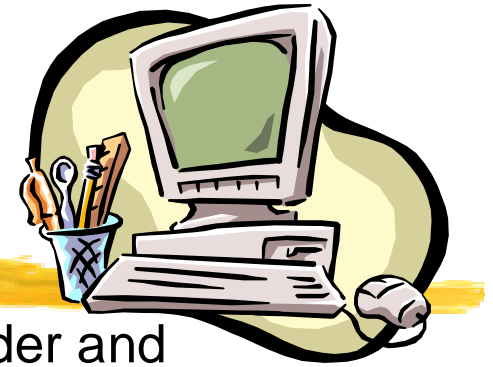
A personal computer is a necessary evil for most of us. A few good tools can help make it more useful.

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

-Dave Winer



# V – The File Viewer



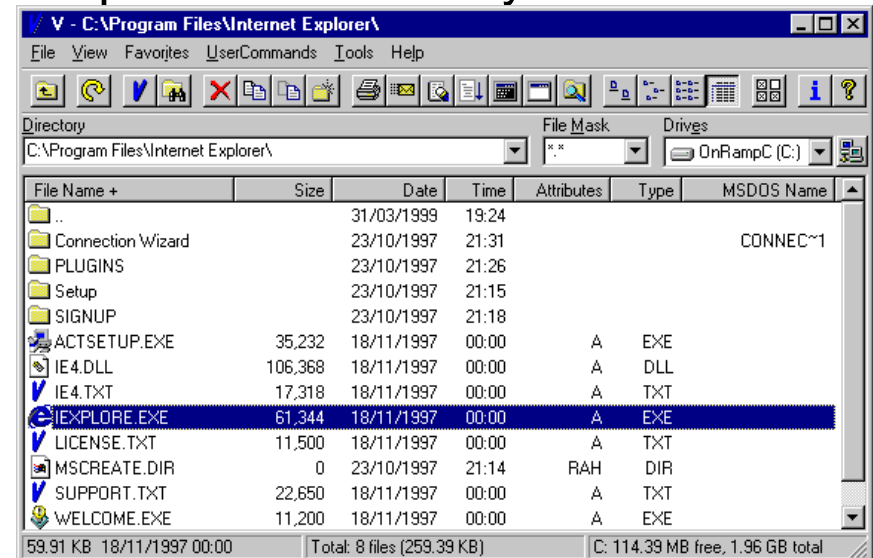
V is a combination File Viewer, Directory Browser, File Finder and File UnZipper for Windows 95/98/Me/XP and Windows NT/2000.

- Open from DOS “V Filename”, or Explorer
- similar in functionality to LIST - the classic DOS program
- Fast!
- Support for EBCDIC improved with the current Beta
- Inexpensive but not free \$20
- SHAREWARE allows free evaluation of full product for 60 days
- Author of V Charles Prineas

has been very responsive

- Ruler and Line numbers
- Handles large files I mean LARGE!
- Extract from archive files
- HEX support
- Read Only optionally do not lock file

<http://www.fileviewer.com>



# V – The File Viewer



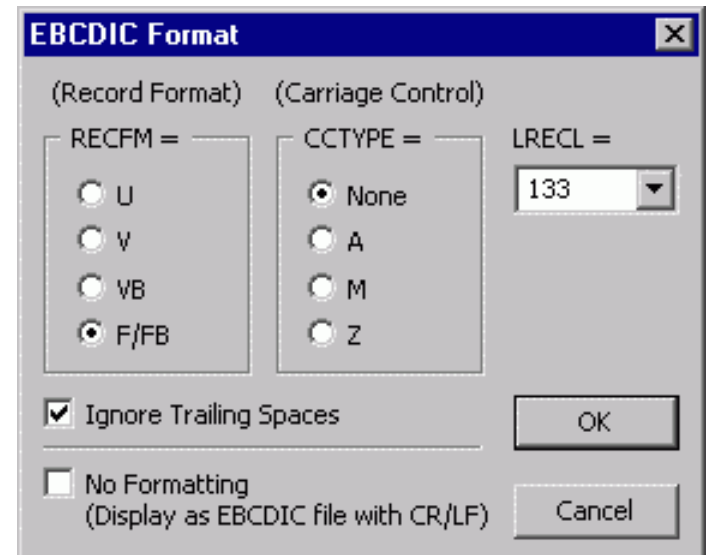
## EBCDIC Support

- V Version 7 tries to auto-detect whether a file is ASCII or EBCDIC
- V will try to determine the format of the EBCDIC file. It will usually get the format right for RECFM=V/VB files and some RECFM=F/FB files.
- Carriage Control is supported

## More Features

- Rulers
- Work with Columns

Free upgrades to date





0	10	20	30	40	50	60	70	80	90	100	110
123456789	123456789	123456789	123456789	123456789	123456789	123456789	123456789	123456789	123456789	123456789	1234567

```

1 1 J E S 2 J O B L O G — S Y S T E M E S Y S — N O D E F F A 1
2 0
3 19.08.27 JOB03321 — MONDAY, 14 JUL 2003 —
4 19.08.27 JOB03321 IRR010I USERID FFI IS ASSIGNED TO THIS JOB.
5 19.08.30 JOB03321 ICH70J01I FFI LAST ACCESS AT 19:07:45 ON MONDAY, JULY 14, 2003.
6 19.08.30 JOB03321 $HASP373 PAPA0 STARTED - INIT 31 - CLASS 5 - SYS ASYS
7 19.08.30 JOB03321 PAPA0 STARTED, TIME=19.08.30, DATE=2003.195 ASYS
8 19.08.31 JOB03321 *** STEP001 ENCPARM *** RETURN CODE 0000 *** PGM=IEBGENER JOB=PAPA0
9 19.08.32 JOB03321 *** STEP002 ESPRMDD *** RETURN CODE 0000 *** PGM=ESPPRMDD JOB=PAPA0
10 19.08.35 JOB03321 *** STEP003 CYBENCOR *** RETURN CODE 0000 *** PGM=CYBRM210 JOB=PAPA0
11 19.08.38 JOB03321 *** STEP004 PAPDO100 *** RETURN CODE 0004 *** PGM=UTYPSYM JOB=PAPA0
12 19.08.39 JOB03321 *** STEP005 PAPDO105 *** RETURN CODE 0004 *** PGM=UTYPSYM JOB=PAPA0
13 19.08.39 JOB03321 IEF233A M 0862,PRIVAT,SL,PAPA0,PAPDO110,PAPE,0110,A09G301
14 19.08.40 JOB03321 IEC706I DENSITY IGNORED 0862,SYSUT2,SL,COMP,PAPA0,PAPDO110,PAPBO1,PAPE,0110,A09G301
15 19.08.41 JOB03321 IEC705I TAPE ON 0862,K49480,SL,NOCOMP,PAPA0,PAPDO110,PAPBO1,PAPE,0110,A09G301
16 19.08.42 JOB03321 T00102I Unit 0862 volume K49480 job PAPA0 dsn PAPE.0110.A09G301
17 19.08.42 JOB03321 T00107I Tape recording technique will be changed from IDRC to normal, unit 0862 volume K49480
18 19.08.42 JOB03321 T00191E VOLUME K49480 record not written. Enque was stolen by PAPA0 on 07/14/2003 19:08:42
19 19.08.42 JOB03321 T00229I Code path flags: FE1A0600 B0150000 60F010B400 special PTFs: NNNNNN
20 19.08.45 JOB03321 $HASP375 PAPA0 ESTIMATED LINES EXCEEDED
21 19.08.49 JOB03321 $HASP375 PAPA0 ESTIMATE EXCEEDED BY 10,000 LINES
22 19.08.52 JOB03321 $HASP375 PAPA0 ESTIMATE EXCEEDED BY 20,000 LINES
23 19.08.56 JOB03321 $HASP375 PAPA0 ESTIMATE EXCEEDED BY 30,000 LINES
24 19.08.59 JOB03321 $HASP375 PAPA0 ESTIMATE EXCEEDED BY 40,000 LINES
25 19.09.02 JOB03321 $HASP375 PAPA0 ESTIMATE EXCEEDED BY 50,000 LINES
26 19.09.05 JOB03321 $HASP375 PAPA0 ESTIMATE EXCEEDED BY 60,000 LINES
27 19.09.07 JOB03321 $HASP375 PAPA0 ESTIMATE EXCEEDED BY 70,000 LINES
28 19.09.11 JOB03321 $HASP375 PAPA0 ESTIMATE EXCEEDED BY 80,000 LINES
29 19.09.14 JOB03321 $HASP375 PAPA0 ESTIMATE EXCEEDED BY 90,000 LINES
30 19.09.17 JOB03321 $HASP375 PAPA0 ESTIMATE EXCEEDED BY 100,000 LINES
31 19.09.18 JOB03321 IEA995I SYMPTOM DUMP OUTPUT
32 SYSTEM COMPLETION CODE=2FF REASON CODE=00000022
33 TIME=19.08.42 SEQ=08085 CPU=0000 ASID=005C
34 PSW AT TIME OF ERROR 070C1000 958961DC ILC 2 INTC 0D
35 NO ACTIVE MODULE FOUND
36 NAME=UNKNOWN
37 DATA AT PSW 158961D6 - 00181610 0A0DD52B 6002905C
38 GR 0: 04000000 1: 042FF000
39 2: 00000022 3: 95899A78
40 4: 106999D0 5: 0007EEC8
41 6: 7F769920 7: 7F73F818
42 8: 7F76A608 9: 009C45CC
43 A: 00C0CD10 B: 15898F90
44 C: 15895370 D: 009C5710
45 E: 80C33728 F: 00000022
46 END OF SYMPTOM DUMP

```

# IBM Softcopy Reader



- The new release, 2.4.0, no longer requires the Sun Java Runtime Environment (JRE). This release has been repackaged to link the Java Runtime functions with the Softcopy Reader code, building it into a Windows executable instead of a .jar file. This eliminates the Softcopy Reader prerequisite for the JRE on the client machine.
- Get it here  
<http://www.ibm.com/software/office/bkmgr/softcopyread.html>
- The new release shows a significant improvement in runtime performance.
- 21MB Download

**Current version 2.4.0**

**New! Improved! Faster!**

March 28, 2003 CD Kits or on-line  
now

# Seagull FTP



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

You may bypass registration if you choose and it does not expire. You may register your email address to get a key to get rid of the registration splash screen.

You can purchase a SSL enabled version from SEAGULL

## MVS Features

- MVS list formats

## VM Features

- BFS support
- SFS support
- Minidisk support





# Seagull FTP



BlueZone FTP - T1

File Edit Session Transfer Commands View Help

MVS PROD

C:\TEMP

Name	Size	Date	Type
..			

'CSSJK.UTIL.CNTL'

Name	WVMM	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
\$AVRDEFM	01.00	1991/10/07 11:00	730	730	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

Download current release from SEAGULL Software  
<http://www.seagullsw.com/>

# 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>

# Xmit Manager



**Xmit Manager v3**  
File Edit xmit Options View Help

Open Extract View JCL Flp2Jes Options Help About

transfer info	message	Member	Alias?	Created	Modified	User ID	Version
xmit file	xmit content	\$\$\$\$\$\$\$		24/11/1997	24/11/1997 07:38	TRIDJK	1-0
		\$\$\$READ					
		\$\$\$DATE		10/01/2003	10/01/2003 10:44	CBT-456	4-56

Size: 7,436 k  
Created: 31/01/2003  
Content files: 1  
File name: FILE182.XMI

**\$\$\$MODS**

File Edit

PDS VERSION 8.5 MODS

NEW SUBCOMMANDS

NONE

CHANGES AND IMPROVEMENTS

1. YEAR 2000 SUPPORT IN MEMLIST, IF, ATTRIB, HISTORY, LISTC, AND TIME SUBCOMMANDS.
2. ADDED MEMBER PDSJCLHL TO ASSEMBLE PDS WITH THE HIGH LEVEL ASSEMBLER.
3. INCORPORATED GREG PRICE'S MODS (FILE 134) TO #PDSTBL AND @PRINTO SO REVIEW AND PRINTOFF PROCESS THE WHOLE DATA SET ONCE, RATHER THAN EACH MEMBER INDIVIDUALLY.
4. ADDED PANEL P85@CUA AS AN ALTERNATIVE TO THE P85PN@P PRIMARY PDS PANEL. ADDED CUA CODE UTILIZING ISPF VERSION 4.X REFERENCE LISTS ON THE ACTION BAR. ADDED PANEL


Data read ok. Size: 49760 bytes

\$WORKBH	27/01/1998	27/01/1998 11:01	TRIDJK	1-3
#MDSECT	24/02/2001	17/12/2002 15:19	TRIDJK	1-35
#PDSGEN	10/01/1992	30/07/2002 08:08	TRIDJK	1-35
#PDSGENB	09/01/1992	13/12/2002 13:55	TRIDJK	1-54
#PDSGENH	19/08/2002	11/10/2002 09:25	TRIDJK	1-1
#PDSGENI	19/08/2002	11/10/2002 09:25	TRIDJK	1-1
#PDSGENU	21/08/2002	19/12/2002 14:28	TRIDJK	1-99
#PDSGENZ	21/08/2002	19/12/2002 14:28	TRIDJK	1-99
#PDSMODS	19/06/2000	29/01/2003 11:12	TRIDJK	1-99
#PDSTBL	27/12/1989	31/07/2002 11:56	TRIDJK	1-5
#CD...OKA				

1 Selected. FILE182.XMI C:\DOCUME~2\Sam\LOCALS~1\Temp\Rar\$DI00.210



# 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

The screenshot shows the Ftp2Jes application window. The title bar reads "Ftp 2 Jes". The menu bar includes "File", "View", "Host", "Go", and "Help". The main area displays "JCL" and "Jobs on spool for CSSJK on MVSPROD". A table lists job details:

Job Number	Job Name	Status	Output Files
JOB02542	CSSJKA	COMPLETED	3

On the right, a control panel shows "Last refreshed: 8/20/2002 6:50:09 AM" and an "Auto refresh" checkbox. Below are buttons for "Refresh now", "Open", "Download", and "Delete".

The bottom section displays "Jes messages for JOB02542" with the following log output:

```
1 JES2 JOB LOG -- SYSTEM PROD -- NODE JES2MVS
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
```

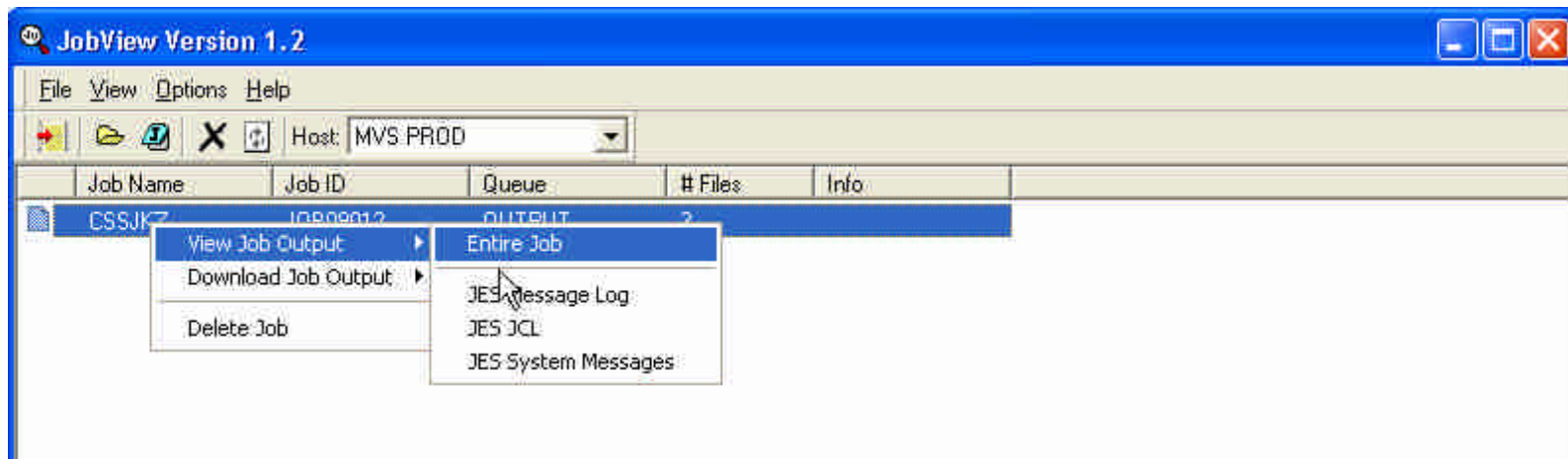
# Jobview



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 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 divided into two panes. The left pane displays a list of records with their starting positions and sizes. The right pane shows the hexadecimal data for the selected record (774).

Offset	Description	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

Offset	Hex Data	Text
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	G.BLKSIZE=80)
0040	40404040 40404040 40404040 40404040	

# Quick Picks PC Tools



## **VNC - Virtual Network Computing**

- Free remote control software
- <http://www.realvnc.com/>



## **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

# Anything but Office



## Why?

- \$\$\$\$\$, Platform independence,

**OpenOffice.org 1.0.2 included on CBT CD #11 in directory “Open Office 1.0.2”**

- Word Processing, Spreadsheet, HTML authoring, Presentations,

- <http://www.openoffice.org/>

- Free, open source, community enhanced and supported, 17+ million downloads, 1.1 RC1 currently available at [openoffice.org](http://openoffice.org)

## **Star Office**

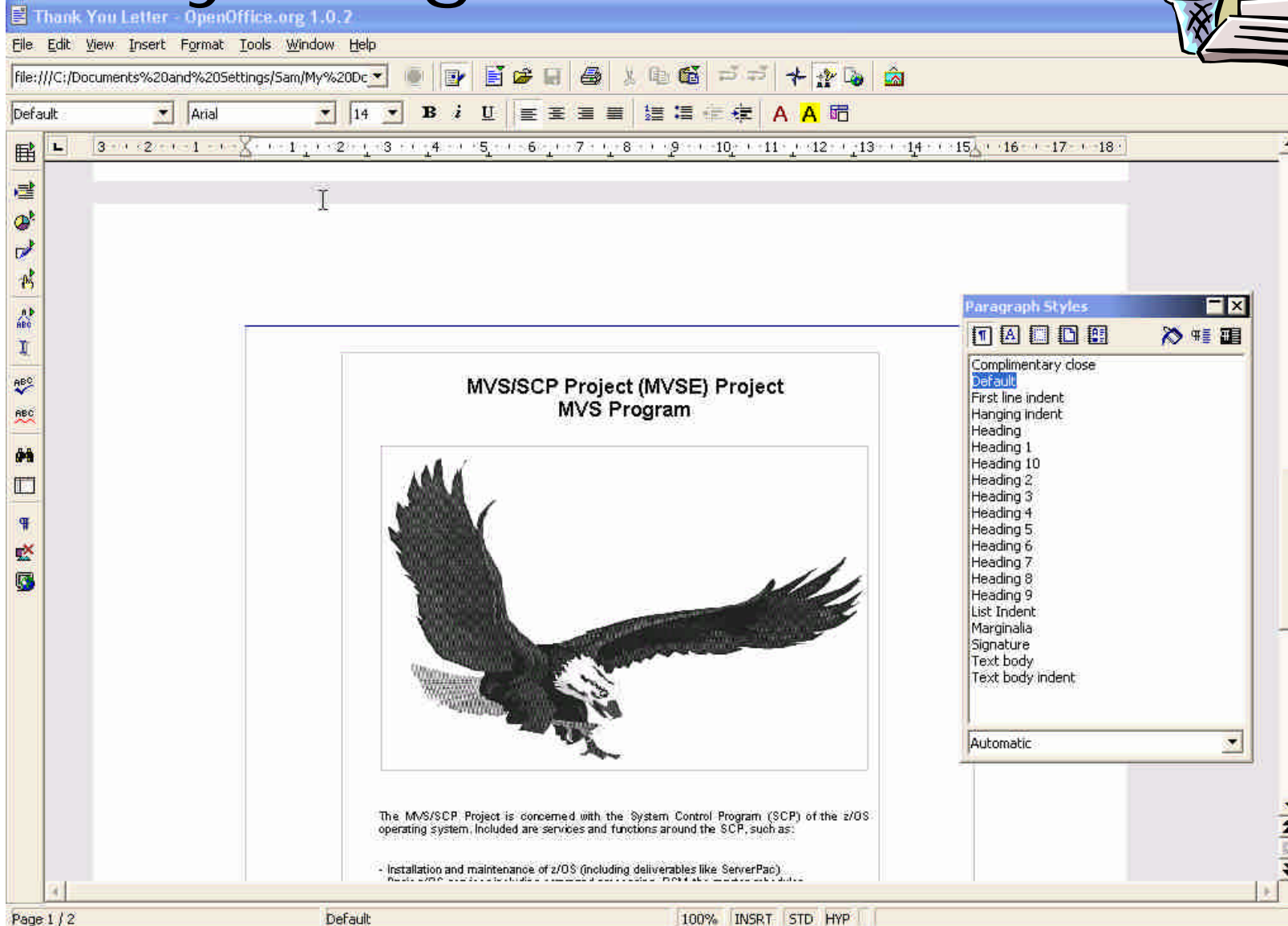
- Commercial product from Sun basis of OpenOffice.org

- Standard software support available

- <http://wwws.sun.com/software/star/staroffice/6.0/index.html>



# Anything but Office



# 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 & 7.06-2 (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

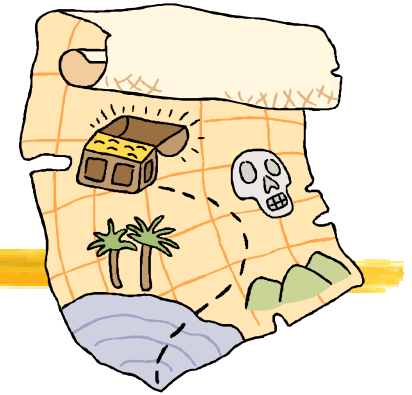


SHOWMVS displays two different types of data:

- 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 & Routcode 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?

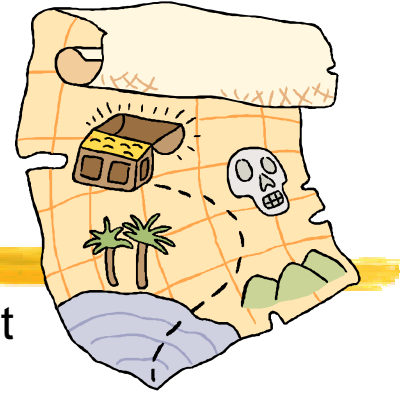
<http://www.schiradin.de>



**UPDATE!**



# MXI **Version 4.3 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 but it is not perfect.
- **Current level is MXI 4.3 Genlevel 030813** released 13th August 2003
- 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>



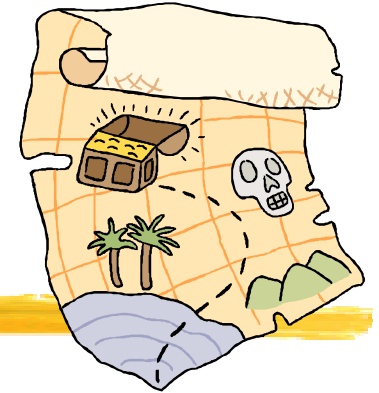
# MXI many displays!



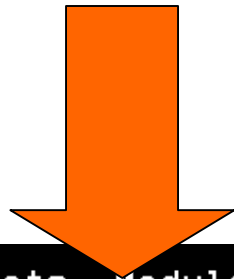
MXI - PROD - MVS Extended Information Primary Option Menu ----- Row 1 of 47  
Command ==> Scroll ==> PAGE

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

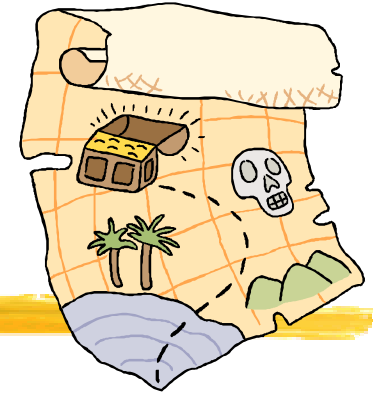


**NEW in v4.1**

```
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

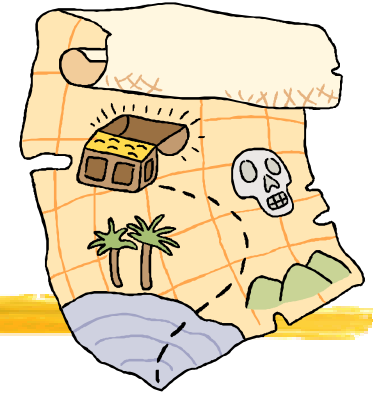


LLA command uses LLA exit LLA EXIT CSVLLIX1 to get statistics. Useful, Interesting, no problems running on every system in my sysplex. **NEW in v4.1**

```
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>IEFN903</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

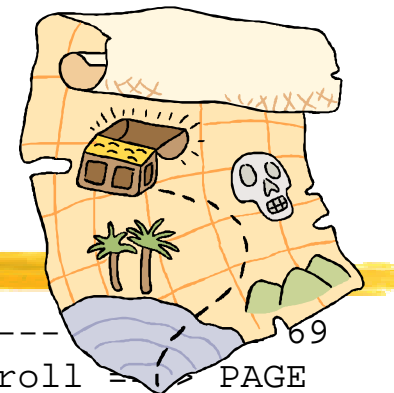


MXI - PROD - Allocated Dataset Information: JES2 ----- Row 1 of 13  
Command ==> Scroll ==> PAGE

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

# MXI 4.3 New Features



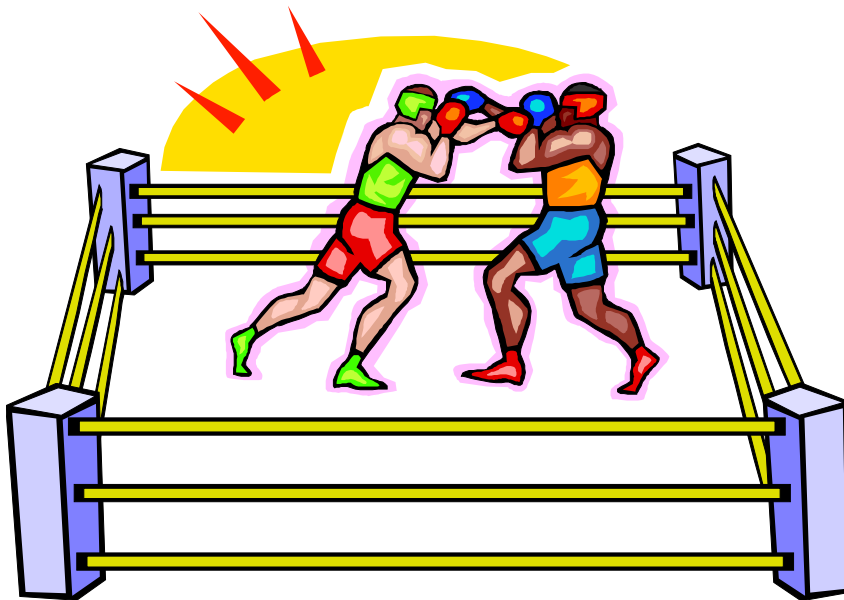
- Version 4.3 is GA with significant new capabilities
  - Complete rewrite of the menu system allows menu customization
  - Add the ability to protect all MXI commands
  - Global settings to enable/disable authorized functions
  - A set of new DB2 displays
  - Point and Shoot sorting of columns
  - Further exploitation of IBM Common Storage Tracking Data. GQE command to display common storage Getmain Queue Elements
- Some MXI HIPER fixes resulted from aggressive testing using IBM DIAGnostic traps

# MXI 4.4 Preview



- Version 4.4 in Beta test
  - Additional DB2 displays
  - JOBID() filtering on the GQE command
  - WAIT command
  - Added the ability to add user-defined DSECT maps for the MEM command
  - Further exploitation of IBM Common Storage Tracking Data
- Planned GA when it's ready but Summer 2003 not unlikely

# 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/>





# PARMLIB DIAGxx

- DIAGxx PARMLIB member introduced in MVS/ESA 4.3 to support IBM Common Storage Tracking and GETMAIN/FREEMAIN trace

- Common Storage Tracking enabled by default now

SYS1.IBM.PARMLIB(DIAG01)

VSM TRACK CSA(ON) SQA(ON)

VIEW in a dump using IPCS

- VERBX VSMDATA 'OWNCOMM DETAIL CONTENTS(YES|NO)  
SORTBY(ADDRESS|ASIDADDR|??)
- See MVS Diagnosis:Reference and MVS Initialization and Tuning Reference for more information
- Discussion on IBM-MAIN and control block spelunking has unearthed other uses for DIAGxx. IBM has some useful but totally unsupported diagnostic options that can be set in DIAGxx

# PARMLIB DIAGxx



- Reporting a bug exposed using an undocumented diagnostic trap even temporarily is not something IBM or your ISVs may be receptive too. **DO NOT EXPECT SUPPORT if you try these.** Some things will probably fail. Some will fail more spectacularly than others! IMHO DO NOT try this on a PRODUCTION system or on a system which shares resources with a production system!
- Add to DIAGxx TRAPS NAME(xxx) and SET DIAG=xx to turn ON a DIAGxx with contents of TRAPS( ) will turn OFF all traps.
- **IGVINITGETMAIN** or “Dirty GETMAIN” seems the most useful and will fill storage that is not insured by MVS to be cleared to a character value normally x'FF' before it is returned by GETMAIN/STORAGE. This will not violate the documented rules that the system clears storage to zeroes if you obtain either:  
8192 bytes or more from a pageable, private storage subpool, CSA, or ECSA.  
4096 bytes or more from a pageable, private storage subpool, CSA, or ECSA with BNDRY=PAGE specified.

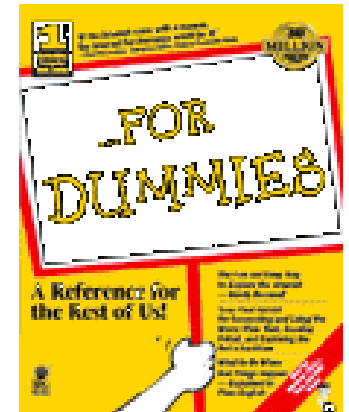
# PARMLIB DIAGxx



- **IGVINITFREMAIN** while not discussed is present in the control block equates in the DGNB control block. Logically it seems to be “Dirty FREEMAIN” so that storage that is freed is initialized before being returned to the free chain so that references to freed storage may fail surfacing bad programming practices.
- **IGVINITCPOOL** will always cause the cell storage to be initialized when a CPOOL GET is done (unless the cell size is larger than 16MB, in which case only the first (cell size Modulo 16MB) bytes will be initialized, due to the length for MVCL being 24 bits.
- **IGVDGNB** in z/OS Data Areas Volume 2 seems to briefly describe many of the traps that might be implemented by IBM or might not be. You may browse `SYS1.MODGEN(IGVDGNB)`
- **IGVNOUSERKEYCSA** will fail attempts to GETMAIN CSA in a user key (8) with an abend B78-5C. This has been discussed in the past in the Bit Bucket and may be yet again.
- **I DO NOT RECOMMEND USING THESE TRAPS TO YOU** but they have helped me find bugs in TMON, XDC, MXI, and other things. SHOWMVS 706 includes a DIAG display about the state of these settings.

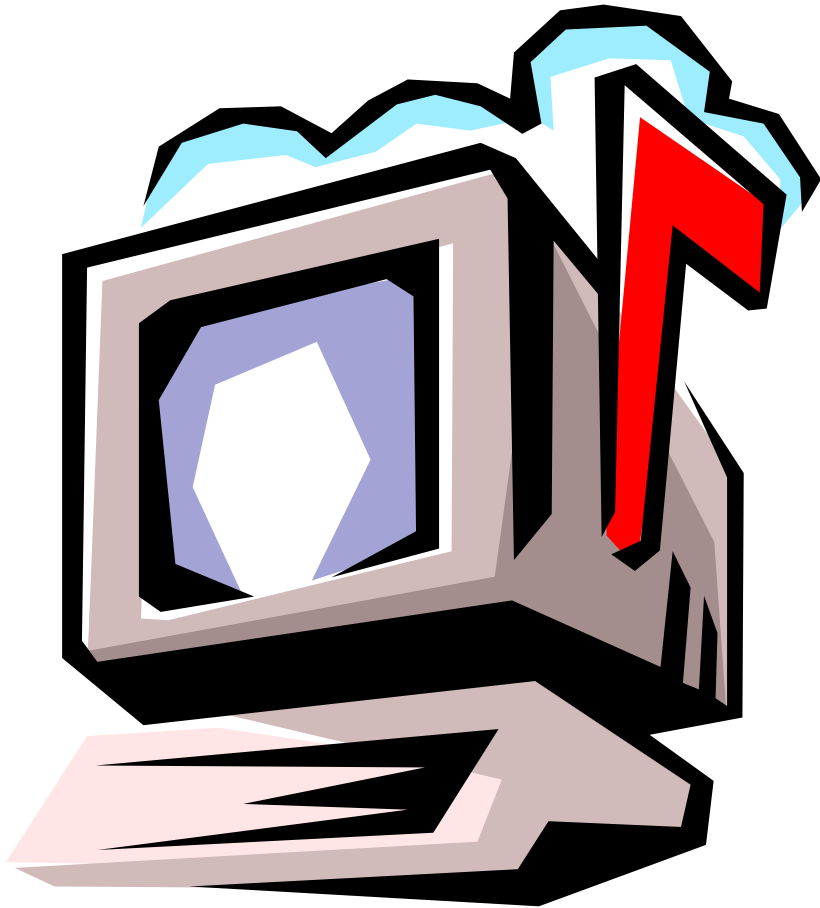
# What is a mailing list and how do I find mailing lists?

- 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.



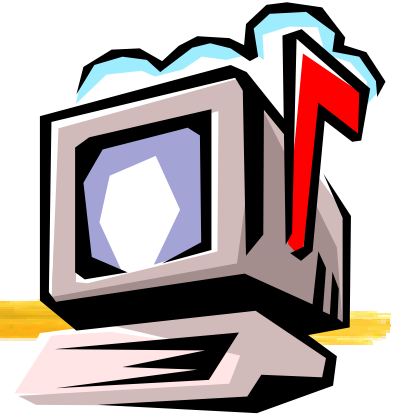
- There are several catalogs of lists available on the web.
  - My list <http://www.cbttape.org/internet.phtml>
  - Catalog of LISTSERV lists <http://www.lsoft.com/lists/listref.html>
  - Catalog of many lists including some other list servers i.e. majodomo, listproc, and listserv. <http://www.liszt.com>

# Mail Lists



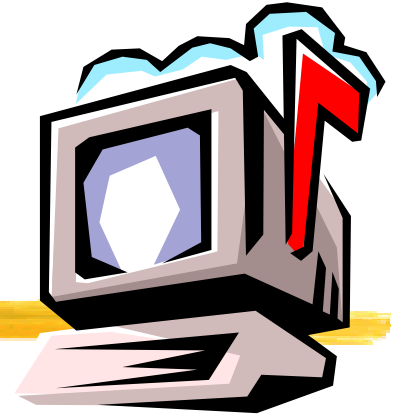
“To sum it all up, **SHARE** is now **365 days a year** rather than 4 times a year.” Melinda Varian in “VM and VM Community: Past, Present, and Future” speaking about **VMSHARE**. **VMSHARE** is gone but lives on in spirit in the discussion groups which stretch across the globe using the Internet.

# 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

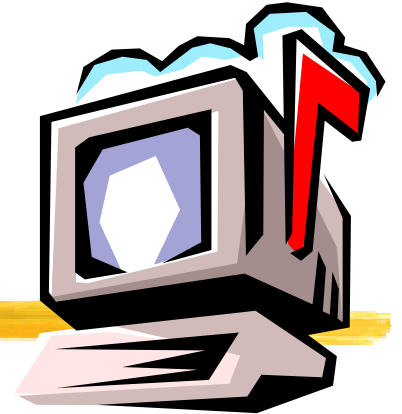
**subscribe ibm-main Sam Knutson**

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

**IMPORTANT**



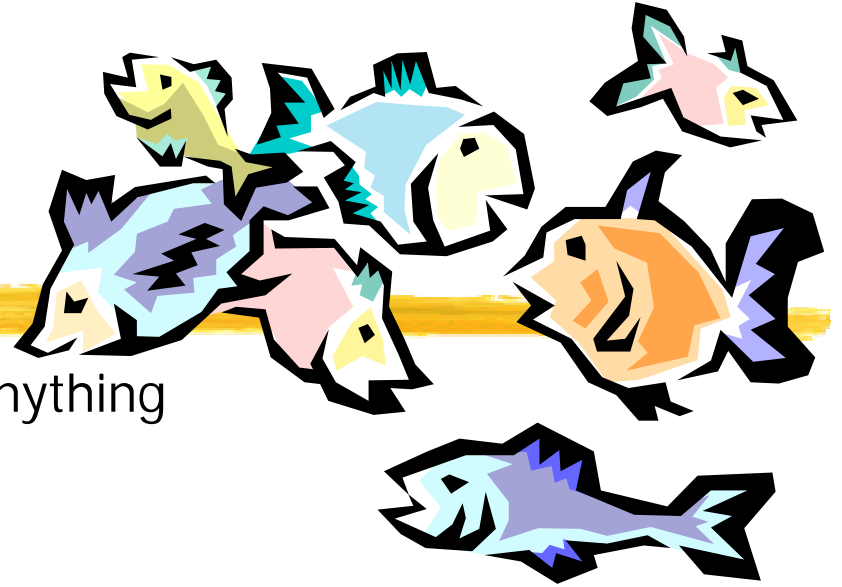
# IBM-MAIN Archives



- 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

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“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.

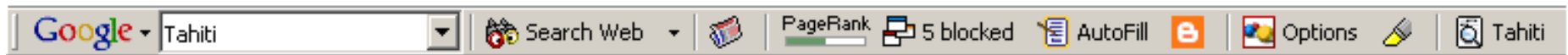
Google™



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, news, 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 here <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. You can send contributions only suited for the CD-ROM or web directly to Sam Knutson.

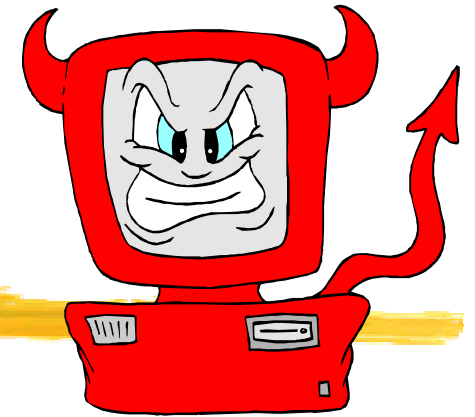
Most contributions are now made via email over the Internet. To contribute, it is preferred that you make a PDS on an MVS system, including documentation member(s), put the pds into TSO XMIT OUTDSN format, download it in binary to the PC (if you need to), and attach it to an email to Sam at: [sbgolob@cbttape.org](mailto:sbgolob@cbttape.org)

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

# Just for fun!



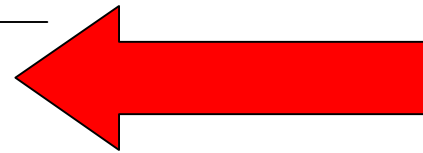
## The Devil's IT Dictionary (after Ambrose Bierce)

**mainframe** n. An obsolete device still used by thousands of obsolete companies serving billions of obsolete customers and making huge obsolete profits for their obsolete shareholders. And this year's run twice as fast as last year's. From <http://www.isham-research.com/dd.html>

Included on CBT CD

---

<http://bofh.ntk.net/Bastard.html>



**BOFH**

"Do you know why the system is slow?" they ask

"It's probably something to do with..." I look up today's excuse ".. clock speed"

"Oh" (Not knowing what I'm talking about, they're satisfied) "Do you know when it will be fixed?"

"Fixed? There's 275 users on your machine, and one of them is you. Don't be so selfish - logout now and give someone else a chance!"

# Just for fun! Bullfighter



- Created by Deloitte Consulting, Fun, Free, possibly useful
- Toolbar for Microsoft Word and PowerPoint 2000 & XP
- Analyzes your document to help you communicate in plain English produces Bull Composite Index (BCI), Bull Index, Flesch Score (real science)

Tested on four recent press releases got diagnosis like this:

Diagnosis: You like to hear yourself write. Despairing of the thought of bringing a sentence to a close with something as demeaningly ordinary as a simple period, you shower readers with gratuitous, interminable and often weighty if not impossibly labyrinthine prose. Meaning lingers, albeit awash in a thick tide of metaphor and exposition that threatens to drown the writer's message. Seek help. Maybe they should learn to avoid phrases like:

"A future-proof asset that seamlessly empowers your mission critical enterprise communications."

"Repurposeable, leading edge thoughtware that delivers results-driven value."

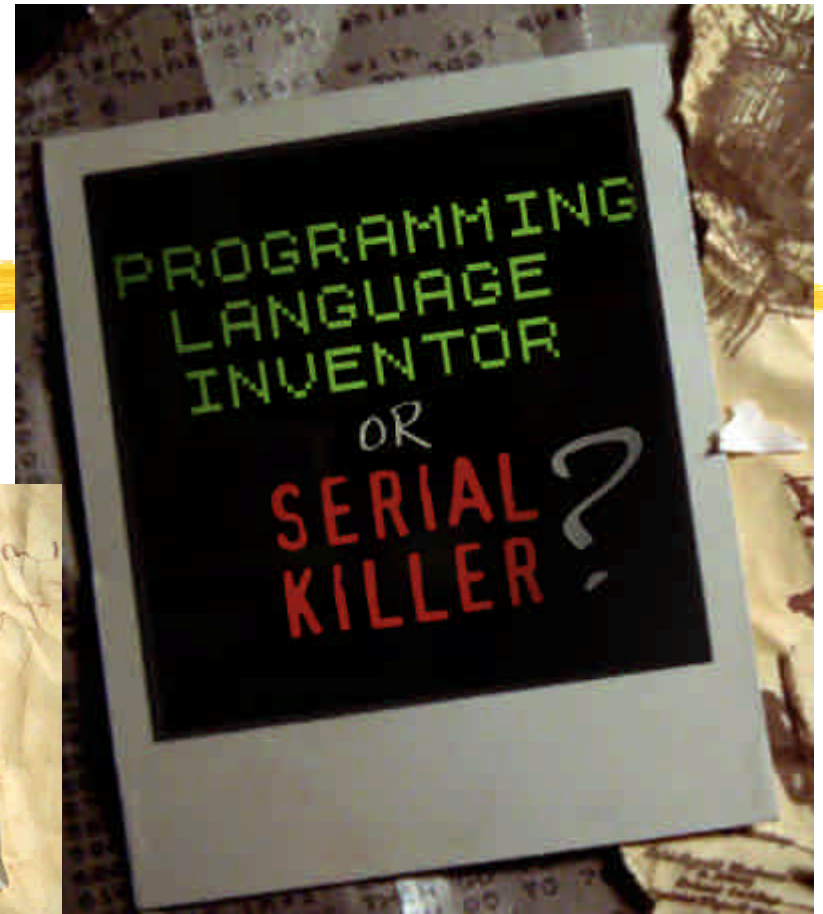
[www.dc.com/insights/bullfighter](http://www.dc.com/insights/bullfighter)



Just for fun!



7/10  
Pretty good, it seems you know  
your JavaBeans from your  
fava beans, your slashers from  
your slashdots.



**Programming Language Inventor or  
Serial Killer?**

<http://www.malevole.com/mv/misc/killerquiz>



# Fully Wired Poems?



**On the fourth day of SHARE I rose at eight to CHAIR a session that was really GREAT!**

**The night before I toiled till 3 (AM) making the foils that you now see.**

**My eyes still bleary coffee I sought and  
now I am Fully Wired believe it or not.**



**Tapes and CDs you will take home free code from SHARE when you roam.**

**Load the code and SHARE the best without each other we would be pressed!**

The End

**THANK YOU**



Feel free to call me at  
(703) 464-1615 or email  
me at  
[sknutson@cbttape.org](mailto:sknutson@cbttape.org)

Please send any  
additions or corrections.

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