FDOTSS3/SS4 DESIGN SURVEY WORKFLOW
Part 2 of 3

FOR BENTLEY OPEN ROADS TECHNOLOGY

Introduction to Open Roads

- Importing Data into Bentley Survey (formally known as Data Acquisition)

- Visualization of the Survey Data

- Cleaning Up the Survey Data

- Building and Editing the Survey Terrain Model

Importing Data into Bentley Survey

- The CAiCE PT4 file

- EFB – The XYZ and OBS files

- EFB – CTL and Processing the OBS

- XML, SRV, KCP and More

Visualizing Survey Data

- PROJECT EXPORER

  ➢Survey Data

  ➢Survey Filters

  ➢Civil Standards

Cleaning Up the Survey Data

- Using the Element Information Box
  1. Visualize
  2. Select
  3. Edit in the Element Information Box (Properties)

- The Survey Database

- Chain Editing

Terrain Models from Survey Data

- The Survey Selection Set

    1. Visualize

    2. Select

    3. Create Terrain Model from Survey Selection Set

- The Survey Database

- Crossing Chains

- Adding Features

Terrain Models from Survey Data

- Edit the Survey Generated Terrain Model
    1. Deactivate Survey Processing Rule
    2. Remove Rules – General Geometry tab of TASK Menu
    3. Edit Terrain Model – Terrain Model tab of TASK Menu

- Apply Feature Definition
- Name the Terrain Model
- Export the Terrain Model

Terrain Models from Survey Data

Building the Terrain:
- Open new file.
- Set triangle length.
- Set geographic coordinates
- Bring in data.
- Resolve feature issues especially for the DTM like attributes.
  - Buildings Break as Break Voids
  - Embankments, Slopes, etc. as Soft Break Lines
  - Go ahead and make any boundaries for the DTM.
  - Also make any holes for the DTM and make sure it is not crossing a break line.
  - Get boundaries/holes into the file then detach all references (set them to DTM_ep eventually).
- Create Initial Terrain for resolving crossing breaklines. Invariably this Terrain may have problems and will need to be deleted.
  - Resolve all crossing break lines. Use the "Manage Point List" to do this and press "Accept". Do not just select the line and change the attribute of the graphic or the break line will not get resolved in the Terrain.
- At some point during this process the terrain will get messed up like some break voids will disappear or even though you have changed a crossing chain the Terrain just doesn't read it.
- If the terrain has these problems and it probably will... delete it and make a new one. All DTM attributes and crossing chains have been resolved so now you have a good Terrain.
- Add holes and boundaries from the TASK menu using the "Add Features" button.
- "Save As" to a new file so as not to have to repeat this process if something happens down the road. In fact, any time you make significant progress do a save as to a new file to avoid repeating work after problems like you are having.
- If the Terrain triangles need to be edited. "Deactivate Survey Processing Rules" on the "Default" just above the field book in the survey tab and also in the TASK menu under general geometry use the "Remove Rule" button to disassociate the terrain from the graphics. Once you do this you can't go back so "Save As" first.
- When in doubt about what you are doing do a Save As first.
- Now you can add a feature definition and proceed to other work like labeling, adding alignments, GLO lines, RW lines and other finishing touches.

QUESTIONS?

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