

Building GIS-Ready Products for FAS

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ASRC Management Services

October 20, 2008

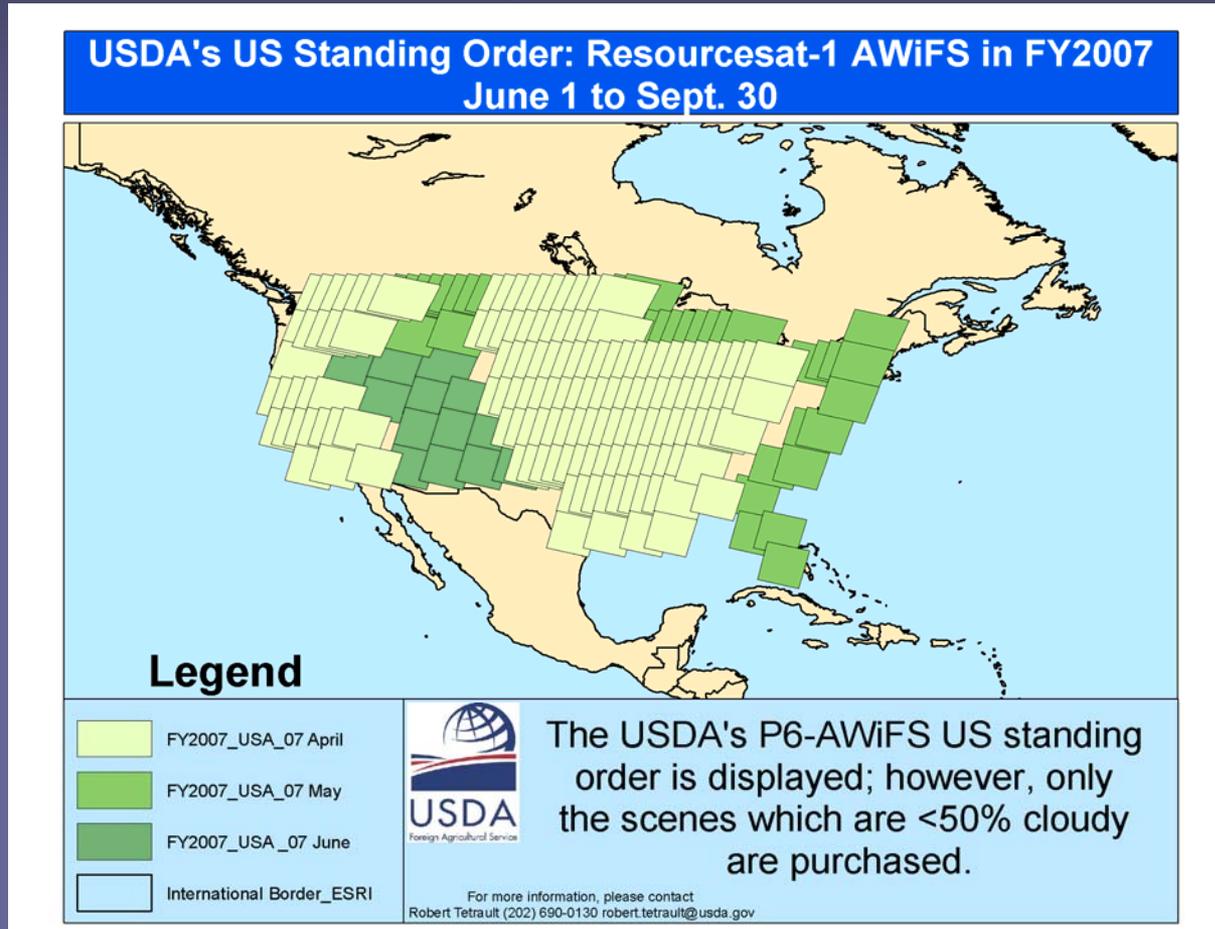
Introduction

- **Who** – USDA FAS International Production Assessment Division (IPAD)
- **What** – An automated process for downloading, ingesting, tracking, reporting and distributing Resourcesat products
- **Why** – Provide timely inputs for Production Assessment, Disaster Response, Food Security
- **Where** – Globally
- **When** – 365 days a year

How?

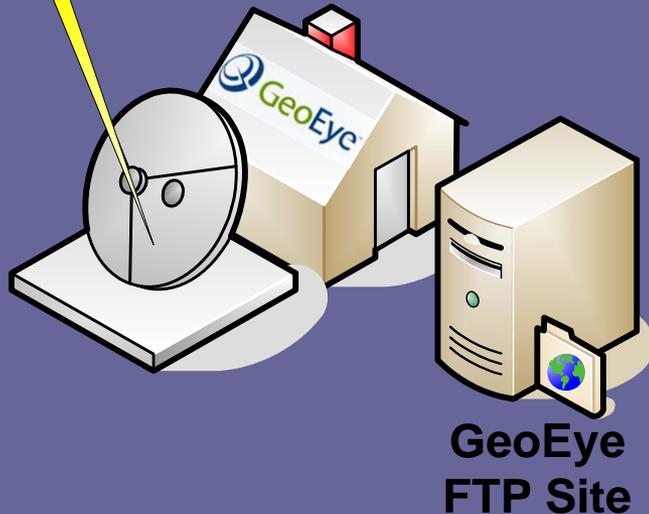
The P6 Processor

Ordering P6 Products



Tetrault, Robert (2007). *USDA Collection Strategy for Resourcesat*. “USDA—FAS/IPAD ResourceSat Seminar featuring Resource Sat AWiFS and LISS Data, Tuesday, November 27, 2007, Greenbelt, MD.

Imagery Acquisition

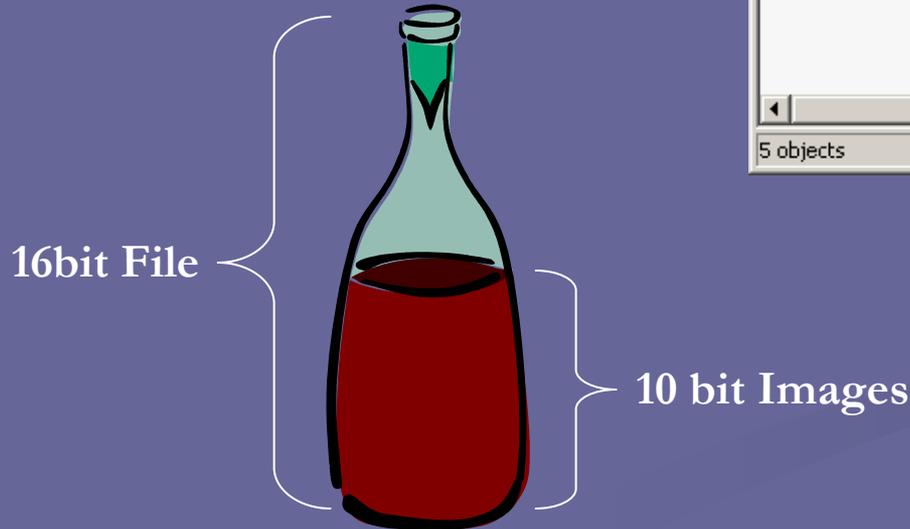
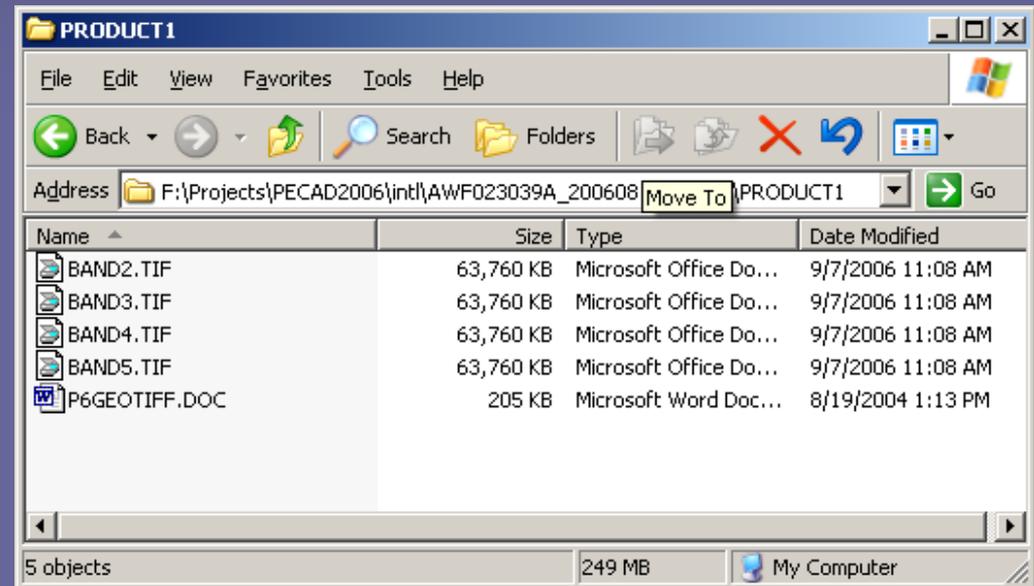


- Data Acquisition
- Data Capture
- Data Processing
- Orthorectification
- Final QC
- Product Delivery

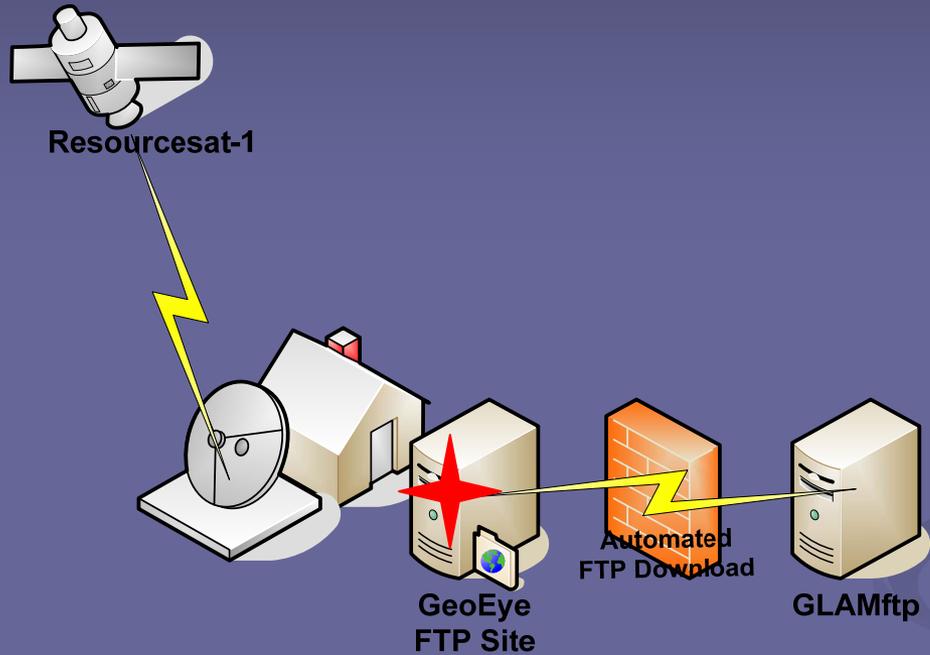
Cooper, Toney (2007). *What Happens In Norman*. “USDA—FAS/IPAD ResourceSat Seminar featuring Resource Sat AWiFS and LISS Data, Tuesday, November 27, 2007, Greenbelt, MD.

Delivered Product

- Zip file
- WorkOrder Name
- 4 single band tif files
- 10bit (16bit files)
- Metadata file – cdinfo

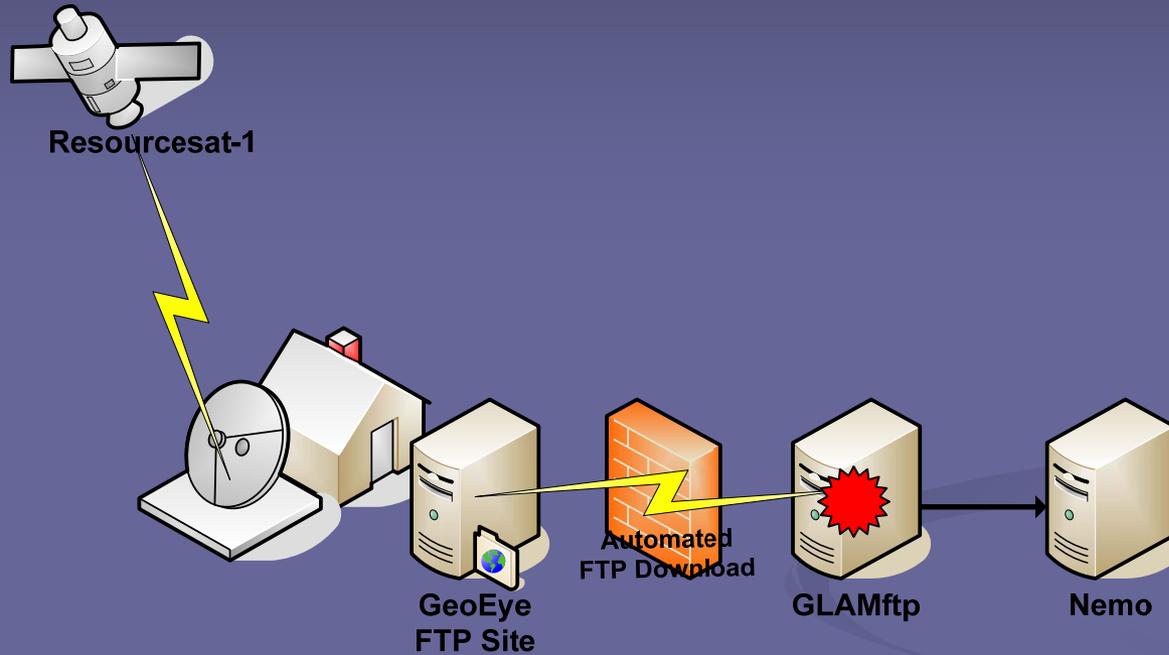


Download to GLAMftp

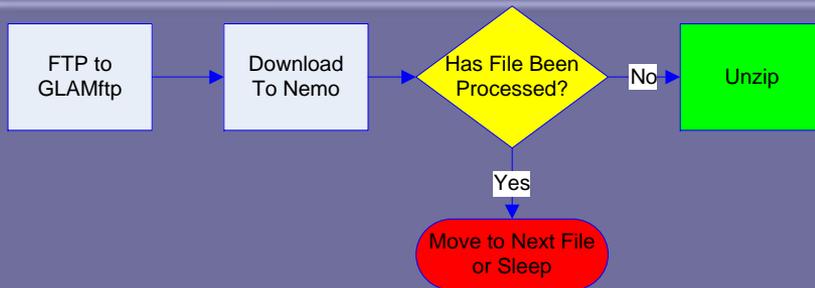
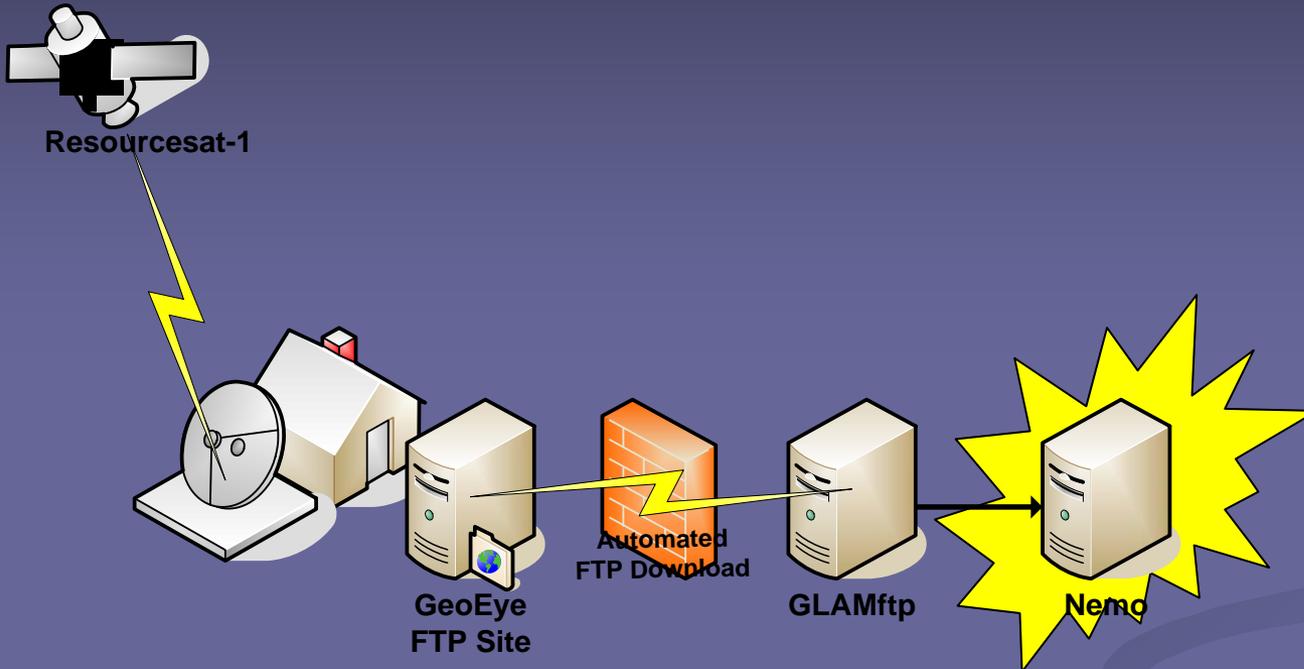


FTP to
GLAMftp

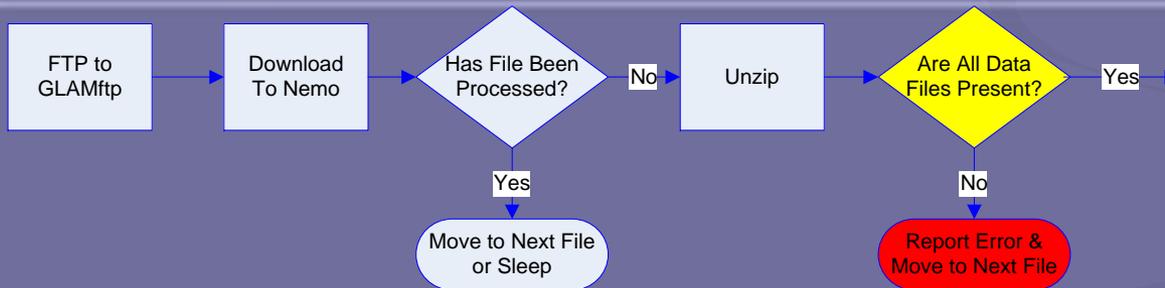
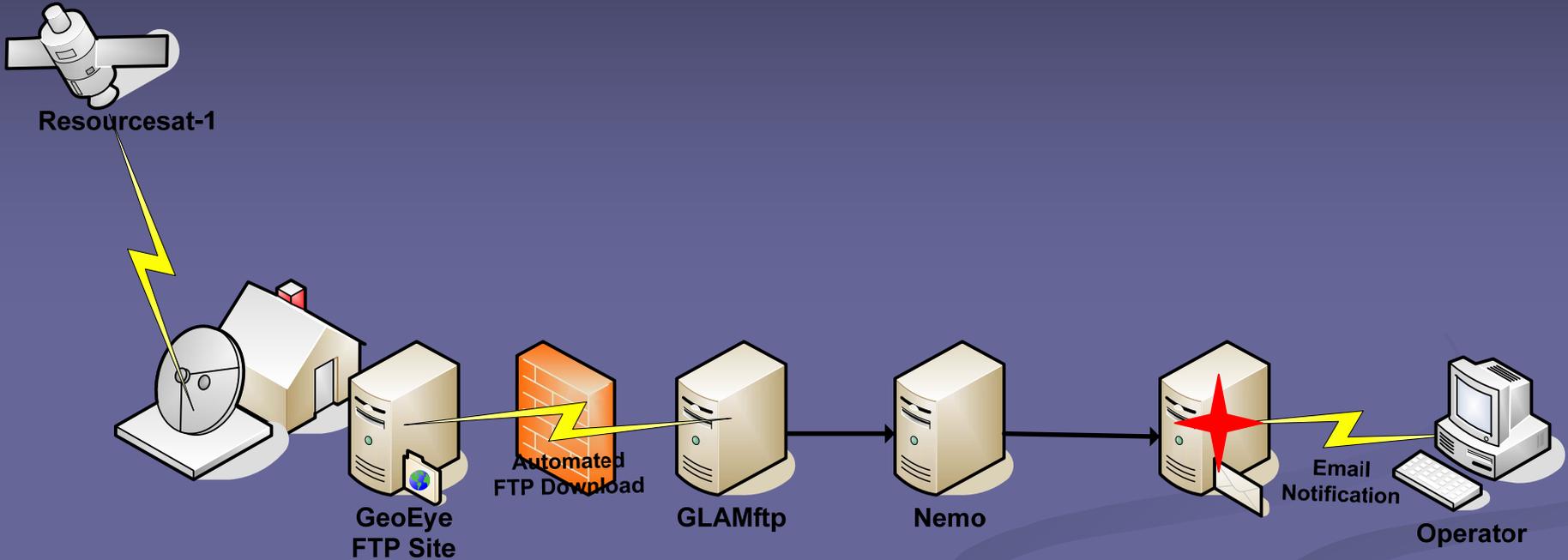
Download to Nemo



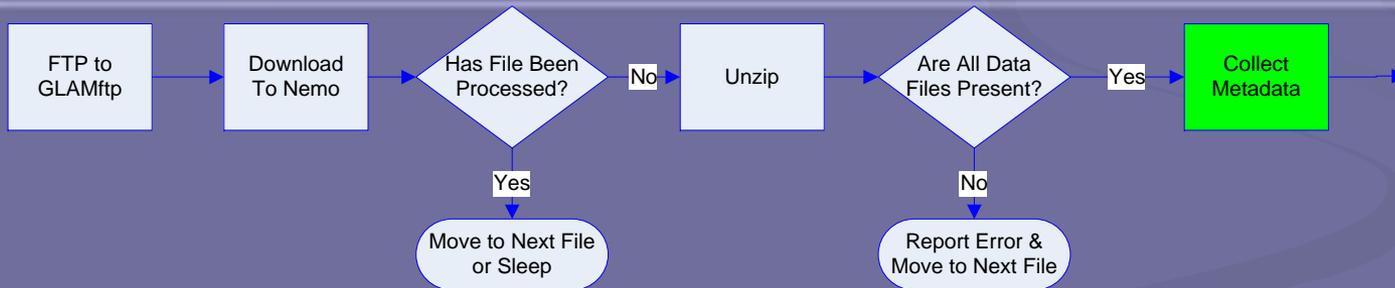
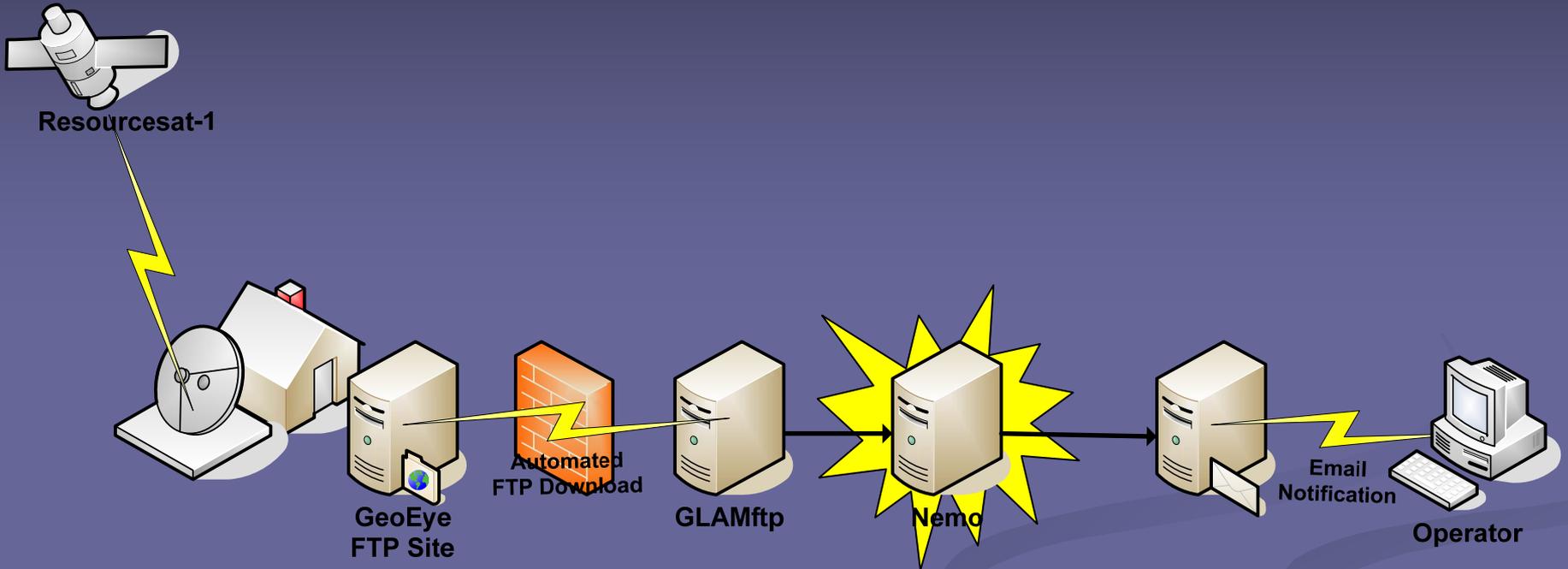
Check File Status



Verify Zip File Contents



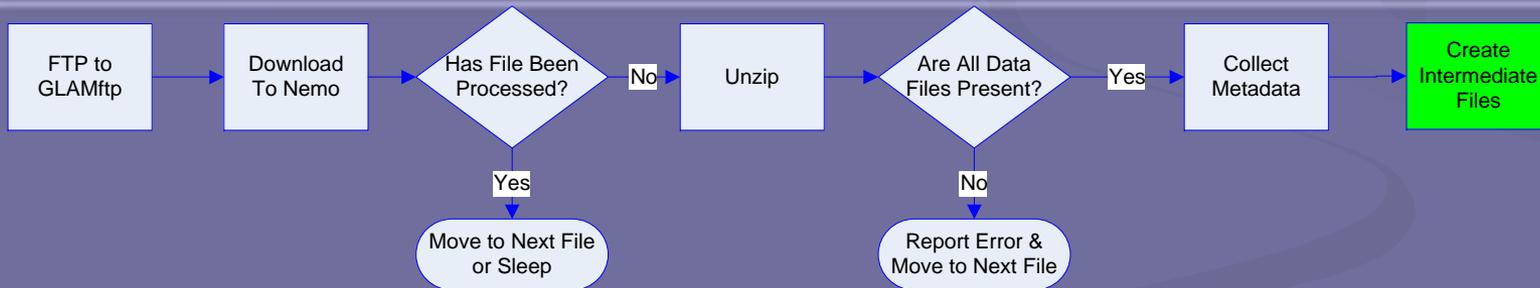
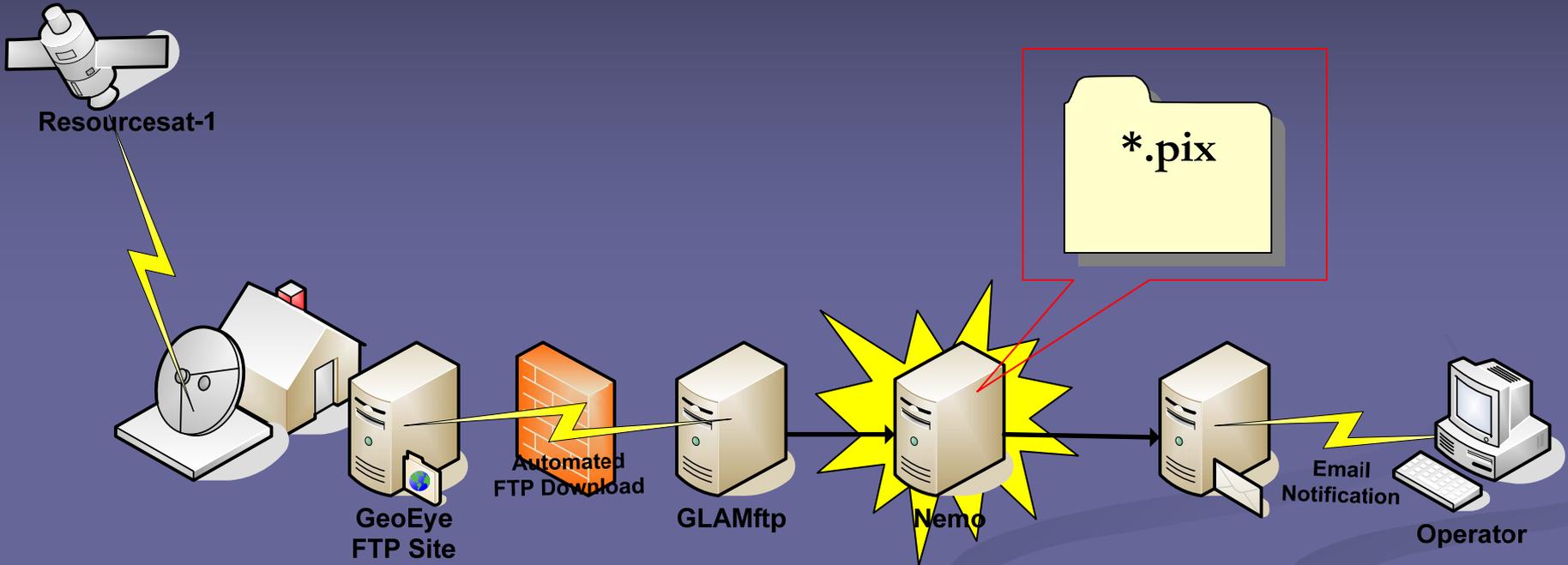
Collect Metadata



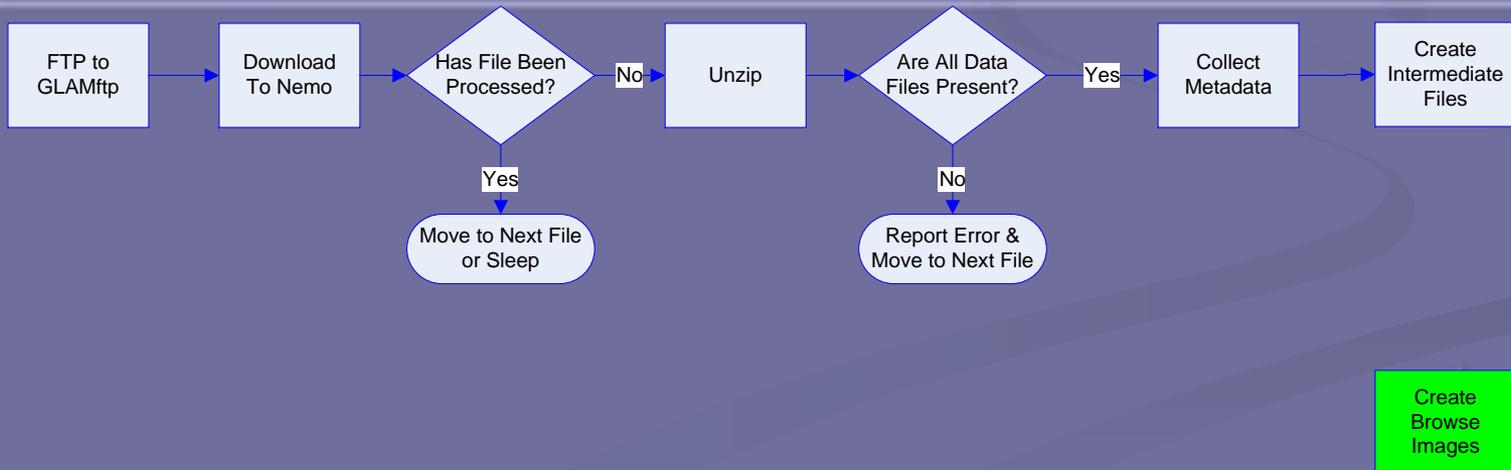
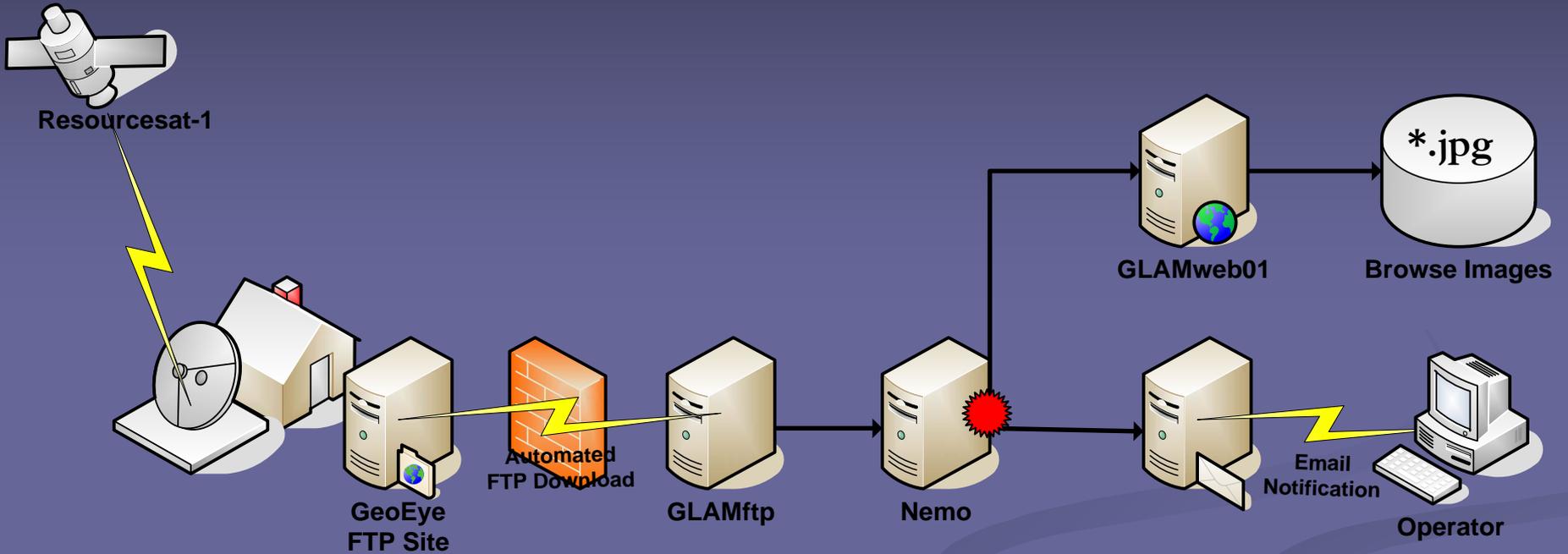
The CDINFO File

```
CDINFO - WordPad
File Edit View Insert Format Help
|
PRODUCT 1:
Product number          :
Satellite ID            :P6
Sensor                  :AWF
Path-Row                :263-040
Date, Time and Scene Id.:23-SEP-08 17:50:11AWFBST00B2345F
Product Code            :STLC000TJ
Orbit Number            :25626
Image Layout            :BSQ
Number Of Bands         :4
Bands Present in Product :2 3 4 5
Bands in this volume    :2 3 4 5
File Header             :0
Line Header (Prefix Bytes):0
Line Trailer (Suffix Bytes):0
Scan Lines              :8310
Pixels                  :8336
Bytes Per Pixel         :2
Image Record Length(Bytes):16672
No of Volume            :1/1
For Help, press F1
```

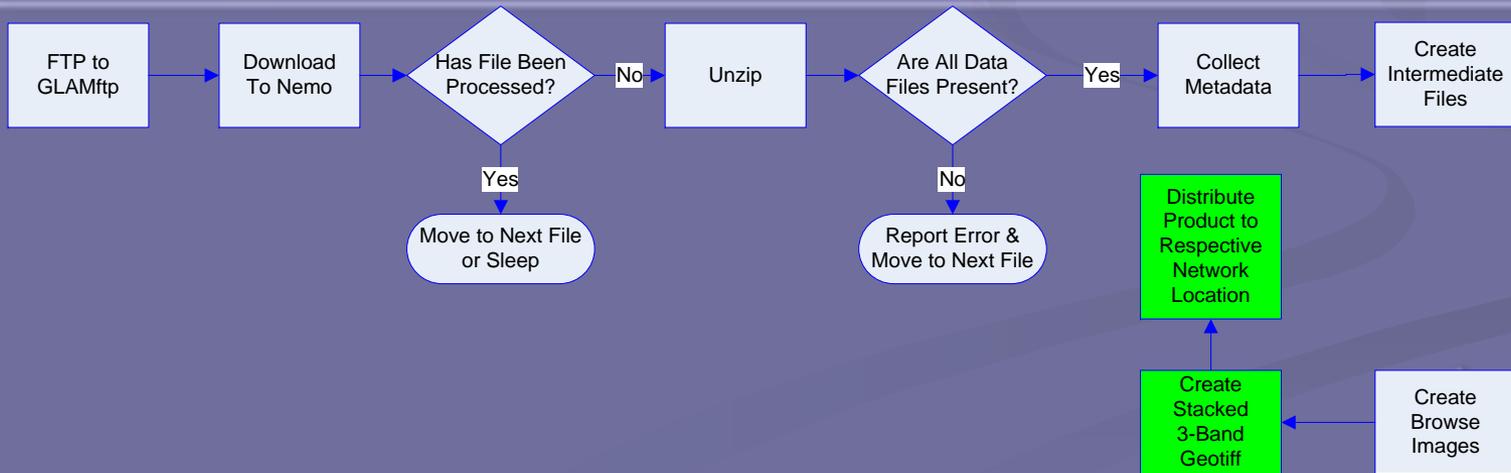
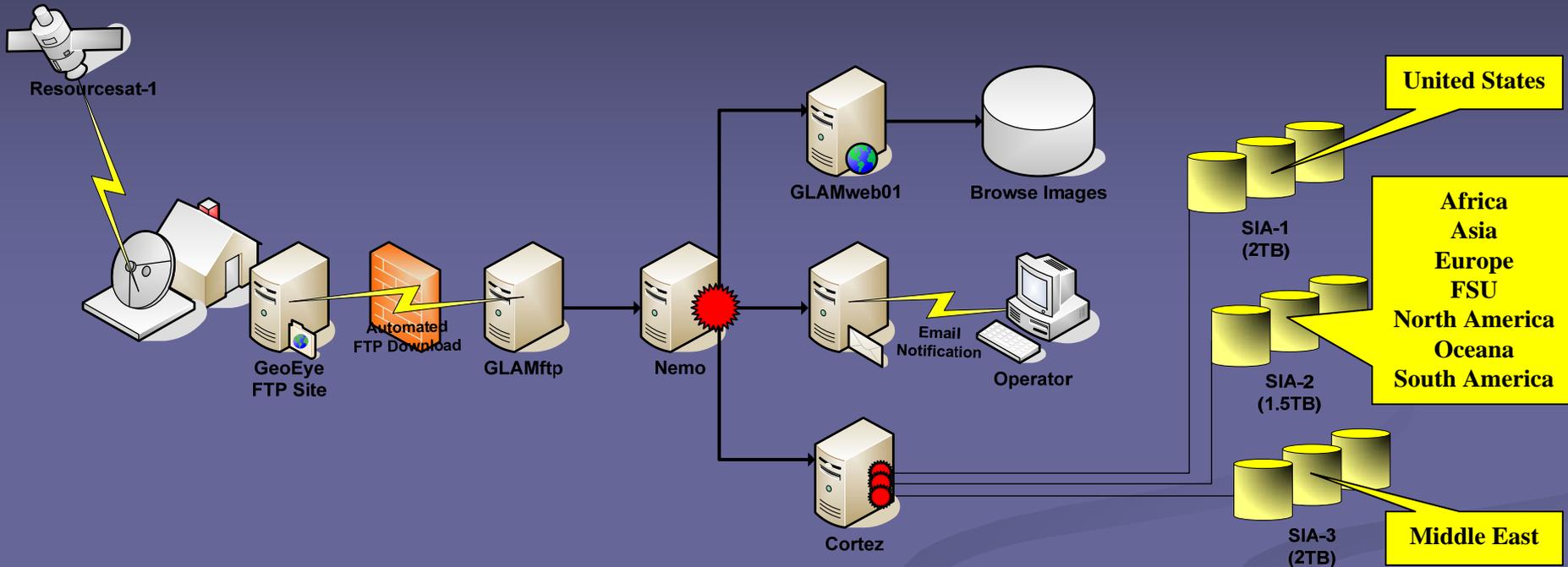
Create Intermediate Files



Create Browse Images

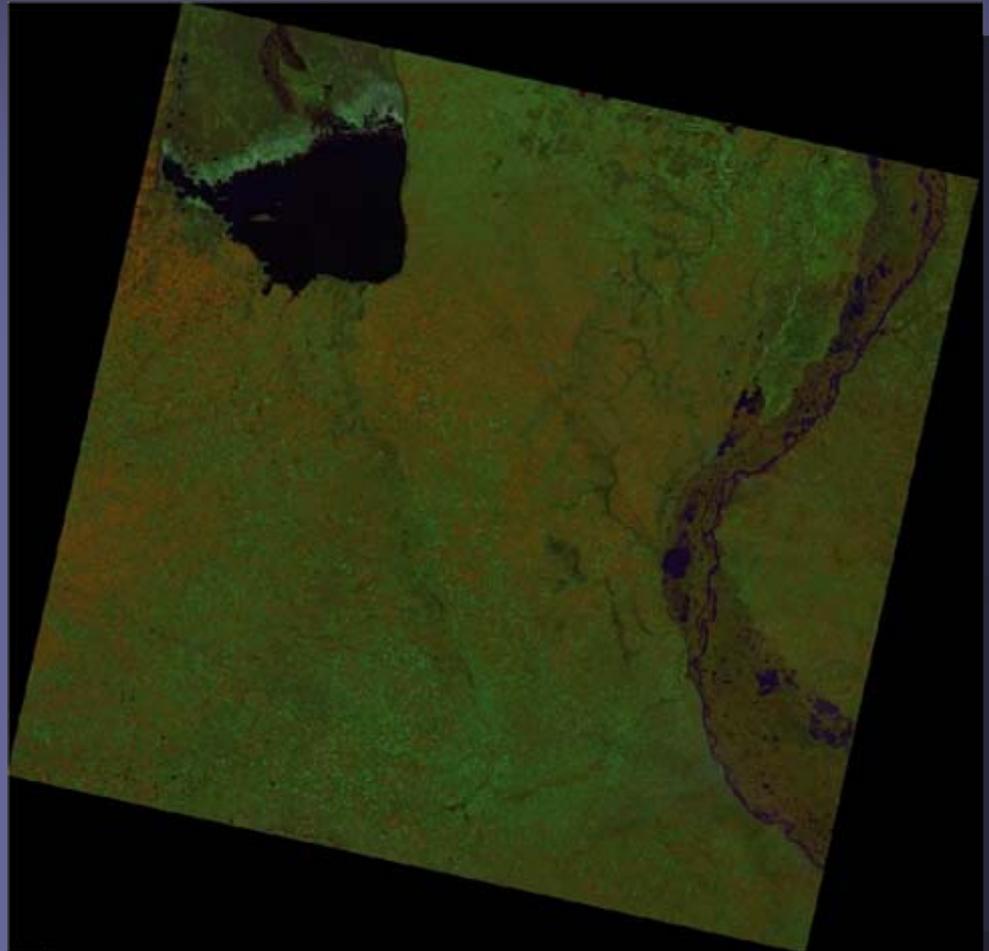
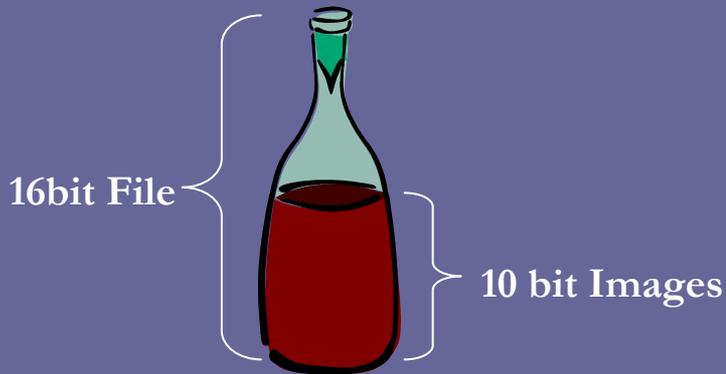


Create 3-Band Geotiff Files

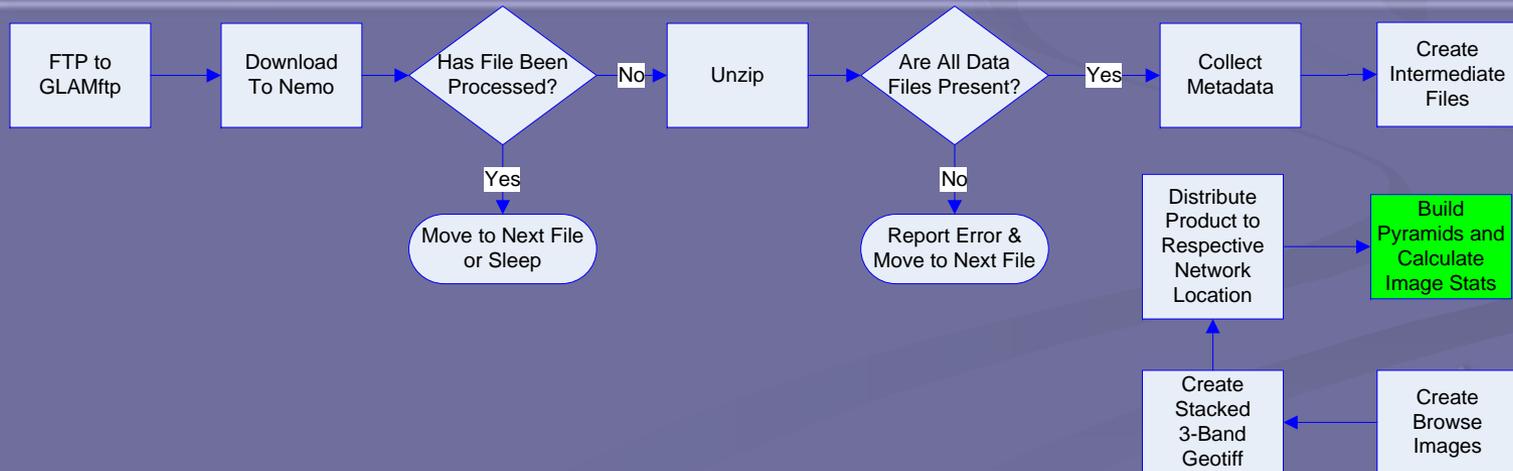
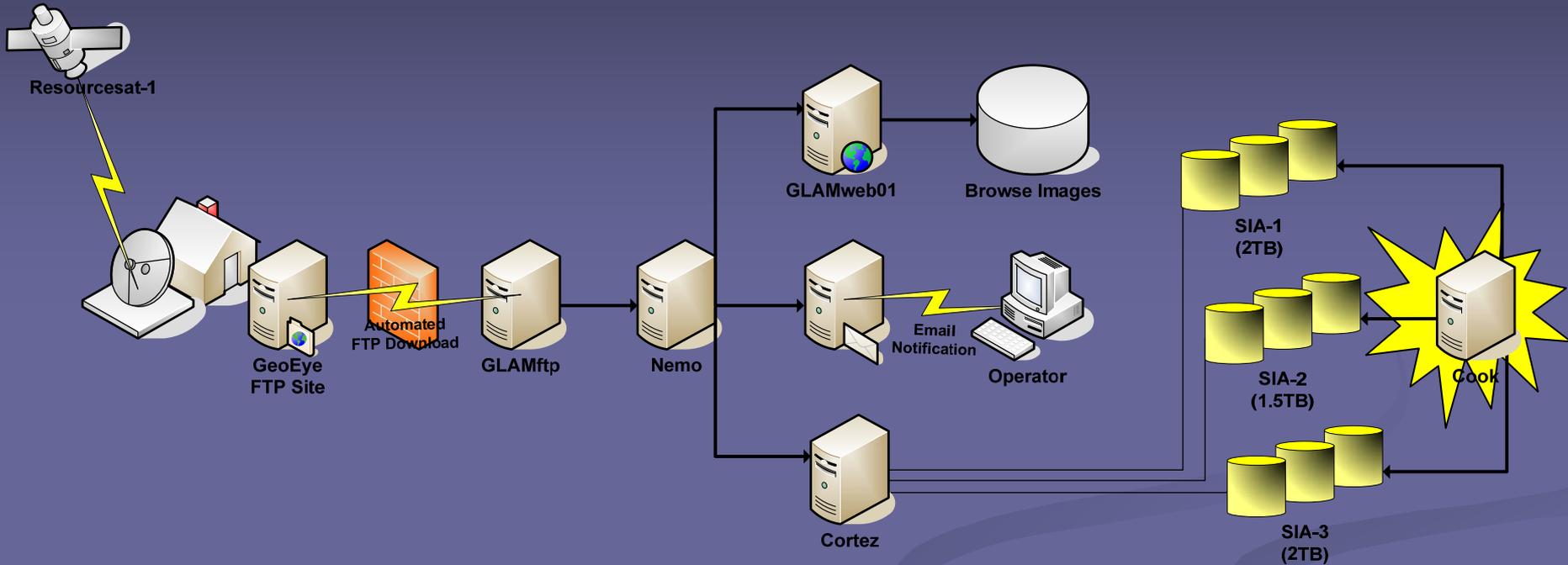


3-Band Stacked geoTIF Files

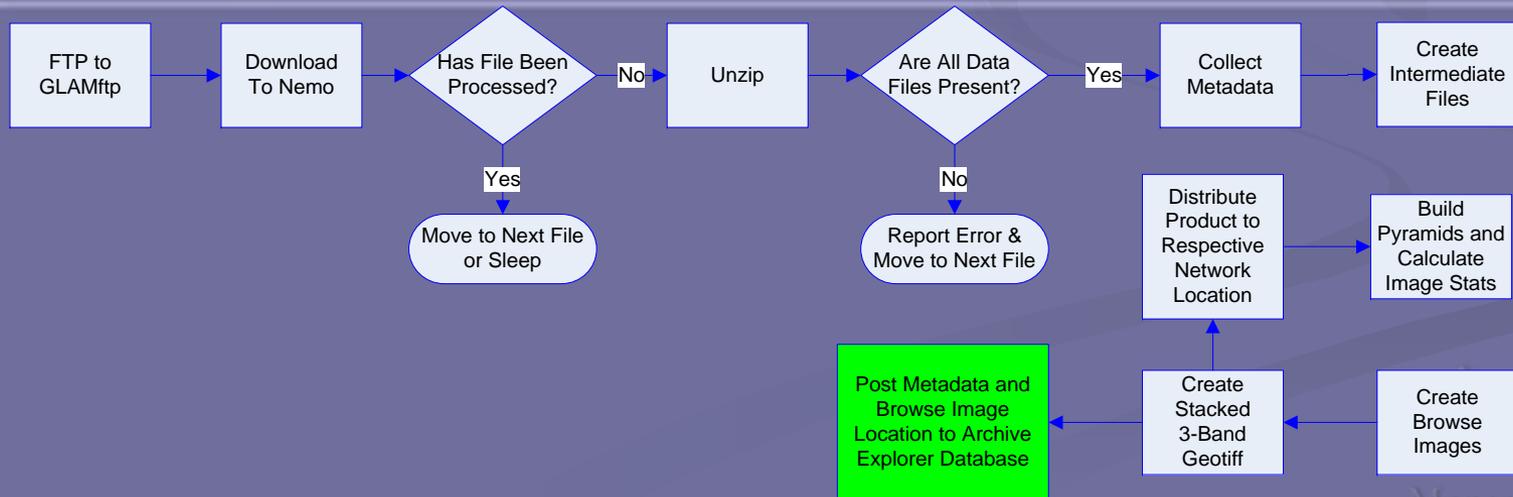
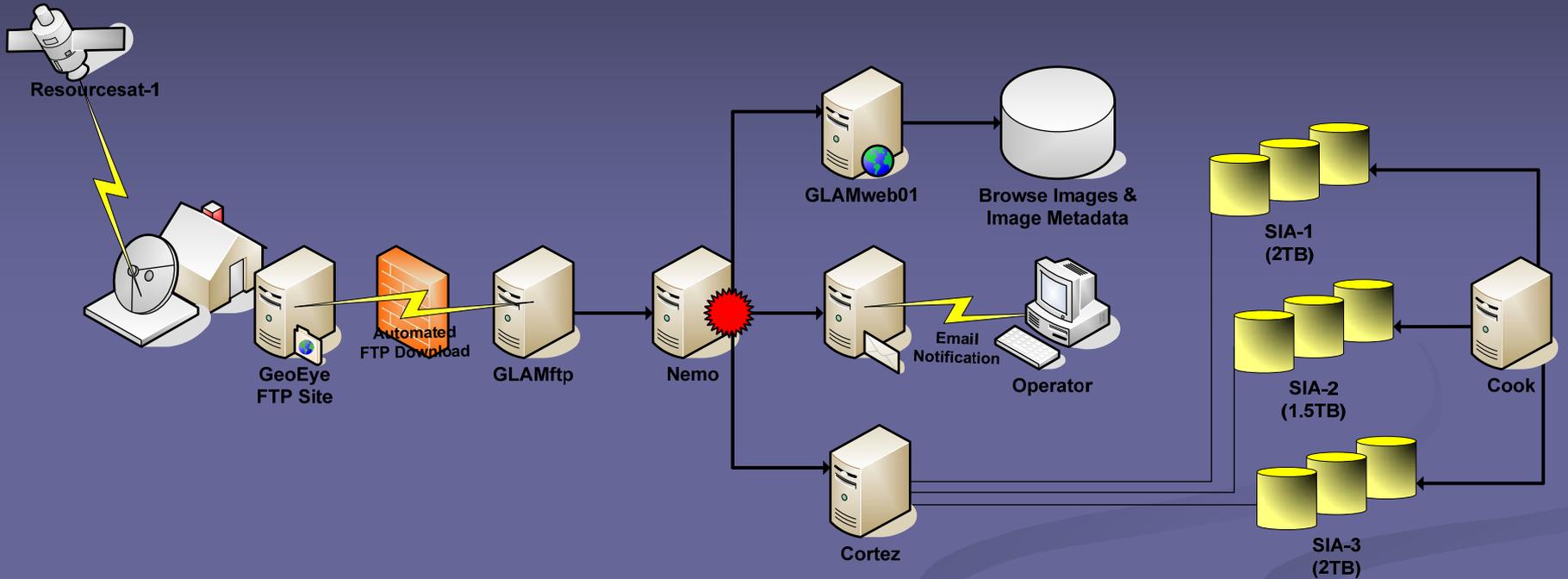
- Orthorectified
- GIS-ready
- Linear-Stretched
- False Color
- 16-bit file (10-bit image)



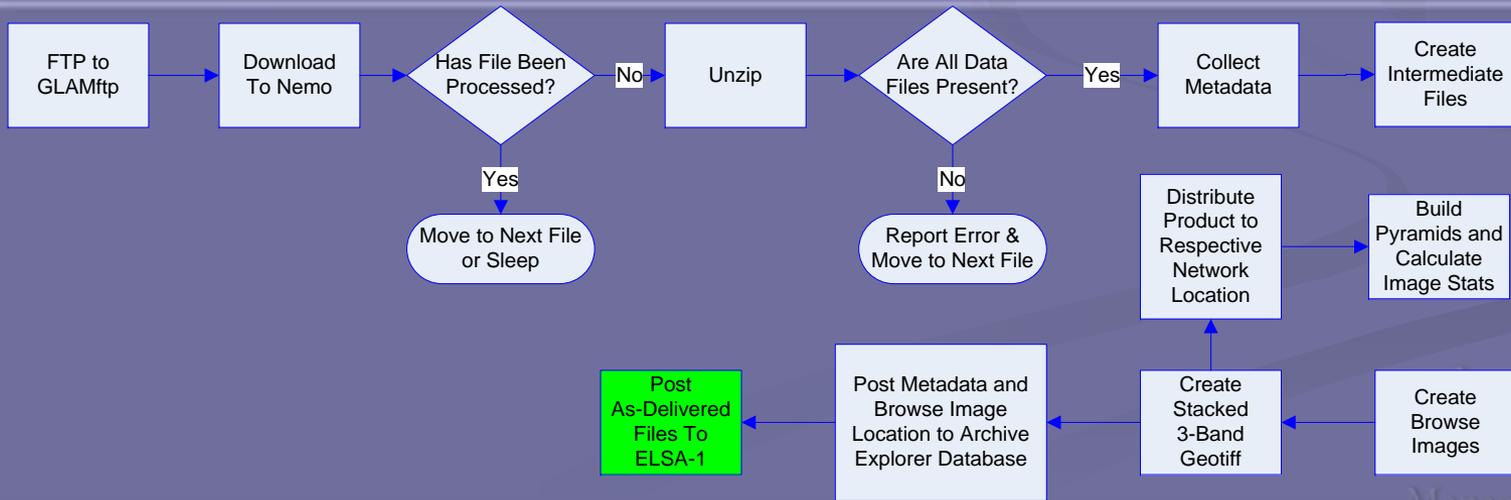
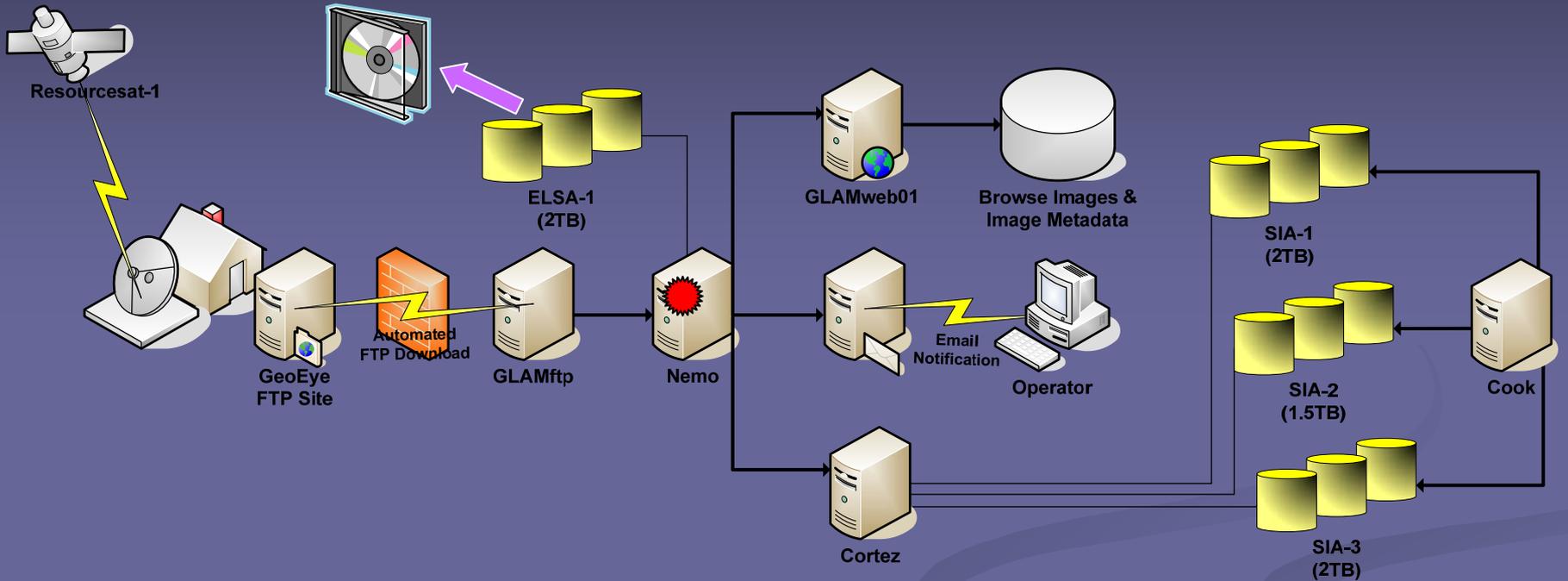
Build Pyramids And Image Statistics



Post Metadata



Archive As-Delivered Files



Notification of New Data Product

Thu Oct 16 19:51:46 ACT 2008

The following AWIFS images have recently been processed and are ready for archival CD/DVD creation. They may be found at the following location: \\nemo\ip\run\awifs\awifsdone\

Image info:

Task id: 154914

Sensor: AWF

Path: 258 Row: 045 Quad: B

Acquisition date: OCT 16 2008

Analyst area: US 04 (US West)

Routing info: \\Cortez\SIA-1\usa\irsp6\J258045_20081016@B.tif

Jpeg thumbnail: \\glamweb01\itars\images\J258045_20081016_B.jpg

Image info:

Task id: 154918

Sensor: AWF

Path: 282 Row: 045 Quad: D

Acquisition date: OCT 16 2008

Analyst area: US 14 (US East)

Routing info: \\Cortez\SIA-1\usa\irsp6\J282045_20081016@D.tif

Jpeg thumbnail: \\glamweb01\itars\images\J282045_20081016_D.jpg

Designated Crop
Analyst

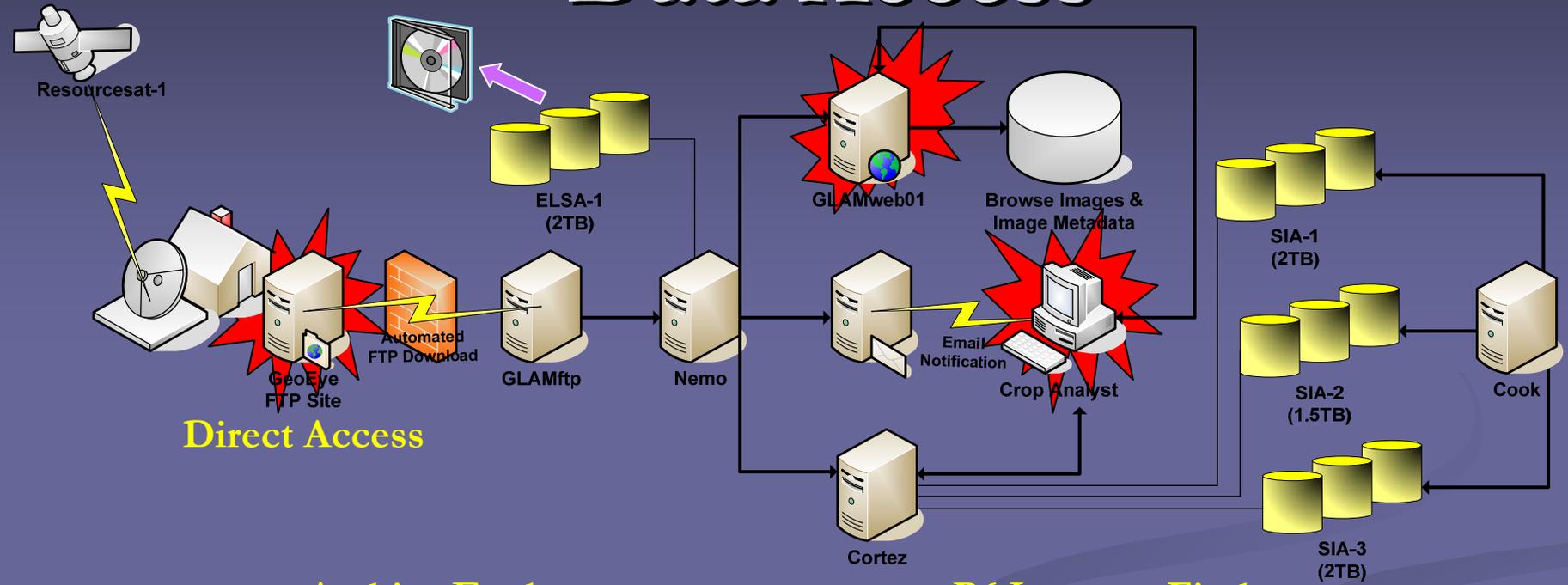
ELSA-1

Explorer Database

Geotiff

Images

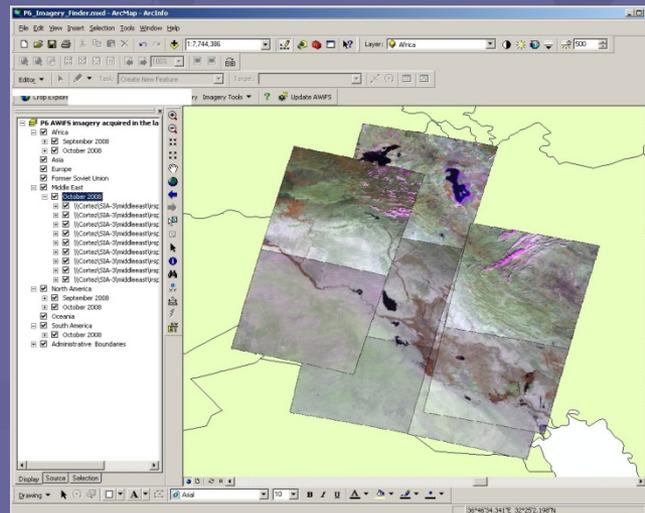
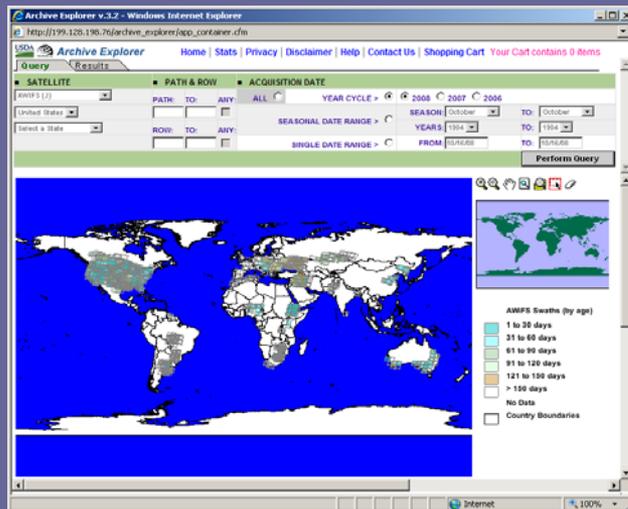
Data Access



Direct Access

Archive Explorer

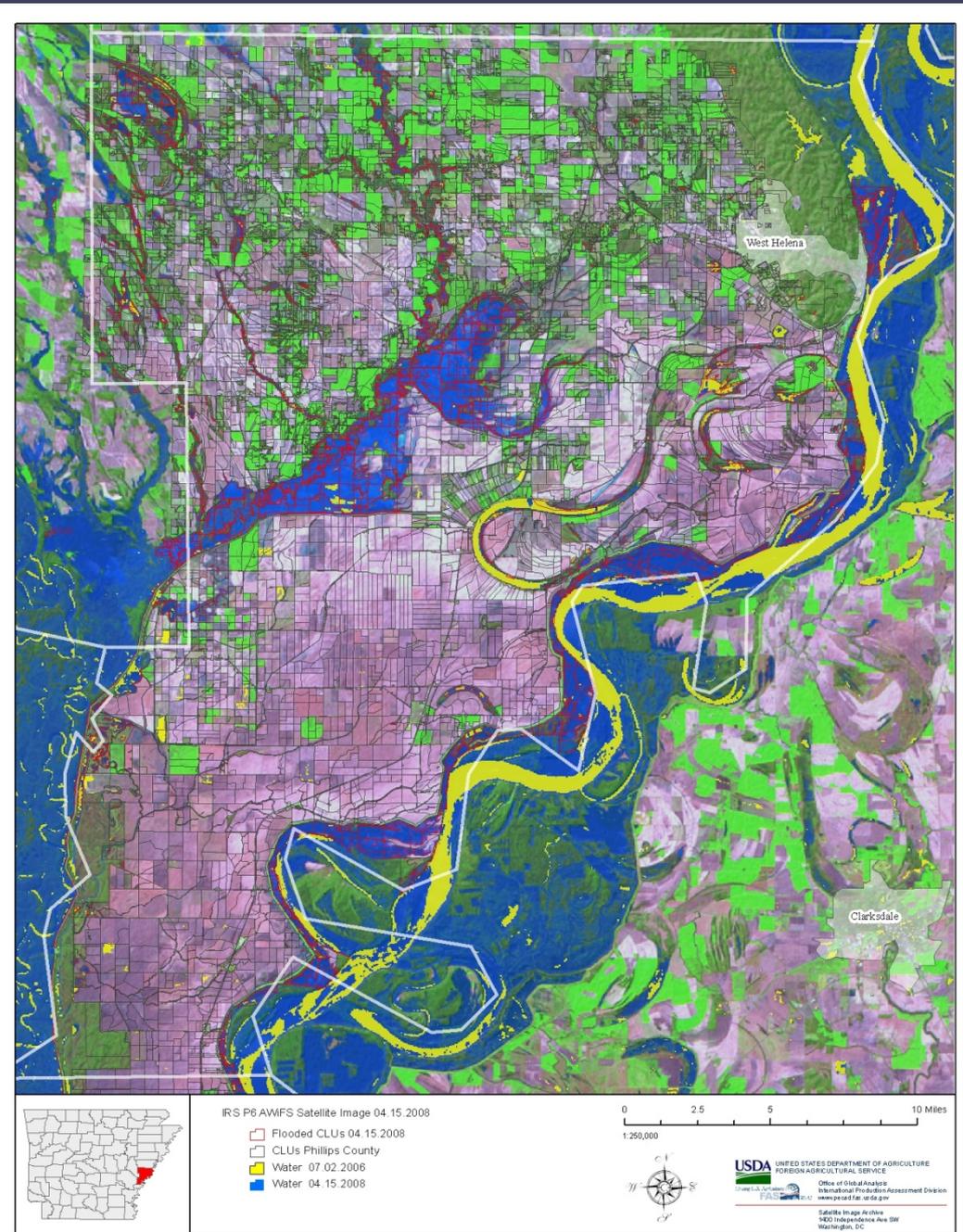
P6 Imagery Finder



Analyst Product

Examples

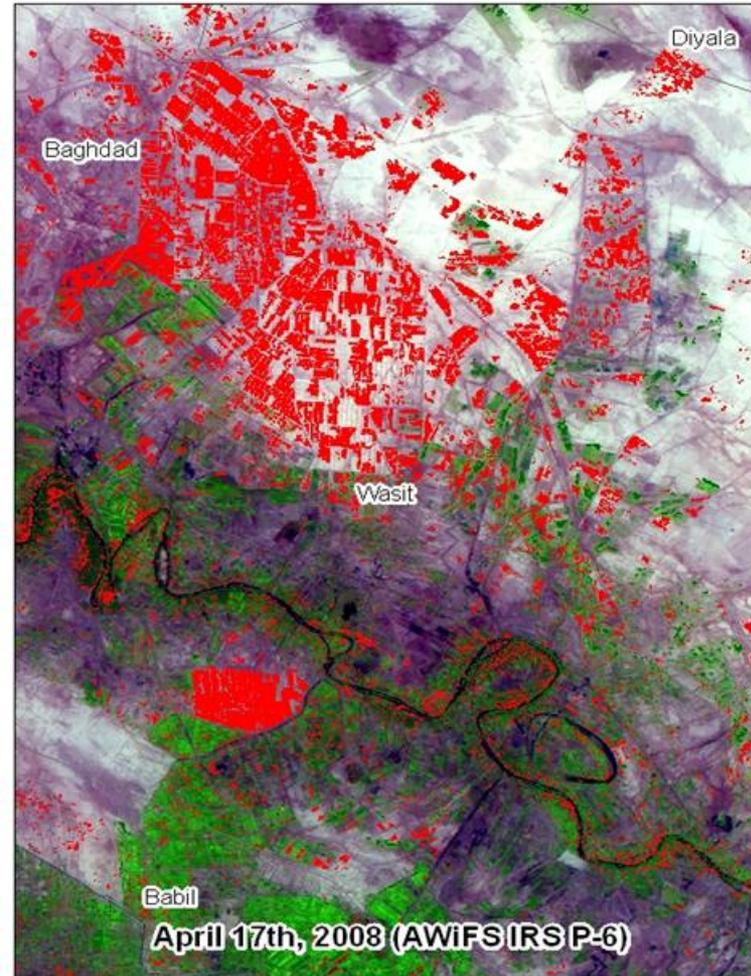
Disaster Response



Analyst Product Examples

Crop Analysis & Change Detection

Multi-temporal Change Detection: Comparison of Current and Archived Data



Data Source: Landsat ETM+/AWIFS IRS P-6
Data Provided by: Archive Explorer/NGA
Supporting: USDA/FAS/OGA
International Production Assessment Division



Summary

- The P6 Processor makes Resourcesat imagery products promptly available to Crop Analyst in a user friendly format.
- An adaptable development process has allowed us to maintain an operational product delivery system while providing the ability to accommodate new functionality as required.
- Ongoing improvements to the P6 processor are aimed at improving reporting functionality as well as aiding in meeting the growing demand of archive data request.

Questions?

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