RealEarth
The SSEC Web Map Service


University of Wisconsin – Madison

2013 McIDAS Users Group Meeting
Madison, WI
9-10 Sept 2013

2013 Aircraft Survey UW
Questions???
RealEarth

- System Updates
- New Data Types & Sources
- Mobile Devices
- Real-Time Demo

VIIRS True Color Rim Wildland
VM Architecture

Modular Design Permits:
- Flexibility
- Load Distribution
- Fault Tolerance
- Redundancy
- Scaling
- Packaging/Distribution

Server: RHEL 6
Virtual Machine Manager

CentOS VM1 (role 1)
CentOS VM2 (role 2)
CentOS VM3 (role 3)

Data

Ports:
22 (and forwarding)
80
5432

Clients

Data Source

FTP

PostgreSQL

HTTP
Requests made to gateway on port 80

Proxy collects and combines information (tiles, shapes, metadata, etc) from the appropriate host and returns the result to the client.
NWS Enhanced Data Display

Product Sharing
Manager Product Editor

SSEC WMS Product Manager

PIREP
Pilot Reports

7m
150 tiles in 41s (0.3s/)

Edit npptcpm

Naming
Name: N. America True Color comp 1km (VIIRS, PM only)
Description: N. America true Color comp 1km (VIIRS, PM only)
Categories: VIIRS,Regional Imagery

Timeliness
Animation Interval: 90 minutes
Warn After: 2880 minutes
Model Data:

Availability
Public: ✓
Released: ✓

Security
Restrict to IPs:

Actions
Rebuild Product  Rebuild Legend  Clean Cache  Delete Product

Display
Data Type: Raster
Tile Type: Color
Transparent Color: 0 0 0
Processing:
Tile Renderer: /home/wms/data/mapfiles/renderers
Canvas Marker: /home/wms/www/html/js/markerGenerators/js
Max Zoom: 4
Seed Policy: Do not seed
Show Legend:

Data Retention
Keep: 366 Files  Hours  Days
Static:

Save
Catagories

Display Controls – Product Selection

- **Products**
  - All Products
  - Displayed

- **Hazard**
  - Global Earthquakes (10 min)
  - RSAC Large Wildland Fires
  - Severe Wx Warnings
  - Hurricane Cone of Uncertainty
  - Hurricane Points
  - Hurricane Track
  - Volcanic Ash Advisories

- **Other**
  - High Res
  - Hurricane
  - Landsat
  - MODIS
Favorites

Display Controls – Product Selection

- Save my selections
- WatchWarn

Products
- All Products
- Displayed
- Save As Favorite...
- WatchWarn

Options:
- All
- Convective Outlook Day1
- Convective Outlook Day2
- Fire Weather
- Satellite Composite
- Static
- VIIRS
- WMS DEMO
- WildFire
Times Animation Time Controls
Canvas

Marker Generators
Basemaps
Data Probe

Great Lakes Surface Environmental Analysis (GLSEA) 20.91
User uploads a text file (myimage.adde) that contains ...
ADDE ingest

.... which creates a RealEarth Layer called myimage
RealEarth
New Data Types and Sources
VIIRS

CIMSS/CSPP: Swath Composites
VIIRS

CIMSS/CSPP: Day Night Band
Landsat 8  USGS: Granual Composites
Landsat 8 USGS: Multi-channel Composites

Bands 7,5,3 = RGB
FLS

CIMSS: Fog and Low Stratus
CIMSS: Atmospheric Motion Vectors

Display Controls

Save my selections

Products

AMV: Upper Level IR/WV (1005-259mb)
AMV: Upper Level IR/WV (251-350mb)
AMV: Upper Level IR/WV (351-500mb)
AMV: Lower Level IR (600-999mb)
AMV: Lower Level IR (800-959mb)

Map

United States
Hazards

VAAC: Volcanic Ash Advisories

USGS: Earthquakes

RSAC: Wildland Fires
RealEarth
Mobile Devices
WxSat

- Global composites of Visible, Infrared and Water Vapor images
- Full native resolution
- Products produced by SSEC Data Center
- Can expand to include other RealEarth Layers
WxSat

- Simple way for anyone to explore global composite imagery
- Leverages RealEarth Web Map Service
- iPhone and iPad
- ....AND ....
WxSat

• ….. Android Version is right behind
• Duplicates functionality and contents
• Beta release first quarter of 2014
RealEarth
Real Time Demo