CAD concepts in AutoCAD terminology (review)

Coordinate systems are those systems by which you orient your drawing in (usually) three-dimensional (3D) space. Most CAD systems default to the Cartesian system of X-Y-Z orthogonal axes, though you can reference polar or cylindrical systems as well in some CAD software. The current system you are using is called the universal coordinate system (UCS). You have the ability to define multiple UCS in any orientation, but only one is used at a time. The default in AutoCAD is the world coordinate system (WCS).

Making something “invisible” or “hiding” it does not delete it. It simply makes that item disappear from view, and become unselectable to the CAD operator via the cursor.

Sketch planes are 2D planes (X-Y cartesian coordinates by default) upon which you are drawing 2D figures. These sketch planes are not required to be oriented to the WCS. You can define sketch planes in many ways: Referenced to a UCS, a defined work plane, or even a plane off an object.

Work planes are planes you define which can then be used as a reference for sketchplanes. Why not just define a sketch plane directly? Because you can plan with workplanes, having them defined and ready for use as the need arises. The sketch plane is the current plane upon you are sketching 2D figures and orienting 3D features (such as extrusions). Keep workplanes visible only long enough to assign a sketch plane to them.

Profiles are a big deal in MDT – they are used to do parametric design. Even if you don’t do parametric design, they are required in AutoCAD for nearly all solid modeling methods. THEY MUST BE CREATED WITH ALL ELEMENTS IN THE SAME PLANE.

Nice to remember and know…

- The command line is at the bottom of the screen, preceded by a colon (“:”) prompt.
- When issuing a command line example, I will write the colon and Courier font. You do not type the colon. The <RET> after the command will be assumed, unless otherwise noted. Example – :DDLMODES
- Ctl-Z is undo.
- :U<RET> is also undo.
- <RET> by itself repeats the last command.
- <SPACE> by itself repeats the last command. Remember this point when you are entering coordinates from the command line.
- :REGEN will regenerate your view, which can become cluttered with junk if you have a less powerful computer.
- <ESC> gets you out of most things effectively.
- SAVE EARLY AND OFTEN!