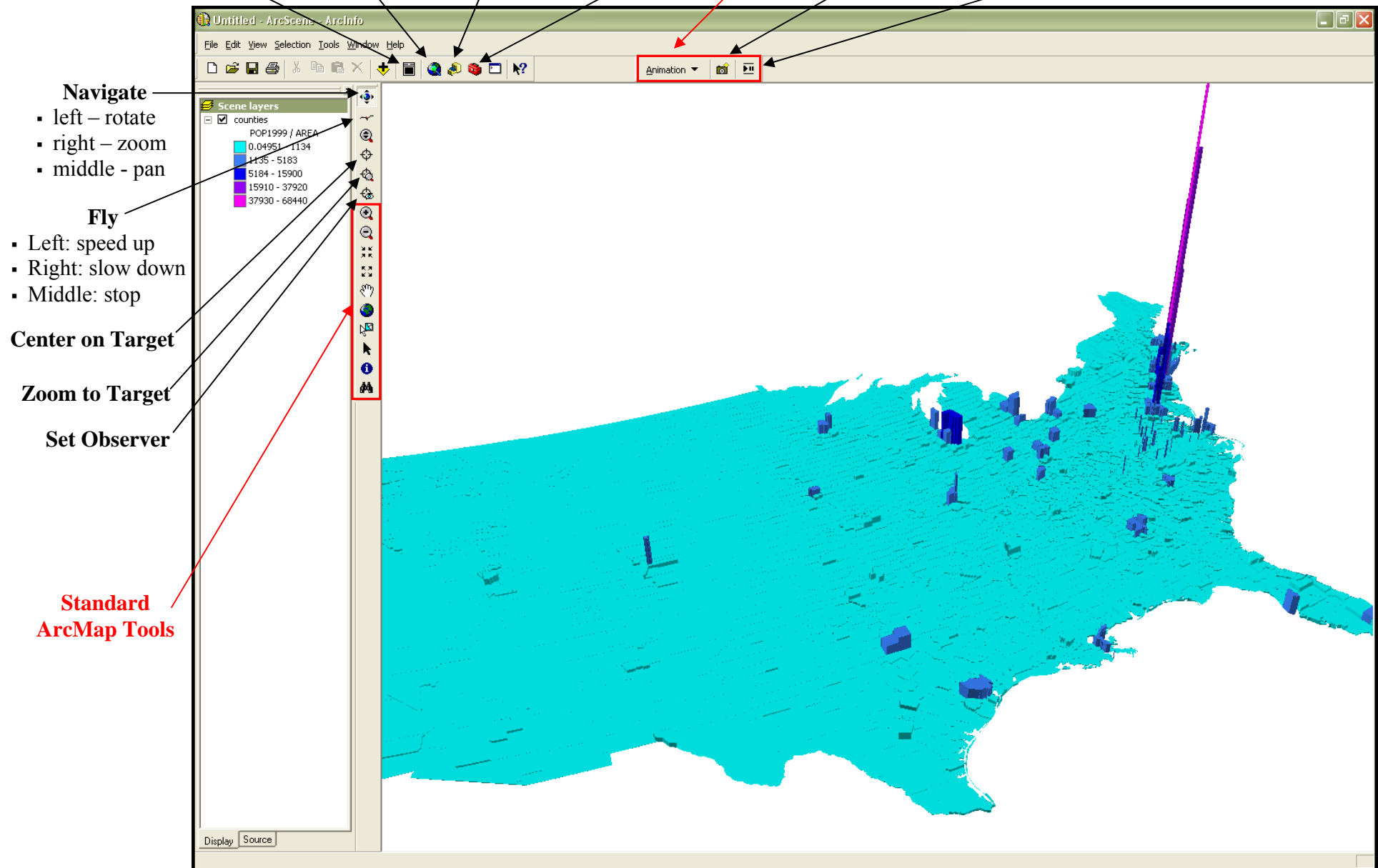


Making 3D GIS Videos! The ArcScene Interface

ΕΡΓΑΣΤΗΡΙΟ ΘΕΜΑΤΙΚΗΣ

ΑΝΥΨΩΣΗ ΟΙΚΟΔΟΜΙΚΩΝ ΤΕΤΡΑΓΩΝΩΝ

New 3D Viewer Shortcut to ArcMap Shortcut to ArcCatalog Shortcut to ArcToolbox Animation Toolbar Key Frame Animation Controls



Making 3D GIS videos

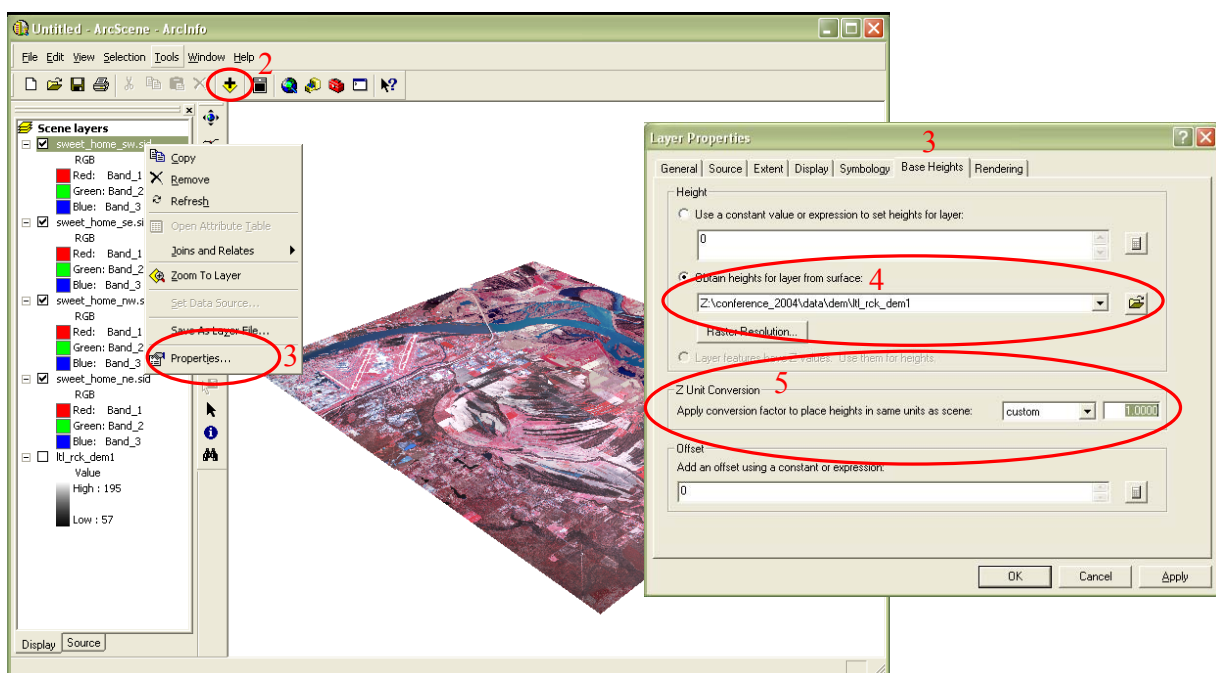
Things needed:

- ArcGIS 9.0 with extensions licensed
- Data: elevation (DEM), aerial photographs, buildings, roads, etc
- 3 button mouse

1. Start ArcScene: Start> All Programs> ArcGIS> ArcScene
2. Add your data by using the yellow plus sign button on the toolbar. It will probably take a while to add aerial photos – be patient ☺

Note: your DEM layer doesn't need to be turned on if you have aerial photographs.

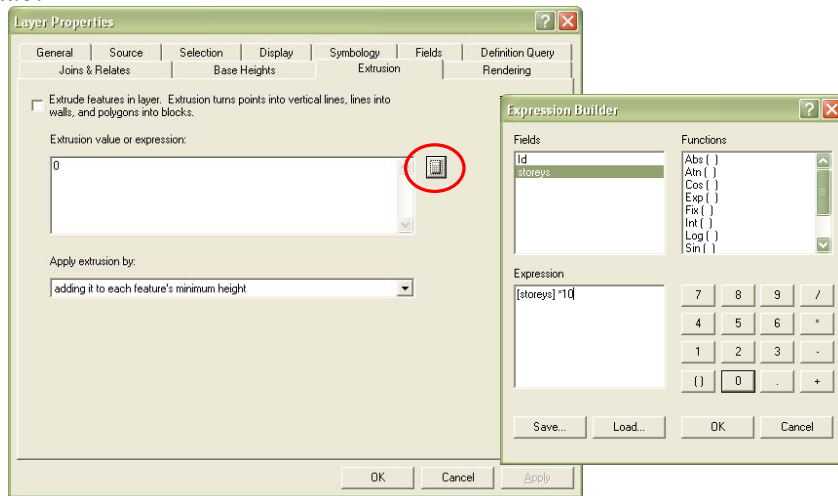
3. Make your data 3D ... Right click on the layer go to properties & the base height tab



4. Select Obtain Height for layer from surface – your DEM should automatically be there (otherwise you need to browse for it).
5. Change the Z unit Conversion to exaggerate the hills and valleys – the larger the number the steeper the hills.
6. Repeat for all of your data in the scene (e.g. aerial photographs, roads, etc)
7. If you are using aerial photographs you can improve their quality by going to the rendering tab in the properties menu. At the bottom of the window slide the “*Quality Enhancement for raster images*” closer to High. (but not all the way because it will take a long time render).

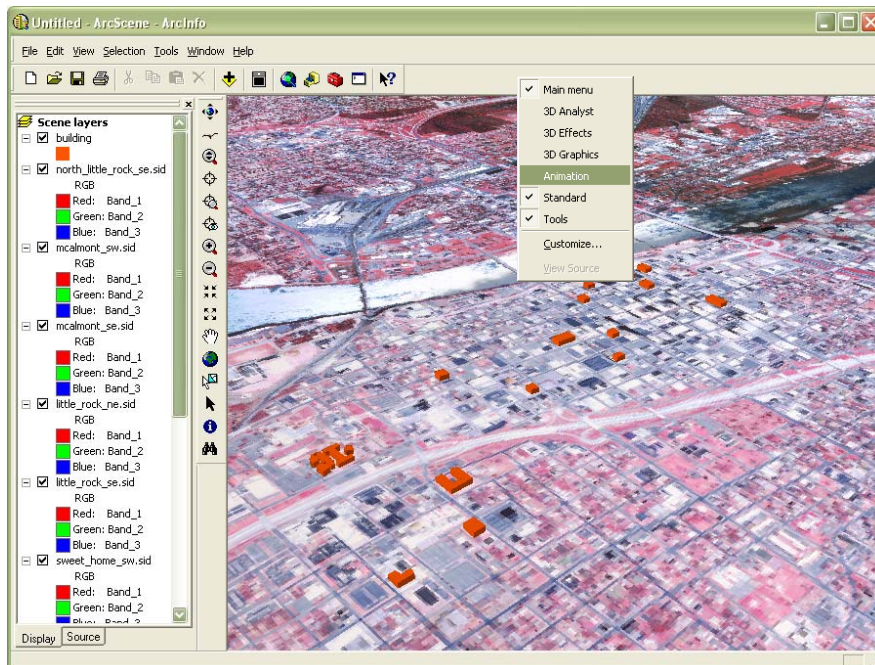
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8. To make 3D buildings: Right click the layer and set the base heights as above, then go to the Extrusion tab.



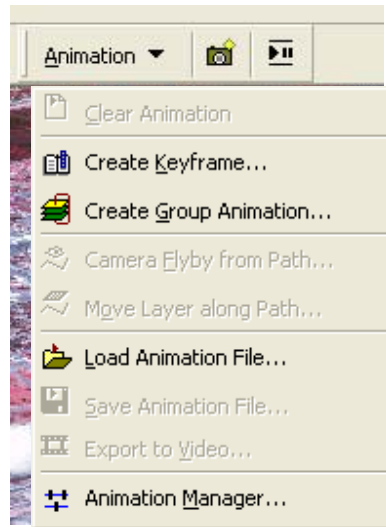
9. You can make them all the same height by putting a number in the Extrusion box (e.g. 20), if you would like different heights of buildings then you will need to have a field (column) in the attribute table with information such as “Storey Number”. Then you can use the calculator (Expression Builder) to get the different heights ... double click the field name in the top left box so that it appears in the Expression box below. Then type in * 10 (or whatever height you feel one story is).

10. Now that you have your data set up in 3D you can start creating your video ☺



11. Right click the grey area above the scene. Click on the Animation Toolbar and dock it above the scene.

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12. The Animation pull down allows you to access the animation manager, save your animation, export to video, and clear animation.
13. The icon that looks like a camera is the “Key frame”: click on this to save a particular points within the view and navigate to another part, press key frame again. Arcscene will fly between the two.
14. The icon that looks like a play/pause button opens up the animation controls. You can use these to record, play, pause and stop your animation. By pressing “options” you can also change the length of animation, and the mode.



15. If you want to create a video by flying (using the bird) then you can the best way is to use the record button.
16. Once you are happy with your animation you can Export to video. Go to Animation> Export to Video. Name your movie and select your video type - you have the choice of AVI (*.avi) or Quicktime movie (*.mov). Click Export ...
17. Unless you know a lot about movies you can leave video compression options as default. Click OK.
18. **IMP. NOTE:** It is really important not to do anything while ArcScene is exporting your video – otherwise that is what will be exported – so no going on the internet, opening another program, locking the computer, etc!