60 Second Techniques with ArcGIS

Brief demonstrations focus on ArcGIS productivity techniques.

http://video.esri.com/watch/158/60-second-techniques-with-arcgis

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Video Transcription

00:01 Sixty-Second Techniques with ArcGIS.

00:04 Rather than just talking about what's new with ArcGIS, we want to focus in on techniques that you might not know.

00:11 ...so that you can learn them today and take them home and use them tomorrow, and hopefully...

00:16 ...be more productive and more successful.

00:19 This demo's going to be a little different in style.

00:21 It's right after lunch, you might be getting a little drowsy, so we're going to do a series of rapid-fire questions...

00:27 ...60 seconds each.

00:28 So I want you to meet a couple of friends of mine.

00:30 Over here on the left is Jo Fraley from Tennessee, and she's going to be working on a map of Afghanistan.

00:36 And then we have Nikki Golding from Florida who's going to work on a map of...

00:39 ...environmental facilities from the Chesapeake Bay.

00:42 So if you guys are ready, let's go ahead and get started.

00:45 Jo, looking at the map of Afghanistan, it looks like the table of contents is lost; where did it go?

00:51 It's actually not lost; the table of contents is now a dockable window, so it has the capability to autohide.

00:58 As it comes and goes, I want you to notice that the map doesn't refresh.

01:03 And if I want to use the table of contents in the typical way, I just push the pin and it's available.

01:08 So this saves me time because I have to wait less for the map to refresh.

01:13 Okay, second question. How do you access the new Catalog window in ArcMap?

01:18 I can get to the Catalog window from the standard toolbar.

01:20 And when I open this up, this is also a dockable window, and I can tell that because I get the blue guide arrows...

01:26 ...to help me figure out where I want to dock it on the interface.

01:30 This gives me very quick access to my maps, data, tools, and data management.

01:37 Because it's a dockable window, it also has that autohide capability.

01:42 And so now I rarely open the stand-alone ArcCatalog application anymore, and this also saves me time.

01:49 Okay. Switching over to Nikki.

01:51 We see a map of environmental facilities, but the map is kind of ugly.

01:55 So, how do you add a basemap to improve the cartographic look?

01:59 To the right of the Add Data button, we've provided a new drop-down.

02:02 From that drop-down you can select Add Basemap.

02:06 This presents to you a basemap gallery from which you can choose.

02:10 Some of the basemap options that you have available are a DeLorme basemap, an OpenStreetMap basemap...

02:18 ...an imagery basemap, and a topographic basemap.

02:22 So all this content is freely available and now easier to access directly from ArcMap.

02:28 Okay, back to Jo.

02:30 Can you zoom in to Kabul?

02:32 Sure.

02:34 And if we look at that map, it would appear that the map draws kind of slow.

02:38 So how do you use the new fast basemap functionality to speed up the drawing?

02:42 Well, actually, it doesn't draw that slow.

02:43 If I pan around the map I do see some white space around my edges.

02:47 And it takes a few seconds for the map to refresh.

02:50 But I can speed this up by taking advantage of the new basemap layer from my Data Frame context menu.

02:56 This new basemap layer acts very much like a group layer in that I can just select feature classes from...

03:02 ...my table of contents and drag and drop those into this new basemap layer.

03:06 So now when the map refreshes, and I start panning around, I want you to notice that in those...

03:11 ...edges I no longer see that white space.

03:14 I can also take advantage of what we call quick pan, Q for quick pan, and I can quickly pan around this map and roam.

03:21 Is that fast enough for you, John?

03:23 Fast enough for the moment. So, moving on. Back to Nikki.

03:26 What's the new query layer capability in ArcGIS 10 all about?

03:30 Well, it enables access to both spatial and nonspatial tables within a database.

03:34 Okay. So that leads us to the next question.

03:36 You've got all those facilities; how do you connect to a SQL Server database and bring in another...

03:41 ...nonspatial table and join that up?

03:44 From the File menu and the Add Data option, have the ability to add query layers.

03:49 By simply providing the connection to the database, I'm provided a list of tables.

03:54 When I double-click on a table I'd like to interact with, note that the SQL is already stubbed out for me.

04:01 So now all I need to do is click Finish and the table is added directly to ArcMap.

04:05 Okay. Second part of that question, can you open up the attribute table for the points on the map...

04:11 ...and show us the trick on how to compare two tables side by side?

04:15 Sure. So when I have two tables open in the table window, you'll notice that I have two tabs along the bottom.

04:21 In order to see them next to one another, I simply select one of the tabs, click and drag...

04:27 ...and drop the table onto the guide arrow.

04:29 This enables me access to both tables at the same time.

04:32 Okay. Back to Afghanistan and Jo.

04:35 When you run a geoprocessing tool or model, it often takes a long time to run.

04:39 So show us the new background geoprocessing and what does that really mean.

04:44 To show this, I'm going to run a multiring buffer tool and select my feature class containing my points.

04:49 I'm also going to add some different parameters for this particular tool run, but before I click OK to run this tool...

04:57 ...I actually want to double-check and make sure my background processing is turned on.

05:01 I can get to that from the Geoprocessing menu, Geoprocessing options, and here's the place...

05:06 ...where you would check on, or enable, background geoprocessing.

05:10 Now that I'm sure it's on, I'm going to click OK, and now it can continue to interact with my map and do my work.

05:17 I also get an update on the status bar of this current model run.

05:21 I can take another question, John.

05:23 Okay, so that's still running.

05:24 What if you go out and have a cup of coffee and come back, how do you know if your job actually finished?

05:29 I can get to the Results dialog from that Geoprocessing menu as well.

05:33 So this Results window gives me information about any current session I have running, as well as any...

05:39 ...previous sessions that have been saved in the map.

05:41 The model just completed, and I got a notification as well in the bottom right-hand corner.

05:47 Okay, Nikki, how do you make your maps more time aware?

05:51 You start by enabling time on the layer.

05:53 So by accessing the properties for the layer, we'll note that there's a new Time tab.

05:58 By checking the box to enable time on the layer, this enables the time slider within ArcMap.

06:05 To enable time on the map, you simply select this button.

06:08 So now I'm able to look at explicit moments in time for weather data on October 14.

06:14 So now that time is a core part of the ArcGIS system, it's easier to make your map time aware.

06:20 Okay, great.

06:21 Jo, show us how to create a map book with one page per city district.

06:26 To create a map book I'm going to switch over to our layout view.

06:29 We actually call map books Data Driven Pages.

06:32 So I'm going to bring up the setup dialog for our Data Driven Pages and enable this within this map.

06:38 I'm going to select the data frame that contains my district boundaries and set a few other parameters.

06:43 When I click OK I'll now have one page for each city district, and I can cycle through that on my Data Driven Pages toolbar.

06:52 But what I'd really like to see are the district boundaries actually pop out.

06:55 So now I have the option, when I right-click on the data frame containing my district boundaries...

07:00 ...I have the option to clip based on that data-driven page extent.

07:05 So now I only see the data for that particular district for that page.

07:09 These can also be exported out to a multipage PDF for distribution.

07:14 Okay, Nikki. Your map is still kind of sparse, or bare.

07:17 So how can you search to find additional content that you can add to your map?

07:21 Using the new search capability, I have the ability to search for information locally.

07:26 I've found some data that I'd like to add to the map so I simply drag it and drop it.

07:31 If I wanted to look for data within my organization, this time using a keyword layer.

07:40 I've again found some information I'd like to add to the map, so again I'll drag and drop that onto the map canvas.

07:47 If I wanted to broaden my search and look for information on ArcGIS Online, so user-contributed content.

07:53 This time I'll use the same keyword I used before, and I found some NOAA environmental...

07:58 ...sensitivity index information.

08:00 To add that to the map, I'll double-click.

08:02 So this new search capability enables quick access to content locally, within my organization...

08:09 ...and also from ArcGIS Online, all directly from ArcMap.

08:14 John.

08:15 Oh, sorry. Yeah. I was checking Twitter. Okay.

08:18 So I was trying to find out if we had a question from the audience, and we do.

08:21 So the question is about military symbology, 2525C symbology.

08:26 So if we give this question to Jo, you've got hospital symbols as those red cross symbols.

08:31 How do you convert those, or change those, to a different symbol that's the 2525C symbology?

08:36 Luckily, that was an easy question.

08:38 I can just bring up the symbol selector, and just like Nikki searched on for maps and data, I can put in...

08:44 ...keywords to search all the symbols that we have in ArcGIS.

08:49 I scroll down and I actually see a friendly hospital symbol that I can add to my map.

08:53 So I'm going to change the size and add it to the map.

08:57 So now you don't need Military Overlay Editor, MOLE, anymore to add your military symbology to your maps.

09:03 I thought that was exciting.

09:05 Okay. On the military topic, how can you add a new hospital using the Military Grid Reference System?

09:11 So if somebody reads to you a coordinate that says, 42 Sierra Whisky Delta 13361922, how do you add that?

09:19 Easy, again. Just right click on the feature class containing my hospitals, and I can quickly get to my editing...

09:26 ...by selecting Edit Feature>Start Editing.

09:29 Select our hospital, right-click on the map, and on the context menu I have the ability to add an absolute x,y.

09:36 I also want to note that on this dialog you have a drop-down arrow that allows you to pick what...

09:40 ...coordinate or reference system you'd like to use.

09:43 I'm going to do MGRS, like John said, and he said 42 Sierra Whisky Delta 13...

09:51 ...361922.

09:52 ...1922. And now I have a hospital added at that coordinate.

09:56 Okay. Back to Nikki.

09:58 How do you share your geodatabase with users that have not yet upgraded to ArcGIS 10?

10:03 Using the same search capability I used before, except this time I'm going to search for tools.

10:09 I found a couple of tools that might enable that capability, one of which is the Create File Geodatabase tool.

10:15 From this tool I have the ability to create a file geodatabase that's version specific, so a 9.3 geodatabase or a...

10:22 ...9.2 geodatabase, so this actually enables me to continue working with other folks that might

not have upgraded yet.

10:28 Okay. Part 2 of the sharing question, how do you quickly share your map and work with others?

10:34 From the File menu, we have a new option to create map packages.

10:38 These map packages enable us to take the map, the layers, and the associated data and it packages them up.

10:46 I'm going to provide some key bits of information so that this information becomes searchable in ArcGIS Online...

10:53 ...choose the group that I'd like to share that with, and go ahead and upload it.

10:57 So this enables users to grab that map document, all of the data, and the symbology and get up and working right away.

11:05 Okay. So far we've been focused just on ArcGIS Desktop.

11:08 But let's switch over to ArcGIS Server.

11:10 So Jo, on the subject of sharing, lots of users have Microsoft SharePoint.

11:15 Can you show us in 60 seconds how to integrate ArcGIS Server with SharePoint?

11:21 No, not in 60 seconds.

11:23 It took me actually five minutes to create my SharePoint site, so let me show you what I did.

11:30 In Microsoft SharePoint 2010, we manage our content, whether it's lists, documents, any content that we have.

11:39 So I created a new site page containing the ArcGIS Server mapping web part.

11:44 This mapping web part is easily configurable to add in your own content, and again, those lists...

11:50 ...that have been spatially enabled that you manage inside of SharePoint, and getting to that attribute data.

11:57 You can also easily configure geoprocessing services.

12:00 So, for instance, I have a drive-time analysis that I configured to run for Kabul.

12:05 So all this can be done through just some simple configuration within your SharePoint environment.

12:10 But, if you need to extend the capabilities, you have that ability, as well.

12:15 Okay, Nikki, last question.

12:17 How do you quickly take your work and create a Silverlight web application?

12:21 Using the ArcGIS application builder for Silverlight, I have the ability to configure an application without writing any code.

12:28 Starting with the basemaps, I've that same basemap gallery that we just saw in ArcMap, so I can choose...

12:33 ...to change the basemap content.

12:36 I can browse for data on my local ArcGIS server or ArcGIS Online.

12:42 I have control or can configure additional tools.

12:46 So, here's a list of available tools that we can add to our application.

12:50 So we have a geoprocessing tool that we can configure; we have standard navigational tools that we can configure...

12:57 ...and we also have the ability to change the layout.

13:00 So using the layout gallery I can decide how I want the application to appear.

13:05 So once I have applied the layout to the application and publish it, which I've already done, this is what it would look like.

13:13 So, again, here's the basemap picker, or the basemap gallery.

13:18 Here's some standard tools that we can use, and here's that geoprocessing tool that I can configure.

13:23 So in this case, we'll just take a quick look at a contaminant that's introduced at the mouth of the Chesapeake Bay.

13:30 So let's say we have about five days; we're interested to see how far that could travel in that amount of time.

13:36 So, in just a few minutes, John, I've configured a Silverlight application without writing any code that enables me...

13:42 ...to look at online content, my own spatial content, and use analytical tools, all without writing any code.