Workflows for Imagery and Big Data Analytics

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ArcGIS is a Comprehensive Imagery Platform

Professional Imagery & Geospatial Analysts

Extract Information from Imagery

Desktop + ImageServer

System of Insight

System of Record

Content: ArcGISOnline Partners, Org

Desktop + ImageServer

Desktop, WebAPIs, RunTime

System of Engagement

Share imagery products and information to those that need it

Manage and process all your imagery
Classifikation of tree species

Testing the Potential of Sentinel 2 Data
(ongoing research, M. Wessel)
Sentinel 2 Daten in ArcGIS

→ Sentinel2 Script
→ Demo
92% Overall Accuracy
From spectral classification towards a timeseries approach

Reflectance (%)

May          August          September

Beech timeseries  Oaks  Deciduous  Coniferous
80% Overall Accuracy
Image Management

Image Server
Image Management Workflow Using Mosaic Datasets

Large Image Collections → Mosaic Dataset → ArcGIS Desktop → ArcGIS Server + Image Extension → Generate TileCache → ArcGIS Online → Apps

Desktop, Web & Devices
Image Analysis

To understand what we see - Raster Analytics
Raster Functions and Function chains

- Traditional Image processing

- On-the-Fly-Data processing with Raster Functions
Raster Analytics
Potential for solar plants (30 m resolution)

ArcGIS Desktop (ArcGIS Pro)
5 h 45 min

Raster Analytics
9 min

ArcGIS Enterprise (w/ RasterAnalytics) on Amazon
8 c3.2xlarge instances (8 vCPUs, 16GB RAM)
Sharing

To provide our results
Thank you for your attention!
ArcGIS Bilddaten

+ Von Esri kuratiert
  > World Imagery Basemap, Landsat 8 / GLS, World Elevation, MODIS

+ Von Drittanbietern
  > Airbus, DigitalGlobe, Rapid Eye

+ Von Anwendern bereitgestellt

Story Map: Living Atlas of the World

Living Atlas
Information

+ Best Practice Workflows für:
  > Orthophotos, High Res Satellite Multispectral Satellite, Elevation, Lidar, Aerial, Drone2Map, Historic Aerial, Oblique, Scientific:

http://esriurl.com/ImageManagement

Image Management Group on ArcGIS Online
http://www.arcgis.com/home/group.html?id=b65f2601e0084e32afab3eb488fa8a67

Support for storage in:
  > AWS (S3 + Elastic EC2)
  > Azure (Azure Blob Storage)

(see OptimizeRasters on GitHub )