Getting Started with the Imagery Template

Copyright © 1995-2012 Esri All rights reserved.

Table of Contents

Copyright © 1995-2012 Esri. All rights reserved.

Getting started

The Imagery template is in the basemap category of Esri defense and intelligence templates. Basemaps are designed to help you more quickly get your bearings in your map.

The Imagery template and the walk-through exercise in the accompanying "Using the Imagery Template" document are designed to teach you how to add military image data in Controlled Image Base (CIB) format to mosaic datasets, which is the recommended data type for storing CIB data in ArcGIS, and publish as a cached image service.

The following are a few advantages of using mosaic datasets to store military raster data:

- Mosaic datasets are designed to handle rasters of different resolutions, making it easy to store, manage, and distribute the various types of CIB data products to users through direct access or through image services.
- Mosaic datasets support loading data with the CIB raster type, which extracts NITF information from the raster metadata and stores it on the mosaic dataset attribute table. Loading data using this raster type also provides update logic that is appropriate for CIB data, to ensure that only the latest data is stored.
- Mosaic datasets allow users to select and download rasters in their native CIB data format.

Before you work with the template, review this getting started document to help you install and set up the template. This document is divided into the following sections:

- Template contents
- Hardware and software requirements
- Installing and setting up the template

Once you have installed and set up the template, review the "Using the Imagery Template" document, which contains the exercise that describes how to re-create the populated mosaic dataset that comes with the template. The same instructions and tools that you use in this exercise can be used to create and populate mosaic datasets with your own CIB data.

Copyright © 1995-2012 Esri. All rights reserved.

Template contents

This template contains the following:

- The **Imagery.mxd** map document. This map contains a populated Imagery basemap containing sample CIB data. Use this map to view and work with the Imagery basemap before starting the exercise to better understand the end results of the exercise.
- The **Imagery.gdb** file geodatabase. This geodatabase contains a mosaic dataset using the WGS 1984 Web Mercator (Auxiliary Sphere) coordinate system—the same coordinate system used by Esri published ArcGIS Online services. The mosaic dataset is named Imagery and contains: CIB 10-meter and 5-meter data for Ft. Irwin, California, Landsat, and NASA Blue Marble Next Generation data. Use Landsat and NASA Blue Marble Next Generation data to help orient you when viewing the map at smaller continental or global scales. This dataset is referenced in the Imagery.mxd map document described above.
- The **Imagery.Overviews** folder. This folder contains the overview raster datasets associated with the populated Imagery mosaic dataset. The overviews were built from the NASA Blue Marble Next Generation data contained within the mosaic dataset and are automatically accessed and displayed as needed by ArcGIS.
- The **SourceData** folder. This folder contains the sample CIB data for Ft. Irwin, California, as well as the Landsat and Blue Marble data. This data, which is the data used by the exercise, has been added to the populated mosaic dataset contained in the Imagery.gdb file geodatabase.

  Note: There are no distribution restrictions on the data included in this template.

- The **ImageryTools.tbx** geoprocessing toolbox. This toolbox contains the tools, used in conjunction with tools that come with ArcGIS, that you need to complete the template exercise. The toolbox contains the geoprocessing tools described in the following table. For additional information, see the context-sensitive help that comes with each tool (click the **Show Help** button in the tool's dialog box).

Tool	Description
Create CIB Mosaic Dataset	Makes an empty mosaic dataset in a geodatabase with the proper characteristics (number of bands and pixel type) appropriate for CIB data.
Add CIB Rasters To Mosaic Dataset	Adds CIB raster datasets to a mosaic dataset from many sources, including a file, folder, raster catalog, or table.
Calculate Raster Visibility	Calculates raster visibility based on a multiplier of the raster resolution.

- The **Imagery.lyr** layer file. This file contains a reference to the populated mosaic dataset contained in the Imagery file geodatabase. To add the layer file to ArcMap, click the **Add Data** button on the ***Standard*** toolbar or drag the layer file onto the map from the ***Catalog*** window.
- **Template documentation**. The template documentation includes this getting started guide plus the "Using the Imagery Template" document (using_imagery.pdf file), a guide that describes how to use the template once you've installed it. Both this getting started guide that you are reading and the "Using the Imagery Template" guide are at the top level of the template .zip file you downloaded. The getting started guide is also available directly from the Esri Defense and Intelligence Gallery page.

Copyright © 1995-2012 Esri. All rights reserved.

Hardware and software requirements

To complete the "Populating mosaic datasets with CIB data" exercise you will need ArcGIS for Desktop 10.1; to complete the "Publishing a CIB mosaic dataset to ArcGIS Server" exercise you will also need access to an ArcGIS for Server 10.1 site.

Hardware requirements

Hardware requirements for this template are the same as those for ArcGIS for Desktop 10.1, and ArcGIS for Server 10.1, which you can review at ArcGIS Desktop System Requirements, and ArcGIS Server System Requirements.

Software requirements

- ArcGIS for Desktop 10.1 must be installed. For a list of ArcGIS for Desktop 10.1 software requirements and operating system limitations, see ArcGIS Desktop System Requirements.
- You must have an ArcGIS for Desktop Standard or ArcGIS for Desktop Advanced license.
- To complete the publishing exercise, you must have access to an ArcGIS for Server 10.1 site. For a list of ArcGIS for Server 10.1 supported platforms and operating system limitations, see ArcGIS Server System Requirements. You will also need the ArcGIS Image extension in order to serve an image service from a mosaic dataset.
- You must have installed an extraction utility, such as 7-Zip.

Copyright © 1995-2012 Esri. All rights reserved.

Installing and setting up the template

To install and set up the template, you must download and extract its associated files, as described in the following procedure.

Steps:

1. Review hardware and software requirements in this guide to make sure your system supports the template.
2. Create a folder named `ArcGISForDefense` on the C drive of your local computer system. Then, in the ArcGISForDefense folder, create a folder named `Basemaps`.
3. On the Esri Defense and Intelligence Gallery, click on Imagery Basemap Template. You may have to use the scroll bars to see it in the template list.
   The page that describes the template and lets you download it appears.
4. Click the **Open** drop-down arrow and select **Download**.
   The ***File Download*** dialog box is displayed.
5. Click the **Save** button.
6. On the ***Save As*** dialog box, navigate to the Basemaps folder you created in step 2 and click the **Save** button.
   The template (a .zip file) is downloaded to the location you have specified. When downloading is complete, the ***Download Complete*** dialog box appears.
7. Click the **Open Folder** botton on the ***Download Complete*** dialog box.
   Windows Explorer opens and displays the downloaded .zip file in your C:\ArcGISForDefense\Basemaps folder.
8. Use your extraction utility to extract the .zip file to its current directory. For example, if you are using 7-Zip, right-click the .zip file and click **7-Zip** > **Extract**.
   The contents of the .zip file are extracted to C:\ArcGISForDefense\Basemaps\Imagery.

You are now ready to use the template. For instructions and exercises for using the template, see the "Using the Imagery Template" guide, which is a .pdf file named using_imagery.pdf that appears with the template contents after they're extracted (after the extraction, using_imagery.pdf appears in the C:\ArcGISForDefense\Basemaps\Imagery folder).

Copyright © 1995-2012 Esri. All rights reserved.