

Smarter and Faster Imagery

Mike Muller showcases the new imagery processing, analysis, exploitation, and dissemination capabilities coming in ArcGIS 10.1.

<http://video.esri.com/watch/453/smarter-and-faster-imagery>

Video Transcription

00:01 The imagery team has made [ArcGIS] 10.1 smarter and faster.

00:06 I'm just going to show you a few examples how this is making it easier to work with imagery on the desktop, server...

00:15 ...and the web for image processing, exploitation, and dissemination.

00:22 10.1 makes better use of all image information. This GeoEye image of the Las Vegas airport just looks good when you open it.

00:35 I want to explore and show you how fast. We're going to head on up to the Las Vegas Strip. Now that's pretty fast.

00:51 There's the Stratosphere, one of the tallest structures in Las Vegas. Now I've zoomed in a bit too much, and it's blurry.

01:03 We're introducing the concept of image processing templates that know how to build products...

01:09 ...from the raw image data and other information.

01:14 I'm going to choose pan sharpen...

01:15 ...because it's going to give me the high resolution of the panchromatic and the color of the multispectral.

01:22 Drag and drop. Okay. Did you get that? That was drag and drop, pan sharpen, and orthorectified on the fly.

01:43 Okay, now the perspective on the building doesn't look quite right.

01:47 But the system knows how to automatically rotate the image and provide me with a more intuitive view.

01:53 This is as simple as checking Top Up.

01:59 [ArcGIS] 10.1 has a new set of mensuration tools which allow me to take accurate height measurements off of imagery.

02:07 This is possible because the tools can utilize sensor information like sun angle and acquisition time.

02:16 This tool measures using a shadow. I simply select the top of the structure to the tip of the shadow.

02:27 With all this image information, working with an image in [ArcGIS] Desktop is easy.

02:35 But it's not just about image exploitation and analysis. Managing collections of imagery gets easier, too.

02:44 Here I'm working with a single image.

02:46 But mosaic datasets allow me to work with collections of images as if they were a single image.

02:54 I'm going to build a mosaic. Now, a smarter system enables simpler choices.

03:03 In this case, to build my mosaic, all I have to do is select how I want it to look.

03:09 In this case, I'll choose natural color and point it to my folder containing images.

03:17 My folder contains about 15 images, and there it goes, and looks pretty good.

03:25 Now, because these images were collected on different dates, you can see there's color differences.

03:32 [ArcGIS] 10.1 has an improved color balancing tool. I'm going to run it, select my mosaic, and go.

03:42 The color balancing tool is just one of the many new and improved tools at [ArcGIS] 10.1. That was pretty fast, too.

03:54 Okay, my mosaic looks good, and I want to create a web service and disseminate this imagery to my community.

04:02 I'll simply select my mosaic and use Share As Image Service. I'll take some initial defaults.

04:13 Now, I want to make sure that members of my community can both measure on this imagery and download the individual scenes.

04:22 Next, I just need to provide a simple summary and choose some search tags.

04:30 Finally, I want to make sure members of my ArcGIS Online groups can easily find this imagery, so I'll enable that, and publish.

04:42 Publishing an image service in [ArcGIS] 10.1 is pretty easy. There we go. Alright.

04:55 But sharing imagery is only valuable when we have a platform for collaboration.

05:01 When I think of collaboration, I think of the web.

05:08 Image services are more than cached maps. They provide rich content for web application.

05:15 This is a focused web application that can take measurements off that Las Vegas image service to keep a GIS layer current...

05:25 ...and it's really simple. I simply select my mensuration tool...

05:29 ...in this case, I'll do base to top, measure up the side of the building.

05:34 Once I have my building height, I simply select the building footprint...

05:38 ...assign a building height, and calculate approximate number of floors.

05:44 As you can see with 10.1, you can get more value from your imagery because [ArcGIS] Desktop is easy...

05:51 ...sharing is easy, and working on the web is easy.