CEE498 AutoCAD Design

Week 2: Class2
Layers, Templates and Scale

Experiences from Lab1

- Understanding of templates
- Setting Limits
- Calculating Scale Factors
- Drawing Lines and Arcs
- Using *Chamfer*, *Fillet*

Agenda

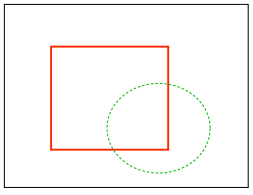
- Layers
- Creating Templates
- Scaling
- Construction Techniques

Layers

- Origin: Pin-registry drafting
- A stack of transparent overlays drawn on the same coordinate system
- Allows organization of drawing information
- Allows Selective viewing of information

Layer Properties: *Nouns*

- Unique descriptive name
- Color
- Linetype
- Lineweight



Layer Properties: *Verbs*

- On / Off
  - Whether layers will be displayed or plotted
  - All layers used for drawing regeneration
  - Current layer has to be on

Layer Properties: *Verbs*

- Freeze / Thaw
  - Whether layers will be displayed or plotted
  - Frozen layers not included in drawing regeneration
  - Layer can be frozen in current viewport
- Lock / Unlock
  - Locked layers cannot be edited

Lineweights

- Used for information organization
- NOT for depicting real width of a line
- Use *LWT* button to view in PS

Linetypes

- Default linetypes come in *acad.lin*
  - Customized linetypes can be added
  - Must save file as *.lin*
- Linetypes need to be "Loaded" before using them
- Can *_mlstyle* set linetypes?
- Use *ltscale/psltscale* to scale linetypes

Templates

- Open AutoCAD (You are automatically loading *acad.dwt*)
- Load all relevant linetypes (You are automatically loading *acad.lin*)
- Create relevant layers
- Setup paper space
- Save as *.dwt*

Scaling

- Calculate scale factor
- Command: *scale*
  - Choose base point and enter scale factor
- Command: *zoom nX* (MS)
  - Zooms in *n* times in MS wrt (0,0)
- Command: *zoom nXP* (PS)
  - Object will be shown *n* times in PS

Construction Techniques

- Xline: Very important for drawing references
- Trim
- Mirror
- Array
- Copy, Move