

[The Imagery Exchange: Global Imagery Generation/Management](#) [1]

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Abstract:

NASA's Global Imagery Browse Services (GIBS) project has positioned itself to be the global imagery solution for the Earth Observation System (EOS), delivering global, full-resolution satellite imagery in a highly responsive manner. This is an ambitious goal for supporting a growing collection of distributed archives consist of heterogeneous near real-time (NRT) and science products with varied and often disparate provenance pertaining to source platforms and instruments, spatial resolutions, processing algorithms, metadata models and packaging specifications.

GIBS consists of two major subsystems, OnEarth and The Imagery Exchange (TIE). OnEarth is the Open Geospatial Consortium (OGC)-compliant Web Map Tile Service (WMTS), which efficiently serves multi-resolution imagery to clients (e.g., <http://podaac-tools.jpl.nasa.gov/soto/> [3] and <http://earthdata.nasa.gov/labs/worldview/> [4]). TIE is the GIBS imagery workflow management solution that is a specialization of the horizontally scaled Data Management and Archive System (DMAS) developed at the Jet Propulsion Laboratory. Like DMAS, TIE is an Open Archival Information System (OAIS) responsible for orchestrating the workflow for acquisition, preparation, generation, and archiving of imagery to be served by OnEarth. The workflow collects imagery provenance throughout a product's lifecycle by leveraging the EOS Clearing House (ECHO) and other long-term metadata repositories in order to promote reproducibility and retain lineage with source observational artifacts.

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