

## Surface 3D Flyover from Surface Entities

The following instructions will guide you through the 3D Flyover Command. This is actually a fun but very useful command that enables you to view the surface as if you were driving or flying over it. These instructions assume that surface entities or a surface file have been created. SurvCADD modules are displayed as {**DTM – Contour**}, main menus are displayed as [**DTM**], and submenus and menu commands are displayed as < **Draw 3d Polyline** >.

- 1) Draw a 3D Polyline to use as the path: {**any SurvCADD Module**} → [**Draw**] → <**3D Polyline**>
  - a. Confirm “**Show options on startup**” is checked
  - b. Uncheck “*Use current drawing layer*” and type the following layer name: **DSGN – 3D Path**
  - c. Click “**OK**” when done
  - d. Draw the path that you want to use for the “Flyover”. Make sure that you use OSNAPS to click on parts of the surface model.
- 2) Run the 3D Flyover command: {**DTM - Contour**} → [**Site**] → <**3D Views**> → <**3D Surface Flyover**>
- 3) The “*Flyby 3D Startup Options*” dialog box appears
  - a. Under Surface Source select “**Screen Entities**” to use objects in the drawing such as contours for the source data
  - b. Direction Control will be forced to “**3D Polyline to follow**” for a predefined path when using surface entities
  - c. Click the “**Select Entities**” box is used for and select all the surface objects. Press “**Enter**” once all the desired objects are selected
- 4) The 3D Drive Simulation Screen Opens with many options:
  - a. **View Direction:** Select Front, Back, Left, or Right of the icon that will move across the surface along the line you just selected
  - b. **Vehicle Icon:** Can select a vehicle icon to move across the surface or select none. Options for the icon are Bulldozers, Hummers and Landrovers.
  - c. **View Position:** Driver which is like being a driver in the vehicle icon. Pedestrian the view is outside the icon alongside it. Bird view is an Ariel view from above.
  - d. **Shading:** Shading of the surface. Can have a Flat color, Smooth which gives a smooth surface and Elevation which colors by elevation
  - e. **Elev:** (ft): Adjusts the height above the vehicle icon of the view

- f. **Distance:** Adjusts the distance from the vehicle icon
  - g. **Speed:** Adjusts the speed at which the animation moves.
  - h. **Color Selection:** Allows for selection of colors for the animation scene if “Color by Elevation” is selected.
  - i. **Vert. Scale** on the right side of the window: Adjusts the vertical exaggeration factor of the display
  - j. **Operational Commands Icons:** Run, Rewind, Previous, Zoom, Rotate, Axis rotation, and Exit
- 5) Click **Exit** to return to the SurvCADD screen

## Surface 3D Flyover from Grid or TIN Files

- 6) Follow the above steps up to and including **step 2** above
- 7) The “*Flyby 3D Startup Options*” dialog box appears
  - a. Under Surface Source select “**Grid or TIN File**” to use a grid file for the source data
  - b. Direction Control has two choices: “**3D Polyline to follow**” for a predefined path or “**Free Flight**” for more freedom to explore the surface
  - c. The “**Reference TIN**” can be used to select a second surface to get cut/fill information. Press this button and highlight a grid file to open in the dialog box to use this option.
  - d. Press “**OK**” when ready to proceed
- 8) If the “*3D Polyline to follow*” was checked in the previous step you will have to **select the line to follow** that was drawn in Step Number 1. If the “*Free Flight*” option was checked, the command line will ask for **two points** to define the starting point and direction.
- 9) The “*Select Surface Model*” window appears. **Select the surface** model that you want to view and click “**Open**”
- 10) The 3D Drive Simulation Screen Opens with many options and most are the same as above. A few new additions to note are:
  - a. If in “**Free Flight**” mode, the **Right** and **Left** arrows that are used to steer the vehicle icon
  - b. If the Reference TIN was used, the “**Display Cut/Fill**” box can be checked to show cut and fill
- 11) Click **Exit** to return to the SurvCADD screen when you are done exploring