Maximize the Value of Imagery

**Imagery** is at the heart of GIS and geography. At Esri, we believe that imagery is essential for inspiring and enabling people to understand the world around them. What do those lines, points, and polygons on the screen mean without imagery to provide context?

Imagery is not just a basemap. It’s used in countless ways. It’s a source for creating new datasets, a tool for updating and maintaining datasets, and a dataset for performing raster analysis. Imagery is integrated into all aspects of Esri’s ArcGIS® system, from the desktop to the server and from the field to the cloud; imagery is everywhere.

**ArcGIS** provides a standards-based information system to visualize, analyze, manage, and disseminate all forms of geospatial data, including imagery.

**Visualize**

Visualizing imagery together with other geospatial data provides better understanding and comprehension of the information. ArcGIS provides fast accessibility to all forms of imagery. Within ArcGIS Desktop, the accelerated image display smoothly pans and zooms around both GIS layers (basemaps) and raster images. The Image Analysis tools enable users to enhance imagery for improved interpretation. The on-the-fly processing capabilities work directly with the raw imagery, which removes the requirements for preprocessing and significantly improves usability. Imagery can be directly accessed as local files or accessed through dynamic image services.

**Analyze**

Powerful, simple-to-use image processing and classification tools extract more information from imagery for detailed interpretation and analysis.

- **Image Analysis window**: Get one-click access to a variety of enhancement and processing tools.
- **Temporal analysis**: Track changes and differences over time.
- **Image Classification toolbar**: Easily extract information classes from multispectral imagery.
- **ArcGIS Spatial Analyst extension**: Perform complex analyses of all gridded datasets on the desktop and server.

Image Analysis Window

The Image Analysis window in ArcGIS Desktop provides single-button access to many common display and processing functions.

**Display Functions**
- Contrast
- Brightness
- Dynamic range adjustment (DRA)
- Gamma
- Transparency
- Stretch
- Swipe
- Flicker

**Processing Functions**
- Composite bands
- NDVI
- Difference
- Pan sharpening
- Orthorectify
- Shaded relief
- Mosaic
- Sharpen

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Manage
Integrate imagery management and processing with the new mosaic dataset in ArcGIS. The mosaic dataset makes it easy for you to manage, search, and discover imagery in collections of any size. The mosaic dataset catalogs image and raster data sources, stores detailed metadata, and defines how imagery should be transformed into different products on the fly without the need to preprocess.

The mosaic dataset includes

- **Dynamic mosaicking** for efficient handling of overlapping imagery
- **On-the-fly processing** to create multiple products from a single source
- Management and accessibility to metadata
- Integration for multiple disparate image sensors and formats
- Streamlined data maintenance and updates of new imagery

Disseminate
Unlock the power of your imagery by putting it at the fingertips of those who need it—in less time and with less effort. Imagery can be served locally and over the Internet to desktop, Web, and mobile applications.

Go Further with Esri’s Imagery Business Partners
ArcGIS provides the foundation for GIS and imagery in an integrated environment. At Esri, we work closely with our partners who provide industry and domain expertise to complement and extend ArcGIS for specialized needs.