

Using GloVis



What is GloVis?

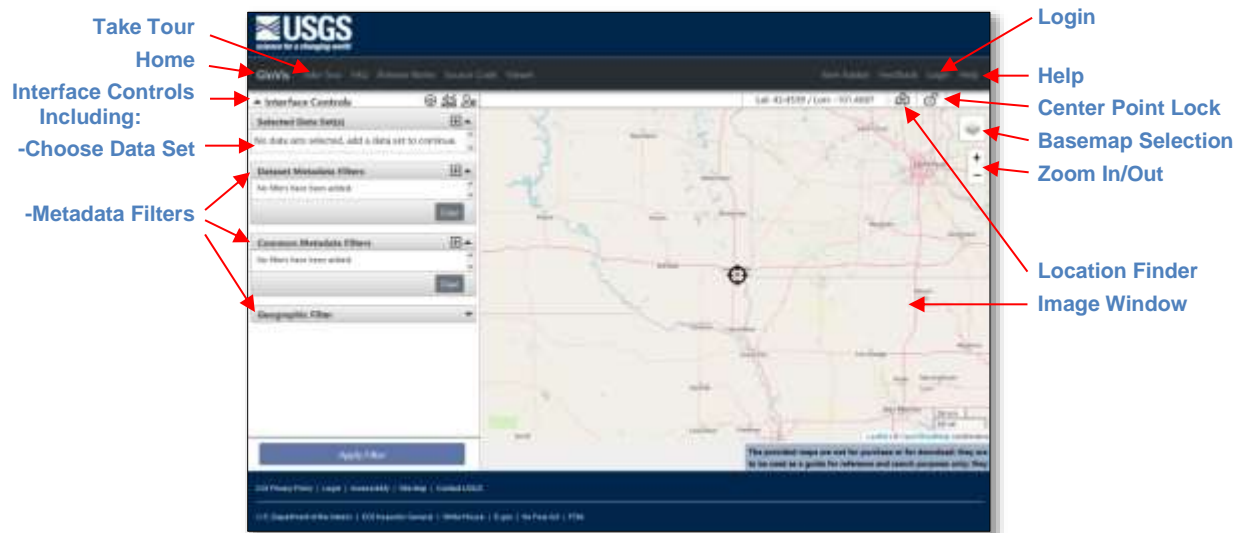
GloVis is the short name for U.S. Geological Survey's next generation **Global Visualization Viewer**. "GloVis is a quick and easy online search and order tool for selected satellite and aerial data." (USGS) The USGS Earth Resources Observation and Science Center (EROS) *data holdings* available with GloVis are listed here:

EROS Collection	What's In the Collection
DOQ (Digital Orthophoto Quadrangles)	Computer generated images of aerial photography in 3.75 minute and 7.5 minute quadrangles
EO-1 ALI	Advanced Land Imager (10 spectral bands) and Hyperion (220 spectral bands) on Earth-Observing One (2000-present)
EO-1 Hyperion	Hyperion (220 spectral bands) on Earth-Observing One (2001-present)
Global Land Survey	From Landsat imagery (1972-present)
IRS	Advanced Wide Field Sensor (AWiFS) and Linear Imager Self-Scanning Sensor (LISS-3) on Resourcesat-1 and Resourcesat-2 (USGS partnership with Indian Space Research Organization) (2003-present)
Landsat 8 OLI/TIRS	Operational Land Imager and Thermal Infrared Sensor on Landsat 8 and Landsat 9 (2013-present)
Landsat 7 ETM+	Enhanced Thematic Mapper Plus on Landsat 7 (1999-2003; 2003-present with data gaps)
Landsat 4/5 TM	Thematic Mapper on Landsat 4 and 5 (1982-2012)
Landsat 1-5 MSS	Multispectral Scanner on Landsat 1-5 (1972-1992)
OrbView-3	Commercial, high-resolution imagery; panchromatic (black & white) and multispectral (color) (2003-2007)
SRTM	Shuttle Radar Topography Mission (February 11-22, 2000)

GloVis offers a graphic map display allowing you to view requested scenes from selected collection datasets. You can browse to adjacent scenes or select an entirely new one; even request scenes with a specified amount of cloud cover.

GloVis is easy to use!

Launch your browser. Point it to the GloVis home page at this address: <http://glovis.usgs.gov/>.



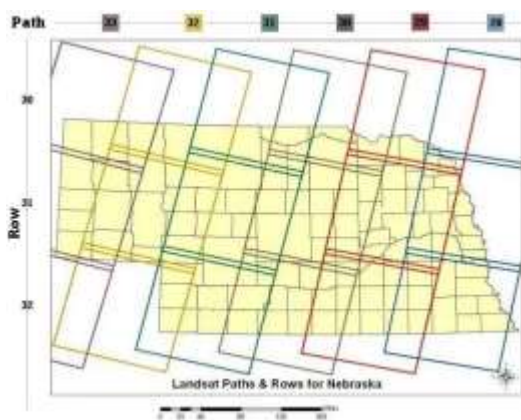
GloVis Capabilities & Tools

This table describes some of the tools available in GloVis Next.

Capability	What It Does
Take Tour (menu bar, top-left)	Optional, built-in tour of GloVis Next
Help (menu bar, top-right)	Access to tutorial section , customer service & more
Interface Controls – Show/Hide(up/down arrow)	Hide control panel to see image full screen
Selected Data Set(s)	Select data set collection
Dataset Metadata Filters	Filters that apply to specific data set only
Common Metadata Filters	Filters that apply to all enabled data sets
Jump to Location	Jump to location by path/row or lat/ong
Center Point Lock	Enable panning without changing crosshair location
Display Timeline	Allows selection of dataset from several on a timeline
Basemap Layer Selection	Change basemap layer (street map, satellite view, etc.)
Zoom-In/Out	Zoom in or out on the view in the image window
Reset map	Take Tour > End Tour

About Landsat Data

Landsat Earth-observing satellites have been in orbit since 1972. The orbital path of each satellite is configured so that the entire Earth is scanned about every 2 weeks. As the satellite orbits the Earth on a generally north-south path (colored columns in the left image below), its sensors scan the Earth's surface one scene at a time (squares in each column). Each successive scene is called a row in that path. Therefore, in GloVis Next, scene locations can be identified by **path and row** as well as by the **latitude and longitude** at the center of the scene.



Example of Landsat Paths and Rows

<http://nebraskaview.unl.edu/landsat/NebraskaPathRowMap.jpg>



WRS-2 Paths and Rows for Landsat 4, 5, 7

<http://landsat.gsfc.nasa.gov/wp-content/uploads/2013/01/wrs2.gif>

The Enhanced Thematic Mapper Plus sensor on Landsat 7 scans the Earth in three visible and four infrared wavebands. Dual instruments on Landsat 8-9 expand that list to eleven bands. Surface features on the Earth absorb and reflect solar radiation. By studying the amount of energy reflected by various surface features in each waveband, scientists are able to identify specific surface features in Landsat imagery. The USGS archives Landsat imagery for access by the general public using the GloVis.

Your Turn

Now, it's time to play with GloVis Next – experiment, learn, enjoy, share!

Try the background information and GloVis Tutorial available in the SEA Library's Analysis Toolbox found at <https://SatEd.org/library/Tools.htm>.