Fully Wired Hot Topics #15 Reloaded: MVS Free Tools and Tips Update!

GEICO DIRECT ®

Sam Knutson

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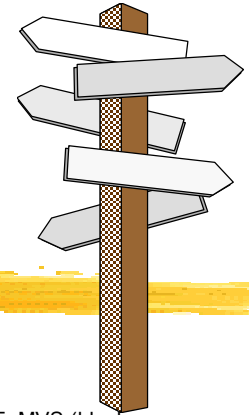Sknutson@geico.com

I'M A MAINFRAME, BABY by Bob Franke

http://www.bobfranke.com

Tell them that I'm running Mepis Linux, Debian Woody and Fedora Core 3 on 3 computers these days.   Best,Bob Franke

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dangerous machinery; possible penalties for early withdrawal; offer valid only at participating sites; slightly higher west of the Rockies; allow four to six weeks for delivery; must
be 18 to read; objects in mirror are closer than they appear; disclaimer does not cover misuse, accident, lightning, flood, tornado, tsunami, volcanic eruption, earthquake,
hurricanes and other Acts of God, neglect, damage from improper reading, incorrect line voltage, improper or unauthorized reading, broken antenna or marred cabinet, missing
or altered serial numbers, electromagnetic radiation from nuclear blasts, sonic boom vibrations, customer adjustments that are not covered in this list, and incidents owing to an
airplane crash, ship sinking or taking on water, motor vehicle crashing, dropping the item, falling rocks, leaky roof, broken glass, mud slides, forest fire, or projectile (which can
include, but not be limited to, arrows, bullets, shot, BB's, shrapnel, lasers, napalm, torpedoes, or emissions of X-rays, Alpha, Beta and Gamma rays, knives, stones, etc.); other
restrictions may apply; contest ends 12-31-98; contents measured by weight only, contents may settle in transit; May cause random outbursts of extreme violence, epileptic
seizures, or whatever; actual presentation may differ from illustration on box.

You should have 3 CD-ROMS and a handout
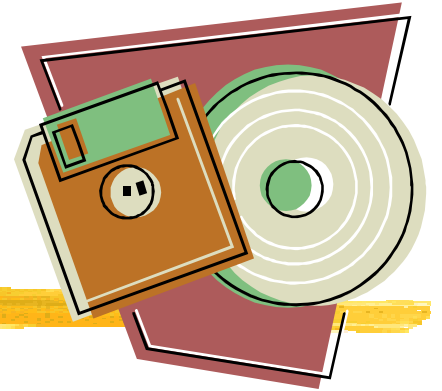
- Paper Copy of foils from this presentation which will also be available at the SHARE web site

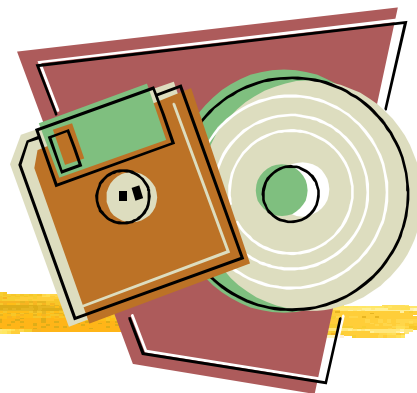**A** — **CBT CD-ROM #16 MVS freeware, tools, information of all kinds for mainframe craftsmen**

D — **Volker's MVS 3.8 Turnkey CD-ROM #3 for Hercules**

3 — **The*Open*CD 3.0 Quality Open Source Software for Windows**

If you were not at SHARE CDs can be ordered from CBTTAPE.ORG/cdrom.htm

Bonus Pocket Reference

Courtesy of DTS Software copies of Pocket Reference Hardcopy

Free download on the web at

http://www.dtssoftware.com/download_home.htm

STORAGE ADMINISTRATION

z/OS POCKET REFERENCE

COURTESY OF DTS SOFTWARE
THE ORIGINAL STORAGE MANAGEMENT EXPERTS
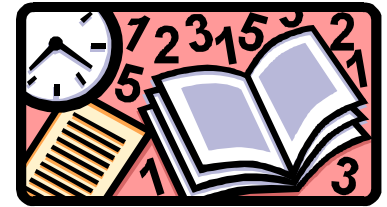
Julian Calendar

DFSMShsm

DFSMSdss

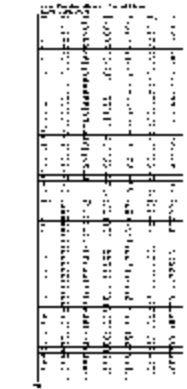Abend codes

APAR codes

Space calc

Julian Calendar

DTS perpetual Calendar

Working on z/OS Julian dates are put in front of you every day. A Julian calendar and date tools are handy!

Bonus Hint: ISPF command SAREA

Excel spreadsheet developed by Scott Holms and sent to me by Robert Seery produces a calendar for any year. The excel worksheet and a PDF to print of current calendar are on CBTTAPE.ORG
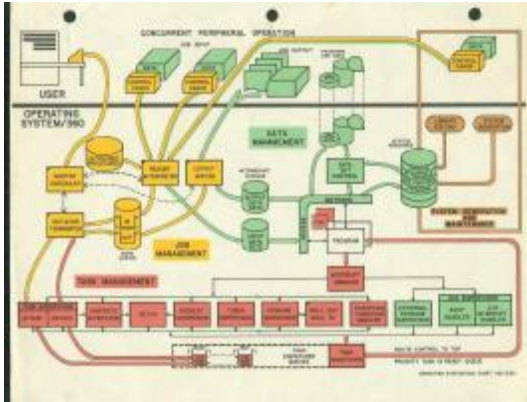
http://www.cbttape.org/pctools.htm

2005

```
┌─ Standard Date ──────────────────────────────────────┐

  Enter the day and year below:

  Day . . . .  233    (Between 1 and 365 or 366 if leap year)
  Year . . .  2005    (Between 1801 and 2099)

  Day  233  of year  2005  is  Sunday         ,  2005/08/21
```

OS/360 MVT CD(s)

OS/360 n. A small free operating system that took IBM to total dominance of the global computing market.
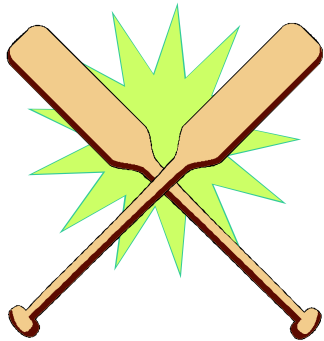*See Linux* From http://www.isham-research.co.uk/dd.html

- OS/360 Distribution by Rich Fochtman

These Can be ordered from cbttape.org "trustmail"
CD Mailing program.

- Turnkey OS/360 MVT for Hercules by Jay Maynard

- Download from http://www.ibiblio.org/jmaynard/

Getting started with CBT CD-ROM

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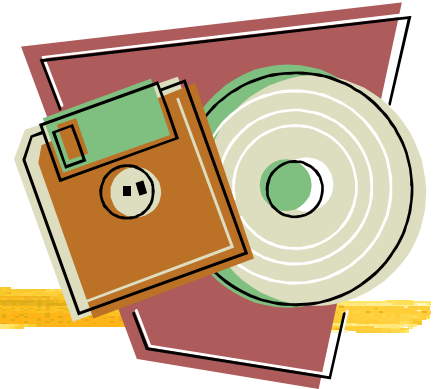
The CD should automatically open CBT.htm in your default web browser from the CD when inserted on most Windows computers. If this does not happen or you are using Linux, Macintosh, etc you can open it manually.

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
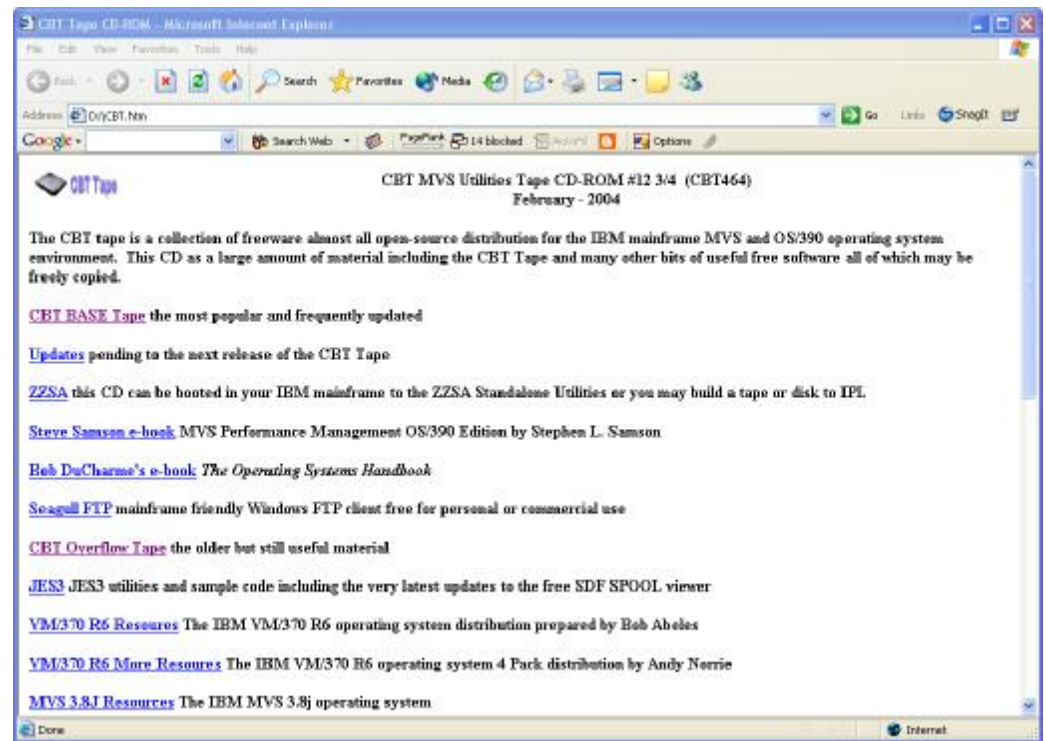
CBT CD-ROM #16 Contents

- CBT Tape V469 Jul - 17 - 2005
- CBT Overflow Tape V466 July - 25 - 2004
- Softcopy books from Bob Ducharme and Steve Samson
- PC Tools to work with XMIT files
- SeaGull Free FTP client free for personal or commercial use
- Historic OS(s) MVS 3.8 sources, VM/370 R6 distributions
- Hercules emulator and related resources
- Web sites from Lionel Dyck, David Alcock, others
- JES3 free tools and mods
- ZZSA Bootable mainframe rescue CD
- Explore for the CD for much more!

A

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, Windows, Mac OS X 10.2 or later, BSD, and experimental ports for other platforms are underway

• Capable of running nearly all software written for S/370, ESA/390 and z/Architecture

• Included on the CBT CD, Volker CD

• Hercules Home Page

http://www.conmicro.cx/hercules
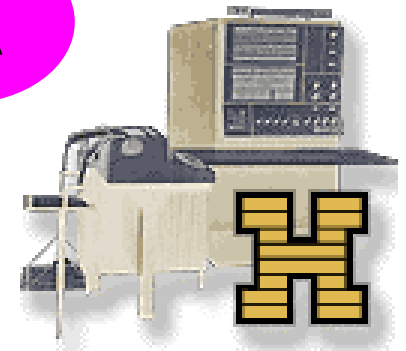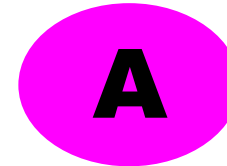
Hercules – Find out more?
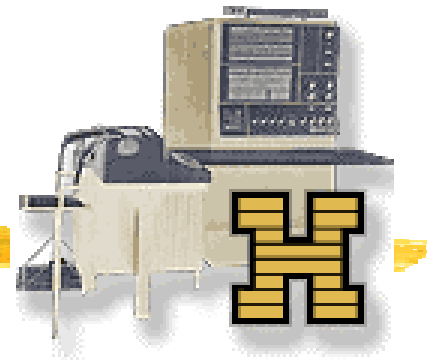
Active User Community on Yahoo Groups
http://groups.yahoo.com/group/hercules-390

- Post message: hercules-390@yahoogroups.com
- Subscribe: hercules-390-subscribe@yahoogroups.com
- Unsubscribe: hercules-390-unsubscribe@yahoogroups.com
- List owner: hercules-390-owner@yahoogroups.com

Groups now include hercules-390, H390-MVS, turnkey-mvs, H390-VM, H390-DOSVS, H390-OSVS1, H390-music

Current GA versions have Cygwin dependencies latest and greatest free of this download snapshots MSVC version (I am running 3.03 Aug242005) http://www.ivansoftware.com/snapshots/

Hercules Home Page
http://www.conmicro.cx/hercules

Hercules – Windows GUI
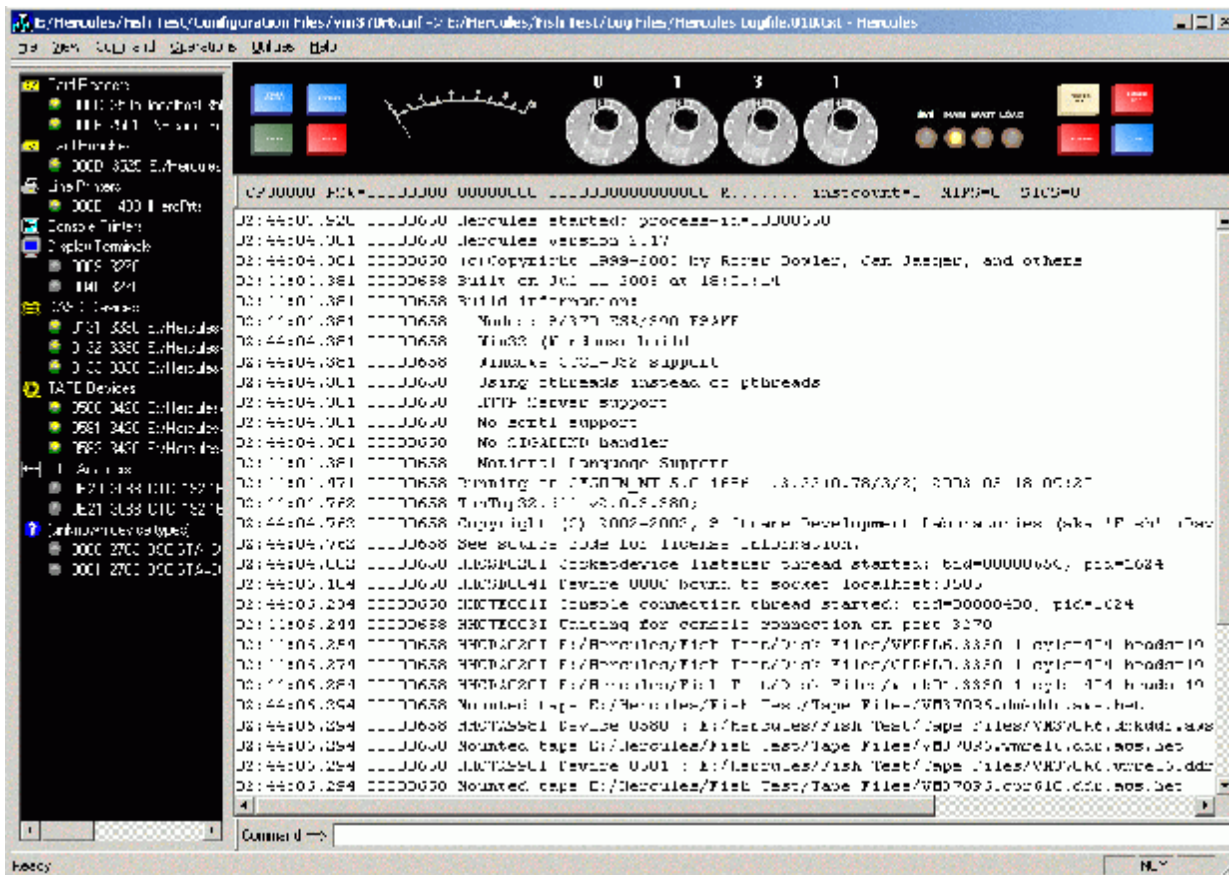
GUI

'front panel'

Aug – 2005

New release!

http://www.softdevlabs.com/Hercules/hercgui-index.html
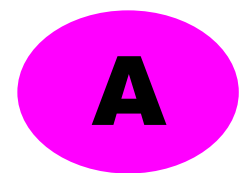
Getting started with Volker's MVS Turnkey CD #3

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.

D

MUS
is
a
system
Turkey

Just for fun! (the Tron Guy)

Jay Maynard the chief maintainer of Hercules was here yesterday but cannot be here today. You might enjoy a visit to Jay's "other" site http://www.tronguy.net/

I have a sneak preview of Jay's latest Tron Guy production.

The*Open*CD 3.0

3
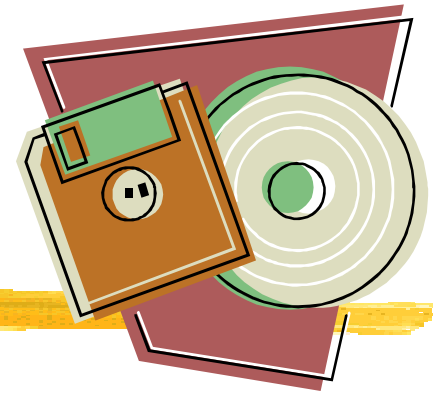
- Open Source for Windows
- Open Office 1.1.4
- Firefox 1.0.4
- Thunderbird 1.0.2
- AbiWord
- GIMP
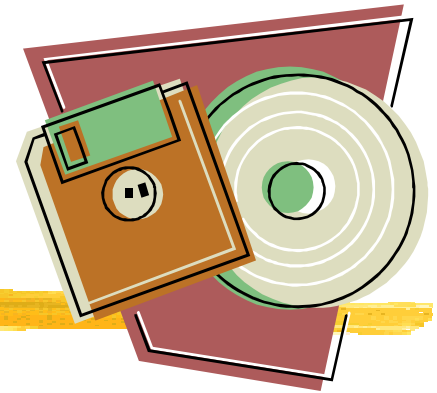- NVU web authoring
- Games
- 7-zip
- Links, Essays
- The Cathedral and the Bazaar
- ***Linux LiveCD!***

The*Open*CD 3.0

3

- Open Source for Windows
- Open Office 1.1.4
- Firefox 1.0.4
- Thunderbird
- AbiWord
- GIMP
- NVU web au
- Games
- 7-zip
- Links, Essays
- The Cathedral and the Bazaar

• *Linux LiveCD!*

Welcome! (TheOpenCD)

TheOpenCD theopencd.org

Powerpoint STOP taken text filter match LINUX

Powerpoint STOP! Microsoft Powerpoint has been temporarily halted due to a violation in Microsoft Terms and Conditions. Microsoft Powerpoint may not be used to promote Linux, BSD, Kindness towards small animals or children, charitable donations to a charity not personally approved by Bill and Melinda Gates.

| Keep using Linux | Delete Presentation | Purge LINUX content and continue |

Design
Internet
Multimedia
Games
Utilities

On-line Resources

Links to further resources on-line.

This disc contains a compilation of high quality Open Source software for Windows. It is intended as a first introduction to the rich world of Open Source. Also included are relevant add-ons, documentation, and tutorials. Feel free to use the programs on multiple computers and make copies for your friends. *This software is free!* To get started, select one of the categories of programs on the left.

Exit

Powered by DiscTree

Free Magazines

The Resource for Users of IBM zSeries & S/390 Systems

Z/JOURNAL

http://www.zjournal.com/

Bob Thomas (Founder ESJ) is back.
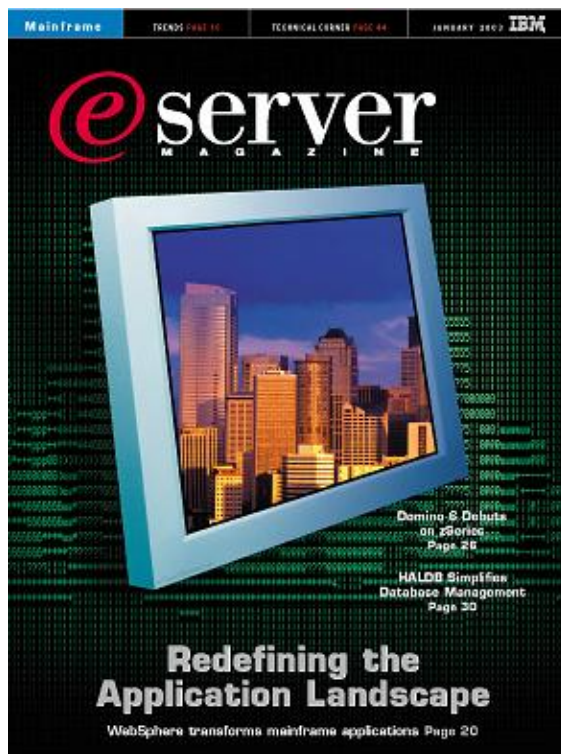
eServer Magazine is published in three flavors — *eServer Magazine,* iSeries edition; *eServer Magazine,* Mainframe edition, and; *eServer Magazine,* IBM edition for UNIX

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

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

"Take what you need, credit it's creators, and add something of your own." Tom Yager from INFOWORLD.COM

"prepare to grab" much like cavemen in 2001: A Space Odyssey Peter Coffee eweek

SHARE: "It's not an acronym. It's what we do."

Bring home the Tools!
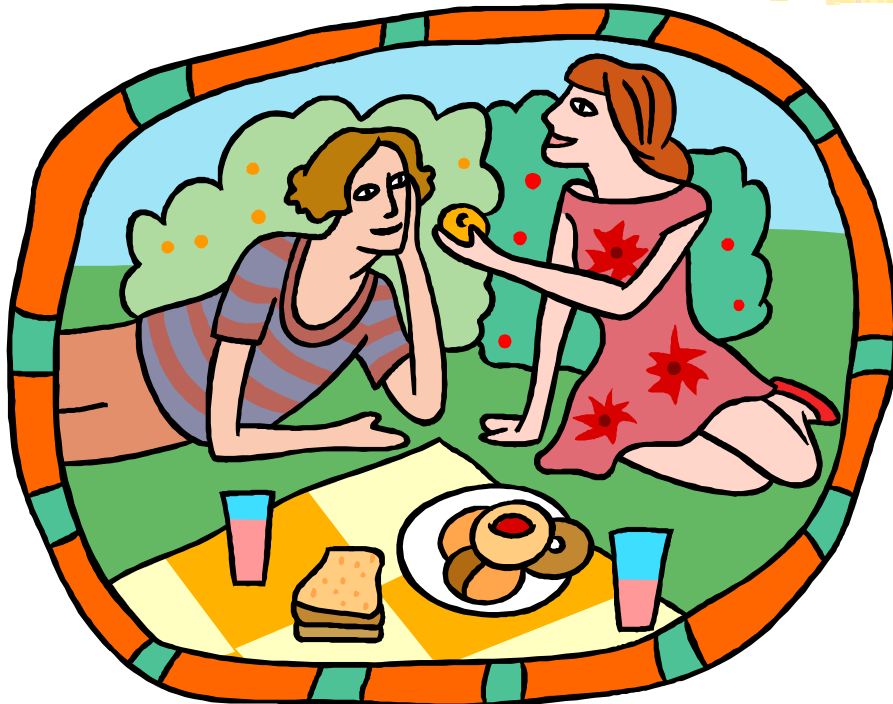
Take home at least one tool and solve a problem. Many conferences attended by managers and others are boondoggles so they are not prepared to believe what you put into a user group like NaSPA, SHARE, or CMG and what you can get out of it!

take home and use what you hear today

CBT Tape FAQ

ARNOLD CASINGHINO
VICE PRESIDENT
O/S SUPPORT MANAGER

CBT THE CONNECTICUT BANK & TRUST CO.
TECHNICAL SUPPORT
99 FOUNDERS PLAZA
EAST HARTFORD, CONN. 06108
(203) 244-5495

Q. What is the CBT tape?

A. The CBT tape is a collection of freeware almost all open-source distribution for the IBM mainframe MVS nee OS/390 nee z/OS operating system environment.

Q. What does CBT stand for?
A. This tape was established and previously edited for over 15 years, from Version 1 through Version 321 by Arnold Casinghino who worked at Connecticut Bank and Trust Company (CBT).

The CBT Tape is now being edited by Sam Golob. Our plan is to keep the initials "CBT" even though this tape is no longer supported at the Connecticut Bank and Trust Company, because those initials reflect how the tape should be properly and accurately referred to. For now, I'm calling it the "CBT" MVS Utilities Tape without the initials CBT meaning anything special. Various acronyms have been proposed including "Casinghino's Big Tape" but none yet accepted.

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

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

How to download and restore XMIT + ZIP

Upload *name.XMI* files to MVS using a binary file transfer method (no CRLF or ASCII translation) and that the MVS dataset created is LRECL=80,RECFM=F,DSORG=PS Note that you can upload into a PDS if you want as long as it is FB80.

Receive the *name.XMI* file on MVS

Issue command: TSO **RECEIVE INDATASET(*name.XMI*)**

When prompted by message "INMR906A Enter restore parameters or 'DELETE' or 'END' +":

Enter: DA(*name.of.your.library*) UNIT(*unit*) VOLUME(*volume*)

Note: The UNIT() and VOLUME() operands are optional but shown in case your installation puts RECEIVE files on work packs by default like mine does

- More hints at http://www.cbttape.org/downloadtrouble.htm

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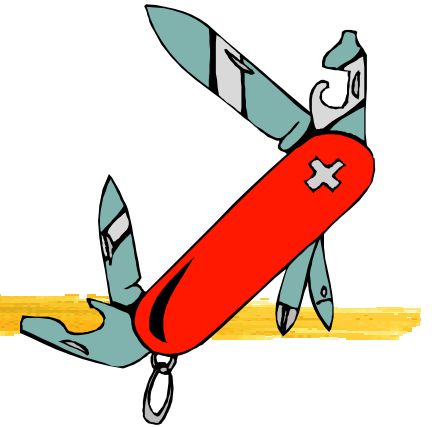
PDS was originally written in 1972 at Fireman's Fund Insurance.

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. Greg Price (REVIEW, IMON) has done much of the new PDSE support.

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.

PDS 8.5 available now

PDS 8.6 will support PDSE BETA soon!

PDS 8.5 MEMLIST
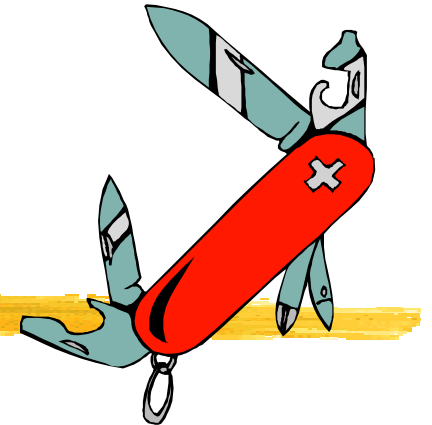
```
CMD -------------------- MEMLIST Source Member List 1 ----- Row 1 to 16 of 34
 COMMAND ===>                                           SCROLL ===> CSR
Enter an ISPF command, a PDS subcommand or a special control code:
   8 View log    1 Suspend ISPF    6 MEMLIST all    F Find      R Recall
  LA Lista       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.

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

SOFTWARE TESTING
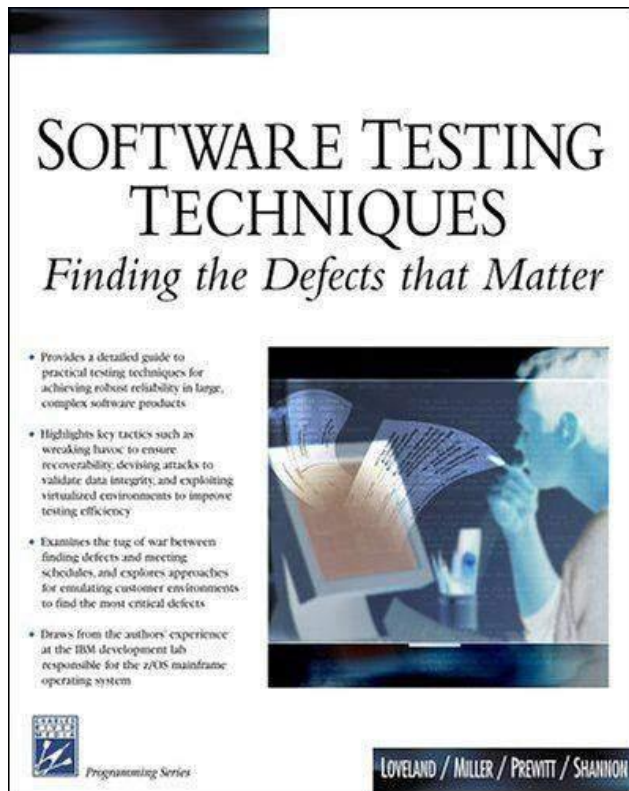
Software Testing Techniques: Finding the Defects that Matter (Programming Series) (Paperback)

by Michael Shannon, Geoffrey Miller, Richard, Jr. Prewitt, Scott Loveland (Editor)

http://www.amazon.com/exec/obidos/tg/detail/-/1584503467

ISBN: 1584503467 Price $33

Chapter 13: Tools

• "Quality tools are not free, weather you build them yourself or buy them"

Chapter 19: The Customer's Role in Testing

• Why customers should test generally available software

• "System support can celebrate among themselves when no one else is even aware that a change occurred."

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

• See Who Did What to Whom in CSA? Session 2851 SHARE in Dallas by Mike Reeves (Fidelity Investments) for interesting ways to extend this. CBT File #650

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 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 NO RECOMMEND USING THESE TRAPS TO YOU** but they have helped me find bugs in TMON, XDC, MXI, and other things. SHOWMVS includes a DIAG display about the state of these settings.

USER KEY CSA   Bad?

Why should we get rid of user key common storage?

It is an MVS Integrity Exposure at worst, and at best a violation of good RAS guidelines and an open invitation to data corruption.

What is MVS Integrity?
System integrity is: the ability of the system to protect itself against unauthorized user access to the extent that security controls cannot be compromised.
(From "z/ OS MVS Programming: Authorized Assembler Services Guide")

That is, there is no way for an unauthorized problem program using any system interface to bypass store or fetch protection, bypass password checking, bypass RACF checking or obtain control in an authorized state. Authorized programs run in protection key 0- 7 or in supervisor state or are authorized via the authorized program facility (APF).

IBM in MVS Planning: Security (GC28-1439) Chapter 5. MVS System Integrity
Under Common Mistakes on page 5-4 "You should avoid performing any of the following: <snip> Allocating storage in the MVS common area with protection key 8."

Wayne Rhoten IBM DFSMS at SHARE in San Francisco August 2002 "Authorized programs must protect data from unauthorized programs that can run concurrently. User data must be protected from other users. Never obtain key 8 storage in CSA. **It can be written from any address space.**"

USER KEY CSA presentations of interest

z/OS System Integrity: Creating Authorized Software without Security Holes by Karl Schmitz of IBM z/OS System Integrity Competency Center in Poughkeepsie, NY at SHARE Dallas February, 2003

Bit Bucket x'19' by Bob Shannon and Carl Youngren at SHARE 100 Dallas, TX in February, 2003.

z/ OS System Integrity - Rooted in Hardware, z/ OS System Integrity - Rooted in Hardware, Managed by Software Managed by Software. by Greg Dyck of IBM z/OS Core Technology Design at SHARE in March, 2002

System Integrity: Do you REALLY have it? by Wayne Rhoten of IBM's DFSMS San Jose Lab at SHARE in August, 2002..

Maintaining Integrity for Authorized User Code by Peter Sawyer then of HDS at SHARE in February, 1994.

Hacking z/OS by Jack Jones of IBM zSeries New Technology Center at SHARE98.

How to break into OS/390 Systems by Stuart Henderson of the Henderson Group at SHARE 95 in Boston.

Bit Bucket x'11' The Search Continues by Bob Shannon and Carl Youngren at SHARE 92 San Francisco, CA in February, 1999.

Mainframe Virtual Security by Brian Currah in z/Journal April/May 2003

USER KEY CSA

To list out user key CSA under IPCS, pick any dump and do

`VERBX VSMDATA 'GLOBAL NOASID' F 'KEY 8'`

If you have OMEGAMON

`CSAA OWNER RANGE(0,7FFFFFFF) KEY(8)`

(Courtesy of Jim Mulder & Andy Wood)

IBM-MAIN archives include many discussions on this topic

- http://bama.ua.edu/archives/ibm-main.html

- bit.listserv.ibm-main newsgroup which can be accessed by http://groups.google.com

USER KEY CSA

PLEASE FOLKS, be extra careful this year!

Remember- Only you can Protect MVS!

MXI is a VERY easy way to find persistent allocations **SP *-8**

```
   File  Dataset  Module  Unit  System  Plex  SMS  Storage  MQ  DB2  RACF  Tool

MXI - SP --- BSYS - HOME ----- CPU 100 UIC 2540 PAG      0 ---------- Row 1 of 2
Command ===> _                                              Scroll ===> CSR

SP  Key  Loc      BBlks   BAlloc   BFree BTot     ABlks   AAlloc   AFree ATot
228-8    CSA          2      8K       3K    0         9     404K      17K    0
241-8    CSA          6     56K       5K    1        27    1180K      12K    0
```

IEBIBALL

Required

Temporary

Allocations may be missed

```
   File  Dataset  Module  Unit  System  Plex  SMS  Storage  MQ  DB2  RACF  Tool

MXI - SP --- BSYS - HOME ----- CPU 100 UIC 2540 PAG      0 ---------- Row 1 of 59
Command ===> _                                              Scroll ===> CSR
SUBPOOL=241 KEY=8
Block        Blklen Location Owner     Start    End      Length Status GQE
00A77000     36864  CSA               00A77000 00A77F17    3864 Free
                             TCEB     00A77F18 00A7FFFF   33000 Alloc  03F501A8
00C17000      4096  CSA               00C17000 00C1741F    1056 Free
                             PREFTEST 00C17420 00C17FFF    3040 Alloc  037DAB98
00C1E000      4096  CSA               00C1E000 00C1E06F     112 Free
                             PREFTEST 00C1E070 00C1EFFF    3984 Alloc  037DAB80
00C3F000      4096  CSA               00C3F000 00C3F007       8 Free
                             PREFTEST 00C3F008 00C3FFFF    4088 Alloc  037DAB50
00C40000      4096  CSA               00C40000 00C4002F      48 Free
                             PREFQUAL 00C40030 00C40FFF    4048 Alloc  037BB130
00C42000      4096  CSA               00C42000 00C4202F      48 Free
                             PREFUSER 00C42030 00C42FFF    4048 Alloc  037C4418
15E7A000      4096  E-CSA             15E7A000 15E7A00F      16 Free
                             TCEB     15E7A010 15E7AFFF    4080 Alloc  02EB1238
16A42000      4096  E-CSA             16A42000 16A428BF    2240 Free
                             PLATXMGB 16A428C0 16A42FFF    1856 Alloc  032978C8
196D7000    966656  E-CSA    TMVSMB   196D7000 197C20EF  962800 Alloc  033206B8
                             197C20F0 197C217F     144 Free
```

USER KEY CSA

- VENDOR responses vary except for IBM

- Persistence and Patience required

- CA, BMC, ASG all committed
at a higher management level to correct
but the message has not gotten to everyone
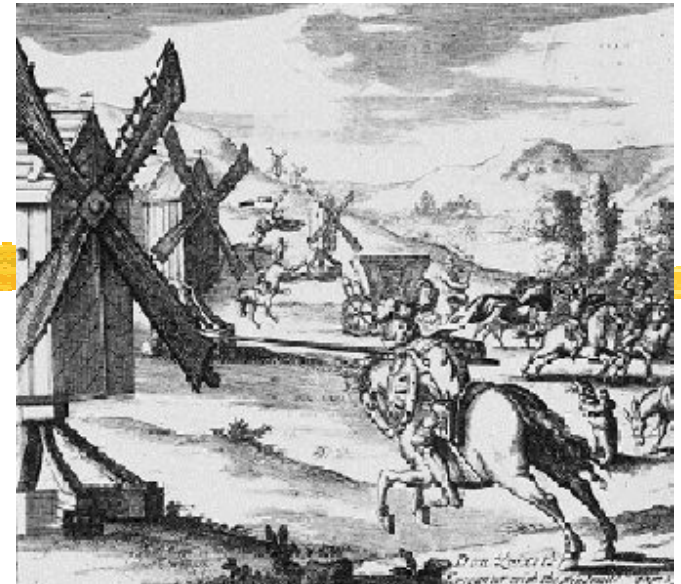
Some vendor products of interest

ASG-TMONMVS large number and size of allocations expected FIN

ASG-TMONCICS we have no indication of progress

ASG-TMON Common code resolved by TQ01335

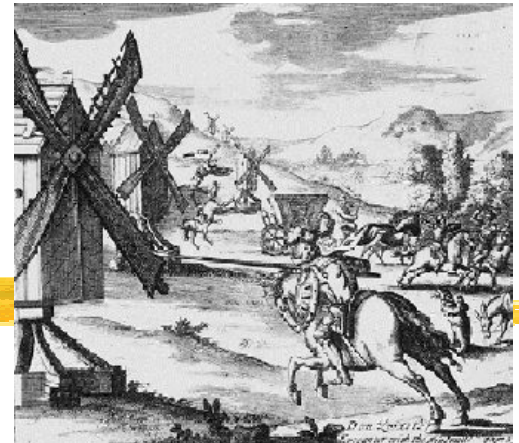CA-NETSPY resolved NZ04533 is for 7.0, NZ04534 is for 11.0

CA-DATACOM resolved use DATASPACE option

Thruput Manager v6.1 PTF LEVEL TMT6101 upgrade to TMT6104 new problem

Thruput Manager v5.2.2 PTF PR04062/TR52286

BMC Patrol for MQSeries 4.1 resolved by BPL1158 and BPL1159

BMC XBM still say FIN +1

XEROX XPAF open resolution delivery being reviewed

USER KEY CSA

- Please join our windmill tilting club here is some sample language you might use

The SST started tasks allocate user key common storage (Key 8). This is an MVS integrity exposure, or at best, a violation of RAS guidelines. No products should obtain Common Storage in a user key! The oldest and most basic statement I know of says the customer is "Do not allocate key 8 storage in the common area because it can be read or written by any program in any address space" per Chapter 5 of MVS System Integrity of MVS: Planning: Security GC28-1439-00. This has been echoed countless times since and is the position of the IBM z/OS Core Technology Design and is enforced throughout IBM software groups. We have worked closely with BMC, CA, ASG, and others to insure they understood this and are getting compliance in all authorized software supplied to xyz Corp. IBM has been very emphatic in this regard. We have worked with most of the other vendors who we have detected doing this in xyz Corp's environment and already received fixes from many of them.

```
SUBPOOL=241 KEY=8

 MXI - SP --- ASYS - HOME ----- CPU  44 UIC 2540 PAG    0 --------- Row 21 of 68

Command ===>                                            Scroll ===> CSR

SUBPOOL=241 KEY=8

Block       Blklen Location Owner     Start     End         Length Status GQE

1E214000      4096 E-CSA               1E214000 1E214387        904 Free

                            XP15       1E214388 1E214567        480 Alloc   0373F730

                                       1E214568 1E214747        480 Free
```

My mainframe is dead yet again

Unplanned EPO when building engineer incorrectly sets "test" switch for UPS bypass test.

Entire raised floor including UNIX, MVS, DASD, CPUs, and all auxiliary equipment deprived of line power simultaneously

• IBM response outstanding! 5 CE(s) onsite within 45 minutes

• Root cause focused on reduced impact cause is obvious

• Participation in shared change control procedures

• Power-up procedures for every piece of equipment jointly developed with IBM

• Escalation procedures documentation enhanced

• Roles and responsibilities clearly defined customer powers up equipment covers on as opening covers and risking electrocution is job only for qualified IBM CE or Star Trek security personnel

JOIN THE RED SHIRT SOCIETY TODAY

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-ROM 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

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

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
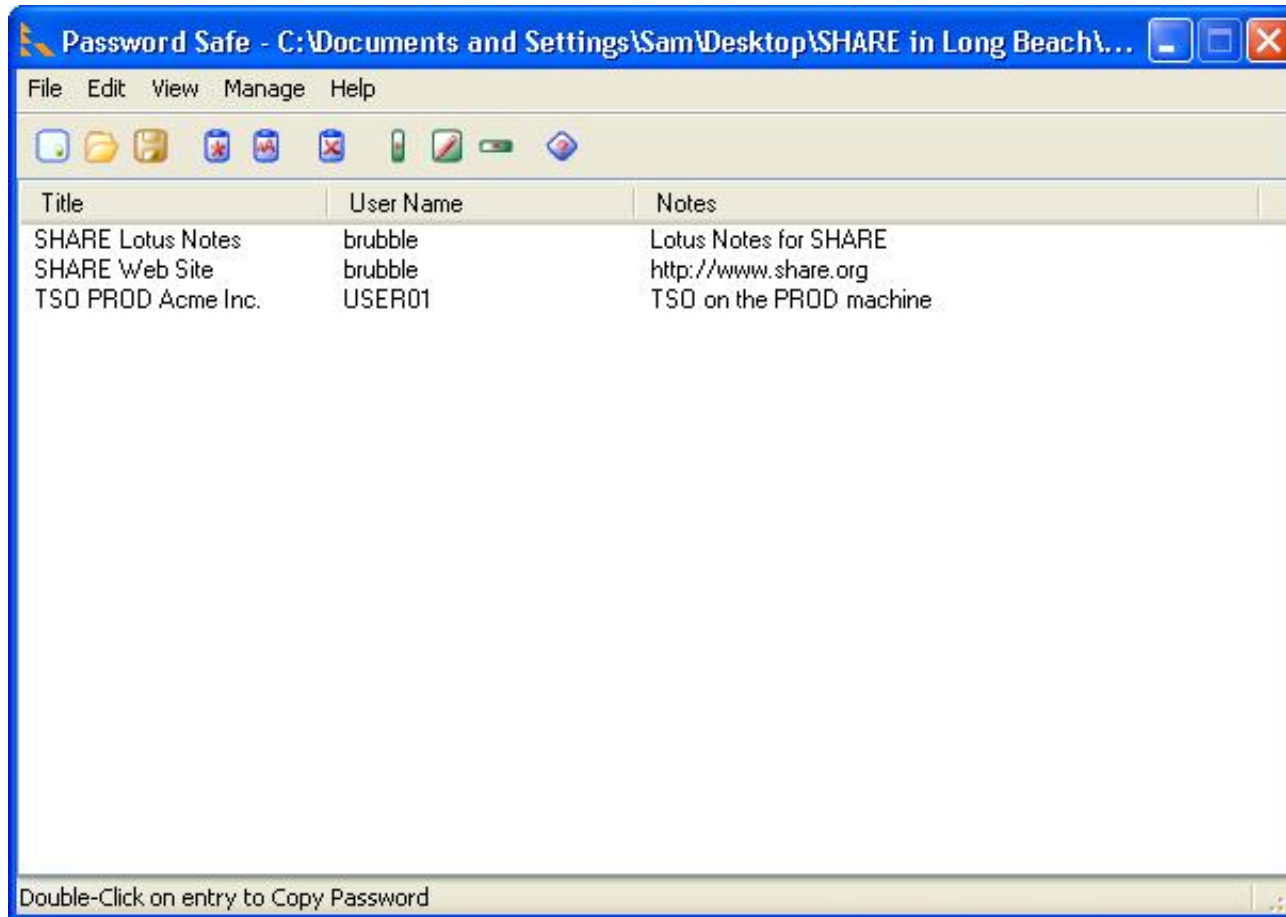
database vulnerable to Password cracking tools

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.infosecuritymag.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

Password Safe - C:\Documents and Settings\Sam\Desktop\SHARE in Long Beach\...

File   Edit   View   Manage   Help

Title	User Name	Notes
SHARE Lotus Notes	brubble	Lotus Notes for SHARE
SHARE Web Site	brubble	http://www.share.org
TSO PROD Acme Inc.	USER01	TSO on the PROD machine

Double-Click on entry to Copy Password

- Free

- Open Source

- Blowfish Algorithm

- Windows, Pocket PC, more to follow

- New Release 2.11!

  - Export!

  - Tree View

  - Open URL in Notes

  - Looks Cool!

  - Improved Help

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!**

Use Tools like the bad guys...

metasploit.com

http://blackhat.com

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

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 with 5 year/7 year renewal upgrades included
• 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
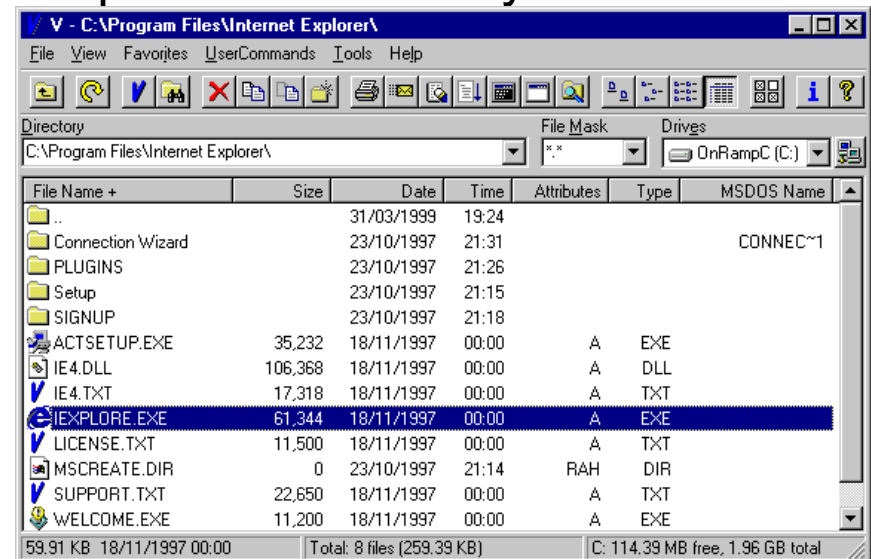
V – The File Viewer

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
• Grid Lines
• Chase the files tail

/V directory on CD

Wnbrowse

WnBrowse is a multifunction ASCII, EBCDIC and Hex file viewer.

- View any size file, including files within zip archives.
- Search for text, hex and UNICODE strings
- Print the entire file or a selected portion
- Integrated with the Windows Explorer for two-click file browsing
- Works with Windows 95/98
      and Windows NT/2000/XP
- *FREE*
- Version 4.8b current

Dale McCart pointed this out to me!

http://www.ngthomas.co.uk/wnbrowse.htm

EBCDIC fonts

A set of fonts **developed by James Campbell** which allow
you to view EBCDIC encoded data in an editor which does not have support
for EBCDIC like Microsoft Word.

One of the things I've wanted for a long time has been a font that displays
EBCDIC encodings - so x'40' displays as a space - not an at sign. This is so I
can "understand" binary ftps without the overheads of a hex editor. Finally I
created my own using a set of glyphs from the Free Software Foundation.
Thinking that others might also find these useful, I am offering them to
cbttape.org. There are three ttf files:

•ecp00000.ttf - displays A-Z, a-z, 0-9 and (what I think are) unchanging
characters
•ecp01140.ttf - displays code page 1140 (which is CP 37 with euro)
•ecp01140.ttf - CP 1141 (=CP 500 with euro)

In each font, the non-characters display their hex value.

# EBCDIC fonts

http://www.cbttape.org/pctools.htm

IBM Softcopy Reader

• The recent releases (current 3.5 7/1) no longer require 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. *If you have problems check your video card drivers!*

• Get the 40 MB Download here:
http://www.ibm.com/software/office/bkmgr/softcopyread.html
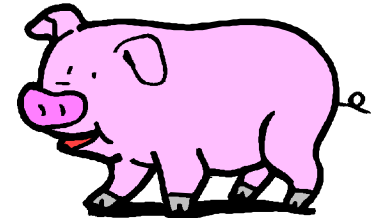
• The new release shows a significant improvement in runtime performance. New! Improved! Faster! Less Warts! Linux Version too!

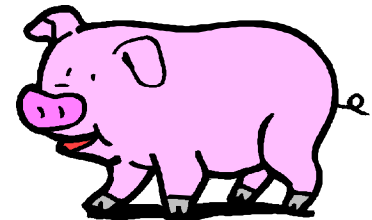**Don't Ignore Softcopy Reader's half brother Softcopy Librarian V4 which also got a makeover**

http://publib.boulder.ibm.com/epubs/df/ebrsclwj.exe

Adobe Acrobat Reader

• The recent release 7 has significantly improved startup times and search capabilities. The current release is 7.03

• Get the 27 MB Download here:
http://www.adobe.com/products/acrobat/readstep2.html

• The new release shows a significant improvement in performance. New! Improved! Faster! Less Warts!   If you are still using an older copy of Adobe it is time to upgrade.

Some have criticized Adobe 7 for inclusion of a capability that allows publication authors to have PDF's "phone home" when opened. If this concerns you then use a firewall to control TCP/IP traffic or don't upgrade.

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 you 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®
SOFTWARE

Seagull FTP

Download current release from SEAGULL Software
  http://www.seagullsw.com/   and it's on CBT CD!   **A**

Filezilla FTP

FileZilla is a fast FTP client for Windows with a lot of features available as GPL (free distribution source and binary) software.

http://filezilla.sourceforge.net/
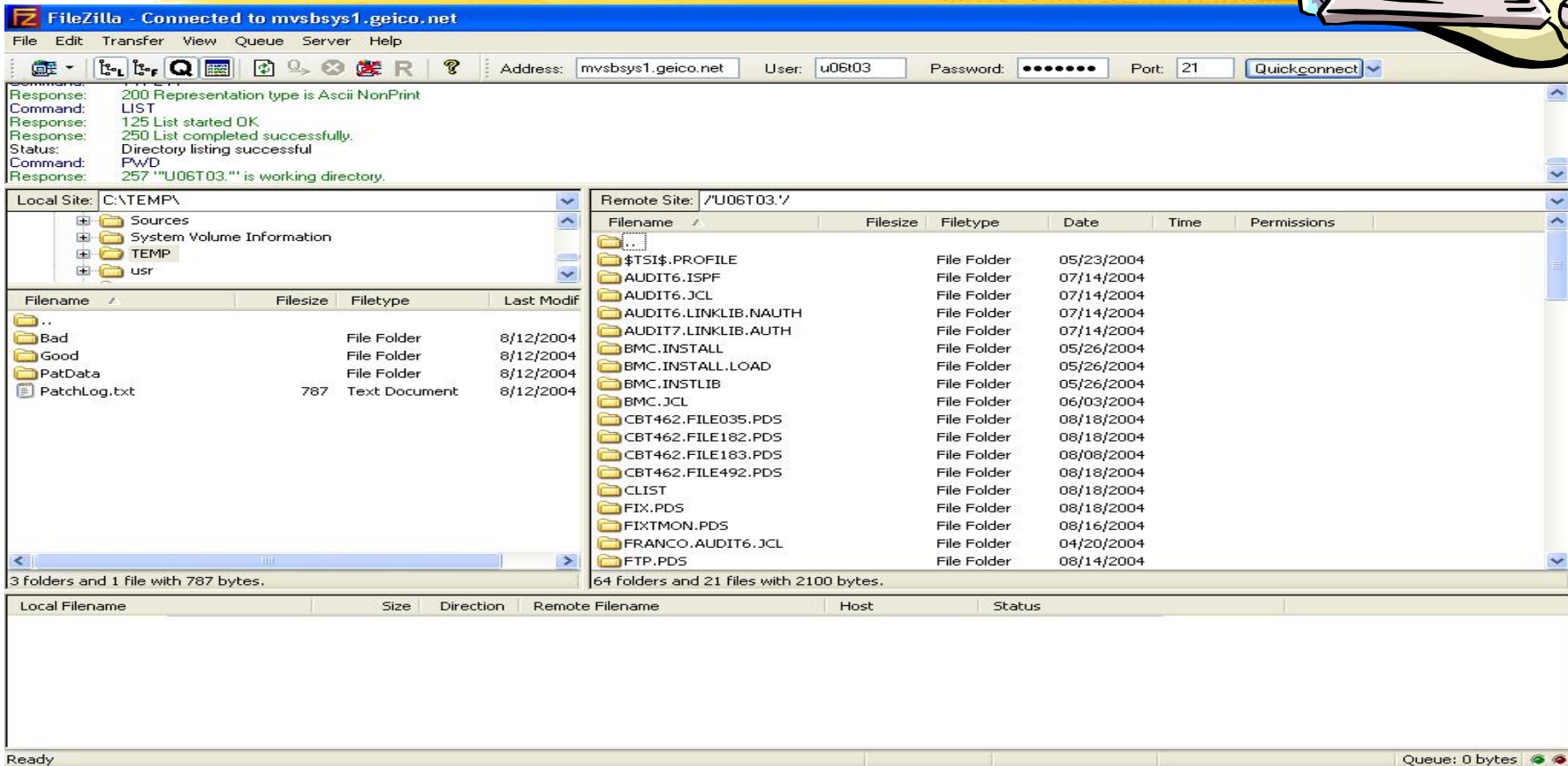
2.2.14 on CD. 2.2.15 released August 21th, 2005

• Security Updates
• MVS Support works

You should download the latest release from the project page. Previous 2.2.x releases had several bugs with MVS support.

Watch this tool! It is FREE as in BEER and as in SOURCE == SPEECH

Filezilla FTP

FileZilla is a fast FTP client for Windows with a lot of features available as GPL (free distribution source and binary) software.

http://filezilla.sourceforge.net/ or on CD /FilezillaFTP

Xmit Manager

A
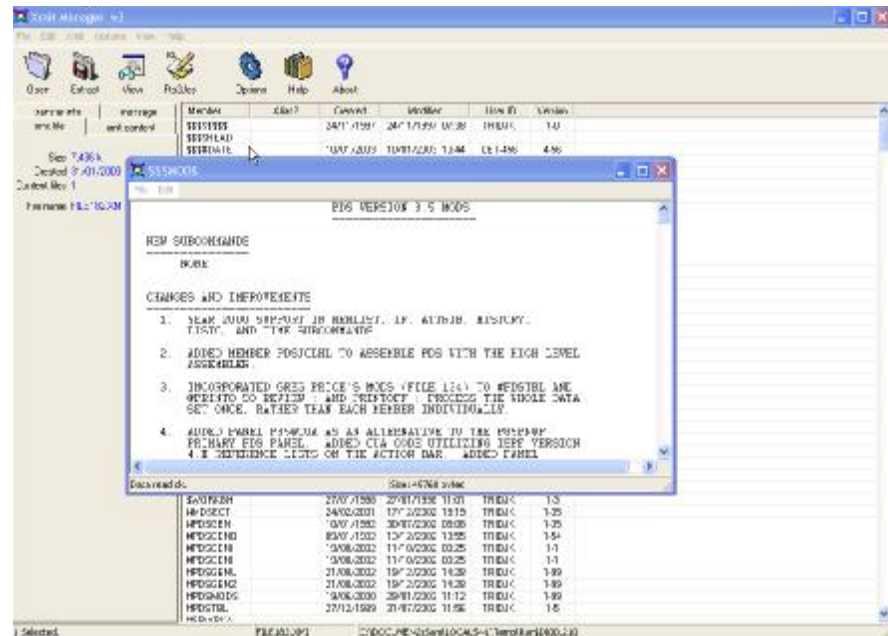
What is Xmit Manager?

Xmit Manager is a Free Windows based utility which decodes IBM Mainframe based TSO TRANSMIT (XMI or 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 (on hiatus)

http://www.data-aid.co.uk
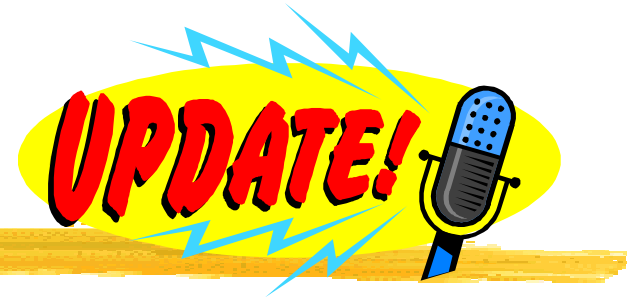
PDS Magician!

Patrick Allmond's freeware utility allows you to examine the contents of a TSO/E XMIT file on your Windows PC.

- **Source** released to CBTTAPE.ORG very recently!
- Written in Visual Basic
- Executeable on cd /pdsmagician
- Watch this space!
- Volunteers to develop further?

You may also be interested in David Alcock's "UnXMIT Information Page" at
http://www.planetmvs.com/UnXMIT/index.html

REXX Everywhere!

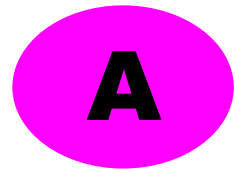• Open Object Rexx (ooRexx) is an Open Source project managed by Rexx Language Association (RexxLA) providing a free implementation of Object Rexx.

• Available for Windows and other platforms

• GA version now available with development ongoing

http://www.oorexx.org/

• The Rexx Language Association (RexxLA) is an independent, non-profit organization dedicated to promoting the use and understanding of the Rexx programming language.

http://www.rexxla.org/

Anything but Office

3

Why?

• $$$$$, Platform independence,

OpenOffice.org 1.1.4 included on The*Open*CD V 2 coming soon!

• Word Processing, Spreadsheet, HTML authoring, Presentations,

• Free, open source, community enhanced and supported, 37+ million downloads, 1.1.4 currently available at openoffice.org

• http://www.openoffice.org/

Star Office

• Commercial product from Sun
        basis of OpenOffice.org

• Standard software support available

• http://wwws.sun.com/software/star/staroffice/
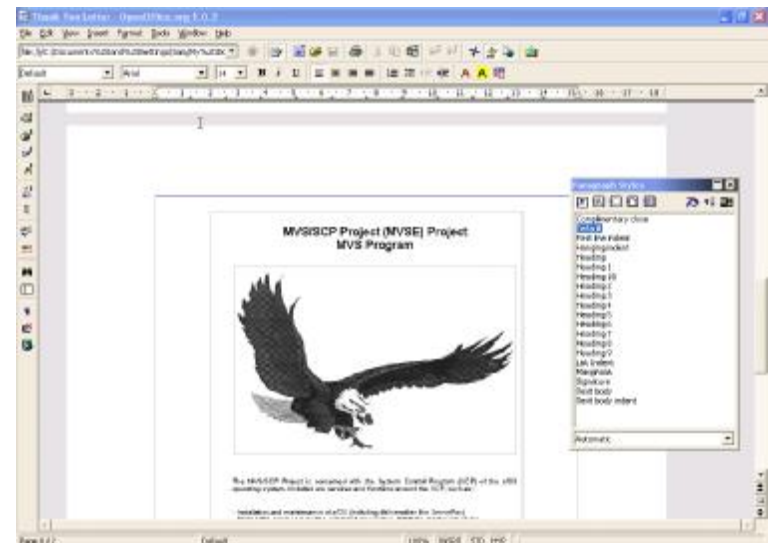
What is a mailing list and how do I find mailing lists?

• 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.

• Newsgroups & http://www.search390.com
       alternatives to email

• There are several catalogs of lists available 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
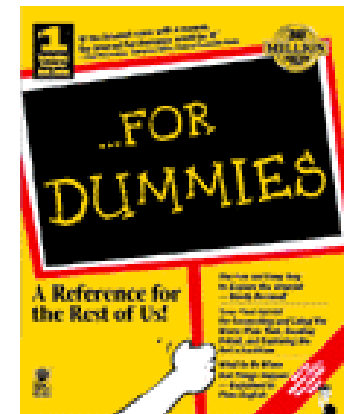
Mail Lists
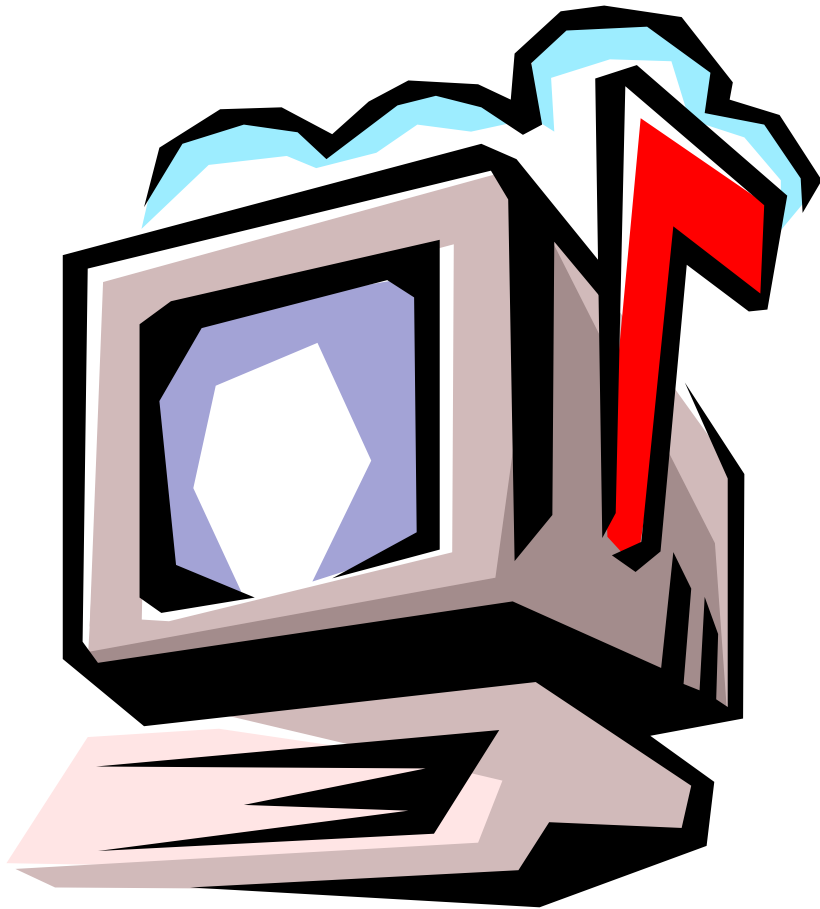
"To sum it all up, SHARE is now 365 days a year rather than 4 times a year." Melinda Varian in "VM and VM Community: Past, Present, and Future" speaking about VMSHARE. VMSHARE is gone but lives on in spirit in the discussion groups which stretch across the globe using the Internet.

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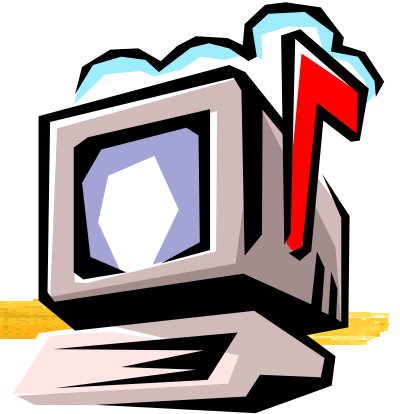
- To join a LISTSERV mailing list you start by sending the list server an email message asking to be subscribed with the text "subscribe listname Joe User"
- So to join the IBM-MAIN mailing list I send a message like this one:

To: LISTSERV@bama.ua.edu
From: Sam Knutson <sknutson@cbttape.org>
Subject: listserv

subscribe ibm-main Sam Knutson

IMPORTANT

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

Posting

Just send an email to the list..

To: IBM-MAIN@bama.ua.edu

From: yourname

Subject: How do I enable SMS data set stripes?

………

Soon you may receive lots of helpful replies!   A caveat is that once you stop lurking and decide to post you reveal your email address to everyone on the list and on UseNet (which is LOTS of people). You may receive unsolicited junk mail some of which may be offensive to you. This is often called SPAM. You can use services like HotMail or Juno to create throwaway accounts from which to post messages.

Note: Hormel Foods has opened the SPAM Fan Club fanclub.spam.com for lovers of the infamous processed meat product!
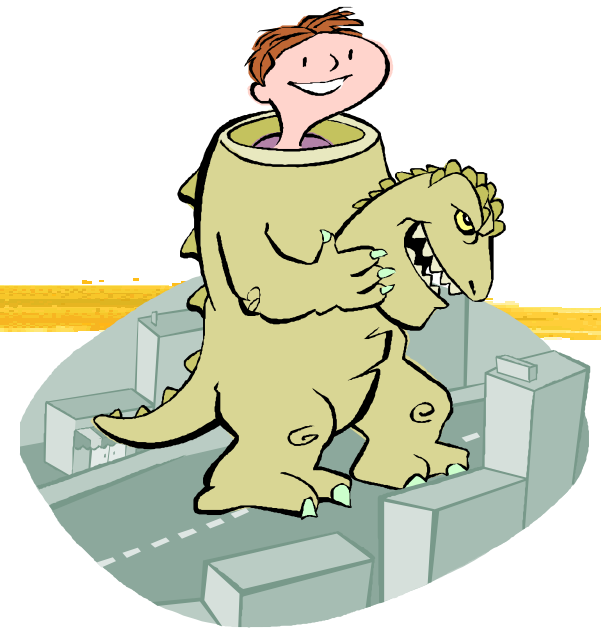
IBM-MAIN
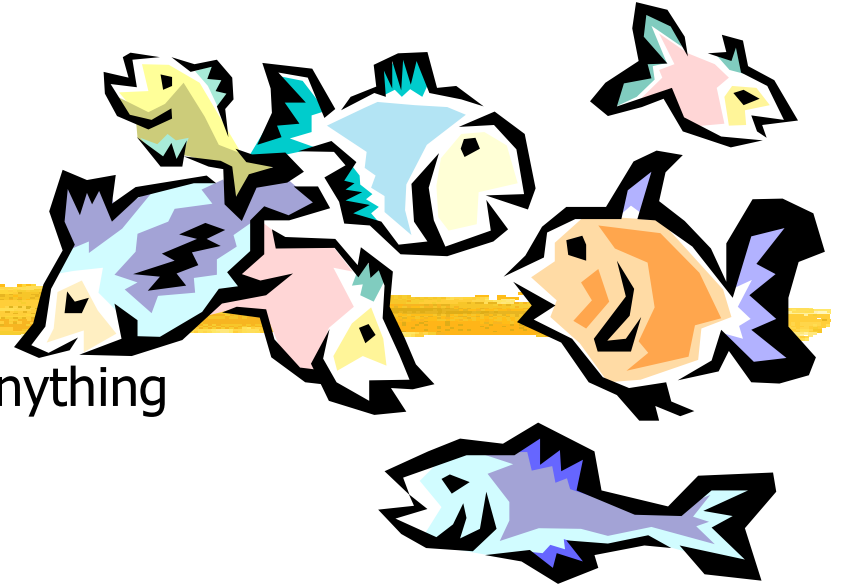
- Topic: IBM S/390 Computing almost anything
  Name: IBM-MAIN
  Type: LISTSERV
  Listserv: LISTSERV@bama.ua.edu
  List: IBM-MAIN@bama.ua.edu
  Web: http://bama.ua.edu/archives/ibm-main.html
  News: bit.listserv.ibm-main
  Weekday Message Volume: 100 - 200 (High consider setting
  DIGEST option)
  More 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!

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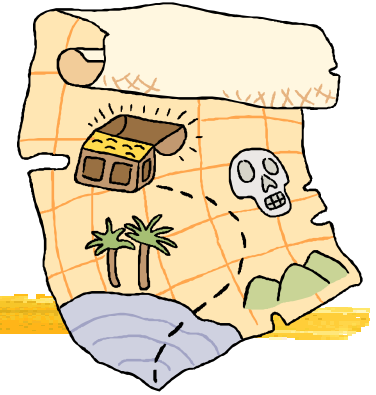
```
MXI - PROD - MVS Extended Information Primary Option Menu --------- Row 1 of 47
Command ===>                                                 Scroll ===> PAGE

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 4.3 New Features

- Version 4.3 had 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

- **MXI 4.3 functionally stable but will continue to be available free! MXI G2 commercial product now GA.**

- MXI G2 now sold by Rocket Software
       http://www.rs.com/portfolio/mxi/download.php

UPDATE!

MXI Version 4.3 still available free
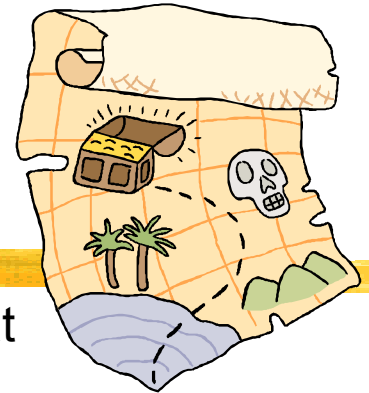
- MXI (MVS eXtended Information) is an ISPF-based application that enables the MVS Systems Programmer to display important configuration information about the active MVS system.
- Although primarily used online, MXI can be run in batch and also has a REXX interface.
- Most of the displays can be filtered 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 050627 still being updated still free
- 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 (Rob's other stuff)

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, SMF recording, and a menu to make the output more accessible in ISPF

SHOWMVS 6.30 & 7.10 & SHOWzOS 7.11 are on 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!!!!

SHOWzOS Trends and Directions
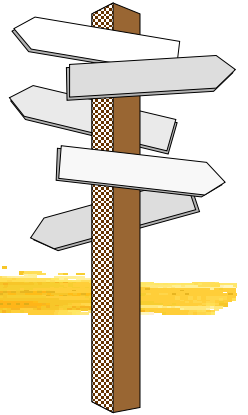
- V711 is baseless (current release)
  - ASN-LX Reusage (prio 1)
  - SMF Buffer enhancement (z/OS R6)
  - Macro STRING should support 64bit and other issues (Gilbert Saint-Flour)
  - IRDFSD as soon as it's working

- V712
  - JES2 dynamic proclib
  - CMDS display
  - D UNICODE settings
  - IOSCDR
  - and so on

SHOWzOS Future

- SHOWMVS was written, expand by
- Gilbert Saint-Flour for several years.

- SHOWzOS is my baby, but everybody
- is welcome to add coding and I'll
- merge it. It's free and will remains free
- unless I got an offer like Rob Scott for
- MXI ☺

CBT Possible Futures

- Talk to me!
- FDR & DFSMSdss complete file level backups of CBT & COV files to allow easy reload of complete collection
- Free, no userid, no password forever
- CBTTAPE.ORG present updates interleaved with last version files
- RSS feed from CBT
- Split CBT CD into CBT CD & CBTOSnn CDs
- SPLA and other old tapes hopefully all available well before next SHARE meeting

The End

Have fun today!

Feel free to call me at

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Please send any additions or corrections.

Visit the CBT Home Page
http://www.cbttape.org

See you at SHARE in

Seattle, WA

March 5-10, 2006