

## Using Scripts and AutoLISP® to Automate, Save Time, and Enforce Standards in AutoCAD®

michael trachtenberg

Software Director - AE Backoffice





In this class we will explore some of the many ways to use Autodesk AutoCAD's ® many programming tools.

All of which will help you to automate, optimize and streamline countless tasks



# Automate

convert (a process or facility) to largely automatic operation



### **Learning Objectives**

At the end of this class, you will be able to:

- Rid yourself of simple time consuming repetitive tasks
- Implement routines/programs a number of different ways
- Silently enforce standards
- Draft faster while enforcing more standards
- Be lazier thanks to your new toys



Image courtesy of www.flodraulicgroup.com



Image courtesy of blog.polleverywhere.com



### The many ways of using:

**Scripts** 

Commands

Menus

Windows

**Palettes** 

New buttons

Ribbon

**Batches** 

Lisps

Commands

Menus

Windows

**Palettes** 

New buttons

Ribbon

Start-up

**Support Locations** 

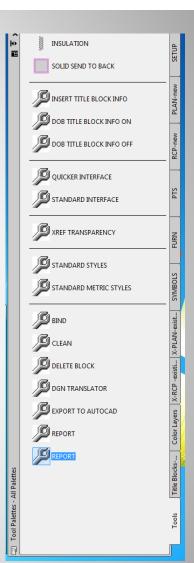


#### **Printing**

The Possibilities

```
    □ □ □ □ = □
        Content
 (€) → ↑ || > Computer > designtech (\\h\mu.com) (V:) > Autodesk_AutoCAD > AutoCAD > Scripts
                                        COL9683.5CR
                                                          A-AREA-CLR1L.SCR
                                                                             A-AREA-CLR15L.SCR
                                                                                                                                                                            POSSET.SCR
                                                                                                                                                                                                     scal
                                                                                                                                               F03SET.SCR
                                        00WGFIX.SCR
                                                           A-AREA-CLR2.SCR
                                                                                                                  Bindwefs.scr
                                                                                                                                               F04SET.SCR
                                                                                                                                                                             PO4SET.SCR
                                                                              ACOL9736.SCR
   Desktop
                                        OPW.SCR
                                                           A-AREA-CLR2LSCR
                                                                              ACOLOR SCR
                                                                                                                  Block counter.sc
                                                                                                                                               asterpalettes.sc
                                                                                                                                                                             PaletteSetupAr
                                                                                                                                                                                                      Downloads
                                        1SHOW.SCR
                                                           A-AREA-CLR3.SCR
                                                                                                                                               FDLAYU2.SCR
    Recent places
                                                                              ACOLOR1.SCR
                                                                                                                  blueen.scr
                                                                                                                                                                             PaletteSetupArchInt2012.scr
                                                                                                                   bluetxt other yell
    designtech (hlw.com)
                                        1SHOWB.SCR
                                                           A-AREA-CLRASCR
                                                                              ACOLOR75.5CR
                                                                                                                  CHPALL SCR
                                                                                                                                               Global_Txt_2_Simplex.s
                                                                                                                                                                             PaletteSetupMEP.scr
   projects (hlw.com)
                                        8.5X11Lacr
                                                           A-AREA-CLR4L.SCR
                                                                              ACOURBUSCR
                                                                                                                  CHPCOLOR.SCR
                                                                                                                                               Grid off.scr
                                                                                                                                                                             PaletteSetupMEP2012.scr
                                         8.5X11P.scr
                                                          A-AREA-CLR5.SCR
                                                                              ACOLZONE.SCR
  Libraries
                                        11X17Lscr
                                                           A-AREA-CLRSLSCR
                                                                              Adv 8 quick.scr
                                                                                                                  converttoctb.so
                                                                                                                                               hlwsysvarDrawings-ltype
                                                                                                                                                                             PaletteSetupPRJ.scr
                                        11X17L-PRESEN.scr
                                                          A-AREA-CLR6.SCR
                                                                              Adv 8.scr
                                                                                                                  Copy of Adv Reder
   Music
                                        11X17P.scr
                                                          A-AREA-CLR6LSCR
                                                                              Adv 76 quick.sci
                                                                                                                                               CONRCEG.SCR
                                                                                                                                                                             PDLAYUZ.SCR
    Pictures
                                                                              Adv 76.scr
                                                                                                                   detachall.scr
                                                                                                                                               imageframeoff.scr
                                                                                                                                                                             plotmodel.scr
                                        18X24-8RD.scr
                                                           A-AREA-CLR7LSCR
                                                                              Adv Reden guick so
                                                                                                                  detachtBlock.scr
                                                                                                                                                                             PLOTPLUM.SCR
                                        24X36-BRD.scr
                                                          A-AREA-CLR8.SCR
                                                                              Adv Reden.scr
                                                                                                                  dims.scr
                                                                                                                                               Insert DOB.scr
                                                                                                                                                                             PLT9474P.SCR
                                         24X36L-PRESEN.scr
                                                                              Adv_Reden_quick.scr
                                                                                                                                               langancleanup.sc
                                                                                                                                                                             Previous Plot Model.scr
   Local Disk (C)
                                        30X42-BRD.scr
                                                           A-AREA-CLR9.SCR
                                                                              anno off.scr
                                                                                                                  DIMVARS4.SCR
                                                                                                                                               LAPXTYP.SCR
                                                                                                                                                                             Previous Plot.scr
   MY (\\hlw.com\marketing) (b)
   Scan (\\hlwacrtest) (Nt)
                                        30X42L-PRESEN.scr
                                                          A-AREA-CLR9LSCR
                                                                              Annostyles.scr
                                                                                                                  DIMVARS8.SCR
                                                                                                                                               layereval0.scr
                                                                                                                                                                             proxycleanup-export.scr
                                         36X48-BRD.scr
                                                           A-AREA-CLR10.SCR
                                                                                                                   DIMVRSM.SCR
                                                                                                                                               LegacylayerResto
   admin (\\01nydsa) (0t)
                                         ASYAN - PRESENTED
                                                          A-AREA-CLR10LSCR
                                                                              audit-Investiltendelete so
                                                                                                                  DIMPRIOSER
                                                                                                                                               Linetype replace.scr
                                                                                                                                                                             notyles ser
                                        4679unlayfix.scr
                                                          A-AREA-CLR11.SCR
                                                                                                                  DIMVR200.SCR
                                                                                                                                                                             QUICKCLN.SCR
                                                                                                                                               styles-imperial.sc
   gedesigntech (\\hlw.com) (V:)
                                         AD-BRD.scr
                                                           A-AREA-CLR11L.SCR Audit-purge.scr
                                                                                                                   DWGA1FIX.SCR
                                                                                                                                                                             reddenfiner.scr
   Discovery (\\01nydsa) (Y:)
                                        A1-BRD.scr
                                                           A-AREA-CLR12.SCR Audit-purpe-laverfilterdelete.sci
                                                                                                                   defout-2004.scr
                                                                                                                                               LTS24.scr
                                                                                                                                                                             nedefBorder.scr
                                                           A-AREA-CLR12LSCR Audit-purge-layerfilterdelete-setbylayer.scr
                                                                                                                                               MAKEPLAY.SCR
                                                                                                                                                                             Reggpurge.scr
                                                          A-AREA-CLR13.SCR Aud-LFD-colbylay-lwbylay-ltimperial.scr
                                         A3-BRD.scr
                                                                                                                   ExportToAutocad.scr
                                                                                                                                               MOVEAULSCR
                                                                                                                                                                             Remove hyperlinks.scr
                                         A3-BRD-P.scr
                                                                                                                  ExportToAutocad2000.scr
                                                                                                                                               NEWTB.SCR
                                                                                                                                                                             Remove unloaded.scr
                                         A4-BRD.scr
                                                           A-AREA-CLR14.SCR BEN12OLD.SCR
                                                                                                                                               POISET.SCR
                                                                                                                                                                             RMTAGCNT.scr
                                        A4-BRD-P.scr
                                                          A-AREA-CLR14LSCR BENCH12.SCR
                                                                                                                  F01SET.SCR
                                                                                                                                               P1MLAY.SCR
                                                                                                                                                                             Scale25.4.scr
                                        A-AREA-CLR1.SCR A-AREA-CLR15.SCR Blind and clean.scr
```

```
_ 🗆 X
                            unxtrans.lsp - Notepad
<u>F</u>ile <u>E</u>dit F<u>o</u>rmat <u>V</u>iew <u>H</u>elp
(defun C:unxtrans ()
(vl-load-com)
(setq xrefsel (entsel "\n Select Xref: "))
(setq ENAM (car xrefsel))
(setq BLKCon (vlax-ename->vla-object ENAM))
(setq blkname (vlax-get BLKCon 'Effectivename))
(setq laylist (list blkname))
(setq acadobject (vlax-get-Acad-Object))
(setq activedocument (vla-get-activedocument acadobject))
(setq LayerTable (vla-get-layers activedocument))
(vlax-for each LayerTable
(setq layName (vla-get-name each))
;(setq trans (vla-get-transparency each))
(setq star "*")
   (if (wcmatch layName (strcat star blkname star))
        ;(setq laylist (append laylist (list layname)))
       (command "-layer" "tr" "0" layname "")
```





#### The end

- Questions?
- Thank you
- Don't forget to fill out the call survey online





Autodesk is a registered trademark of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and/or other countries. All other brand names, product names, or trademarks belong to their respective holders. Autodesk reserves the right to alter product and services offerings, and specifications and pricing at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document. © 2013 Autodesk, Inc. All rights reserved.