



EOSDIS

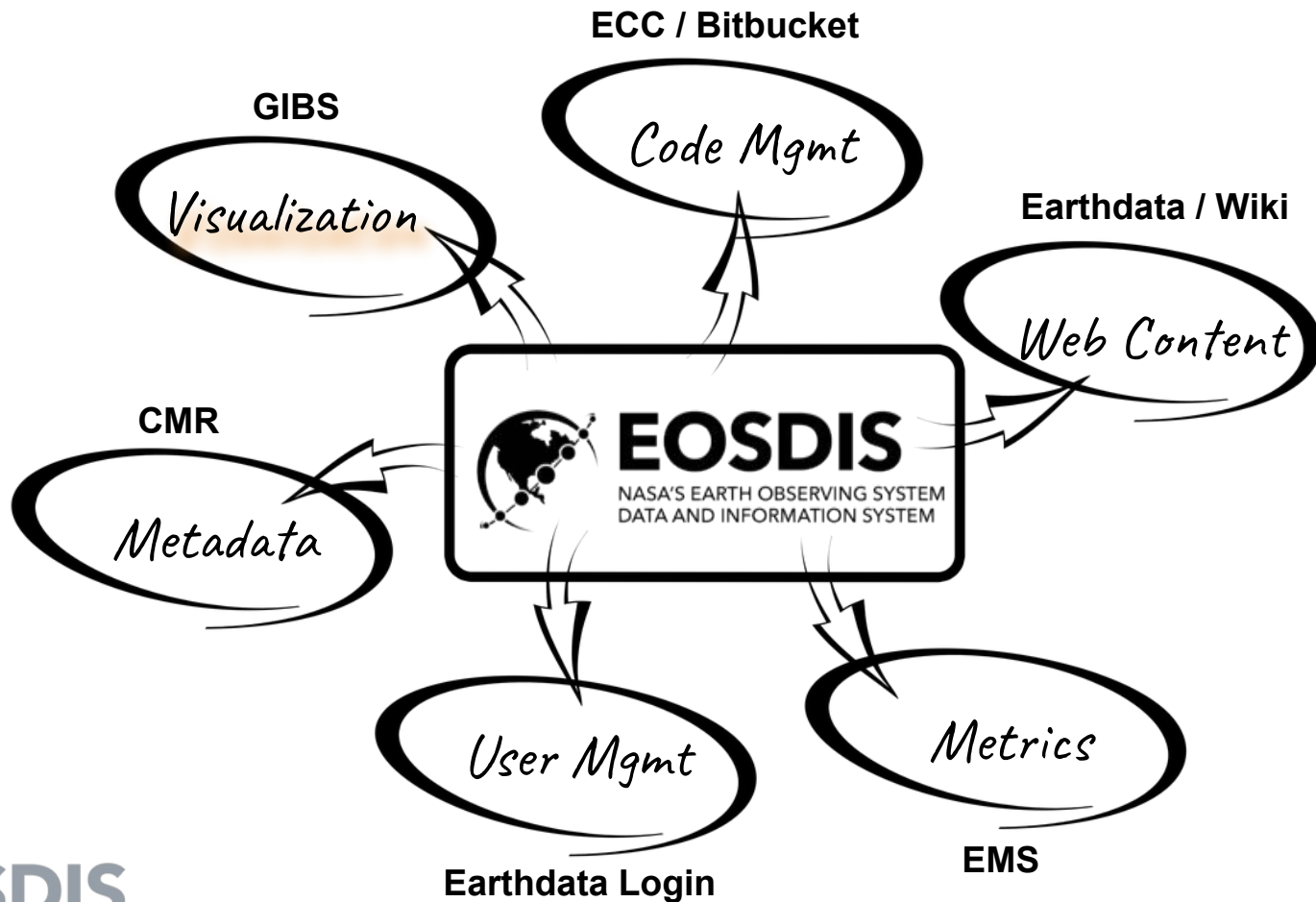
NASA'S EARTH OBSERVING SYSTEM
DATA AND INFORMATION SYSTEM

Global Imagery Browse Services LANCE Status

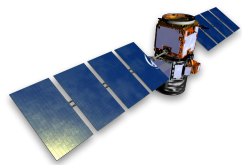
Fall 2018 LANCE UWG Meeting

Matt Cechini
GIBS Systems Engineer
SSAI Inc.

What is GIBS?



Visualization Flow

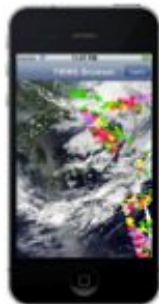
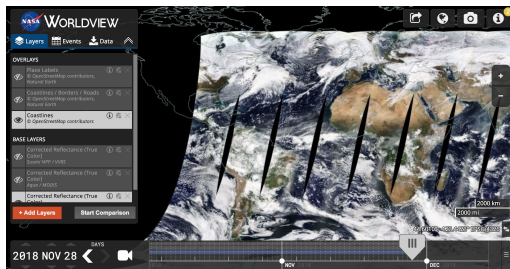
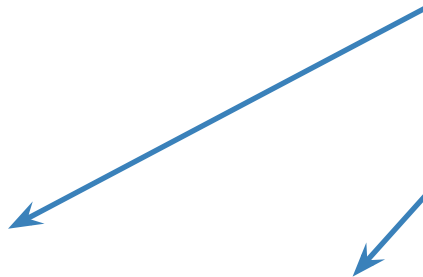
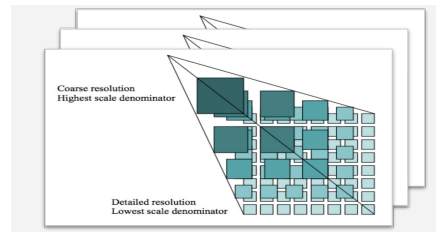


Data

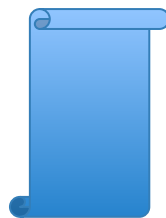


Imagery

GIBS Archive / API



Web / Mobile Clients



GDAL Scripts



GIS Clients

Request Define Develop Test Review

Disposition internal or external request:

ESDIS / GIBS / SIPS / LANCE / DAAC / Science Team / UWG

Define ICD and Colormaps/Legends

GIBS / SIPS / DAAC? / Science Team?

Develop Image Generation Code

SIPS / LANCE

Internal Imagery Testing

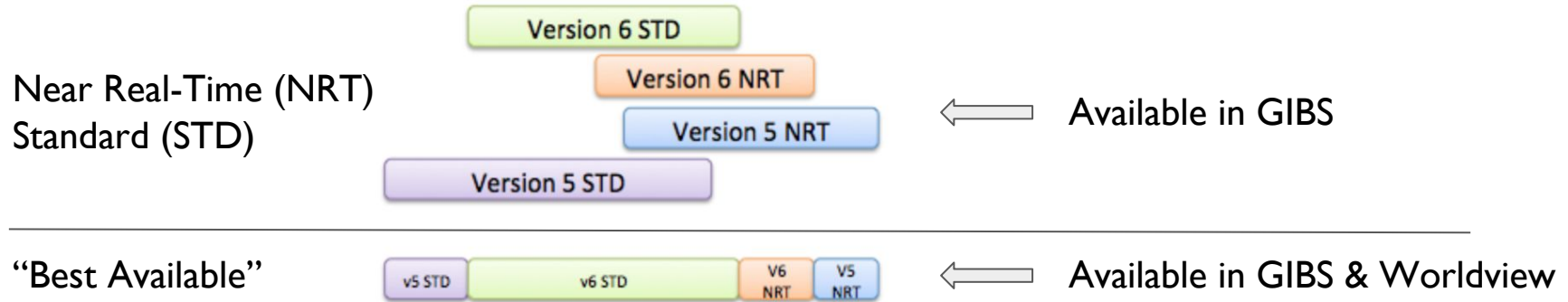
GIBS / SIPS / LANCE

Review for image quality and correctness

DAAC / Science Team

NRT Visualization Layers

Visualization Layer Categories



Existing NRT Layers

- AIRS - 28
- AMSR2 - 19
- GMI/IMERG - 8
- ISS/LIS - 2
- MISR - 18
- MLS - 14
- MODIS - 98
- MOPITT - 1
- OMI/OMPS - 17
- VIIRS - 9

Known Future NRT Layers Updates/Additions

- AIRS
 - Updated visualization algorithm
- AMSR
 - AMSR2 → AMSRU2
- GMI/IMERG
 - Rain/Snow → Precipitation update
- MODIS
 - MAIAC & Flood Product
- OMI/OMPS
 - Cloud Pressure?
- VIIRS
 - Atmosphere (SSEC)
 - Land/Snow/Ice (MODAPS/LDOPE)

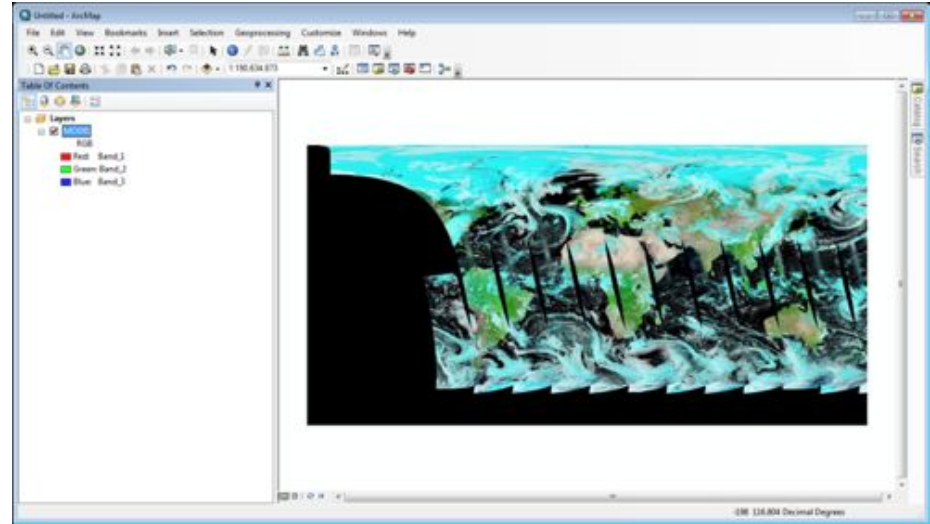
Maintenance Ingest Continuity

- Overview
 - Previously halted all ingest during GIBS maintenance (4-8 hours)
 - Continued ingest for selected NRT/STD products during GIBS maintenance
 - Products initially selected based on metrics evaluation
- Products
 - AMSR2 - Snow Water Equivalent and Rain
 - AIRS - SO₂
 - GMI/IMERG - Rain, Snow, and Brightness Temp
 - MODIS Aqua & Terra - Corrected Reflectance, No-Data, AOD, and Land Surface Temp
 - VIIRS - Corrected Reflectance and Day/Night Band

Upcoming Capabilities

Public WMS Access

- Supports broader GIS usage
- Built on top of tile-based API
- All imagery and projections supported
 - Current issue with vectors in EPSG:3857
- GIS client issues with “time” remain
 - Fewer than with WMTS
- Requests serviced by Active-Active HA server pair for availability and performance
- Working with Disasters Portal and SEDAC Hazards and Population Mapper
- Stay tuned for public announcement



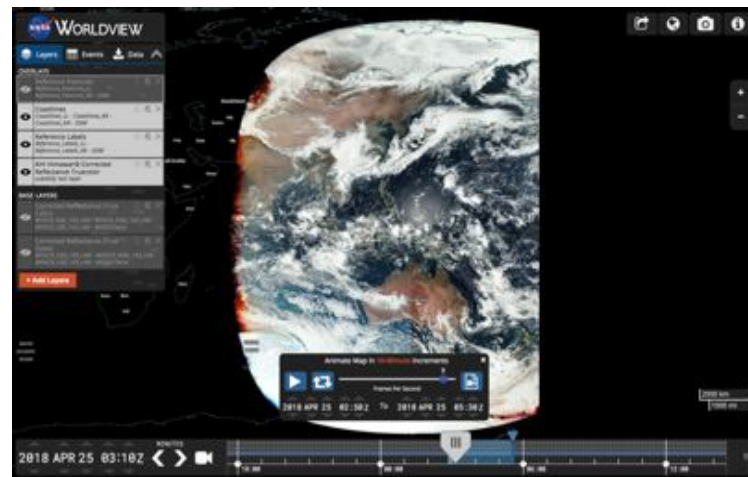
Matured Vector Support

- Official support for delivery of vector data
 - Updates to ICD expected in early 2019 for review
- Existing WMS rasterization unchanged
- Additional WMTS access to “vector tiles”
 - Contain properties to style/filter and describe features
- “Vector Properties” metadata document in draft
 - Describe feature properties contained within vector tile
- Mapbox JSON Style documents define default/custom styling
 - Analogous to existing RGB colormap document
- Active prototyping expected in Q1 2019



Geostationary Imagery

- Currently supported/unleveraged functionality
- Similar ingest/access processes
 - Possible modifications due to reduced spatial coverage
- Support requires storage impact analysis
- Actively prototyping with GEONEX and SPoRT



... and now Worldview ...