

In-class Tutorial 2-Navisworks Interface

Goal: Introduce how to interact with a BIM Model within Autodesk Navisworks

Areas of focus:

- Opening models
 - Understanding the Navisworks Interface
 - Navigation
1. Discuss Manage vs. simulate vs freedom by showing lack of tools (and limited to NWD)
 2. Application button
 - a. Open “Low rise-Architectural model”
 - b. Save as “02_low_risie_Your Last name.nwf”
 - c. Note that it is taking a while to open since it is reading in 36 MB of 3D Drawing files (4 levels of arch and structural drawings that had been exported from Revit)

Note If people are getting reference errors often the cause is that they have browsed into the ZIP file and double-clicked on the NWF. Instead make sure they unzip the files to a folder and then browse from within Navisworks itself.

Also mention that double-clicking on an unzipped NWF still isn't the best idea since it could open Freedom or some other version of Navisworks you may have installed. Again it's always best to open the Autodesk software you wish to use and navigate to your file from the Open command.

3. Manage: Global options (in both)
 - a. Manage: Set linear units to Feet & inches (which gives decimal inches) – or the one with fractions
 - b. For those students experiencing graphic card issues (like flashing, cursor trails, etc.):
 - 1- Ask them to up to date the driver,
 - 2- Interactive Textures and Lighting can slow things down a lot, if you strip the settings back to basics then switch things on again one by one to identify which is killing your performance,
 - 3- reduce the faceting factor (Options > File Readers,
 - 4- Use the Selection Box tool to work out what is distant from the model and see if you can change in the native application, if not then Hide it.
 - 5- If you have set lots of the model to be required (i.e. prioritized when you are navigating) then you may experience lots of drop out of all the other items. Again, start from nothing (right click > Reset All > Unrequire All) and slowly build up adding those essential items.

- 6- Try running the model with 'Scene Lights' Lighting and 'Shaded' Mode on the Viewpoints tab, if this significantly improves performance then you might have over done it on the materials and lighting.
 - 7- There may also be other hardware issues, like not enough RAM, or the graphics card overheating, something corrupt on the machine or there may be too many other applications running
 - 8- have them disable the hardware acceleration checkboxes under Interface / display.
- c. Viewpoint defaults: Save/hide required attributes AND Appearance
- d. Point out there is also a file options window which is file-specific (Home / File options)
- 4. Quick launch toolbar; save
- 5. Other interface elements (Scene view, Dockable windows, status bar, etc.)
 - a. Review the dockable window concept in Navisworks (auto-hide, how to find them, etc.)
- 6. Loading and saving workspaces
- 7. Viewpoints
 - a. Explore different views
 - b. Viewpoints tab: Perspective vs Iso
 - c. Render style settings
 - d. Create viewpoints, folders, and organize
 - e. Viewpoint settings (right-click on a viewpoint and choose edit to control speed, avatar, etc.)
- 8. Navigation tools
 - a. Mouse navigation
 - b. Touchpad navigation
 - c. Navigation bar, starting with walk tool (use interior view) – explain gravity and collision
 - d. Walk tools in interior viewpoint
 - e. Avatar on/off through Realism button (Viewpoint tab) – more on this later
 - f. View cube
 - g. Steering wheels
- 9. Background settings (View tab)
- 10. Show how to split scene view through View tab, split buttons
- 11. Selection Tree
 - a. Note referenced files
 - b. Explore tree view
 - c. Right click for selection resolution
- 12. Hide options (Visibility tab in Home)
- 13. Visibility overrides

14. Selections & Properties

- a. Show properties window interface
- b. Note selection options
- c. Escape to cancel

15. Reference views (View tab)

- a. Undock if necessary, leave floating
- b. Set scene view to **Plan 01** (reference views folder) – explain wireframe
- c. In Plan view right click and set to current view
- d. Change scene view back to interior, note arrow
- e. Note movement of arrow during walk/fly, and also that the arrow can be moved directly
- f. Repeat with plan...

If time:

- 1. Sectioning
- 2. Creating viewpoint animations
- 3. Selection sets
- 4. Point out contextual tab in ribbon when items are selected (save for session 5 unless we have a lot of time)