Image Data Management

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Agenda

- Overview
- Capabilities
- Demonstration
- Conclusion
The ABC’s of Imagery

• What is imagery?
• Why should I use it?
• How do I use it?
• Where does Esri play a role?
5 Key Imagery Capabilities of ArcGIS

Visualization

Management

Analysis

Map Production

Content
ArcGIS Imagery Platform
A Complete Imagery Solution

Proprietary
LiDAR Scanned PDFs
Drone Imagery

Esri
Landsat Living Atlas
Sentinel-2

3rd Party
Planet Digital Globe

APIs
Well Pad Detection
Frac Hit Analysis
Leak Detection
Encroachment

Esri GeoSpatial Cloud
Imagery Content
Access Esri’s library of imagery content and its partner network

Living Atlas
• Esri-curated content
• Integrated with your Web GIS
• Access imagery and vector data
• Geo-enriched analytics

Partners
• Esri’s ~2500 partners
• Data providers of various types
• Planet, Maxar, etc
• Varying resolution, cadence, formats

Your Data
• Access and serve your own imagery
• Classic imagery, FMV, LiDAR, SAR/Radar
Image Data Management
Manage vast imagery datasets and make them accessible

Server
• Dynamic mosaicking
• On-the-fly processing
• Persist large datasets as needed
• Scalable
• Serve in multiple formats

Desktop
• Author mosaic datasets
• Maintain metadata
• Publish image services to the web
• Export mobile map packages for the field

Field (New)
• Directly from drone to cloud
• Process with the click of a button
Image Analysis
Extract actionable insights from your imagery datasets

Server
• Fast in-place persisted image processing
• Scalable and distributed analysis for large datasets
• Highly useful for advanced analytics (GeoAI)
• Utilizes distributed raster analytics architecture

Desktop
• A complete workstation for imagery and spatial analysis
• Built-in, flexible machine learning tools
• Label your training datasets
• Perform classification, clustering, and prediction

Notebooks (New)
• Access your datasets in a hosted notebook
• Perform custom analysis using Python
• Use hundreds of open source libs, ArcGIS API, ArcPy

System of Insight
Image Visualization
Integrating imagery into dynamic applications to aid understanding

Desktop
- ArcGIS Pro + Image Analyst Extension

Web
- Configurable imagery web applications
- Visualize elevation and 3D models with web scenes
- Swipe to compare temporal changes in imagery

Mobile
- Out-of-the-box apps ready for viewing imagery in the field
- Create mobile map packages using ArcGIS Pro for offline use
Map Production
Creating authoritative imagery-derived information products

Server
• Image server and raster analytics to scale up processing
• Allows creation of 2D and 3D products at scale

Desktop
• Pro
  - Complete suite of map production tools
  - Symbology, base maps, layouts, etc
  - Stereo display and feature collection
• Drone2Map
  - Standalone 2D and 3D map products from drone images
  - Optimized for working with imagery products

Web
• Site scan map products, ortho maker
• Map viewer configurable maps and apps
• Configurable imagery web applications
• Visualize elevation and 3D models with web scenes
Questions?
Thank you!

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