The Z ManagementToolbar

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History of the Z Management Toolbar

- Initially written for 9.3 as a sample
- Compile it yourself in C# of VB.net
- No feedback to ESRI
- No idea of usage

- Not included and not compatible as part of ArcGIS10
- Recompiled for 10.1 in 2013
Z Management Toolbar at Murrin Murrin

Typical assumption of 3D in ArcGIS

In reality - nothing square, vertical or neat
First Project - Murrin East Hub

- The Murrin East Hub has lunch rooms, storage facilities, workshops, communications towers and office facilities.
- Multiple versions so as to accommodate changing circumstances and priorities as the project progressed.

- The hub was designed in 3D to visualise the above and below ground components.
What Does it Do?

- Create all feature types with a Z coordinate
- Pick up the Z coordinate off a surface (Raster, Terrain or TIN)
- Apply Z offsets
- Set a constant Z value
- Snap coordinates to existing Z coordinates
Installing the Toolbar

- Search for Z Management Toolbar on ArcGIS.com search for Z values or Editor
- The toolbar comes as an AddIn
- Install in either
  - C:\Program Files (x86)\ArcGIS\AddIns
  - Or
  - My Documents\ArcGIS\AddIns\Desktop10.x
- Start ArcMap
- Load the toolbar from the toolbars menu
Prerequisites

- To pick up data off a surface you will need at least one
  - TIN
  - Terrain
  - Raster

- You can switch between surfaces as you edit

- A Z capable Point, Line or Polygon Feature Class
Limitations

- The surface can’t be part of a Layer Group
- Layers being snapped to in the Z coordinate require fully qualified names in the TOC
- Classic snapping only
Setting up for Editing

- The 10.x snapping tools do not work with the Z Management toolbar
- Start Editing
- Go to Editor/Options and check *Use classic snapping*
- Go to Editor/Snapping/Snapping Window to turn on Classic Snapping
Setting up for Editing

- Pick an initial surface to pick Z coordinates from
- If a continuous surface is required, turn on Drapping by clicking the icon

- Set Feature Classes you want to snap to in X and Y
- If you want to snap to existing Z vertices, click the Blue Dot and select which Z vertex layers you want to Snap to
Picking Up a Z Surface

- Go to Create Features and select a feature to create
- Click on the first position on the map
- Depending on size of data, network speed etc there will be a delay while the data is loaded into memory.
- Now you can click point-to-point
- Double click or F2 to finish
- Use the profile tool on 3D Analyst to check the profile
- Click the Edit Vertices Icon on the Editor Toolbar and examine the Edit Sketch Properties

* Drapping tool will pick up a point on every cell when Editing in Stream mode
Snapping to a Z Coordinate

- Snapping to an existing coordinate is just as easy
- You need to have both the Classic Snapping and the Z Snapping toolbars set up first
- Set a Snapping Tolerance
- Under Editor/Snapping Options… make sure the Show snap tips is ticked