Using Pictometry Oblique Imagery with ArcGIS 10

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Agenda

• Why specialized tools/extensions are needed

• How can you use Pictometry Intelligent Oblique Imagery with your GIS?

• Live Demonstration of new ArcGIS Pictometry Powrsuite Tools
Nadir (vertical) vs. Oblique

SCALE UNIFORM
\[ S = \frac{f}{H} \]

SCALE VARIES
\[ S = \frac{f}{H / \cos \theta} \]
Oblique Image Resolution
(Ground Sample Distance)

Oblique Image Resolution varies from Front to Back
“Frame Based” Methodology

- Digital, Color imagery
- Natural Perspective in Height & Scale (no distortion due to “ortho-rectification” of oblique images)
- Accurate Measurements including height
- Overlay GIS Data on Imagery
- Obliques & Orthos in a one flight
- Overlapping flight lines results in numerous images of an area
- Direct Georeferencing allows for very fast processing and delivery
How Can You Use Oblique Imagery with your existing GIS?

- Pictometry Desktop Software – Electronic Field Study (EFS)
- Pictometry Web-based Solutions
  - Pictometry Online (POL) & Self Hosted POL
- Pictometry SDK’s are available for customers and business partners to build custom integrations
- Various GIS, CAMA and 911 mapping vendors already offer existing, proven integrations with their software packages
  - Intergraph, True Automation, Tyler Technologies, Schneider Corp, 39 Degrees North, WTH, Manatron, PlantCML, Positron, etc.
- ESRI – Multiple integration options with various products
ESRI Integrations
PowrSuite ArcMap Extension

- Developed in cooperation with ESRI
- Included at no additional cost to Pictometry Customers
- True extension, runs within ArcMap
- Compatible with ArcMap 10 (and previous versions)
- DOES NOT require installation of any other Pictometry software (i.e., EFS)
- GIS overlays are enabled and Pictometry measurement tools are built in
ESRI Integrations
PowrSuite ArcMap – POL Extension

• Similar functionality to standard extension
• Web-based, imagery is accessible via a Pictometry Online login
• **DOES NOT** require imagery to be stored locally (ideal for those requiring access to large areas of imagery – i.e., statewide coverage, etc.)
ESRI Integrations

**PowrSuite ArcMap Transform**

- ArcMap can now read and display Pictometry Oblique Imagery **directly** in the data frame!
- On-the-fly virtual Oblique Mosaic creation
- Only available in ArcGIS 10

- Oblique Images are ortho-rectified in order to be displayed in the data frame - will result in distortion similar to “push broom” style ortho-rectified oblique imagery
ESRI Integrations

ArcGIS Server

- Interfaces using Pictometry Image Navigator API
  - Core technology of both Pictometry Online & Self Hosted POL
  - JavaScript based
  - Includes all major functionality of EFS (view, navigate, measure, annotate, GIS overlays)
Johnson County, IA – Self Hosting

http://gis.johnson-county.com/PIV/

Property Information Viewer

Pictometry

http://gis.johnson-county.com/PIV/pictometry.html

Pictometry

http://gis.johnson-county.com/PIV/
Pictometry Web Based Solutions

• Pictometry Online – Self Hosted
  – Server-side application to serve out tiled oblique imagery via internal and/or public facing sites
  – Includes ready to use GUI and API allowing custom integration into existing web mapping applications
  – Can be used in a mapless environment or with any supported map service
    - Google Maps
    - Bing Maps
    - Yahoo! Maps
    - Web Map Service (WMS)
    - ESRI / ArcGIS Server
    - GeoServer
    - OpenStreetMap
    - MapServer
    - MapGuide
    - GeoMedia WebMap
Live Demonstration of Oblique Technology