FAT32 Update

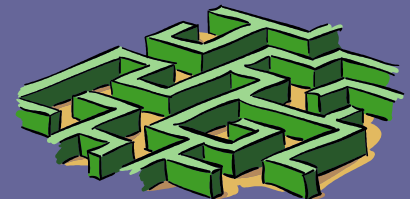Gregg Young
ygk@qwest.net

Warpstock
Europe
Utrecht
Netherlands
May 18 –19   2019

FAT32 Issues

➲ Cache not working
➲ Intaller's placement of directives in Con-fig.sys
➲ Chkdsk doesn't return correct error code.
➲ PMChkdsk hang
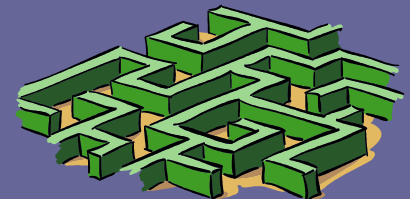➲ Exclude drives from cache
➲ Compiler optimizations

Cache

➲ Cache was turned off in Netlabs revision 136.
➲ AN version is based on Netlabs revision 360 plus some later code.
➲ Data Segments and the Watcom compiler
➲ Benchmark shows
  • Hard disk no cache 750 kb/sec with cache 3000 kb/sec
  • Thumb drive no cache 65 kb/sec with cache 2000 kb/sec
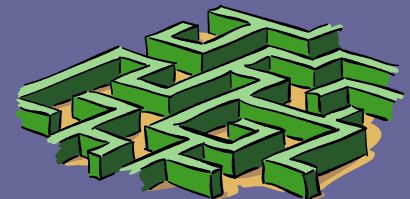➲ It traps on some systems under load

Installer Issues

➲ On clean install IFS statement incorrectly placed at bottom of config.sys

- Fortunately this was a typo in the wis file easily fixed
- Telling it what line to follow is more problematic

➲ Uninstalling the Netlabs version

- On uninstall \os2 is removed from PATH and \os2\dll is removed from LIBPATH

Chkdsk Issues

- ⮑ Chkdsk doesn't fix mismatched FATs
  - However it returned 0 after the error
    - Result AN removables would report the drive mounted successfully
  - Now it returns 4 as it always should have
    - Result AN Removables returns an error
  - Unfortunately PMChkdsk ignores all this and seems to hang forever when it happens.
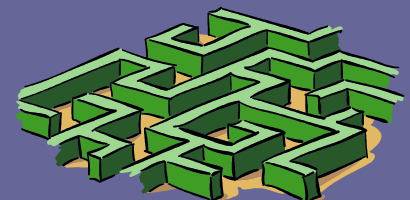   - Just close PMChkdsk and Chkdsk from command line to see the error.

Other Issues

- ➲ Excluding drives.
  - SSDs and Ram drives actually run slower with the cache.
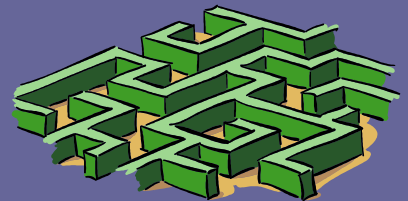 - -exclude:listofdriveletters
    - Doesn't work for removables
- ➲ Compiler options
  - Netlabs FAT32 built without optimizations
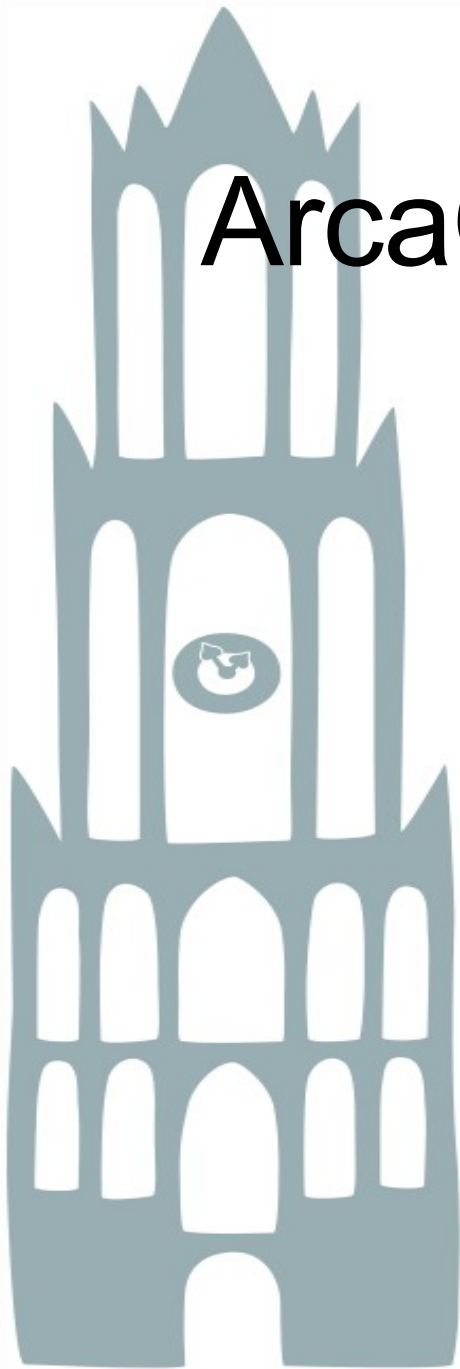 - Still experimenting with various options.

Thanks

Questions

ArcaOS Tips and Tricks
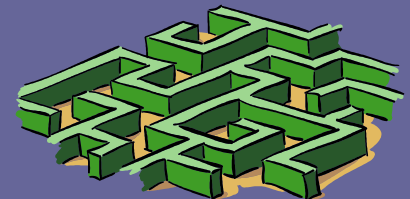
Gregg Young
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Must have update

- ⮑ ACPI 3.23.10
  - ● Fixes an inter process communication issue on fast multiprocessor machines
    - ● Hang on switch to full screen
    - ● Hang on starting a video with an audio stream playing
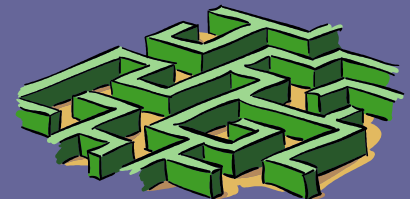   - ● Hangs related to Firefox and Seamonkey
    - ● Probably others
- ⮑ ACPI 3.23.11
  - ● Allows ACPI to load and run on more systems.

ArcaOS Install PreBoot menu

- ➲ If you aren't using an external USBDVD drive
  - Set USB CD drives to 0
  - USB Floppies
- ➲ If you have a driver trap
  - select edit config.sys and rem it out.
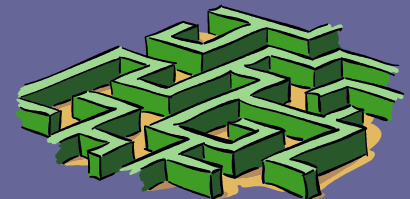 - Alt-F2/F4 and verbose boot

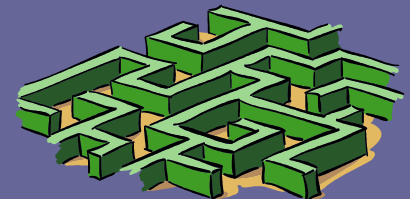# ArcaOS Install

- ➲ Peer Networking
  - Make sure you install Netbios or Netbios over TCP/IP
  - It can be used with Samba if you use Netbios
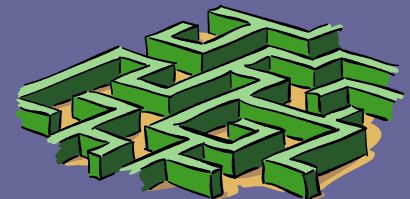   - Port conflict with Netbios over TCP/IP
- ➲ USB 2 port verses controller

ArcaOS Install

➲ AltBoot

➲ Install from USB stick

➲ DFSee disk image (1899 mb)

➲ Create from Mac, Windows, Linux or OS2

➲ AOSBOOT.CMD

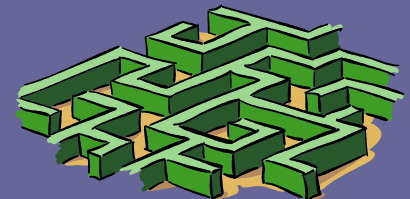   ● Mount image run to install from HD volume

Config.sys

➲ Remove the drivers you don't need
  - PRINT01.SYS – Parallel port
  - IBM1FLPY.ADD – Floppy drives
  - USBPRT.SYS – USB printer
  - FAT32.IFS/CACHEF32.EXE – Fat 32

➲ Don't remove duplicate USB base drivers
  - USBXHCD.SYS
  - USBEHCD.SYS
 - USBUHCD.SYS
  - USBOHCD.SYS

Config.sys

- ➲ Protect only (No Dos or Win 3)
  - Network related V-drivers (and probably some others) are still install.
 - Dos.sys is still needed

Config.sys

- ➲ The Shell Game
  - I use 4OS2 as my build shell(OS2_SHELL)
    - It has some problems with some VMREXX programs
    - ANPM install fails using it
    - ArcaMapper behaves badly with it.
    - It is not supported for Arca Noae drivers
    - It is easy to change back to CMD when I need to
    - We have the source so we can fix things
    - http://trac.netlabs.org/4os2
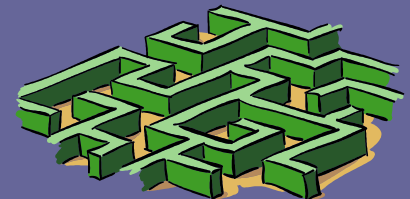
4OS2

⮑ SET DIRCMD=/v
⮑ Aliases
⮑ 4OS2.INI
⮑ 4START.CMD
  ● Options2.exe
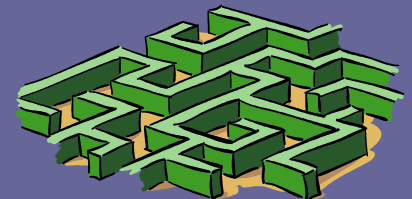
Config.sys

- Command line switches
  - IFS=J:\OS2\BOOT\FAT32.IFS /CACHE:2048 /H /Q /AC:* /LARGEFILES /EAS /FAT /EXFAT
    - /EAS is broken in the early .10 versions
    - Cache broken since .10 beta 7 still not working
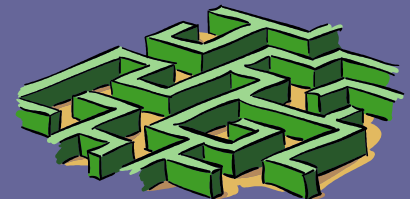 - BASEDEV=OS2AHCI.ADD /N /F
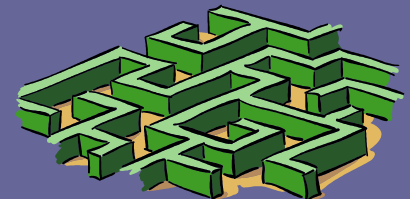   - May speed drive access
- VIRTUALADDRESSLIMIT
  - 1024 – 3072

MMRE and Injoy

➲ Very slow
➲ Lacks ReceiveChain
➲ A fix is in testing on the Injoy side
➲ Other MM drivers may have same problem

Config.sys

- ➲ DOS what do I change/add
  - DOS=LOW,NOUMB DOS=HIGH,UMB
    - Traps if DEVICE=H:\OS2\MDOS\VXMS.SYS /UMB is also set
  - Add VCOMPAT.SYS or V2GB.SYS
    - http://hobbes.nmsu.edu/h-search.php?key=vcompat&pushbutton=Search
    - http://www.tavi.co.uk/os2pages/v2gb.html
  - SHELL=PATH/4DOS.COM
    - https://www.4dos.info/v4dos.htm
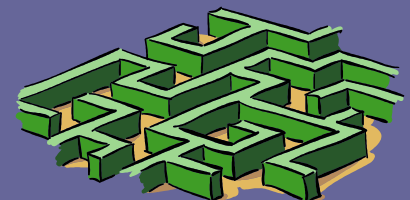
Dos Video issues

⮌ VVGA.SYS
- /nodisplay /nowinbgnd /nowincmd /nowinnotify /dual /int10off /debug

⮌ VSVGA.SYS /int10textgrfxsafe
- May need: mode co80 cls in Autoexec.bat
  - VVGA switches plus /bgexec /int10restoremode /int10restoremods /int10restoreregs /int10restorebank /int10bgndvgamode /noint10restoremode /noint10restoremods /noint10restoreregs /noint10restorebank /noint10bgndvgamode /int10textgrfxsafe
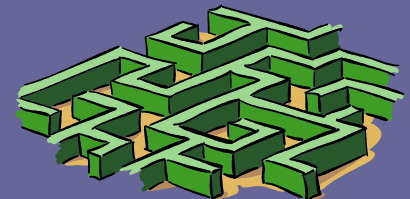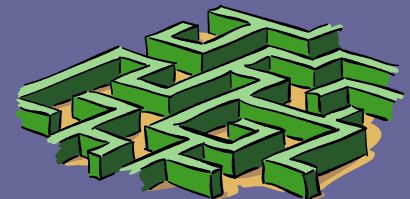
⮌ VXGA.SYS
- Doesn't seem to be a valid driver

Dos Video issues

➲ On some systems you can open a full screen session and then switch to a window

- Some systems trap on opening full screen sessions of any kind.
  - Fixed with ACPI 3.23.10

➲ Problems with WinOS2 windowed session can sometimes be fixed by changing the "Video" setting for the WinOS2 sessions

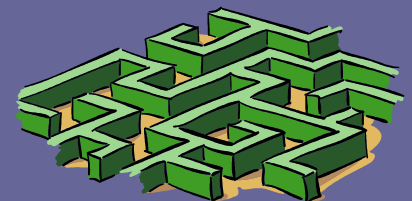# *Config.sys Utilities*

⮑ Logical Config.Sys Sort, by Doug Bissett
- http://hobbes.nmsu.edu/h-search.php?
key=lcss&pushbutton=Search

⮑ Cfgtool
- http://hobbes.nmsu.edu/h-search.php?
key=cfgtool&pushbutton=Search
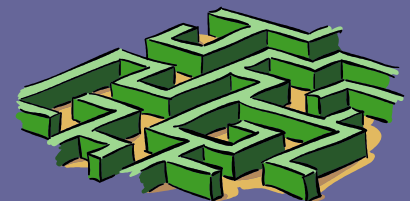- Old but still makes some good suggestions

Mice

➲ Amouse vs Smouse
 ● ThinkPads
➲ Multipt.exe
 ● WPCONFIG.DLL

A New Loader

- ⮌ OS2LDR.CFG
  - Can create a RAM disk above the 4 gig limit
    - RAMDISK = HPFS Z:
    - RAMDISKNAME = RamDisk
    - Use for Temp directory
      - RUN=X:\OS@\CMD.EXE /C md Z:\temp
      - Set TEM=Z:\temp
      - Set TMP=z:\temp
  - Can limit memory use
    - MEMLIMIT = 512
    - Trap dumps

Xcenter

- ISwitcher plugin or stand alone
  - Winlist if you use ISwitcher stand alone
- Remove unused plugins
  - XWLan
    - Only needed for WIFI.
    - Older versions don't unload when Xcenter is closed
    - Xcenter very slow in opening
    - Unlock rename restart desktop or reboot
  - Part of Desktop process
- Add to screen boarder
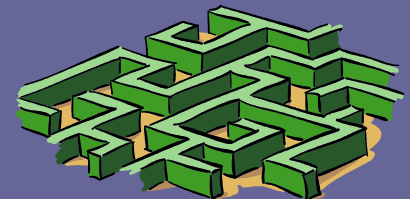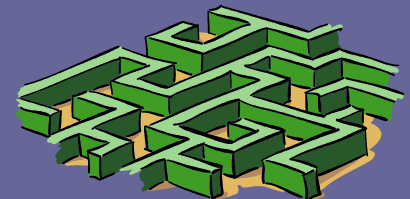
ANXWP vs XWP

- ⮂ Reboot to options
  - It works with Airboot but doesn't give a list of partitions
  - setboot /iba:"eCS-N"
- ⮂ Turbo Folders
  - Changes the behavior of associations
  - Assoedit
    - http://hobbes.nmsu.edu/h-search.php?key=assoedit&pushbutton=Search
 - Settings Object

ArcaMapper

- There are two ways to restart the Samba shares
  - Use Netdrive's volume persistence (not Au- tostart)
    - Turn it on before mounting any drives
    - PersistentVolumeConfiguration = volumes.cfg
    - Unremark it in ?:\Programs\NDFS\ndctl.cfg
  - Autostart minimized on startup means a visible rectangular window with a throbber annoyingly on the screen.
  - Autostart generally manages to throw an error dialog about something failing to load
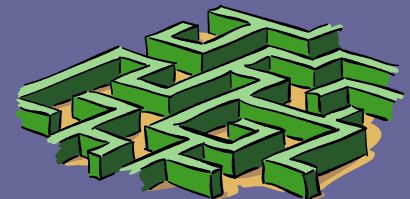 - Don't use both

ArcaMapper

- ⮑ Shares and/or Server not shown
  - ● Update the hosts file to list all the servers before starting ArcaMapper
    - ● Need to make sure server always has same IP address
  - ● Setup a local DNS
- ⮑ When using 4OS2 it hangs on rescan
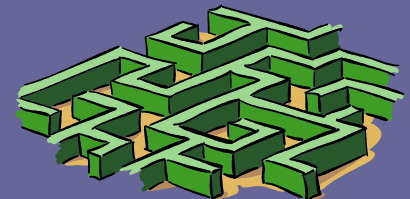 - ● Kill the background samba process
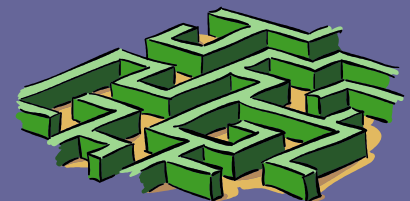
ArcaMapper

- ⮑ Advanced mount options
  - All options are selected by default
  - They are mutually exclusive
  - Their location is unintuitive
- ⮑ Smb.conf
  - ArcaMapper doesn't load its setting from Smb.-conf
  - It overwrites the existing Smb.conf if you save.
 - Verbose log files may quickly fill a volume

ArcaMapper

➲ Network Printing isn't supported

- Use the smb printer port (install with Print Manager)
- Smbprint.exe doesn't work with parallel port attached printers
  - You can use Print.exe (os2 utility)
    - However it doesn't delete the spooled files which will fill the drive
    - Scheduled cmd to delete these

Highmem

➲ Mozilla apps, AOO and ClamAV
➲ Highmem.exe (included with AOO)
➲ Exehdr.exe (Installed with ArcaOS)
➲ Warnings about stability
➲ Why not everything?
➲ Memory not releases on close
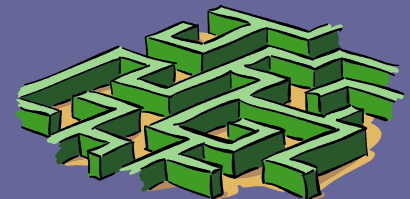 ● Use turbos
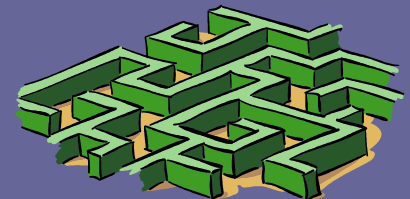
Hide floppy icons

- ➲ Drives folder properties
  - Include tab
    - Add
      - Attribute: Object Title
      - Comparison type: is equal to
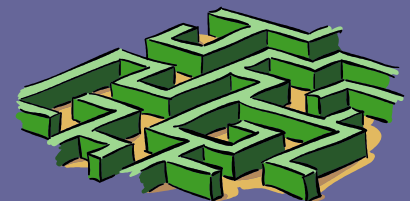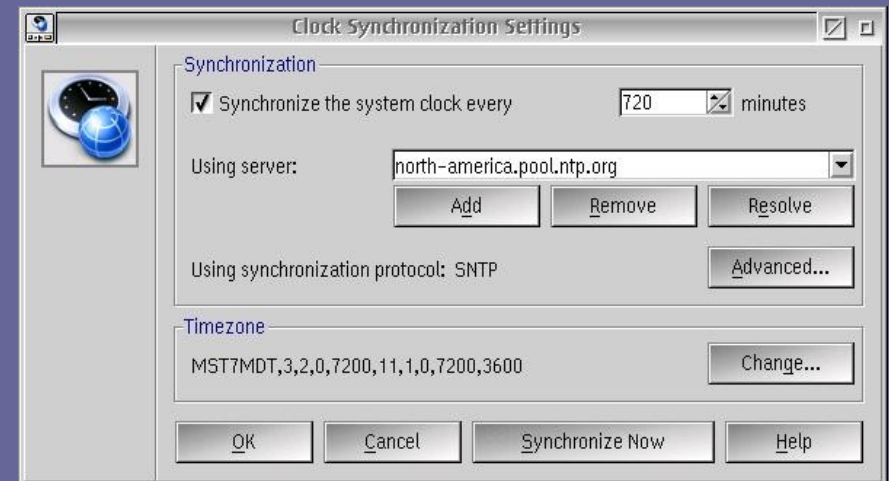   - Comparison value: Drive A
  - Repeat for drive B
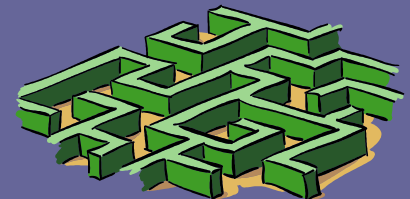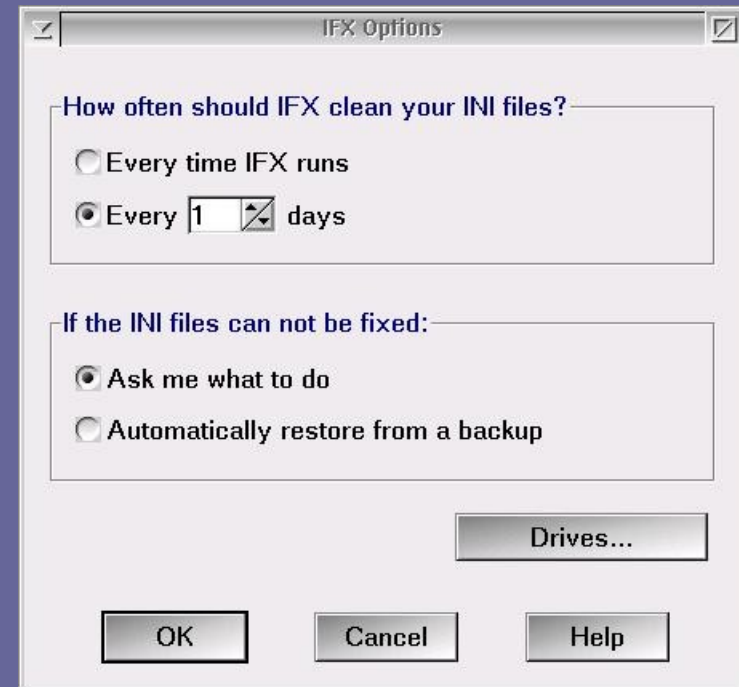- ➲ FM/2
  - Add /AB %* as command line parameters

Clock Sync

- ➲ The correct time
- ➲ Daytime as a back-end
- ➲ Can use to update your time zone settings

IFX

➲ Cleans INI file han-
   dles
➲ Backup and restore
➲ Not a replacement
   for full featured INI
   cleaners/checkers

IFX Options

How often should IFX clean your INI files?
- ○ Every time IFX runs
- ● Every [1] ⬍ days

If the INI files can not be fixed:
- ● Ask me what to do
- ○ Automatically restore from a backup

[Drives...]

[OK]   [Cancel]   [Help]

INI file checkers

- ⤷ Checkini
  - http://hobbes.nmsu.edu/h-search.php?key=checkini&pushbutton=Search
- ⤷ Cleanini
  - http://hobbes.nmsu.edu/h-search.php?key=cleanini&pushbutton=Search
- ⤷ UniMaint
  - http://jaread.net/software/pages/download.html
- ⤷ RWS
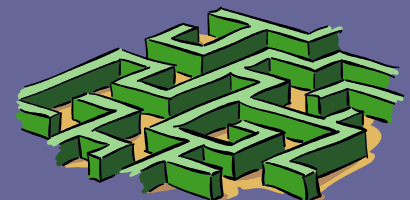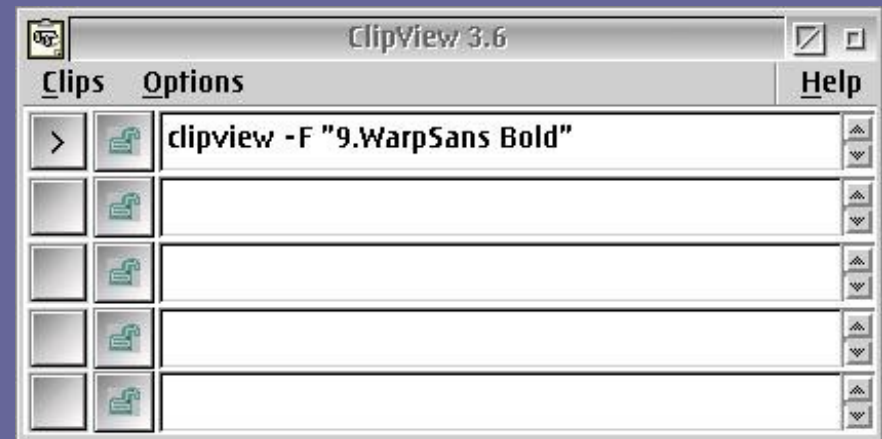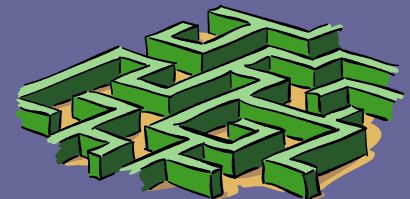 - http://hobbes.nmsu.edu/h-search.php?key=rws080&pushbutton=Search
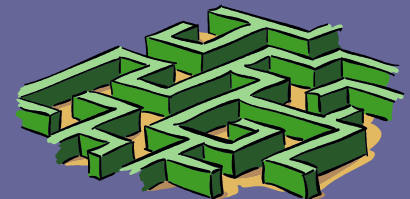
Useful Utilities

- Clipview
- Screen Capture util-
  ity
- Gotcha
- Simple Calendar
- Lswitcher
- NCFTP
- OO

OO

- ➲ A text-mode utility for working with the WPS
- ➲ Use it at the commandline or in scripts to
  - ● open, locate, and list objects, get info about them, assign setup strings to them, and more.
- ➲ Can perform all of the WPS tasks that used to require REXX.
  - ● oo's alternatives are more powerful because they work with any object, not just files or fold-ers.

Gotcha!

- Screen capture utility
- Gotcha Quiet captures "Print Screen" keys
- Alt+Print Screen = settings
  - Screen/region/window/interior
  - Clipboard/file
  - Multiple capture formats
  - Auto name
  - Delay (allows opening a menu)
  - Initiate capture

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Gotcha!

- Ctrl + Print Screen = Capture to clipboard

- Print Screen/Shift + Print Screen = Capture to file

- Design questions

  - Should a command line switch be provide so Print Screen prints to printer?

  - Should the setting window automatically reopen after a manual screen capture?

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ISwitcher

- Task switcher

- Freestanding or Xcenter plugin

- Group/Icon only

- Priority

- Switch/Min-Max/Tile/Cascade/Close/Kill

- Popup

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Lucide

- Why does it take so long to fix my bug
  - Trap on opening large PDF
  - Problem is with Poppler not Lucide
  - Fix Poppler (and load issues with Lucide)
  - Poppler is updated as part of the fix
  - Update breaks Lucide
  - Update Lucide to compile with new Poppler
  - Poppler traps with FPU issue
  - I get paid nothing. The Poppler maintainer is dependent on your donations.

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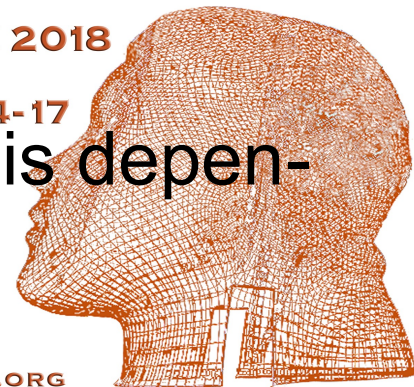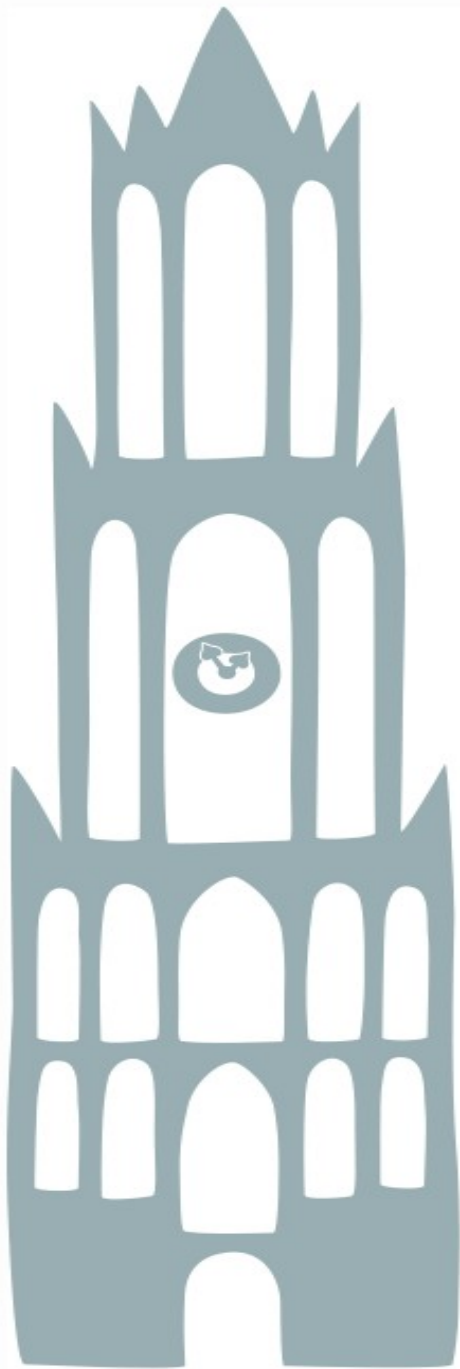
Thank You

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