##### [00:00:00.910] - Speaker 1

Welcome to this Community Viz Video Tutorial this tutorial is about setting up scenario 3D scenes. Look for a different video on exploring scenes once they've already been set up. The general idea of of setting up a scenario 3D scene is to go from a 2D arc map or community project like this one, and turn it into an interactive 3D scene like this one. That's what we'll do in this video.

##### [00:00:30.890] - Speaker 1

To set up a scenario 3D scene, you'll need the Scenario 3D toolbar. If it's not already showing, you can add it by doing customized toolbars and choosing Scenario 3D from the Arc map menus. Here's a three step process that you go through. The first is specifying how you want lines, points, polygons and images to appear in the eventual 3D scene. The next is running an export which creates a new file called a scene file.

##### [00:01:01.250] - Speaker 1

And the third is launching the viewer to look at your work.

##### [00:01:07.170] - Speaker 1

Now, here's the general concept of how it goes from two D to three D. Images in 2D become terrain cover in 3D. Points in 2D become buildings, trees and other objects. Lines in 2D usually turn into roads or fences, or sometimes walls. And polygons and tudi usually turn into ground cover like parking lots or lawns, or perhaps turn into what we call extruded buildings, which are building footprints that have been expanded in the vertical or z direction.

##### [00:01:44.430] - Speaker 1

So let's look at doing that. In the scenario. 3d exporter. The first icon is the one you want. 3d scene settings looks like this.

##### [00:01:55.520] - Speaker 1

And the first tab I get to is called General. That's where I set the export path, which is where my dot scene file will be stored and I can get to for later reference. I can set some information about author and description, and I can choose what the sky will look like. Here's a sunny sky. There's also options for mountains and a cloudy sky.

##### [00:02:17.020] - Speaker 1

These are called backgrounds, and you can sometimes find additional ones if you desire on the web.

##### [00:02:25.890] - Speaker 1

Here's a reminder of what the sky looks like in the 3D scene. I can never touch it and never changes. It's just an image, but it's a pretty good one. Next up is the Scenarios and Layers tab. And this is where most of the work happens.

##### [00:02:41.140] - Speaker 1

I can choose which scenarios I want to include in my scenario 3D scene. And if I want, I can use a terrain layer. This is what gives the scene mountains, valleys, et cetera, terrain. And it's usually based on a contour layer with a height attribute. It can be actually any layer that has a height attribute.

##### [00:03:00.810] - Speaker 1

This layers list is all the layers in my analysis. The same ones over here and the ones I've been working on have a yellow cube next to them. That means that I've already made some settings for that layer. A green check means I want to include that layer in the next export that I do, I can clear this check. It just means I won't export that layer, but my settings are saved.

##### [00:03:25.890] - Speaker 1

To create or edit the settings for any particular layer, double click its name in the list or highlight it and use this Edit layer settings button which opens up the 3D layer settings window. In this first example I have chosen an image and images are very simple. You can generally accept the defaults. For the next example, let's look at street trees. This is a point layer and this exemplifies a typical layout for the 3D layer settings windows you use for points, lines and polygons.

##### [00:03:57.360] - Speaker 1

There are usually four panes and you work from the left to the right. The first pane is called Substitution Method and this talks about how 3D symbols will be associated with features in the map. Single is the simplest. It's just a single 3D symbol for every feature on the map here for street trees I've chosen a birch tree from the 3D Model library that comes with Scenario 3D. You'll also find materials and backgrounds in this library.

##### [00:04:30.270] - Speaker 1

These are KMZ files or Dae files or three DS files. There's a large selection of them sorted into different categories. If you want to add your own, you're welcome to and you can find many more models like this from the 3D warehouse available on the web. Once you've chosen your model, you can set some options. Scale adjusts the size of the model compared to its original form.

##### [00:04:58.880] - Speaker 1

So a factor of one means use the original size, a factor of two means double the original size, et cetera. Orientation is how it's twisted in the 3D scene and vertical offset is how far it's origin, usually its base is from the ground or the terrain.

##### [00:05:17.670] - Speaker 1

Notice for each of these you can either enter a number directly or you can use a field in the layer that you're working on. So in Street Trees layer, for example, I have a field called Scale, which has some random numbers which gives the size of the trees some variation.

##### [00:05:36.910] - Speaker 1

Now let's look at a line layer like streets here. In this example I'd like to use a substitution method called value based. What that does is look for an attribute that you specify in the layer, finds all the unique values of that attribute and then you can symbolize on each one. Just pick one and set whether you want it to be a color or a texture. And if it's a texture, you can choose.

##### [00:06:01.120] - Speaker 1

Pictures also specify what you want to happen with the shape. For instance, you can make the top flat, you can make it conform to a surface, et cetera. You can also set extrusion height, which is how far up it goes from the ground and width. So it's a single line, but we're going to use the width that corresponds to the right of way, which is another field in the layer. Also with this, you can set the sides.

##### [00:06:28.450] - Speaker 1

So, for instance, something like a road, I just make it gray. And in this case, I'm doing no sides. I might want to just give it a little simple color to give it more sense of thickness.

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And finally, let's look at a polygon layer, like commercial building footprints.

##### [00:06:49.430] - Speaker 1

Here. It's about the same as liners tops and sides. The top think of as the roof, and the side now is the interesting part because you might want to put on some facades that make it look more like a building. Again, these are available from the 3D library, or you can get more on the web.

##### [00:07:11.490] - Speaker 1

So when I'm finished setting up all my layers, there's a few more options I can set. I just want to remind you of this general export path where a dot scene file is going to be placed. The way I create that dot scene file now is using the Export 3D scene button. I simply push it and automatically all my work will be wrapped up and made into this scene file. When it's done, I can launch the Scenario 3D viewer to see my scene, and you can see a different demo video on how to view that or how to use that viewer.

##### [00:07:47.910] - Speaker 1

Final point is this button here. It's export selected layers. And once you've created a scene, if you want to just update one or two of the layers, you can do that here. It's faster than re exporting the entire scene if you wish.

##### [00:08:04.750] - Speaker 1

So that's a brief introduction to set up in scenarios. As always, more help is available from the menu. Thank you for watching this community Vis video Tutorial. For more video tutorials and community of resources, please visit the website.