Publishing 3D Globe Services

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Why create 3D Globe services...

• Sharing can often be done without services
  - Screenshots
  - Exported videos

• You need 3D Globe services when:
  - The content makes more sense in 3D
    - Elevation surface, 3D objects, …
  - Your users need direct access to the data
    - Interactive investigation (measure, identify)
    - Basemap / background content for other GIS data
How do I create 3D Globe services?

- Start with a good ArcGlobe document (.3dd)
  - Search for “optimization” in the Desktop Help
  - Use Templates from the 3D GIS Resource Center
  - Tech Workshop on Thursday afternoon

- Publish the 3dd to an existing ArcGIS Server
  - Where required, fully cache the service

- TIPS
  - You can only publish from ArcGlobe
  - You cannot republish existing services
  - Each layer in the 3dd is like it’s own service
3D Globe services – 3 subtypes

- **Elevation**
  - Surfaces, such as the ground or geology

- **Vector**
  - 3D objects, such as buildings or trees

- **Rasterized / Image**
  - Rasters, such as imagery or draped counties

- **Animations**
  - Fly-throughs and layer animations

You can publish all these in one workflow…
Globe document should be streamlined

- Remove layers you can’t / won’t publish
  - All service layers
  - Background layers
- Make the 3D view as fast as possible
- Use the Desktop Help by searching for “optimization”
  - Optimizing ArcGlobe
  - Optimizing ArcScene
  - Optimizing 3D multipatch layers
  - Etc…
DEM layer authoring

- Local DEM data can really improve the view
- Needs to be an Elevation layer (in Authoring tab)
- Will only be shown as part of the elevation mesh
- **Note:** the mesh will only display with:
  - No visible Draped layers, and
  - The mesh option enabled on the Default Layers tab of the ArcGlobe Options dialog
Animations

- There are many types of animations
  - Camera / Fly-bys
  - Layer
  - Environment
  - Time
- Learn more about them in the Help
Caching properties

- Caching properties are available per layer
- Cache tile size is on the General tab
- Other cache properties are on the Cache tab
Save the ArcGlobe document

• When you publish you specify a 3DD document
• All layers within the 3DD document will be published
  - A folder is created for the 3DD file
  - Sub-entries are created for each layer
• Animations are also stored in 3DD files…
Connect to the server

- Connect to your GIS Server (Catalog Window)
  - Use the ‘Manage’ option (so you can add/remove svcs)
Publishing

- Publishing is done from the ArcGlobe document
- Navigate to and right click the 3DD file
  - “Publish to ArcGIS Server”
- The defaults properties are usually OK, and you can change most of them later, if needed
Caching on the server

• Property pages on the service allow updating of important service properties

• Building full data caches is required for elevation surfaces to avoid seaming / splits between different level-of-details in the tiles

• Full caches are also recommended for vector-based 3D services (e.g., buildings, street furniture)
Who can use 3D Globe services?

- Any globe-enabled ArcGIS client
  - ArcGlobe
  - ArcGIS Engine applications that use the GlobeControl
  - ArcGIS Explorer (free)
  - ArcReader (free)
Questions?

Please fill in your surveys

www.esri.com/sessionevals