

Creating Web Applications with ArcGIS

ArcGIS offers several options for building Web applications. You can start by using one of the ready-to-use Web applications and adding your data on top of a basemap in the ArcGIS.com Web map or ArcGIS Explorer. If you need more control over the look and feel and functionality of your Web application, choose the configurable Web map built with Flex. In this session, you will learn more about the types of Web applications you can build with ArcGIS.

<http://video.esri.com/watch/73/creating-web-applications-with-arcgis>

Video Transcription

00:01 Let's talk about creating web applications.

00:05 So I'm Jeremy, Bernie and Derek, as you know, and we're glad to be here to talk about building web applications with ArcGIS.

00:14 You have many different options now, so we're going to hopefully go through all those...

00:18 ...and you'll leave here empowered to go out and put your maps on the web.

00:24 So just a brief agenda here...go over the web application fundamentals, a little bit about what kind of web applications we offer...

00:33 ...and with no programming experience required. Then we'll drill into each of our main viewers.

00:39 The arcgis.com viewer, ArcGIS Explorer Online, and jokester here will do the Flex 2.0 viewer.

00:44 So we don't have it in arcgis.com in this experience yet...

00:49 Just a little bit about fundamentals. I think these are pretty important to...I'm sure this is like a...

00:54 ...you've heard this before, it's a broken record, but this is very important.

00:59 Of course the web application is accessed over a network, over the Internet.

01:04 It really consists of a web map, and it's not just one service that goes with one application.

01:11 That was really the ArcIMS days, if you remember.

01:14 When you did the ArcIMS days, you built the service that targeted a specific application.

01:18 Within that service, you would include things like your orthophotos, your sidewalks, maybe your building footprints, your street poles...

01:27 ...everything all just to drop on well locations, or something like that.

01:34 Then your user, that forced you to show your users applications where they would turn on

and off individual components.

01:41 Of course, the user needs to be able to turn off the double-wide stream, from the perennial stream...

01:45 ...or they need to turn off the ponds from the lagoons...No, of course they don't need to do that, but that's what that framework gave you.

01:54 Now it's really different. You need to come up with a basemap, either from Esri and arcgis.com using one of our basemaps that we offer...

02:03 ...or Bing or Open StreetMap, or you create your own basemap.

02:08 And then you'll just add the particular operation layer on top of that basemap.

02:14 That's very powerful, because you can start mixing and matching, different services together to create new and different maps.

02:23 So it's a very important concept. Now the operational layers are the actual...

02:29 ...those are the important layers that you're going to add to your map.

02:32 It could be a toxic release inventory layer, it could be parcel information...

02:39 You know, whatever your map needs to advertise, whatever is the most important thing...

02:44 ...that's what you put into your operational layers that you put on top of your web maps.

02:49 And then also, you can enhance your web maps with tasks.

02:58 At ArcGIS 10, we've tried to make it really easy to create web applications...

03:02 ...for you to get your knowledge and your maps out over the web for everybody to use on multiple devices and platforms.

03:08 So we have several out-of-the-box solutions like we've talked about.

03:11 We have a hosted web application in arcgis.com...

03:14 ...and those are the two applications that Bernie and I will talk about, arcgis.com viewer and ArcGIS Explorer Online.

03:21 And Derek will talk about the configurable application solution that we have, and that's the ArcGIS Viewer for Flex 2.0 beta.

03:29 All this information can be accessed from the Resource Center. So I want to drill into the arcgis.com viewer.

03:35 Well, putting maps on the web is easy now, and that's the most important takeaway that you should take away from this conference.

03:42 You can use arcgis.com to create and share maps. Just by using the arcgis.com viewer, which I'll show you in a second...

03:49 ...you can create this map, and send somebody the link to that map and they can view it themselves.

03:54 But you can go another level. You can embed the map that you created in arcgis.com in a blog within your website.

04:02 We make easy to cut and paste that map, give you the little codes you need to drop it in.

04:07 The next level is you can personalize that map by actually downloading a preconfigured layout with the map that you authored in arcgis.com.

04:16 Download it to your website, change the logo, do minimal customizations to it, to personalize it to give the context to your users about the map.

04:27 Then finally, the last step you do, if you need to add more functionality or to create a more focused map...

04:33 ...is to actually drop down into the APIs.

04:36 So the arcgis.com viewer is built with JavaScript API, and so you can use the JavaScript API to enhance that even further.

04:43 But really that development stage is really the last stage that you go to.

04:51 So with that let's just get to some demos here.

04:59 Okay, so I'm sure you've heard a lot about arcgis.com.

05:04 And arcgis.com really works off the services that you published, all the geographic information and knowledge...

05:12 ...the authoritative content that you guys put out for your ArcGIS servers...

05:15 ...arcgis.com is a platform to be able to combine all that...

05:19 ...mix and match, share, securely or with the public, that information to anybody else.

05:28 But how do you get your maps into arcgis.com?

05:31 Well, it starts with map services...

05:33 ...and just briefly I want to just show you a little bit about how you get your maps, MXDs, into arcgis.com as a map service.

05:42 Well, you need publish this map document, so in this case I've got ArcMap open, I'm looking at a layer of recent earthquakes...

05:51 ...and then I have for context, I have this basemap and topographic layer.

05:55 Now I can go ahead and just publish this right here, click the Analyze button,...

06:01 ...and it's going to say, Ah! Don't publish basemap layers, stupid!

06:05 Because you don't want that basemap layer to come in.

06:08 That's just context for you as you are building or authoring the symbology for the layer that you actually want to publish.

06:13 So you want to remove that layer before you actually go to the server, publish it to the...

06:18 ...as a service, because the topographic map is already accessible from another map service...

06:23 ...and you'll mix and match those two together.

06:27 So let's go ahead and remove that layer.

06:31 Then if I want to go ahead, and publish it again, I can go ahead...

06:35 ...click the Publish ArcGIS Server button, and I'd be good to go.

06:38 Now for this demo, I've already published this service on an external ArcGIS server...

06:44 ...just so that we could use it in other contexts later, and that's right here.

06:53 This is this recent SoCal earthquake service.

06:56 It has just one layer in it, and it has some information about the extent and whatnot.

07:01 Actually what I want to do is just copy this URL.

07:04 This is the addressable resource for this map service, and I'm going to use that to add that into arcgis.com.

07:12 So we'll go over to my content, and arcgis.com...

07:16 ...when you sign up for arcgis.com, you get two gigabytes worth of storage for free.

07:21 And you can store data, layer packages, map packages, and whatnot...

07:25 ...or you can create references or create map service links or web maps, and those don't take very much space at all.

07:33 So let me go ahead and add this new item, in this case we're going to ask you a couple of questions.

07:38 Where is this item? Is it a file on your computer? Well, actually it is an ArcGIS Server map service.

07:44 We'll also ask the question, it could be a web mapping application or a mobile application...

07:49 ...and that's for you to share back to your application to arcgis.com because it's not just about maps; it's about maps and apps.

07:55 In this case, I want to share this ArcGIS Server web service.

07:59 Go ahead and plop in the URL, and we will go ahead and figure out the title for you.

08:06 This time, I'm going to give it a better title. We'll go ahead and tag it, make it so it can be searched better. And now add it.

08:25 So arcgis.com is going to contact your service and get some more information about it, and we'll add that in as a new item.

08:32 Create an initial thumbnail, I could go ahead edit and add more description or access constraints or whatnot...

08:39 ...and I could decide to share this if I wanted to.

08:44 I'll share this service with everyone. Now I just want to see that on a map, so just by clicking on the button...

08:52 ...I go to the arcgis.com viewer.

08:55 By default, I'm looking at the topographic map, but I've just added the service that I've published on top.

09:02 I see the title there, Recent Southern California Earthquakes, and I can drill over to the legend and I see the legend for that operational layer.

09:09 This is what brings the map to life, communicates information to the end user. Now I could go ahead and tweak this map...

09:21 ...I can go ahead go and change it to maybe a different map.

09:23 Maybe I don't want the topo map, but I would rather actually look at the OpenStreetMap service...

09:29 ...or even the shaded relief.

09:38 Switch back to the topographic map, and now I want to add a bit more information to this map.

09:43 Now I could go and publish some more things myself...

09:45 ...but I'm going to go ahead and search and find things that are already out there.

09:52 So I'm going to search ArcGIS Online. I have different ways to find content within arcgis.com...

09:57 ...but now I'm going to search for ArcGIS Online to find anything with US faults.

10:01 Here I see a service, active US faults, published by the mapping center team.

10:06 This map service represents the slip rate and fault visibility for faults. Hey that sounds good.

10:10 I'm dealing with earthquakes, let's go ahead and add that. Now I've added that map on top of my earthquakes.

10:19 I'll zoom in a little bit more, and if I switch back over to the legend, I get the legend for the earthquakes...

10:30 ...excuse me, for the faults as well.

10:36 I'm going to go ahead and tweak this bit...

10:38 ...and move this recent Southern California earthquakes above the other one, above the fault layer.

10:45 But now I don't want to stop there ...I want to find some other content to add to this map.

10:50 So instead of searching for ArcGIS Online, I could search directly from my ArcGIS server.

10:55 I could type in my own GIS server in here, and I'd see all the services that were there and I could pick the one that I want.

11:01 Or I could look through a particular group that I belong to, see all the services that are in that group...

11:06 ...and then add that service to the map, or I could search the open web.

11:11 I'm going to search the open web for earthquakes, and here I found a service from the Resources Agency of California...

11:23 ...a tsunami risk for California, so let's go ahead and add that map.

11:28 Now I see a few things that came down here in Southern California, I see that area in blue, that's the area of tsunami risk.

11:39 I'm done adding layers, I'm going to go ahead and move this one down...

11:44 ...all the way to the bottom, so it doesn't cover up anything.

11:47 Alright, I'm pretty happy with this map.

11:49 I want to save it so that I can share it out with other people, and also come back to it later.

11:54 Let me go over to the Save button; now I can give a title to this map.

12:01 So, Recent California Earthquakes Demo.

12:11 Recent California Earthquakes Demo, Bernie, for future reference, which has California Resources Agency earthquakes...

12:27 ...and I could also put a good...also you definitely want to put a good description...

12:31 ...but if I were to write a good description...

12:33 ...Derek might tell more jokes, so I'm going to skip that step and go ahead and save that map.

12:41 So now I'm saving that map.

12:42 Now I'm not really saving anything, any actual data to arcgis.com, I'm just saving basically the order of the maps...

12:52 ...what's my basemap, what are the three operational layers that I have on top...

12:56 ...what's the transparency that if I may have set that...

12:59 ...what's the extent of the map, that's all that I'm really saving here. Now if I...

13:07 Now that I've got this map saved, I can go ahead and share this with somebody.

13:12 First, before I share it with anybody, if I want to share it with anybody I need to go ahead and make it public.

13:17 I could keep it private and then only people who belong to...I could keep it private or share it with a group...

13:22 ...and then only people who belong to that group would be able to see it.

13:25 But in the interests of putting this map out on the web I'm going to share it with everybody.

13:29 Now, once I've done that I can do a couple things here, I can just copy and paste this URL and send the URL in an e-mail.

13:36 I can go ahead and post this to Facebook or post this to Twitter under my Twitter account.

13:41 And that will send the URL to this map and somebody will open it up it will be that arcgis.com viewer.

13:46 That's the easiest way to put a map out on the web, using the viewer that we deliver and you don't have to do anything else.

13:53 I could also go a next step. I could say, I want to embed this map somewhere else.

13:57 Like maybe I have a blog I'd like to put this map into.

14:01 So I'm going to go ahead and just copy this.

14:04 You know those of you who've used YouTube, notice there's an Embed YouTube video link or string.

14:10 You copy that string and paste it into your blog; you're doing the same thing here.

14:15 We have different sizes, you can set or you can manipulate it yourself right here...

14:20 ...and I have the option of whether I want to show the zoom control. Alright, so I'll close that. Now let's jump over to a blog.

14:29 So I'll put a blog up for this site, Jeremy's test blog. It's out there; JeremyBartley.blogspot.com...everybody can go to it.

14:41 I'll go ahead and add some text here, and paste that string in just like I did before.

14:52 Now all I need to do is publish this. Now [that] it's been published out to the world, go ahead and view it, and there we go.

14:59 That map that I just authored in arcgis.com viewer has now been embedded into this blog.

15:05 It's a real map; it's not a fake map. I can zoom in, zoom out, I have control over this map.

15:12 Now if I also within that I put the link here to view.

15:14 If I wanted to go back and get more information about this map, I'll put this link view.

15:19 Larger map takes me back to the arcgis.com viewer itself, I see the comments that I didn't, excuse me...

15:24 ...the information that I didn't fill out that you would see there, and I can get comment on it and so forth.

15:32 Now, that's not just that you're going to put this on your blog.

15:34 You might also just embed this within your existing corporate website.

15:38 It should very easy for you to be able to just copy and insert that in.

15:43 Now let's go the next level. Let's say we don't necessarily just to want to embed it...

15:48 ...but actually we want to bring that map and put it within our organization...

15:51 ...and we want to have that website be from USGS.gov...

15:56 ...or MyCompany.com. Now we are still working this in arcgis.com, but we will be exposing this soon.

16:04 What we've already exposed is in the JavaScript SDK.

16:08 Now in the JavaScript SDK, we have a book of samples called arcgis.com, and I'll see various samples here.

16:16 Here's a map that has a full map layout with some border and margin settings.

16:21 I open this map...it looks like that web map is not there anymore...What I want to do...Let me go back to my map here.

16:42 To my content...here's the map I just created.

16:48 I'm going to open this map, and this is the actual ID that I'm really interested in.

16:52 This is the ID that makes this map unique within arcgis.com.

16:56 Go ahead and copy this ID.

16:59 Go back to this full map layout and see that I've got this query parameter here, web map equals this ID at the top.

17:08 This is some other web map. Replace that with the one I just copied, press Enter...

17:13 ...and now I see the map that I authored in arcgis.com accessible in this nice little layout.

17:21 We could go further, and let's say we wanted to do, maybe we wanted to pick a different layout...

17:25 ... maybe I want to pick a layout that has an overview map already enabled.

17:34 There we go right there.

17:35 So it's pulling the title from the web map itself.

17:38 I see the map, it's navigable, and I have the overview map that I can move around as well.

17:44 With no programming at all, I just did this and brought it down. Now actually I haven't brought it down just yet.

17:52 Right here we have a Click here to download it...That will give you a ZIP file that you just put on your web server...

17:57 ...you change the parameter to point it to your web map, and then it will be on your website.

18:02 And you can take these and just tweak the text...

18:05 ...so you, maybe you want to drop a textual description about the map into that left panel, it will be easy for you to do.

18:13 Or maybe you wanted to put your logo, put the USGS logo or your company logo up here on the top left, you can do that as well.

18:22 Maybe you just wanted to just put an E-mail me for questions down here.

18:25 You can put that link at the bottom and put your e-mail address in and someone will e-mail it to you.

18:31 And the important point is that you're picking from one of these predefined templates that we've authored for you...

18:36 ...and you're downloading them, putting them within your organization on your web server...

18:40 ...and you're serving it back out to everyone else.

18:47 ...but in the next release of arcgis.com over the next few weeks, we'll add that.

18:51 And we hope to have like 30 different layouts, and we might have 6 different spatial layouts of the application...

18:59 ...with each one having five different color schemes because really that's the hardest part.

19:02 You just pick the one that you like, click it, download it, edit it, point to your map, and you're done.

19:09 Now it's not just for viewing, but what we'd also like to look at is for, well, how do I create maps that are actually editable?

19:21 Let me close up some of these windows here so I don't confuse myself.

19:28 arcgis.com...excuse me...

19:30 ...ArcGIS Server 10 introduced a feature service.

19:32 Feature service is an editable map; basically, you define the templates when you publish them...

19:39 ...what layers you want to be edited, and what templates you want to be assigned for the default values.

19:45 If I look at this...that'll send me back up here...If I look at this layer here, damage point assessment...

19:52 ...I see the rendering information each of the templates that I should be able to, that our clients should use.

20:00 And you don't really have to know too much about this, but we just want to populate a web map with this service.

20:07 So I'm going to go ahead and create a new map. I'm going to search for a couple of layers here.

20:18 One I want to add for contextual information is the Station Fire parcels.

20:34 Now the next thing I want to add is this, it's hard to read in the back, but it's that same service...

20:38 ...I'd already added that service to arcgis.com, the one that I just showed you...

20:43 ...but it's the fire assessment service for the Station Fire, it happens to be a feature service.

20:47 I'll go ahead and add that, and we see some information just got populated on the map.

20:52 Let me zoom in a bit further. I see the parcels turn on.

20:56 Let me switch the basemap to imagery with labels, zoom in a bit further, and there we go.

21:05 Now I don't know if you noticed it, but at the top here I see an Edit button just came on.

21:10 Because it notices that this map had layers that were actually editable...

21:15 ...it's going to enable the editing capability of the arcgis.com map.

21:19 So I can click this Edit button and I see the templates that were already authored, published by the service...

21:26 ...and consumed by this web map, and I can just start editing.

21:30 So I can go in here and say there was only vegetation damage at this point...

21:34 ...it's going to add that, it's going to present me with the list of questions or information to fill out.

21:40 This is based on what was published, so the incident name I'm going to switch it to the Station Fire; the date...

21:46 ...I'm going to say was the sixteenth; it's only the vegetation, vegetation only, so that's not a...

21:52 ...I'll leave that, and on, and on and on.

21:55 And I'm going to fill out what's the inspector that did this, well, I'll say this was Derek who did it, and then I'm done.

22:01 I could also go ahead and attach photos to this, because this service...

22:06 ...the data behind this service, supports attachments, attachments are also new in ArcGIS 10.

22:12 We'll go ahead and attach this photo to go with it. Now it's been added for that feature.

22:18 Now I can also edit existing features, so in this case, I've selected this damage zone...

22:24 ...and maybe I want to switch it to catastrophic damage, or maybe actually I just want to delete it altogether.

22:31 I can go ahead and create other features.

22:33 Now one of the exciting parts of feature-based editing is you set the default values for each of these templates.

22:41 Not only do you set the default values for the attributes...

22:44 ...you also set the default values for what the actual drawing tool should be.

22:49 So actually in this example, this feature, the default draw tool type was Autocomplete.

22:57 Autocomplete is a tool that takes the line that you draw and will match it with any features that intersect it...

23:05 ...and then use those features' geometry boundaries.

23:10 Alright, so now I'll go ahead and save this map, Jeremy's Test Editing Map.

23:29 And the template concept doesn't just apply to read-only maps, but it also applies to maps that are editable.

23:34 We'll go ahead and share this map with everyone, and we'll go back to the details of this map, get this map ID.

23:45 I'm going to go back to my JavaScript samples, and I noticed here I've got a map with Editor here at the bottom.

23:51 So this is a template that's already set up for the editor.

23:54 So I could download this, put it on my own server, and change it so that it's working with my own web map.

24:02 Boom, there you go.

24:04 This map is editable just like the map was on arcgis.com, but in this case...

24:08 ...I will have deployed it on my own web server and then I'd be done. Yeah?

24:17 [inaudible question]

24:25 Yeah, the question is, If you have layers that are editable, but you don't want people to edit them, can you disable it?

24:31 Yes, you can right now add that layer as a map service.

[24:35](#) Map service doesn't support the editing capabilities, but you'll still see the features as well.

[24:41](#) And then also, we haven't put this into the arcgis.com viewer yet, but we will very soon.

[24:46](#) Actually the author of that of web map will be able to say whether he wants anybody else to be able to edit it.

[24:53](#) And then we'll honor that property when we display it, whether or not it's coming from a feature service or not.

[25:02](#) And with that, I think I will turn it over to Bernie. Yeah?

[25:09](#) [inaudible question]

[25:12](#) Yeah, this layer can be used anywhere. I could go back and create another web map.

[25:16](#) I'd just consume this layer in a different web map and use that.

[25:21](#) It's all going into one geodatabase and multiple services can point to that geodatabase.

[25:26](#) Let me show me one more sample of all of them.

[25:30](#) And one more sample that is very cool, and I think you guys could go and be successful right now...

[25:36](#) ...is a sample that pulls in comma-delimited data.

[25:40](#) So in this case, I've got a web map, it's just a street map in this particular area that I've authored.

[25:46](#) I've passed in that web map ID, but I've also passed in through the URL this CSV file.

[25:55](#) So this is a URL to a comma-delimited spreadsheet that's living on some external server.

[26:01](#) Just passed it into this map and we've gone out, pulled out the location information for you, and exposed it to you.

[26:11](#) And we have quite a bit of control over the query parameters that you pass in.

[26:15](#) Now the only reason that I show you this is because this is something that is in the SDK now and works with web maps.

[26:20](#) arcgis.com will be opening up and we will be able to add more of these things directly to arcgis.com and use it within the viewer.

[26:28](#) And with that, I'll turn it over to Bernie.

[26:34](#) Okay, thanks, Jeremy.

[26:37](#) Before I talk about ArcGIS Explorer, I wanted to show you something else that's pretty neat.

[26:41](#) I think our goal here is to intimidate Derek into not talking about Flex at all, but we'll see how well he does.

26:48 This is ArcGIS for iOS, otherwise known as ArcGIS on my iPhone or iPad, and it's a free download, was just released the other week.

26:56 And Jeremy earlier created a map of earthquakes and faults, and things like that, and now, you're not going to be able to see this real well...

27:05 ...but I've gone to the My recent maps and I see here's a...

27:10 ...I've got Jeremy's test editing map, I also see Jeremy's recent California earthquakes demo map...

27:16 ...and now I've opened that up, and I think at least you'll be able to see as I zoom out...

27:20 ...you'll see that big cluster of red dots, which are all the earthquakes there.

27:24 So the really neat think about how all this is coming together is...

27:27 ...ArcGIS Online represents sort of this online ecosystem that sits underneath all of Esri's products.

27:34 You can discover things there, and open them up in many different client applications...

27:39 ...and use them in many different ways, and what you can do on those maps will depend on the clients that you use.

27:43 But this is really cool, and I open this up on my iPad and the same application, it's what's used on my iPhone...

27:51 ...and I think I'm just going to show you the red dots here real quickly, I already opened it, right?

27:55 You probably can't see that, but trust me, same map...iPad, iPhone, arcgis.com viewer, custom web apps.

28:03 And now let's take a look at ArcGIS Explorer.

28:07 ArcGIS Explorer, we recently introduced a new member of the Explorer product family, it's Explorer Online.

28:12 It's been publicly available and fully released, came out of public beta about two or three weeks ago now.

28:19 And it has a similar look and feel to the downloadable desktop version, has some of the same capabilities...

28:24 ...but it runs inside of a browser and it's been implemented using Microsoft Silverlight. Next slide please.

28:32 Okay, some of the key differences are, well, first the commonalities.

28:35 Both are free, they are available to use all for free, they have some very compelling capabilities, which I'll show you.

28:41 They integrate tightly with ArcGIS Online.

28:44 The big differences are that the downloadable desktop version works with local content...

28:49 ...like your file geodatabases, your local rasters, you can connect to ArcSDE, you can add shapefiles, and it works with local content.

28:57 It's also both a 2D and 3D application.

29:00 The Explorer Online version works primarily with online content like the web maps and services that you saw Jeremy use...

29:08 ...and it's also currently a 2D application only. So let's take a closer look at that.

29:15 And we'll switch over to my laptop. And the first thing I'd like to show is how you get started with Explorer Online.

29:22 You do that by just typing in explorer.arcgis.com.

29:26 If you need to install Silverlight, you'll be prompted on the way, but here is the application.

29:32 It opens up with the default ArcGIS Online world topographic basemap, which is that basemap that has some great content in it.

29:41 So let's take a quick tour of some of that content real quickly here.

29:45 So here's Toronto, is where I wanted to go, and as I zoom into Toronto you'll see it's a multiresolution basemap...

29:54 ...and it's been compiled with contributions from GIS users everywhere, and here are the contributions from the city of Toronto.

30:01 Let's go to Washington, D.C., here very quickly, and I can zoom in on Washington, D.C.

30:08 The search tool is also a gazetteer, I can type in things like "the Mall," meaning the National Mall, and we can find that.

30:15 I can type things like "the White House" and we can find the White House.

30:19 There it is on the map with a little pushpin, and as I zoom in...

30:22 ...we'll see the detailed content that was contributed to this basemap by the District of Columbia.

30:28 And other basemaps are available.

30:29 I can just open up the basemap gallery, the same basemap gallery that's available in the arcgis.com viewer, which Jeremy showed...

30:37 ...and I can choose any of those and use that as my basemap for adding my operational layers on top of that.

30:44 Let's go back to the topographic basemap for a second, and let's zoom out.

30:49 One of the things that Jeremy showed was connecting to a service that he added, which was the recent California earthquakes.

30:56 And I'm going to look for content to add to my map, and the places I can look are, ArcGIS, meaning ArcGIS Online...

31:03 ...and open web search where I can connect to a specific ArcGIS server through its URL.

31:09 Now let's first do an open web search. I'm just going to type "weather," and I see a number of hits here.

31:15 Here is one I'm familiar with. This is coming from the National Weather Service, and it's the live Doppler weather radar.

31:22 It's kind of coarse as we're zoomed in, but we zoom out and we can get a live Doppler weather radar picture of the United States.

31:30 So, I've done an open web search to open the contents, I can do that at the bottom...

31:37 ...and I have different tools which I can now apply to this layer.

31:41 For example, I can adjust the transparency and do other things.

31:45 I'm going to turn that off for now, and let's go back to searching for data.

31:50 And what I'd like to do is now go to ArcGIS. Let's look for those recent California earthquakes.

31:56 So if I type in enough keywords, "recent earthquakes," I should be able to find Jeremy's...

32:02 ...and amongst others, here it is.

32:04 I see it's been authored by J. Bartley, and there's the link to the services directory and the thumbnail, and I'll add that to my map.

32:11 So here I've connected to that service and there we go.

32:16 There's the earthquakes, and we had actually a pretty good earthquake here not long ago...

32:22 ...and it was along this area of the fault coming from Baja into this area.

32:26 So tonight when you are out there on the Embarcadero, just remember this map.

32:32 And look to the west for the tsunami coming in.

32:37 Okay, so I've connected to the same service that Jeremy just authored and I've added this to my map.

32:44 And ArcGIS Explorer provides me some additional interesting capabilities.

32:48 Let's open up my contents here, and here's my recent California earthquakes highlighted...

32:54 ...and with that highlighted I can choose the tools tabs and I can create a query.

32:58 This is pretty interesting. I'm going to work against recent earthquakes and the query I want to do is...

33:03 ...I want to look for all earthquakes where the magnitude is greater than or equal to 3, and

click OK.

33:10 So that query has been executed, those earthquakes are now highlighted...

33:14 ...and you can see that there's just a cluster of them here in this area down near Baja California.

33:21 And I can look at these individually and as I click these, they're being highlighted, and I can look at more information.

33:27 Now a query is almost like a map layer. It's just stored in ArcMap, just like we can do things like this ArcGIS Desktop.

33:35 So what I might do is, I might rename this and call it, Magnitude Greater Than 3, and now that's part of my map.

33:44 And anytime I want to execute that query I just double-click, click, and it executes the query.

33:51 Now there are other things that I can do with queries that are pretty neat. I can create what's called a parameterized query...

33:56 ...and in this case, rather hard wire it, I'm going to create a new parameterized query.

34:01 I'm going to choose magnitude, I'm going to use as my operator greater than or equal to, and let's put in the default value of 3.

34:10 I add a prompt string, and my prompt string will be Enter magnitude, and I give it a hint, and my hint will be Enter a number.

34:19 And let's go back to my query, let's select that, and click OK.

34:24 Now I have a parameterized query. Let me toggle that off for a second, and let's rename this.

34:31 And this will be Find Earthquakes.

34:36 Okay. So there's that query, and now when I double-click on it, I'm able to enter a parameter.

34:42 My prompt is Enter magnitude. As I hover over this, I will get the hint; the hint says, Enter a number.

34:48 Let's look for all the 5 or greater earthquakes and click Execute, and you can see there've been some down in this area.

34:55 We had a 5.4 or 5.7 I think the other week in this area here. So queries are an interesting feature of ArcGIS Explorer.

35:05 Now let's take a look at another way that I can experience ArcGIS Explorer.

35:08 I'm going to go to the arcgis.com website and I want to look for some maps.

35:13 And a map that I might be looking for would be, let's say, California earthquakes...

35:21 ...and as you might recall, Jeremy created an earthquake map, which I don't see here at the moment.

35:26 Let's click on Date to find the most recent ones, and here it is.

35:30 It's the recent California earthquakes demo, that map that Jeremy created earlier.

35:35 I can view the details, and Jeremy has shown that it preserves all of the links to the service endpoints...

35:43 ... and I can also open this in the arcgis.com viewer, or I can open it in Explorer Online or ArcGIS Desktop 10.

35:52 Let's open this map in ArcGIS Explorer Online, and this time I have all the layers that Jeremy had added.

36:00 So I've got the active US faults, I've got the tsunami risk and recent Southern California earthquakes.

36:06 Let's go down now to the, my favorite area here in the Imperial Valley area, and let's make a presentation.

36:15 This highlights one of the capabilities of Explorer.

36:17 Before I do that, even though I've opened Jeremy's map, I can adjust it a little bit.

36:22 So I can say, I'd rather look at the imagery instead.

36:25 So I can now take control of Jeremy's map and add more layers, change basemaps and so forth.

36:31 I'm going to create a presentation, and let's just turn off these layers, and let's think about what we might do here.

36:37 Let's make a presentation, I'll give it a title, and this will be Earthquakes in California, and I'll capture that as a slide.

36:47 Now let's zoom in to Southern California and we'll edit the title, and let's make the title Let's Take a Closer Look Near San Diego...

36:59 ...and we'll capture that as a new slide.

37:01 And now let's add my tsunami risk polygons, let's zoom in a little bit.

37:06 So there's a tsunami risk; edit title, and we'll label this Tsunami Risk.

37:12 Pretty soon I'll not do the titles anymore, you get the idea.

37:15 I'll capture that as a new slide. And let's turn on the active faults here in the United States, capture that as a new slide...

37:22 ...and let's add the recent California quakes.

37:25 We'll shift over a little bit, capture that as a new slide, and now let's do something else.

37:30 Let's add something called a note, and a note's kind of interesting.

37:34 I can use it to mark up my map, and just for the sake of time here, I'm just going to digitize a rough, sorry...

37:44 ...a rough polygon outline.

37:45 I did a terrible job digitizing that, let's edit that shape.

37:48 I double-click on it and I can grab these vertices and adjust them around a little bit more to refine my shape.

37:54 A note is a great way to add additional content, and I'm going to give this a title.

38:00 I'll call this My Area of Concern for This Evening's Party. And we'll also provide that as a description.

38:10 I'm going to add a link to a website, and I'm going to use a word called website...

38:15 ...and we'll link to www.esri.com, and I want to add more context...

38:19 I can add an image or a video, and here I did a Google search and found a roller coaster...

38:25 ...which might be indicative of what you'll experience should an earthquake hit, and I'll go ahead and paste that.

38:35 Sorry, let's go back I need the whole string. Copy that and let's paste that in here, and now we have a roller coaster added to a note.

38:46 Notes can be points, lines, polys; you click on them. Here I have a link to the Esri website as well that I added.

38:52 You get the idea with this. Let's turn off the note, let's edit the title and call this Area of Concern, and we'll turn on that note...

39:03 ...and we'll capture that slide, we'll open the pop-up, we'll capture that slide, and we have a presentation.

39:09 Let's see how we do. It opens up in full screen and I can use the space bar, or I can use these controls at the top to advance.

39:17 I can also open up the slide preview, and I can click on slides to advance.

39:22 So let's hit the space bar. We'll move to the next slide.

39:24 We're going to take a closer look at San Diego and examine some of the earthquake risk.

39:29 Now at any point in time, I can zoom in. Jeremy asked me a question.

39:33 Well, do we need to worry about tsunamis here at the Convention Center?

39:37 And I zoom in, and I can say, yeah, looks like it. Let's get some more information...

39:41 ...and I can click on that feature, and I can identify, and I can get additional information about the tsunami.

39:48 Okay, back to the slide show. And let's take a look at the faults which we've added, and now let's take a look at this area...

39:56 ...and this is an area of concern, and holy cow, what a ride it will be tonight if we have a big earthquake.

40:03 So that's a presentation, and the interesting thing about these is...

40:07 ...I save them with my map, I can share them easily via a link, so anybody can view these presentations and use them...

40:14 ...and in fact, if I go back to arcgis.com, look at the gallery...

40:19 ...one of the favorite presentations of this conference has been Rupert Essinger's conference tour.

40:26 A little tour, and he's implemented it just using Explorer Online.

40:29 And this is in the gallery; you can go ahead and click on it and take a look at it.

40:34 He's added some titles, some points of interest, and we can cruise around the city and see where we might want to go.

40:40 And I can click on features and get more information about all the places to eat and drink and be merry.

40:47 So this is a really good example, there are many examples on arcgis.com, and with that, I'll turn it back to Derek.

40:59 Can you guys hear me okay? Bernie is a tough act to follow.

41:05 So I want to talk about the ArcGIS Viewer for Flex...

41:07 ...and the number one thing I want to hammer home is that this product is different from the arcgis.com viewer...

41:13 ...and the ArcGIS Explorer Online product, because those two applications are hosted by Esri on arcgis.com.

41:20 The product that I'm going to talk about is something that you would go to the Resource Center, download it...

41:25 ... and install it and serve it on your own server machine or on your own web server.

41:30 And the idea is, this is a ready-to-deploy, quick, and easy product that you can configure...

41:34 ...and set up to use with your own ArcGIS Server services...

41:38 ...and also with services from ArcGIS Online.

41:40 So it's a configurable, ready-to-deploy web application built on the ArcGIS API for Flex.

41:50 You can easily and quickly build and deploy a web mapping application.

41:53 So all you do is, you go to the website, to resources.esri.com...

41:57 ...you download it, you configure it if you want and customize it, and then you deploy it.

42:02 It's that easy, and I'm going to demonstrate that to you in my demo later on.

42:05 Key thing to be aware of, no programming required. So if you are not a developer, life is good.

42:11 This is the out-of-the-box solution that many users have been waiting for.

42:15 If you can edit HTML files, you can edit XML files...

42:18 ...I'll demonstrate that for you to customize the application for your specific business or your specific workflow.

42:23 You can also add functionality by editing these XML files.

42:29 For those of you who may be familiar with, who's used the sample viewer, the sample Flex viewer? Anyone?

42:34 This was a very popular developer sample available at the 9.3.1 release.

42:39 Basically, we've taken that developer sample and we've now made it a product.

42:43 Notice on the title I have beta. So we're currently in beta.

42:46 We released the first beta two weeks ago, and we released a new beta last Friday with the edit widget, so...

42:52 ...fully supported by technical support.

42:54 Now if this out-of-the-box application isn't quite right, and you want to tweak it some more...

42:59 ...we're going to make available to you the source code.

43:01 So you can hire a developer, or if you write in Flex code yourself, then you can customize it for whatever means you want.

43:07 So it's available off the Resource Center, and the quickest link is links.esri.com/Flex-viewer.

43:15 So I have a quick slide just to kind of show a screen capture of the application.

43:19 I wanted to show this so that you can orient yourself when I refer to some of the pieces.

43:24 In the upper left-hand corner, we have our application title, subtitle, and logo; that is customizable and I'll show that to you.

43:30 On the left-hand side, we have our zoom slider bar; on the lower left-hand corner, we have our scale bar.

43:35 That's dynamic, and it changes with the data as you pan and zoom around, so keep your eyes out for that when I demonstrate this.

43:42 In the lower right-hand corner we have our overview map, and at the top we have what's

called the widget tray.

[43:47](#) Think of this as analogous to the Windows toolbar tray, when you have different applications open.

[43:54](#) So you can click that button, and that will open up little dialogs, for different pieces of functionality, and I'll demo that as well.

[43:59](#) Finally, on the upper right-hand corner, we have the map switcher...

[44:02](#) ...and this allows us to switch between basemaps. But it's probably best to just demo this.

[44:10](#) So again, like with the other demos, we start off at resources.arcgis.com, and I'm going to show you get the ArcGIS Viewer for Flex...

[44:19](#) ...which is available for free, which is good. On the lower left-hand corner, we have this ArcGIS products link...

[44:25](#) ... and you can get the product either from the web link or the server link, but the web link is faster.

[44:31](#) When you click web, it'll take you to the web application's landing page, and we talk about the four different options.

[44:37](#) Jeremy already talked about the ArcGIS .com viewer. Bernie talked about ArcGIS Explorer Online.

[44:43](#) There is a fourth option, which is ArcGIS Mapping for SharePoint, so you can include little mapping applets on a SharePoint site.

[44:50](#) But I'm here to talk about the ArcGIS Viewer for Flex.

[44:53](#) If you click this link, it'll take you to the ArcGIS Viewer for Flex Resource Center.

[44:58](#) And here we have a complete bunch of resources. We have some code samples if you want, help documentation; again, it's in beta.

[45:06](#) We have a little description about what the product does and what it is, and then we have three different sample apps.

[45:10](#) If you want to explore with it, so I can click on a default configuration link, and here it is...

[45:16](#) ...the application running live real time, and you can mess around with it.

[45:20](#) But I said to you that the key differentiator between this product...

[45:23](#) ...and the other two viewers that you saw earlier is that you can download it...

[45:28](#) ...configure it, and then deploy it on your local servers, right?

[45:31](#) So I'm going to, I'm going to do that right now.

[45:32](#) I'll go back and I'll click on the Download Flex Viewer link.

45:36 When I click on that, it's going to give you some instructions on how to grab it.

45:39 First, you have to sign in to arcgis.com, and I've already done that, if you look in the upper right-hand corner.

45:45 And then you simply click on the download page, which I will do.

45:49 So I click on the download page, and there's another page to download it.

45:53 And then it'll prompt you to ask you, where do you want to save this download package?

45:57 So I will click Save, and I've already navigated by default to my inet pub, wwroute UC demo directory, so I hit Save.

46:08 The inet pub directory is basically a web folder on my Windows operating system that allows me to share resources onto the web.

46:15 Really quick, you can see it's a small download package. I've already completed it; I will hit Close.

46:20 Now what I'm going to do is go into Windows Explorer, and you can see I have that ZIP file. If I double-click that ZIP file...

46:27 ...you can see that inside the ZIP, here are all the files that I need to run that ArcGIS Viewer for Flex product or application.

46:35 I'll select all the files, and I will extract them to that same default location, inet pub wwroute/UC demo...

46:43 ... and I'll hit Extract. Again, really quickly, WinZip will go through in matter of seconds and extract that application.

46:50 And it's that easy, I have a Flex Viewer folder, I am theoretically ready to run, and I can start working with it right away.

46:56 What I will do is open up that folder, so you can see inside the contents of the folder.

47:01 Pretty small, we have bunch of configuration files, notice all with an XML extension, a folder for widgets, and a folder for assets.

47:08 So I'm going to minimize Windows Explorer now and go back to Internet Explorer.

47:13 And here I'll type in the URL to access that viewer.

47:16 So http localhost ucdemo Flexviewer. This is just a directory of that location, that download location.

47:26 I click Enter, the application will automatically load...

47:29 ...and we've preconfigured the application out of the box to automatically be hooked up to sample data from ArcGIS Online...

47:36 ...and some sample servers from Esri. And now I can quickly use it.

47:40 I have a widget already open to find an address...

47:43 ...and we have it open by default because we've found that most people want to find an address...

47:47 ...but then again, we're in beta; we can change it. My zoom slider bar, I can zoom in, I can pan around...

47:54 ...it's very responsive, very fast; these are grabbing basemaps from arcgis.com.

47:58 Notice as I zoom out, the scale bar in the lower left-hand corner will change dynamically, giving me a map scale.

48:04 And in the lower right-hand I have my overview map, so I have this little red box, which again is dynamic...

48:10 ...and I can move around, and zoom into places.

48:15 I want to give you a quick tour of some of the widgets that we've enabled out of the box by default.

48:20 So let me close this Overview map widget. In the upper right-hand corner, I have what's called the Map Switcher.

48:25 As the name would imply, it allows me to switch between basemaps.

48:29 So right now I have streets data, I can click on the aerial button, to show some raster imagery, and I can zoom out.

48:36 I also have a topo button to access a wonderful topo map from ArcGIS Online.

48:42 So the Map Switcher allows us to switch between basemaps.

48:46 The More button allows me to view some operational layers, which I'll show you in a minute.

48:51 But what I'm going to do is a quick preview through the different widgets that are already preloaded in my widget tray.

48:58 So first, I have the Bookmark widget, and as the name would imply...

49:01 ...it allows me to go to various locations that have been pre-bookmarked.

49:04 They've been chosen at random by the development team, there's no order or hierarchy.

49:10 One that I want to show is Los Angeles, because we live near there...

49:14 ...but also because this is where my operational layers are showing.

49:17 So I can click on my Fires operational layer, and if I zoom out a little bit, you'll see that my fire map symbology data shows up.

49:27 I can also active my Boundaries and Places layer, and if I zoom up some more you'll see the state breakdown of the United States.

49:39 Let me turn off that Fires layer. There we go. So you can see the different names.

49:45 Now some of you may be wondering why, hmm, Louisville, Kentucky; why did they bookmark that?

49:50 Anyone from there? Hey, cool, there you go, claim to fame.

49:54 We bookmarked Louisville, Kentucky, because the city was gracious enough to share with us some sample data.

49:59 So we've pre-hooked up some widgets to illustrate that you can use that functionality with the Louisville, Kentucky, data.

50:06 One of the widgets I want show is this one called the Query widget.

50:09 So we've preconfigured this Query widget to find the different police stations in the city of Louisville.

50:14 So it's automatically running, and here we go; out of the box, I have my police stations in the city.

50:22 Another very cool widget that we've pre-hooked up to data from Louisville is this Search widget.

50:27 So you can see when I open up the widget I can find some parcels, right? So the Louisville parcels.

50:33 I'll use this polygon tool, and I'll quickly highlight and query in this area for any parcels from that feature class.

50:39 And I can zoom in, and you can see now as I hover my cursor, I got information about those different land parcels.

50:51 Some pretty cool stuff. Again, I can minimize my widgets, and they're free form, I can leave them floating if I want.

50:58 There are configuration properties to make them stack up horizontally or vertically.

51:02 It's completely flexible. Let me just close these.

51:10 Another cool widget that we've enabled out of the box is this Draw widget, so I can draw some simple graphics on my map display.

51:17 So what I'm going to do is I'm going to call this, Study Area, I'll change the color to a bright orange so everyone can see...

51:27 ...and the font size, I'll bump it up.

51:29 Now with some feature creation tools, I can quickly draw a polygon...

51:38 ...and if I want I can add that text, all available out of the box.

51:44 We have a Print widget, and we have another one called the GeoRSS widget.

51:49 In this example, we have this widget set up to a GeoRSS feed from the USGS for different earthquakes...

51:55 ...continuing along that earthquake theme. So what I can do then is quickly click on one of these records, and it shows me...

52:02 ...let me zoom out a bit, where earthquakes are around the world.

52:08 So here we have a whole bunch. I can click the one by Chile, and if I want to find out more information...

52:15 ...I can click on this little arrow to open up the USGS web page to show me more information about that earthquake.

52:22 I actually talked to a customer yesterday and he gave me a very cool example of setting up this widget to vehicles moving...

52:30 ...so they can track vehicle locations.

52:32 It's not live real time, but the widget will refresh every couple of minutes to grab and query that location. So pretty cool stuff.

52:42 One more widget I want to show you that's available out of the box is this, Find an Address.

52:47 So again, it loads up by default and no demo would be complete without this address.

52:54 I'm sure some of you may be familiar with this, 380 New York Street, Redlands, California 92373...

53:06 ...and I can locate it and we have a very lovely topo map that shows you a map of the Esri campus.

53:13 And as an FYI, the three of us all work in building MA right here.

53:20 One more widget I want to quickly show, we did not enable it with the sample viewer because of the data, is this Edit widget.

53:29 So we just released this on Friday. So I'm clicking on samples from the Resource Center.

53:34 I'm going to click See It in Action. Okay, they forgot to clean up the service last night. That's okay.

53:45 Basically, we just added this, and as Jeremy kind of mentioned in his demo, we've added these new web editing capabilities...

53:52 ...so you can grab data from a geodatabase, and with this out-of-the-box tool...

53:56 ...hook it up to your service to enable feature editing with a feature service.

54:01 It's based on the feature template model so I can quickly click a feature, select what I want to add, click it on the map...

54:09 ...the attributes dialog will appear; notice we honor subtypes and domains, so those constraints that are preset in the geodatabase.

54:18 I can pick a date; I'll pick today, and I'll type in a description, fight, it's a civil disturbance, and I can click OK to add it.

54:28 And now when I click on it again, I can edit the attributes.

54:31 We also give you the option to add attachments, so I can add PDFs, or pictures, whatever I want.

54:37 And again, the cool thing is this is all available out of the box; all I have to do is hook it up to my service.

54:53 Okay, so I showed you how you could use it out of the box...

54:57 ...and I gave the five-cent tour over some widgets that already enabled by default.

55:01 This may change, we may enable more, may enable fewer; we're still not sure yet because we're still in beta.

55:07 The other key thing is that you can take this out-of-the-box application and change it.

55:11 You can change the appearance, you can change the data that you're looking at...

55:14 ...and you can change the functionality without having to do programming. And this is all possible with configurable XML files.

55:21 And I'm going to show this to you in a minute.

55:23 The other thing to be aware of is, functionality is all based on widgets, little chunks of code.

55:30 Think of it like LEGO. I take these different pieces of LEGO and I build my web mapping application, I build my final product.

55:37 And it's important to be aware that every single widget consists of two key files, a configurable XML file...

55:43 ...and also a SWF file or a compiled Flash file.

55:48 So a quick slide on some of the core widgets that we're planning to ship with final, and I've demoed some of them for you...

55:55 ...the Bookmark widget.

55:56 I did not show the Data Extract widget, but this allows you to basically define an area, clip that data, and download it locally.

56:03 Again, available out of the box, all you have to do is hook up your services, Draw widget, Edit widget I showed you...

56:09 ...GeoRSS, we also have a Layer List widget.

56:13 Think of that More button as its own widget, so you can turn on and off multiple dynamic layers if you wanted to.

56:21 Print widget, Search Time slider, if you time-enabled data, and I have a few widgets that are

highlighted in orange text.

56:30 The reason why these are highlighted is because these widgets form part of the user interface, and you saw that earlier, right?

56:37 We have our Map Switcher widget, our Overview map, and that Splash Screen widget, which I did not demo.

56:42 So again, think of it like LEGO. I can have this functionality inside that widget tray, or I can have it part of the UI...

56:49 ...and I'm going to show you how to do that in the next demo, or where they are in the next demo.

56:55 Two other key widgets to be aware of that define the look and feel of the application.

57:00 One is called the Header Controller widget, and this defines that black bar at the top of the application.

57:06 For those of you who have used the sample Flex viewer, we also have a widget called Classic Controller...

57:11 ...which allows you to keep that classic look, all the tools are collected and that overhead bar in the upper left-hand corner...

57:17 ...and if you hover over an icon, we have some drop-down menus for some of the functionality.

57:23 Now if I want to configure the ArcGIS Viewer for Flex, what do I do?

57:28 As I mentioned, you do not need to be a programmer.

57:31 You simply edit XML files. And I'm going to demo this to you in the next demonstration.

57:37 If you can edit HTML, you can configure the ArcGIS Viewer for Flex. Believe me, I am not a developer and I can do it.

57:44 It's really, really easy, and I can change how it looks in terms of the application itself.

57:49 I can change the widgets that are available, the functionality, and also the data content.

57:55 So before I go into my demo, I want to throw up this concepts slide of the config.xml file.

58:03 And what I wanted to kind of illustrate is...

58:04 ...these are the general sections or areas of that XML configuration file which I'll demonstrate for you.

58:10 So at the top of the XML file, we have some general properties that I can change.

58:15 This is followed by elements that form the user interface.

58:20 This is also followed by properties of the map, so what data I'm going to show...

58:24 ...and then in the last part of the configured XML file...

58:27 ... is the widget container, which defines all the widgets, all those controls inside that widget tray at the top of my application.

58:36 Okay, let's go on to a demo.

58:40 So right now I'm in Windows Explorer and I'm looking at the Flex viewer folder that you saw me download and what's inside it.

58:49 As I mentioned, we have two folders; one is called Assets. This contains various icons that are used in the application...

58:56 ...[and] one is called Widgets.

58:58 If I double-click on it, you can see there's a whole bunch of subfolders, and each one of those folders is that...

59:04 ...loosely, in quotes, "piece of LEGO."

59:06 Each one of those subfolders represents a widget that I can use for my application, right?

59:12 As I mentioned, if I open up the Bookmark widget, notice, it's got two pieces.

59:16 One is my configuration file, one is my compiled code, right?

59:21 The other thing I want to highlight, immediately off of my Flex viewer folder, I have this config.xml file.

59:28 As I mentioned earlier, this is that master control file that basically allows me to set my settings for my applications.

59:34 So what I'm going to do, I'm going to minimize this now, and I'm going into application called TextPad.

59:40 The beauty about TextPad? It's a very simple XML editor, available free. I'm all about getting free stuff.

59:46 So I'm going to go to File, and I'm going to open that config.xml file, okay?

59:51 Now think back to that concept diagram as I go through this file.

59:56 At the very beginning, we have some general properties about the application, such as the title, subtitle, the logo, and the style sheet...

1:00:03 ...its appearance. This is followed by UI elements, and if I hide this section, you can see...

1:00:10 ...I have three different widgets subtext, three different pieces of LEGO that form my user interface.

1:00:15 What do I have? I have my Map Switcher. If you'll recall, that's the three buttons in the upper right-hand corner of my application.

1:00:23 I then have my Header Controller widget, which is that black bar that forms the top part of my application...

1:00:30 ...followed by the Overview Map widget.

1:00:32 Each one of these tags simply references that LEGO, that SWF file for that widget.

1:00:39 In the third part of my configuration file, I have my map tag.

1:00:44 This contains all the information that I'm going to see, all the data contents from my application.

1:00:48 I have my default map extent, so what it's going to display by default, followed by two key concepts that Jeremy talked about earlier...

1:00:57 ...basemaps, the data layers that will form the lower part of my application, right?

1:01:02 Notice, I have three map services. Each one of these map services corresponds to a button in that Map Switcher widget.

1:01:10 So I have streets, I have aerial, and I have topo.

1:01:16 After my basemaps, I have my operational layers, those dynamic layers that will appear on top of my basemap data.

1:01:23 And again, you saw this earlier, I have Fires and I have Boundaries and Places.

1:01:29 And finally, at the end of my config.xml file, is my widget container.

1:01:35 This is the container that stores all my little buttons inside my widget tray at the top of the application.

1:01:40 And again, each one of these widget tags contains the functionality for each control in that widget container.

1:01:47 So again, like LEGO, that's the end of the file.

1:01:50 Now to prove to you it is really easy to customize and configure this application...

1:01:55 ...what I'm going to do is make some minor changes.

1:01:57 I will edit the title. Let me just show you real quick.

1:02:04 Remember, it says ArcGIS Viewer for Flex using ArcGIS, right, and it's black.

1:02:10 What I'm going to do now is make a minor change and I'll call it UC Demo, and I will put a subtitle, Technical Workshop...

1:02:25 ...and I'm going to change the style sheet. Instead of calling it Black Gold values, something called Lighter Side.

1:02:31 I'll save my edits. It's that easy. And what I'm going to do is just open it in Firefox because my browser will probably be cached...

1:02:42 ...then go to Tools, clear recent history, clear now, and I'll type in that URL, http...

1:02:50 ...localhost/ucdemo/flexviewer.

1:03:00 It's going to load up now, and look at that, it is that easy.

1:03:02 I've changed how it looks; I've changed the title; I've changed the subtitle. I'm going to take it a bit further.

1:03:07 If I've called it UC Demo, I think it would nice if I could have it zoom in to the User Conference center, right?

1:03:14 So I'm going to do that next. So what I can do, I want to edit this map extent property.

1:03:24 I want to redefine the minimum x and y bounding box coordinates.

1:03:28 And we have a little applet available to you that will make your life very easy.

1:03:33 So what I'm going to do is...Is it this page? No.

1:03:38 I'm going to go back to the ArcGIS Viewer for Flex Resource Center, and if I click on the Concepts tab...

1:03:44 ...you'll see we have help documentation for this product. And again, we are in beta.

1:03:50 But very useful, we have an Overview page, which talks about the product and tells you what you can do.

1:03:56 We have a Getting Started page...

1:03:58 ...which holds your hand and shows you step by step what the product is and how to make some quick changes...

1:04:04 ...and also some comments about the structure, and we also have a list of all the different core widgets.

1:04:09 So you can click on those links to learn more about the Edit widget.

1:04:13 Notice now from an end-user perspective, we talk about what the widget does, and more importantly...

1:04:18 ...at the end, we have information about its configuration file.

1:04:22 If I want to change the Edit widget, what are the different properties in the XML file...

1:04:26 ...and what are the different values that I can change?

1:04:30 The other thing is, under configuration files, we have this Extent Helper page.

1:04:35 It's a little application written by the development team - very, very cool.

1:04:38 It allows me to quickly and easily find minimum and maximum x and y bounding box coordinates to reset my map extent.

1:04:47 So I'm going to zoom to Southern California, zoom some more into the Conference Center; here's that Conference Center.

1:05:08 Notice at the top of my page, I have this map tag with my minimum and maximum x and y

coordinates.

1:05:15 I simply copy it, I'll go back to TextPad, and I will paste those values, save my configuration file; I will go back to Firefox...

1:05:30 ...I'm going to clear my cache again, and now I'll retype in the URL to access my Flex viewer...

1:05:40 ...localhost/ucdemo/flexviewer.

1:05:49 Now it's going to load, and here we go. I've reset my map extent. Honestly, it is literally that easy.

1:05:55 Now, I'm going to show two more things. Maybe I might find this widget automatically loading annoying...

1:06:01 ...and I'd like for it to load without it opening up. I'm going to show you how to change that.

1:06:06 Also, by default, we enable two widgets, one called Louisville Police, one called Search.

1:06:11 They're very useful, but we've hooked them up to some sample data to show you how it works.

1:06:15 I'm going to remove those widgets entirely from the interface, and it's really, really easy.

1:06:19 Let me go back to the configuration file now. I will scroll down to my widget section, right?

1:06:27 I had one tool called Find an Address, one widget, and all I have to do is delete this property called Preload.

1:06:33 I'm going to delete that. So now when it loads, it won't even preload.

1:06:38 The other thing is, I'm going to remove two widgets, the Louisville Police widget and the Search widget...

1:06:42 ...so I'm simply going to add a comment tag, and I will go down to Search and take it out down here.

1:06:55 That's it. Two pieces, open the comment line, close the comment line.

1:07:00 I'll save this configuration file, I'll go back to Firefox, clear the cache again.

1:07:14 Notice, now it loads, that widget is gone and those two other widgets are gone. Again, I am not a developer. It is that easy. Okay.

1:07:27 He's not a comedian either.

1:07:31 Ouch! Ouch!

1:07:33 Alright, so to summarize, ArcGIS Viewer for Flex, it is different from the other two viewers...

1:07:39 ...because this is something you download, you enable it and serve it out on your own web server.

1:07:44 Easily configurable as you saw, targeted toward nondevelopers, and we anticipate two main groups really.

1:07:52 You can configure it as I showed you, by simply editing those XML files, and the analogy I used is like LEGO functionality...

1:07:59 ...you add or remove those widgets, right.

1:08:02 Or you could be a developer, so if you want to write some custom functionality and extend this application, it's totally doable.

1:08:09 You can program with the ArcGIS API for Flex.

1:08:13 So to summarize, at the ArcGIS 10 release, we have three different out-of-the-box, ready-to-deploy options for you.

1:08:21 We make it easy for you to get your map data on the web, which is very, very cool.

1:08:26 We have two hosted web applications on arcgis.com, the arcgis.com viewer that Jeremy showed you...

1:08:33 ...and also ArcGIS Explorer Online that Bernie showed you...

1:08:36 ...and then I showed you the ArcGIS Viewer for Flex 2.0, which is currently in beta...

1:08:40 ...all of them available from arcgis.com at our Resource Centers.

1:08:44 Thank you, guys, very much. Please fill out the survey...

1:08:48 ...and we hope you enjoy the rest of your conference.

1:08:50 If you have any questions, we'll make ourselves available to you.