MODIS Web Services
Enabling Automated, Standard Access to MODIS Science Data

MODIS WMS currently in Beta tests, implements OGC’s v1.0 Interface Standard. The WCS enables query and retrieval of MODIS geographical coverages across the Web using platform-independent interfaces. The user interacts with the WCS in a synchronous session, with results returned within a brief time period. A Coverage is a geographic data file, which may be modified and analyzed. MODIS WCS may be accessed at http://ladsweb.nascom.nasa.gov/data/web_services.html.

Earth Science Cross-Archive Distribution
ESCAD allows users to search and order data, which has been sent by MODAPS to USGS’s Land Processes Distributed Active Archive Center (LP DAAC), using the existing search and order capabilities and product holdings of LAADS. This service utilizes the newly implemented Cross-Access New Distribution Interface (CANDI), which provides a standard interface for users to specify their data selections from LP DAAC and swath data from MODAPS. This application leverages services from the ECHO, MODAPS and USGS GloVIS teams, enabling low cost development, robust integration and minimal maintenance.

A Growing Library of Services
The Teams at NASA Goddard Space Flight Center which serve MODIS Atmospheric and Level 1B data and data products through the MODAPS (MODIS Adaptive Processing System), are developing and deploying a suite of services to simplify, standardize and automate locating, interrogating and retrieving metadata and science imagery. The MODIS Web Service provides REST and SOAP based methods for interacting with the MODAPS data archive. The Web Coverage Service, scheduled to be released end of 2011, enables access and download of daily, global image files from over 500 data products. The Web Map Service provides presentation and overlay facility in order to produce a map. WCS and WMS comply with their respective OGC standards. These services are enabling collaborations between data centers more easily and rapidly, bringing more robust and varied capabilities to the user community. Examples of these collaborations are: Data Quality Screening Service (DQSS) and MODIS Cross-Access Distribution.

LANCE WMS implements OGC’s v1.0 Interface Standard. The Land Atmosphere Near-real-time Capability for EOS WMS enables the user to combine spatially referenced MODIS global data layers into a map and to access different geospatial databases without requiring the original source data. The WMS incorporates Geospatial Foundation’s open-source Map Server to generate and serve the images and OpenLayers API for the Client to submit requests and present maps. LANCE WMS may be accessed at http://lance-modis.eosdis.nasa.gov/wms/.