Forestry Inventory Planning

Tim Clark, Esri, assumes the role of forester to demonstrate how ArcGIS can be used to layout a Forestry Inventory Plan. The resulting maps and templates can be taken into the field to collect data.

http://video.esri.com/watch/159/forestry-inventory-planning

Video Transcription

00:01 I want to take the next few minutes to play the role of a forester...

00:03 ...and show you how I can use ArcGIS to lay out a forest inventory plan.

00:08 When I'm done, I'll be able to take my map and templates out into the woods to collect data.

00:14 So in order to lay out a forest inventory, I need to select random locations on the ground where my field crews can go...

00:21 ...and actually measure trees following standard forestry practices.

00:26 I'm going to start with one inventory point that exists from a previous inventory that happens to be in the same area.

00:33 By reusing that point, my field crews can revisit that location and update the data that's already been collected there.

00:41 So the first thing I need to do is run a custom forest inventory tool that was written to create either random or...

00:47 ...gridded plot locations inside of selected forest polygons.

00:52 Now new to ArcGIS 10, I can add custom functionality to my desktop without administrator privileges using the Add-in Manager.

01:02 I simply browse to the folder containing the add-in that I want to use...

01:07 ...and ArcGIS takes care of the registration process for me.

01:11 So I can see from the Add-in Manager that this tool consists of a button on the crews point tool category.

01:18 I can then access the customized dialog, locate my tool, and drag it to a toolbar.

01:26 So now I can select the forest stands that I want to inventory and run my tool.

01:35 So I want to create random locations.

01:38 I want to create five plots per polygon, and I want to separate them by at least 20 chains.

01:46 So there are my random inventory locations.

01:48 So the next thing I need to do is to run an ArcPython script that will process my point locations...

01:56 ...and create a standard forest inventory plot layout, and it will process my existing data.

02:03 So now as I zoom in on a plot, you'll see the inventory layout that got created...

02:09 ...and a new feature class containing individual tree locations from my existing data.

02:15 So now the last thing I need to do is to create an edit template for my Tree feature class.

02:21 So I simply access the organized features template dialog and select the Tree feature class to create the template.

02:29 So now I can use this map and the license to ArcGIS Mobile that comes with every desktop...

02:36 ...to run a geoprocessing tool to create a mobile project package.

02:40 This mobile project package will deliver my map, my data, and my templates to my mobile device.

02:47 So now as I switch over to my mobile device, the first thing you should notice is that again...

02:53 ...I have the same map and templates that I used on the desktop and the web.

02:58 In the field, I would navigate to a plot center and start collecting data.

03:04 As I select the Collect Features task, my Edit template is now available, so I can select the feature I want to add...

03:14 ...and then collect its geometry, either using the map or the GPS.

03:22 And then now I can collect the remaining attributes.

03:27 So I won't go into a lot of detail on the kind of data we collect in a forest inventory, but hopefully you get the idea.

03:35 So what I've been able to show is how we can use one map...

03:38 ...and one set of templates to deliver editing capability across the desktop, web, and mobile devices. Thank you.

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