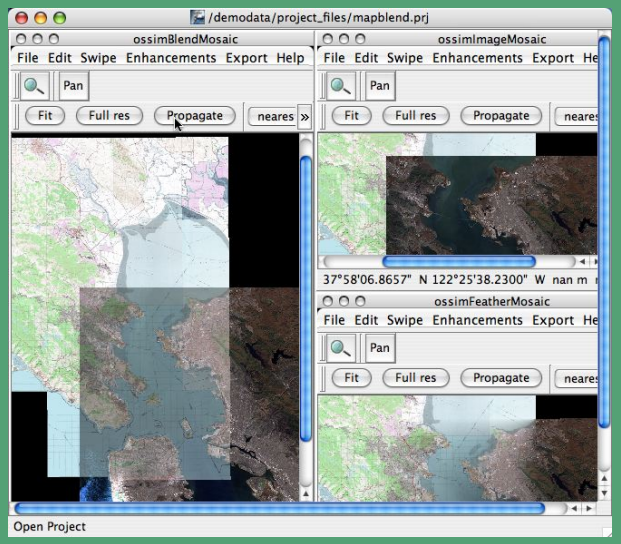
OSSIM Overview

Mark Lucas
OSSIM

RadiantBlue TECHNOLOGIES



OSGeo.org
The Open Source Geospatial Foundation

"Awesome"

Open Source Software Image Map (OSSIM)

www.ossim.org

OSSIM

High Performance Geo-spatial Image Processing

Open Source Software Distribution

Laptops to Clusters - Mac OSX, Linux, Windows, Solaris

Sensor Models, RPC, Commercial and National Formats

Precision Terrain Correction / Orthos

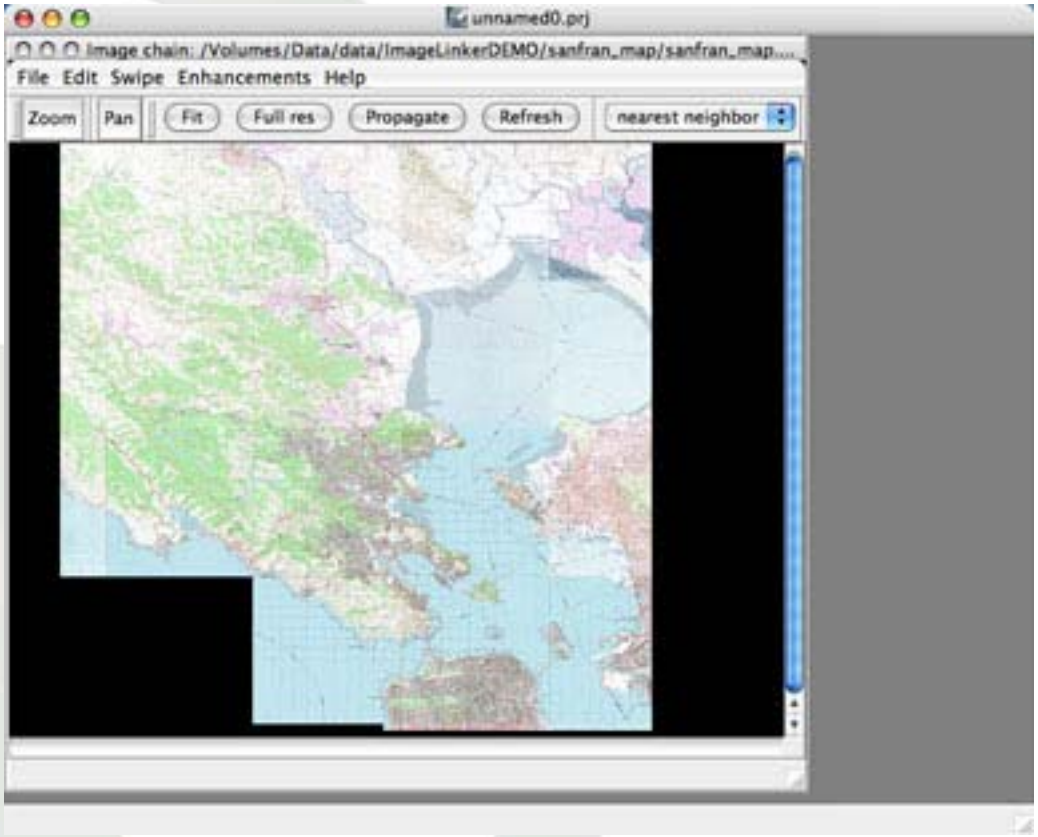
Production, Prototyping, Advanced Visualization

Used in Government and Commercial Applications

OGC Interfaces over the web

OSSIM

1.7 GB Raster GeoTiff of San Francisco

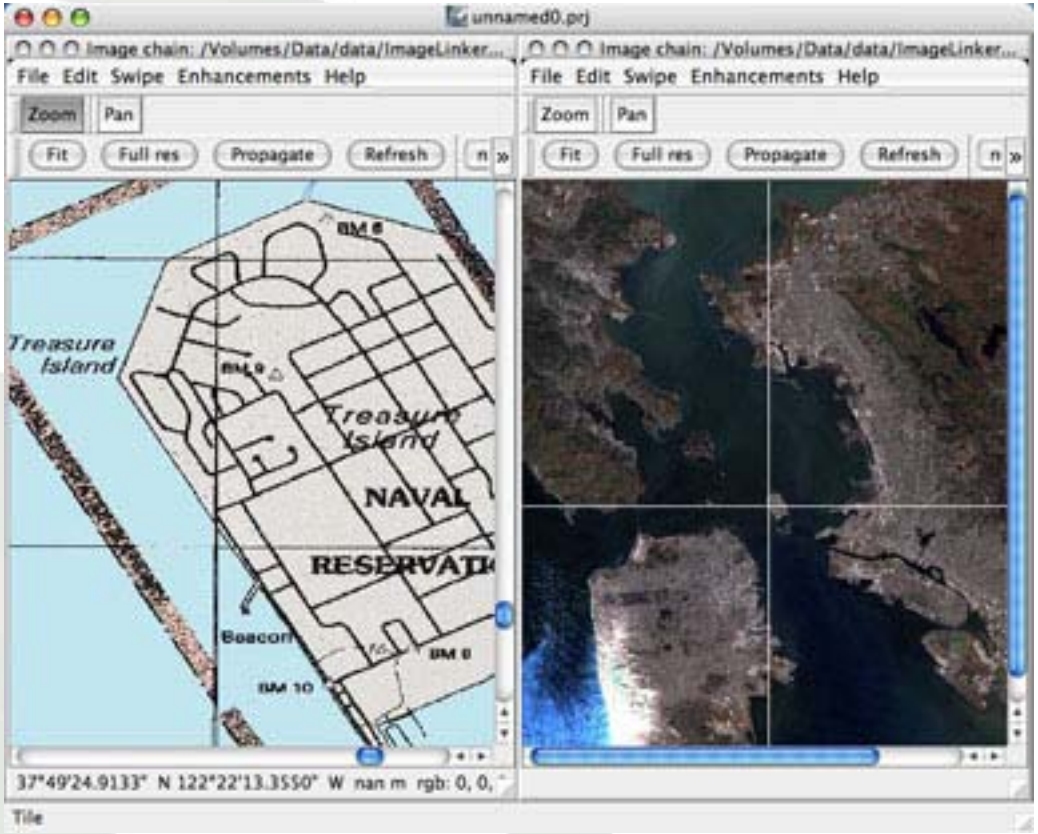


OSSIM

Arbitrary Panning and Zooming

OSSIM

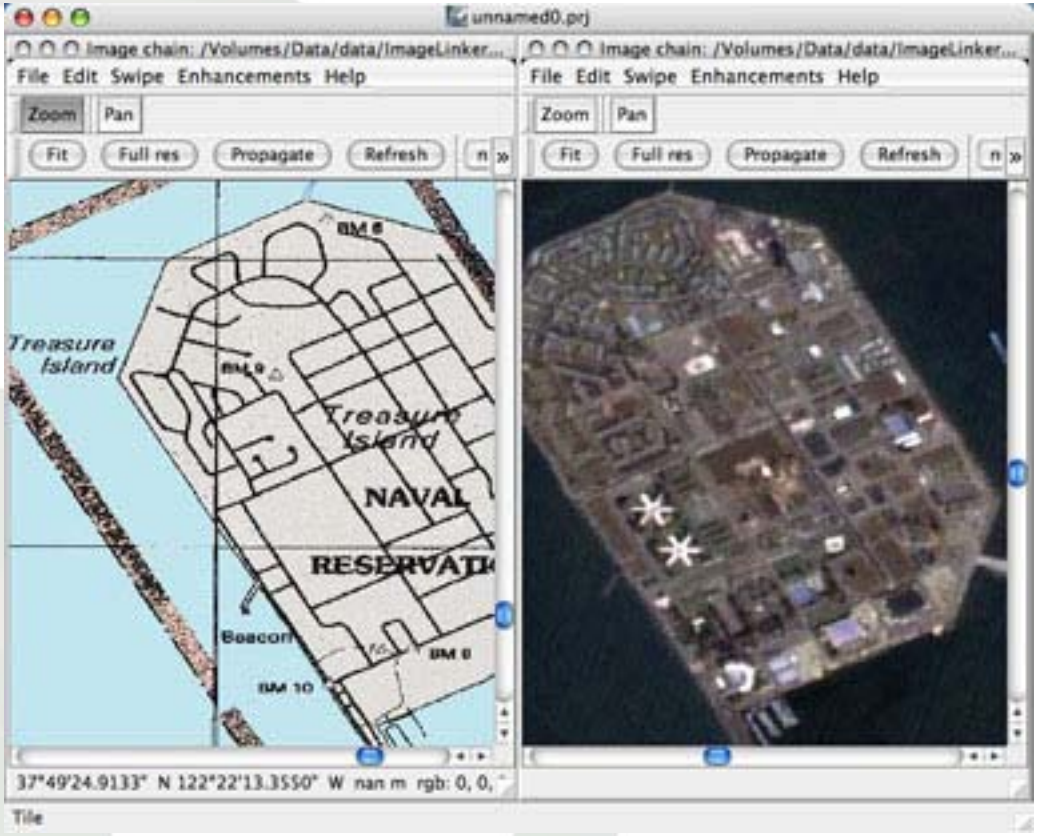
263 MB Landsat image



Different Scale, Format, Mapping Projections

OSSIM

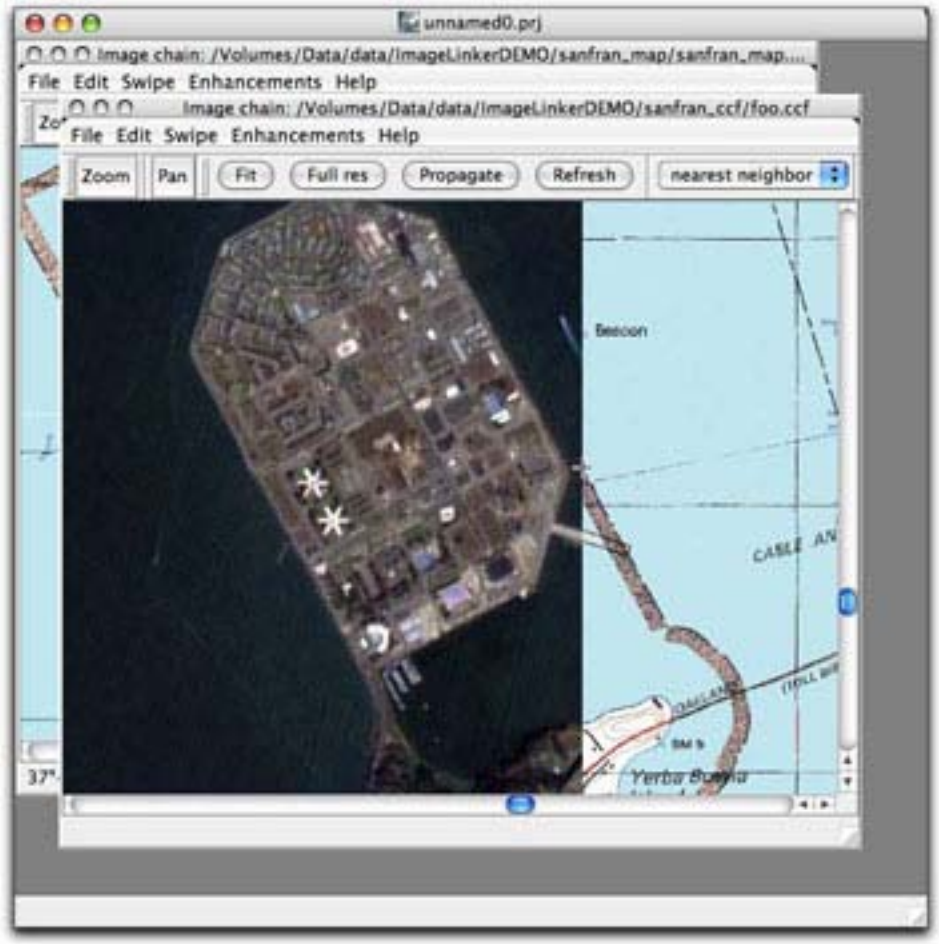
Publish Viewing Geometries



All Windows Display Same View

OSSIM

Swipe Displays



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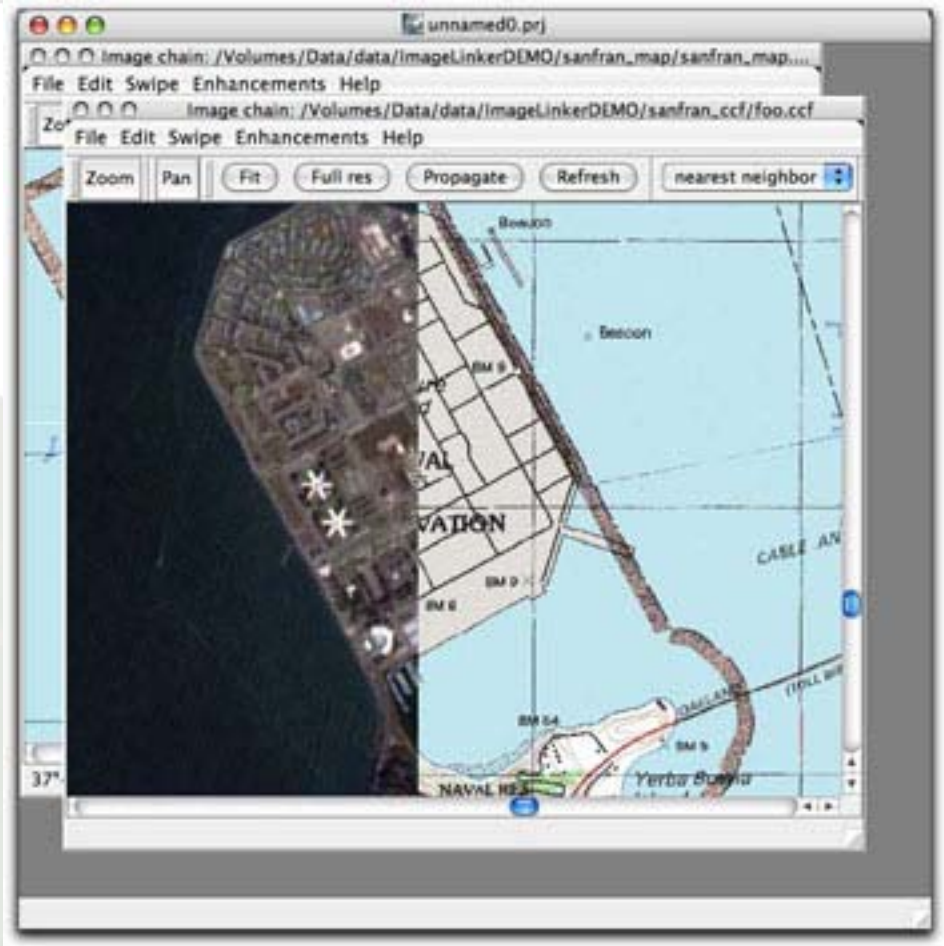
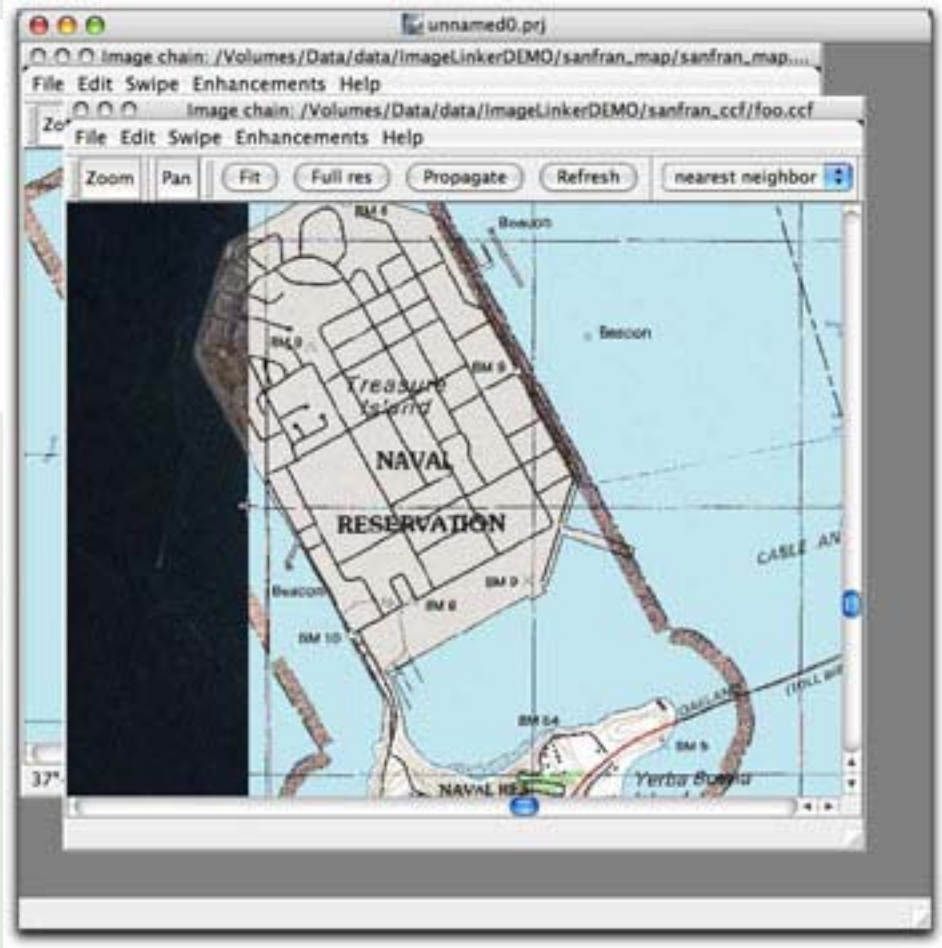
Swipe Displays



OSSIM

Swipe Displays



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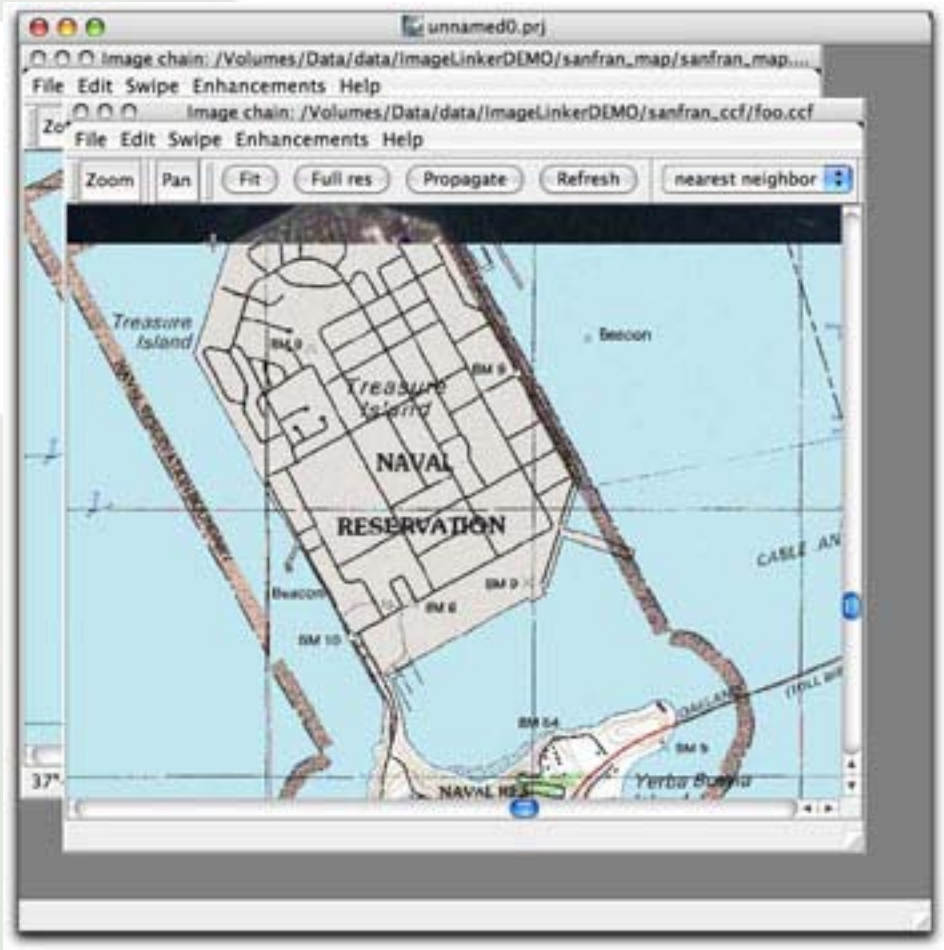
Swipe Displays



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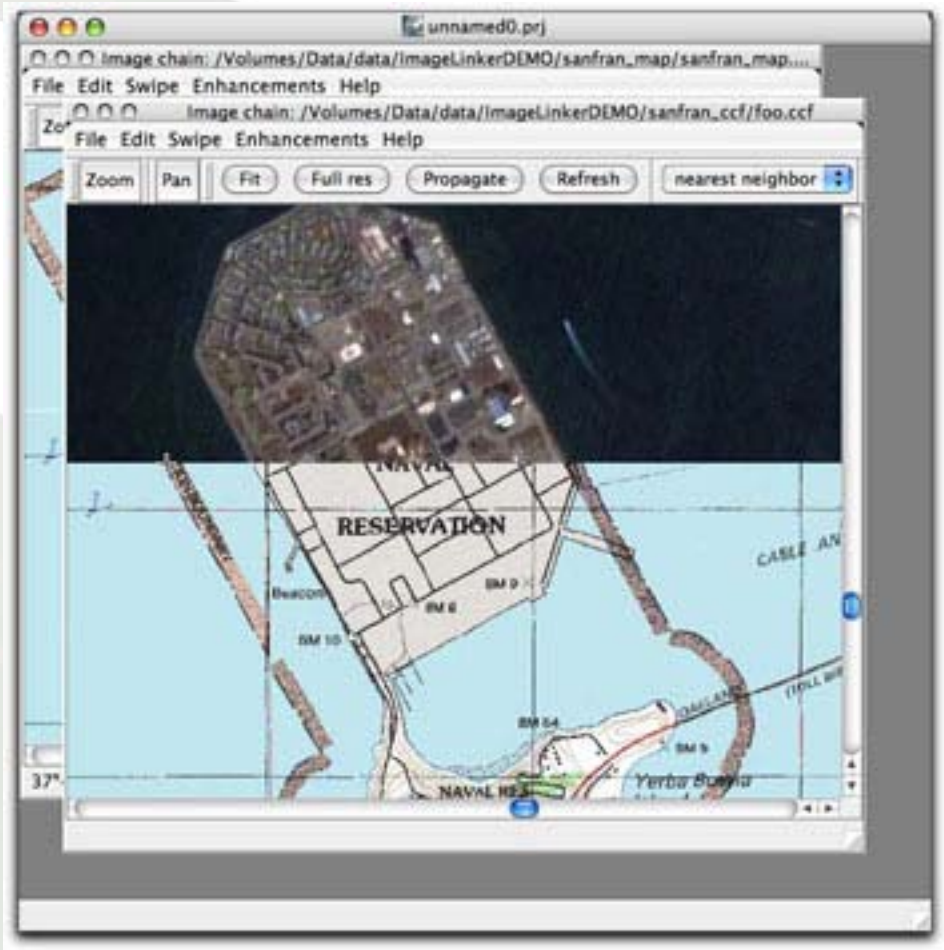
Swipe Displays

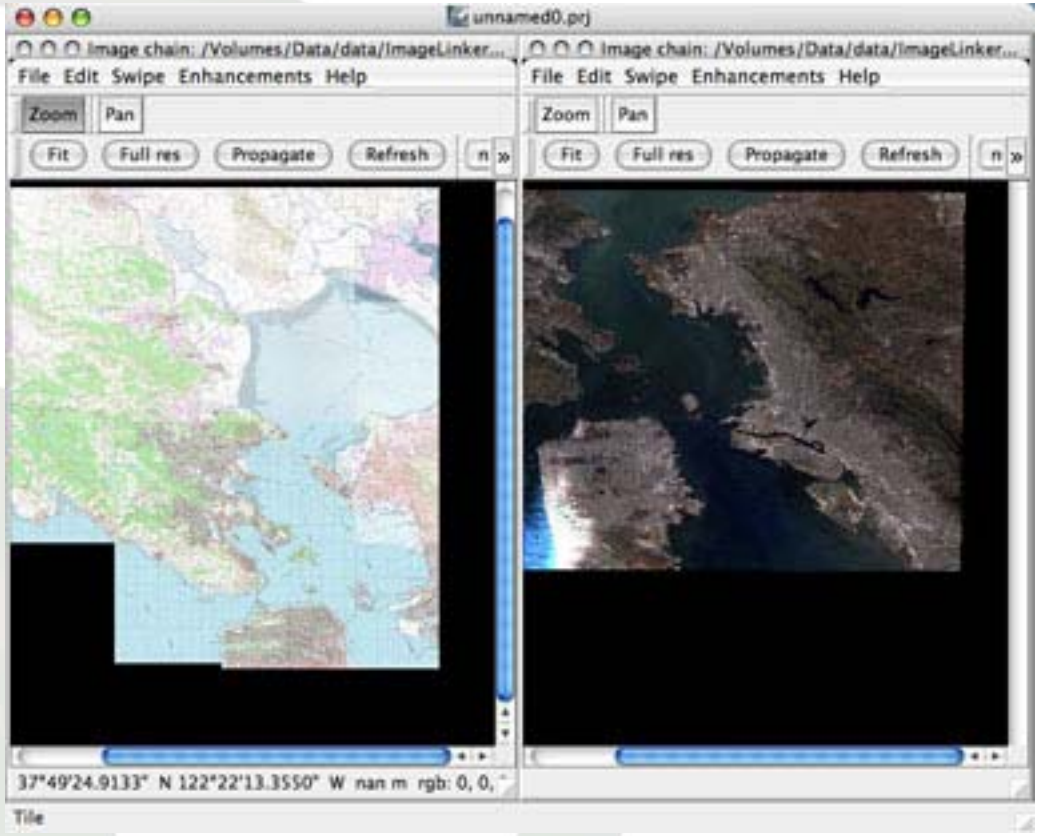


OSSIM

Swipe Displays

OSSIM

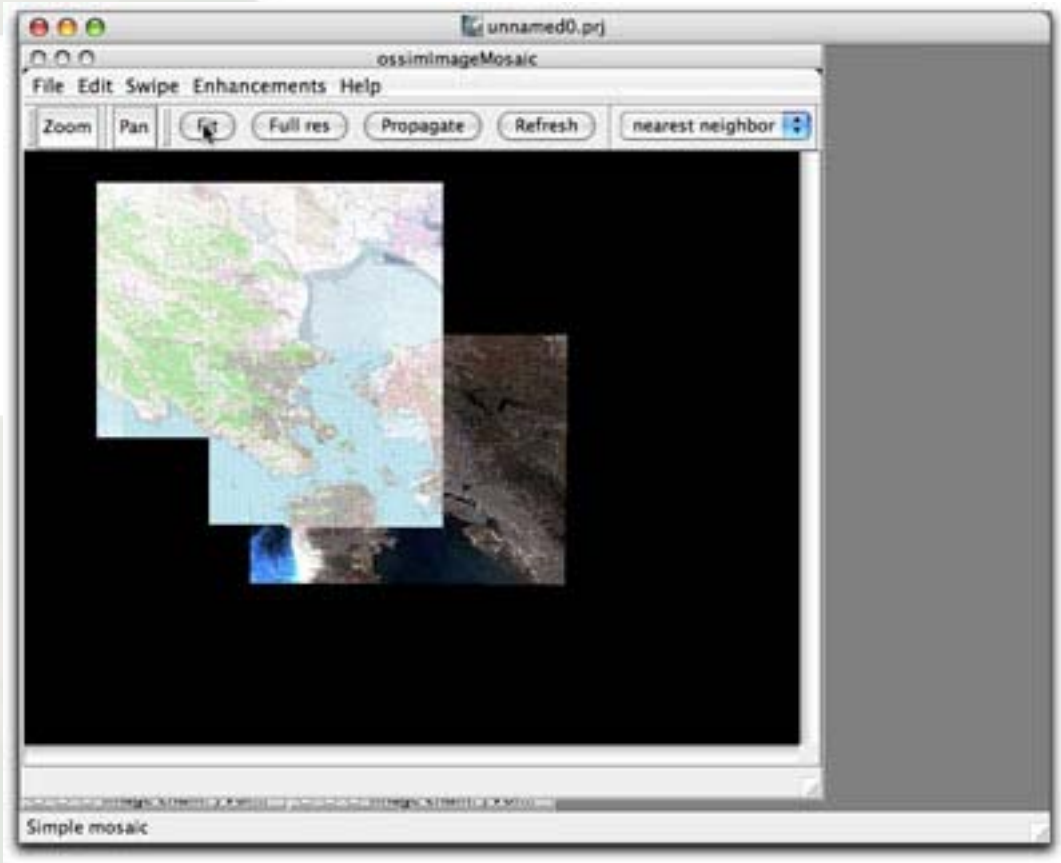
Fit to Window



Quick Overviews

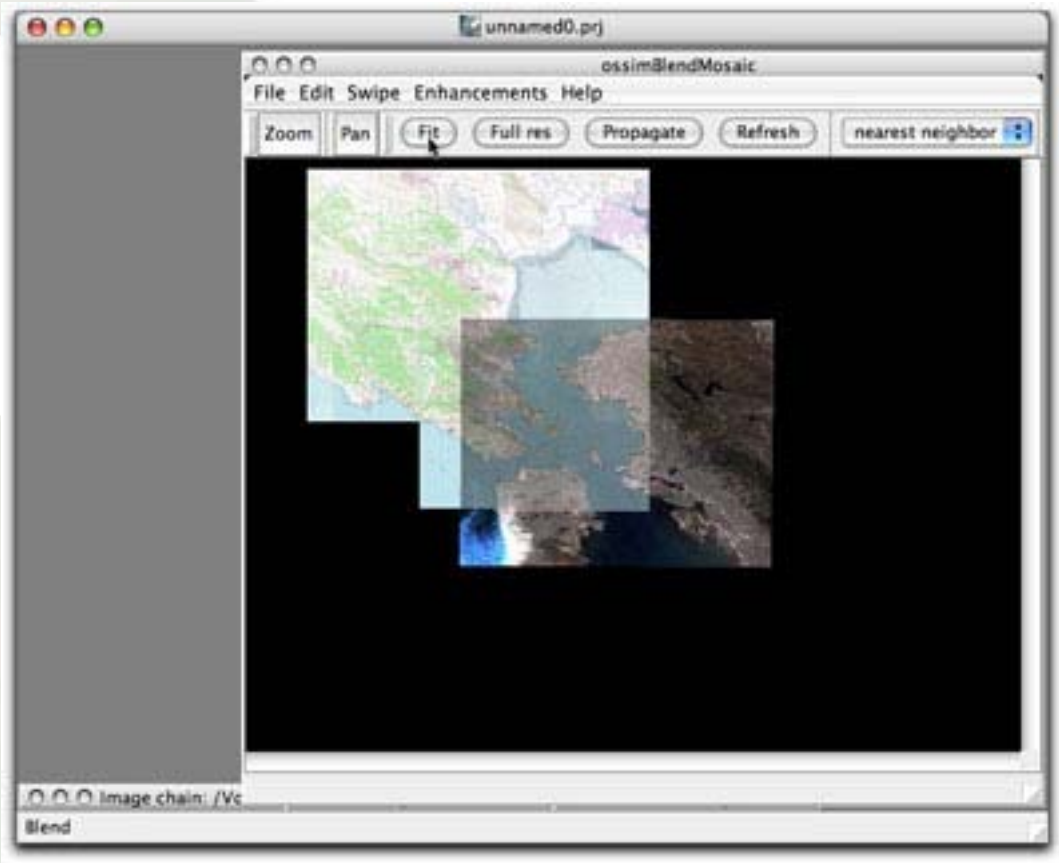
OSSIM

Mosaics



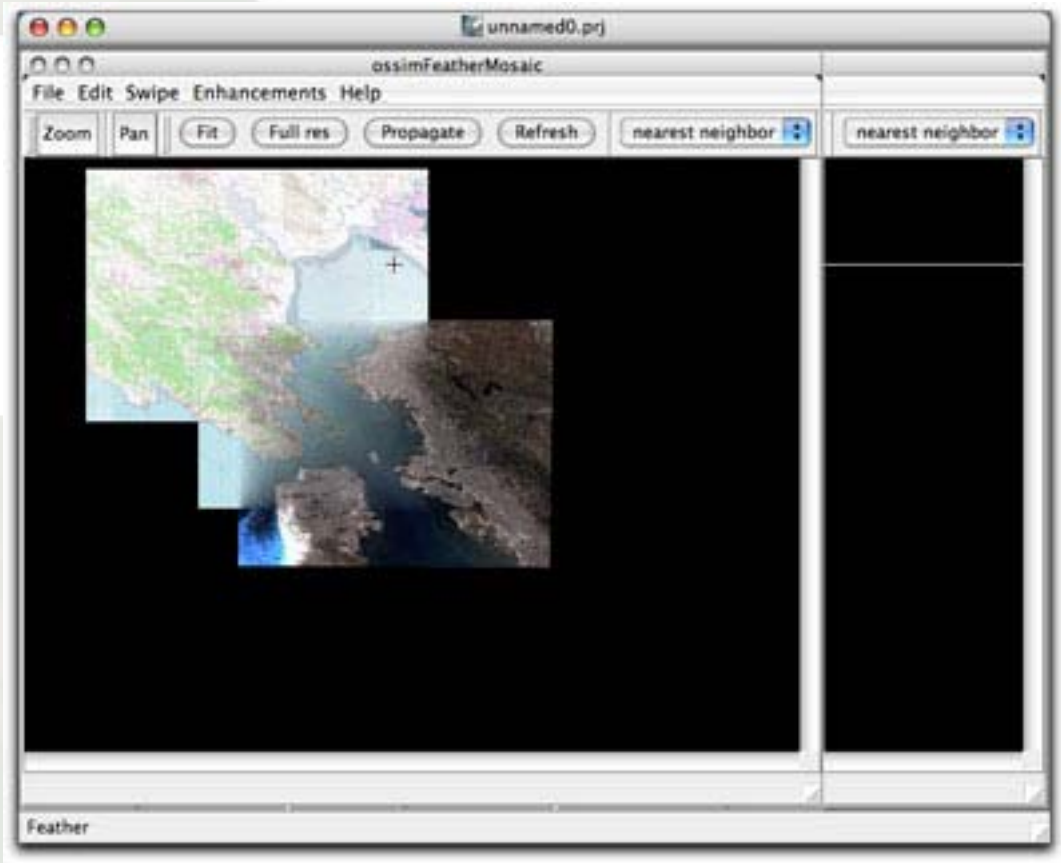
OSSIM

Blends



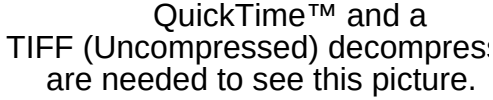
OSSIM

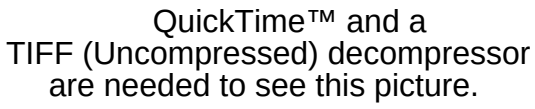
Feathering



OSSIM

Elevation Processing





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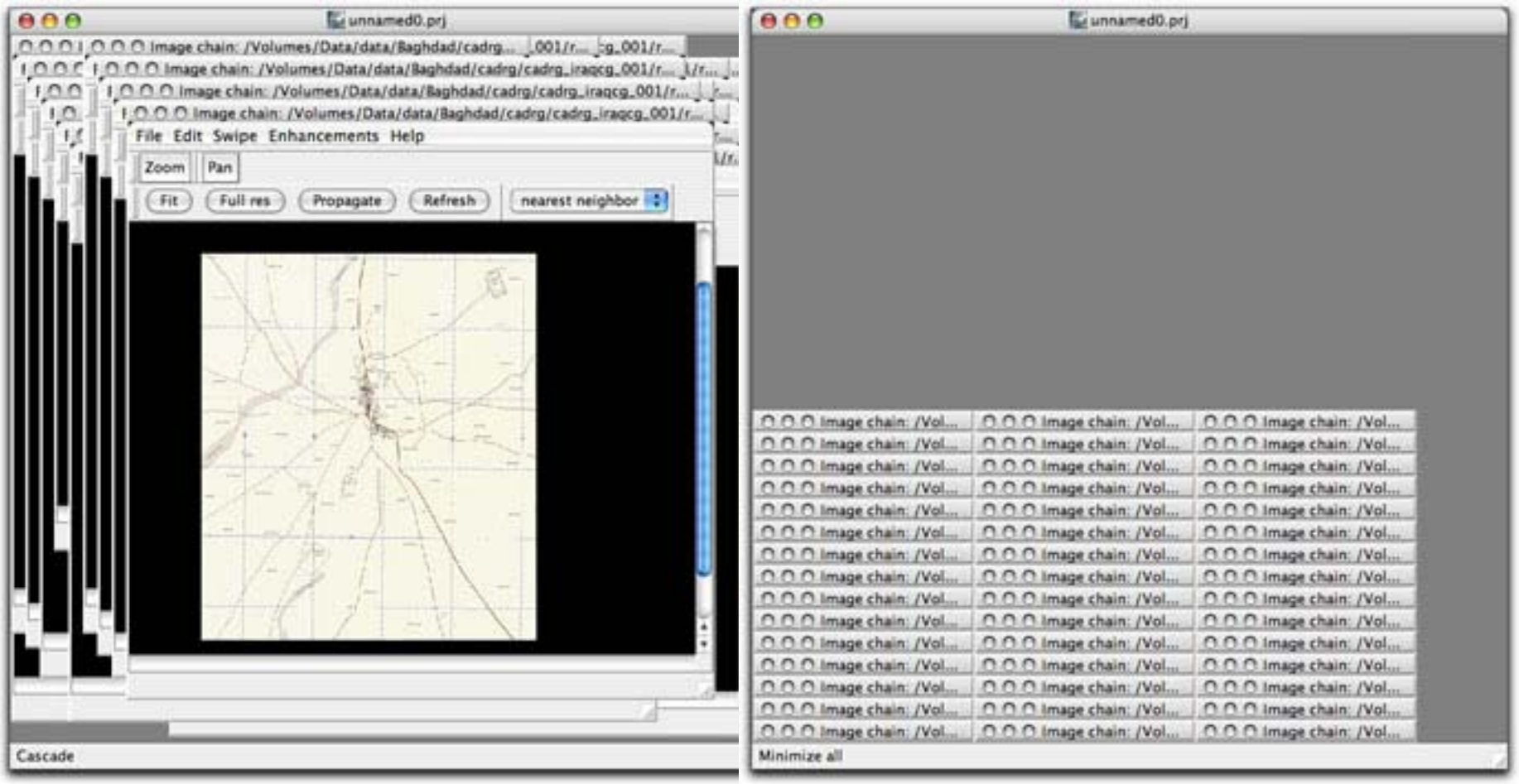
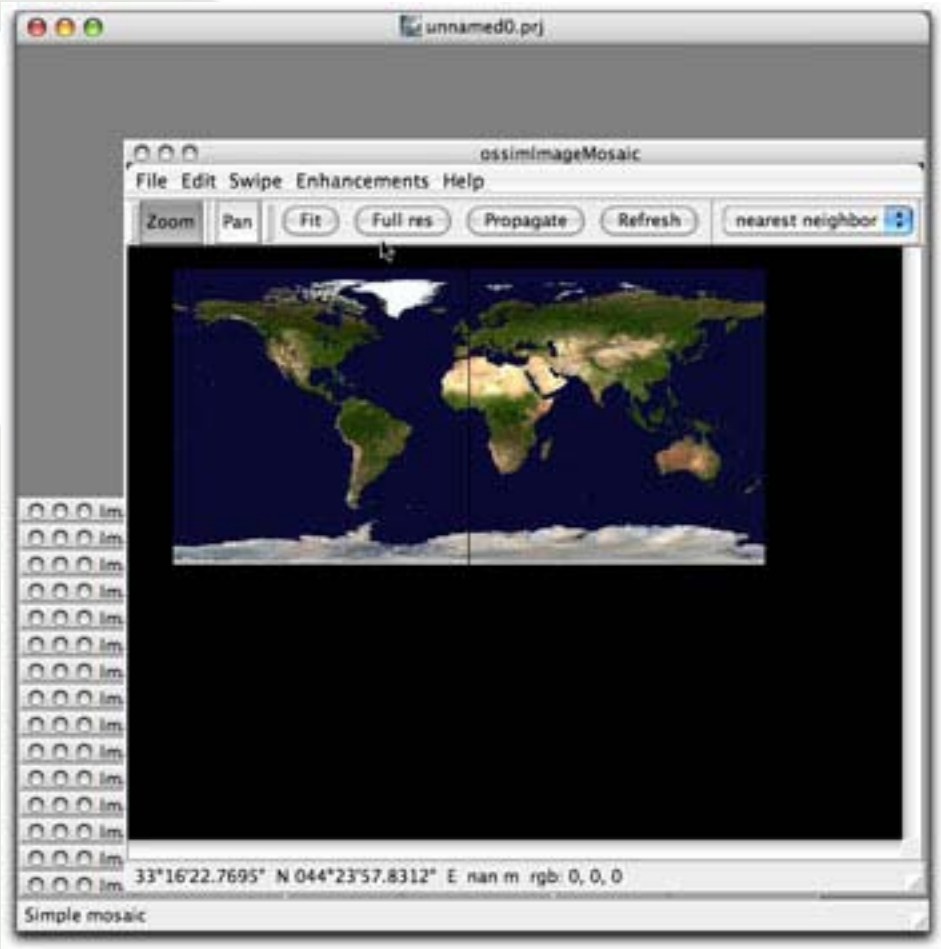
CADRG, SPOT, QB, CIB, NASA Data



OSSIM

Very Large Mosaics



OSSIM

On a Laptop

OSSIM

NASA 2.6 Gig File

OSSIM

Zoom to Baghdad

OSSIM

Middle East

OSSIM

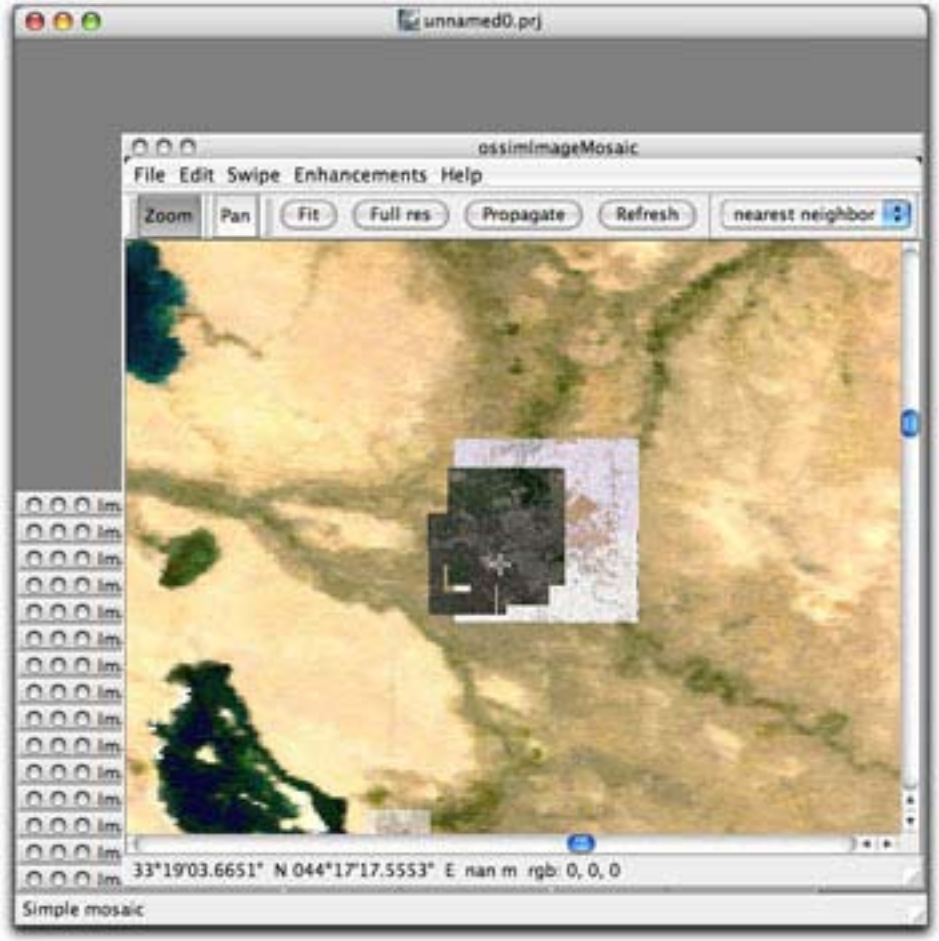
CADRG Maps through a.toc

OSSIM

SPOT 5 Image

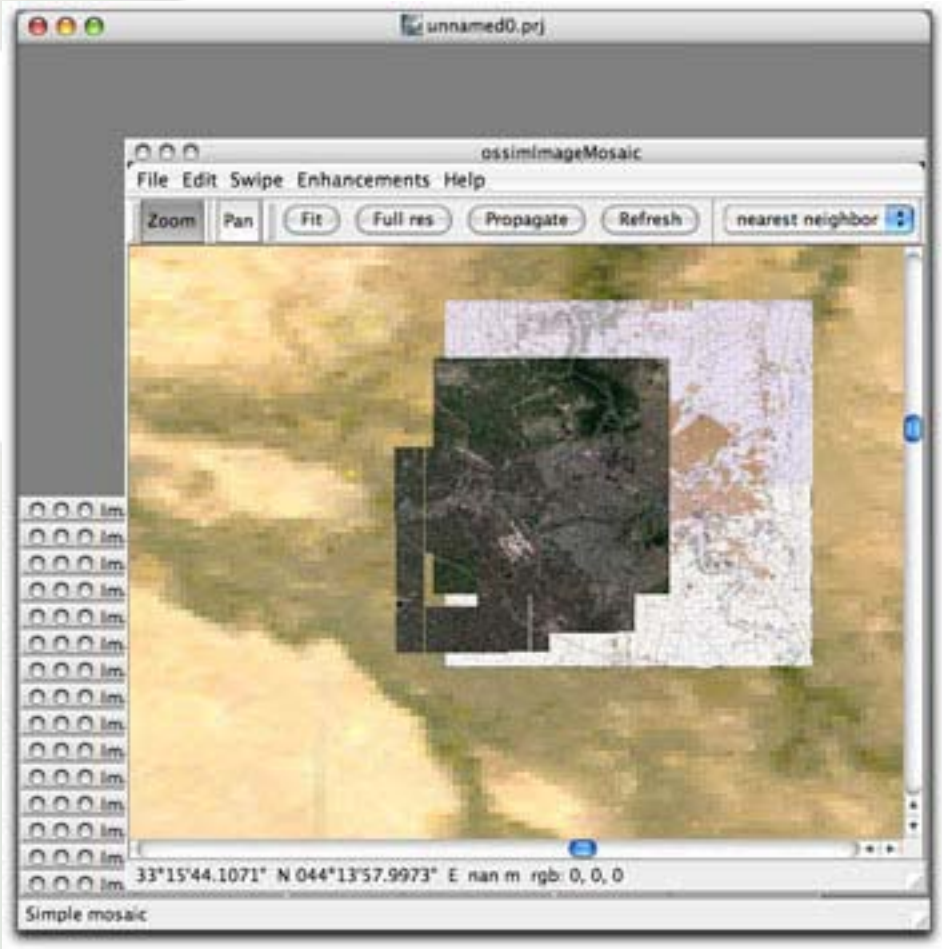
OSSIM

Digital Globe QuickBird Mosaic



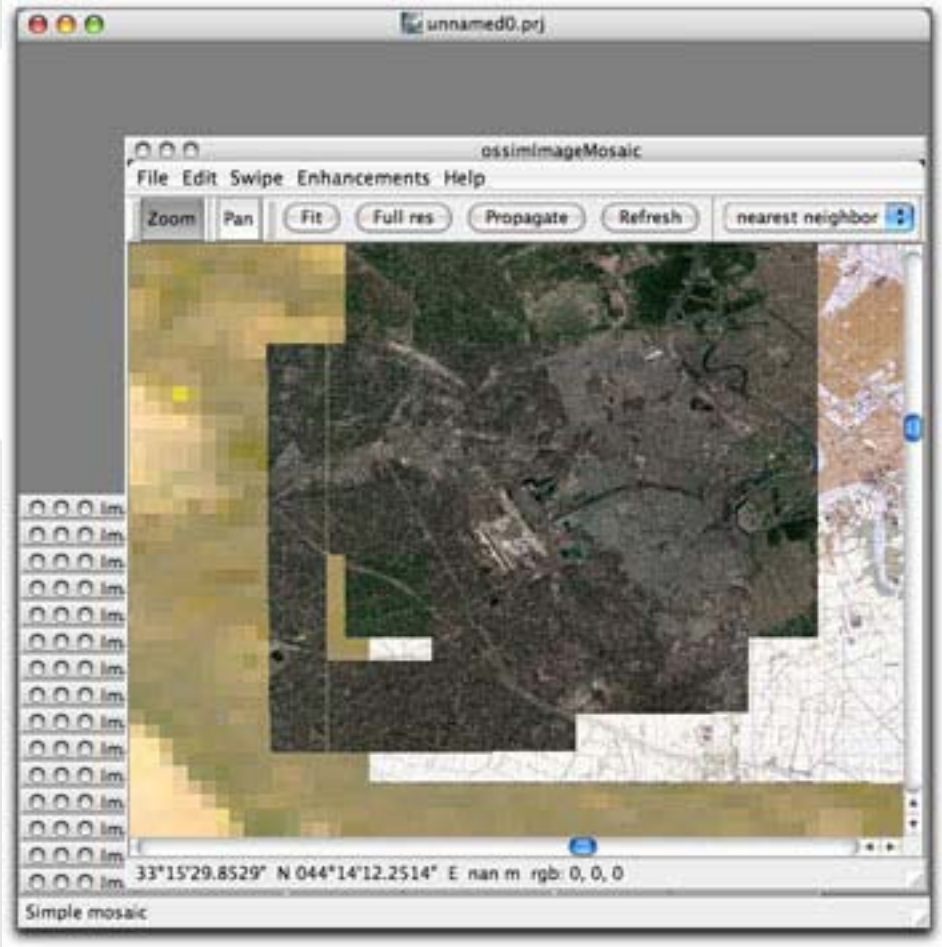
OSSIM

Baghdad Area



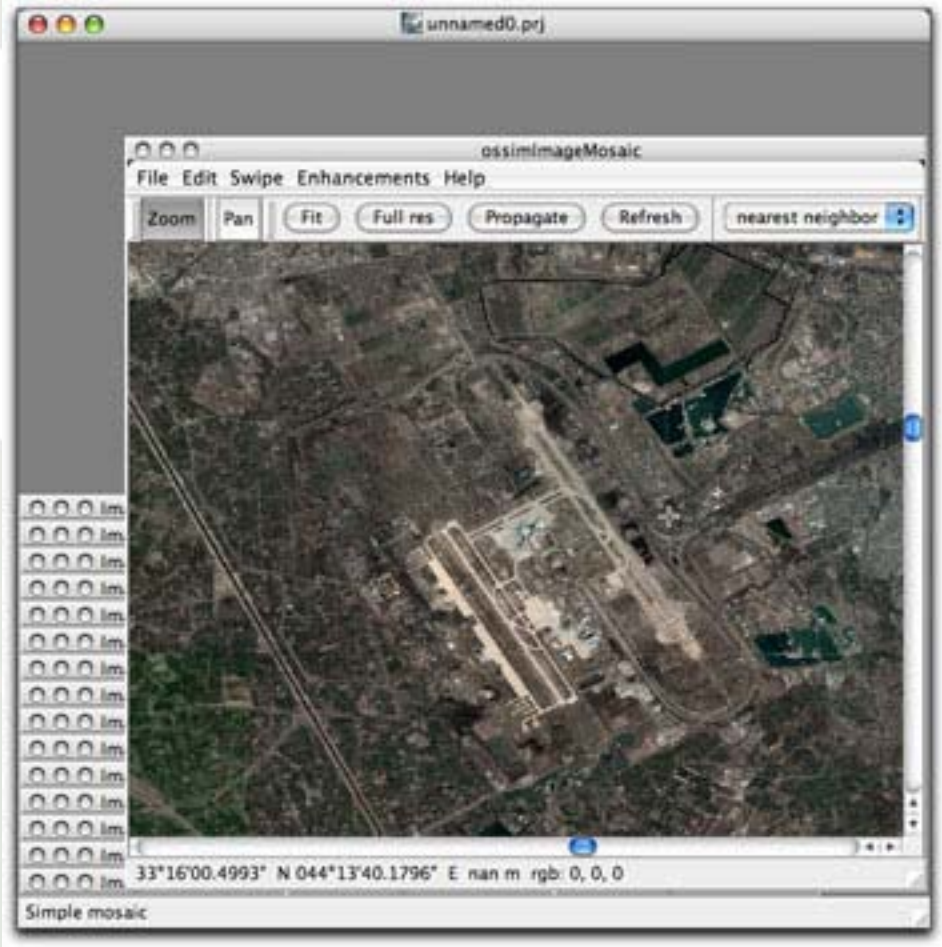
OSSIM

Zoom to Airport



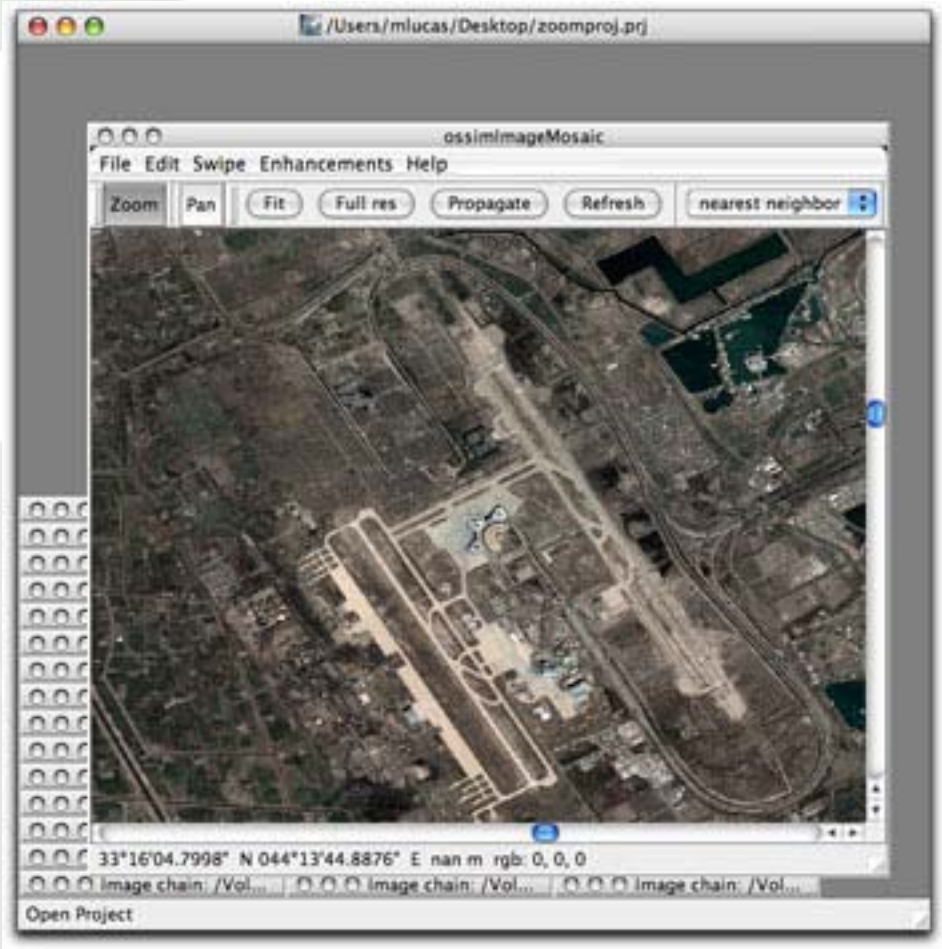
OSSIM

Baghdad Airport



OSSIM

30 GB Mosaic



OSSIM

meter

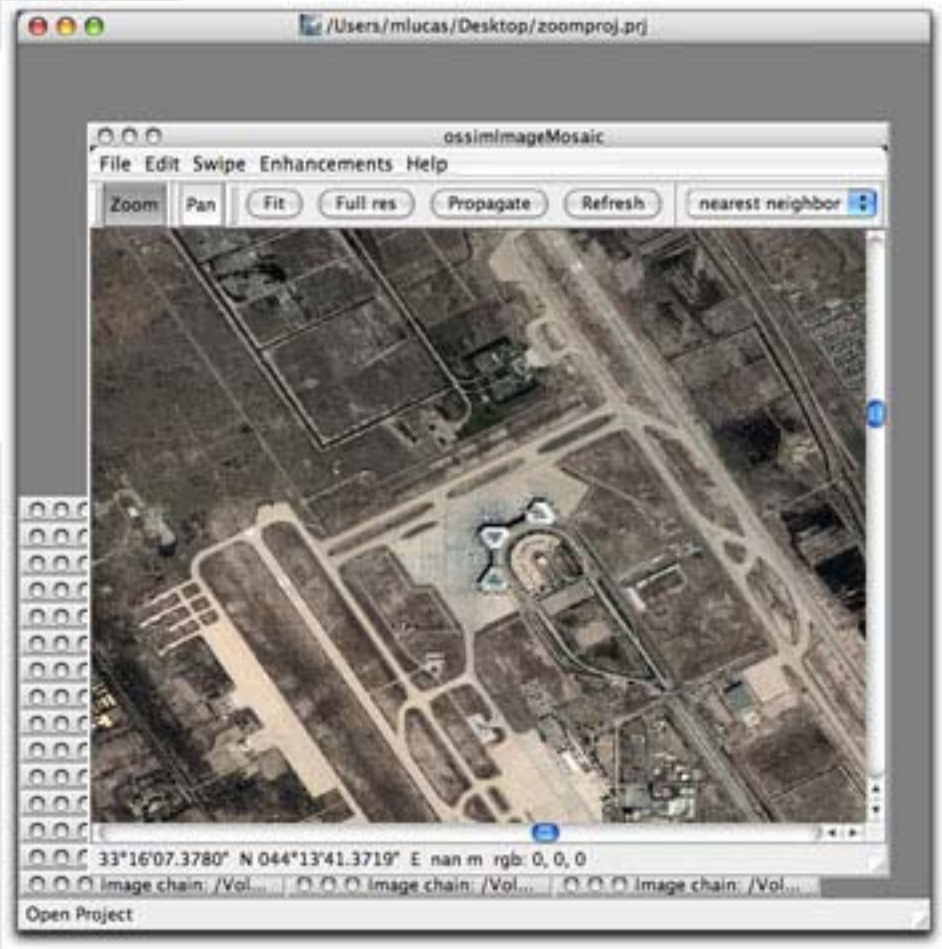

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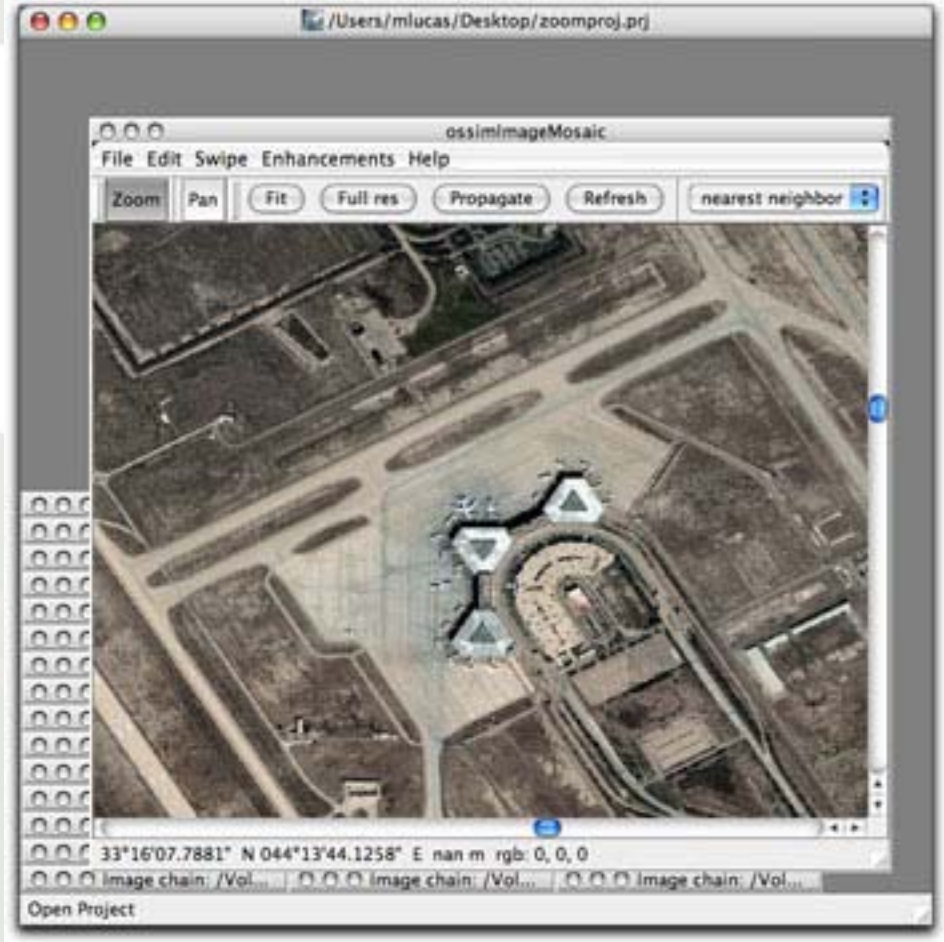
Image chain: /Vol...
Image chain: /Vol...
Open Project

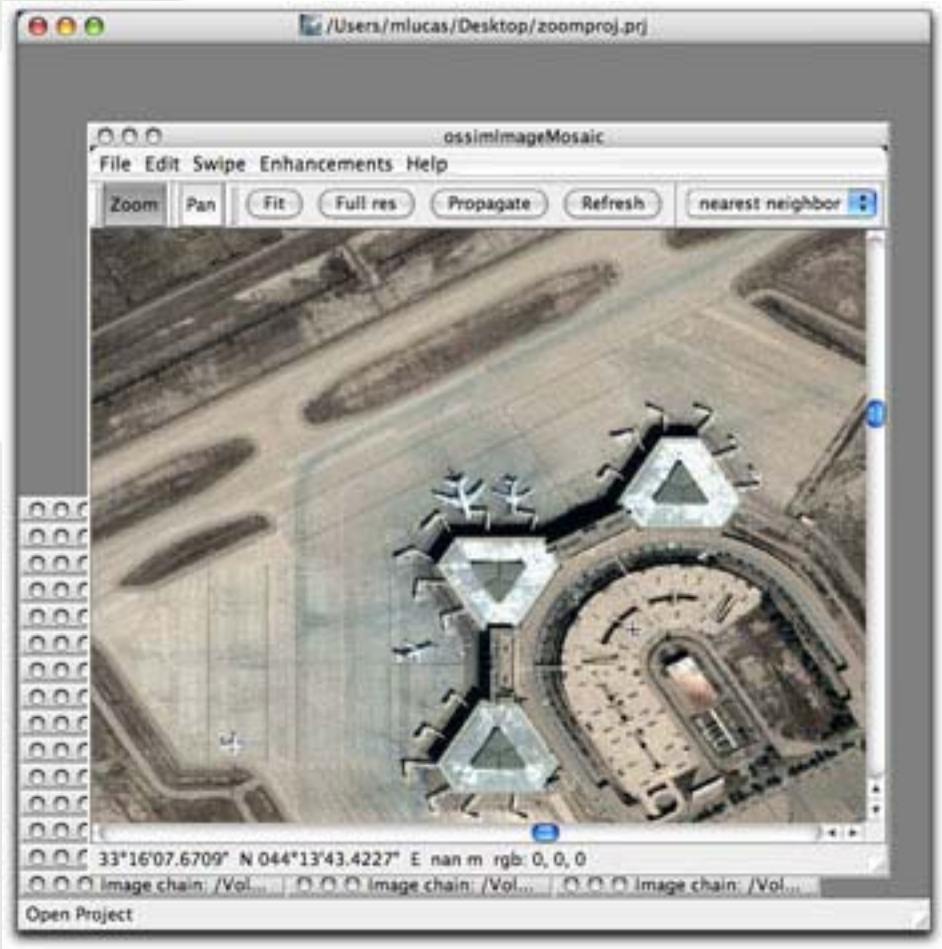
OSSIM

Very Large Mosaics



OSSIM

2.5 Meter

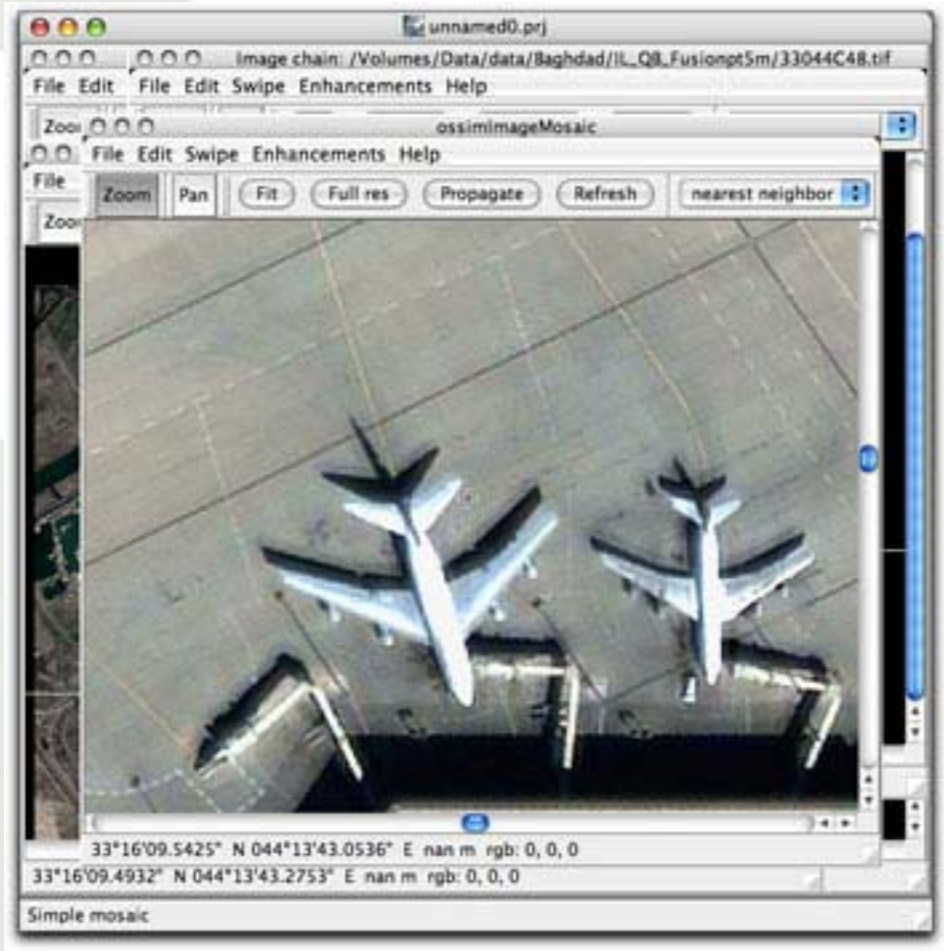


OSSIM

1 Meter

OSSIM

0.5 Meter



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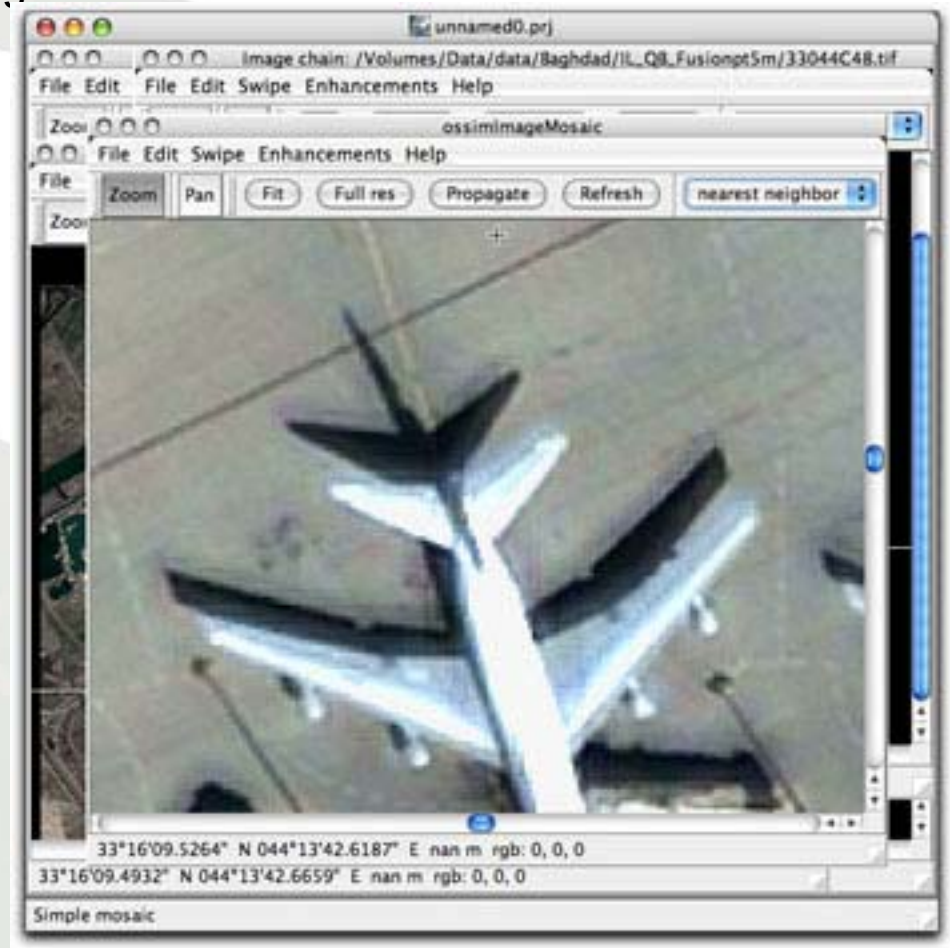
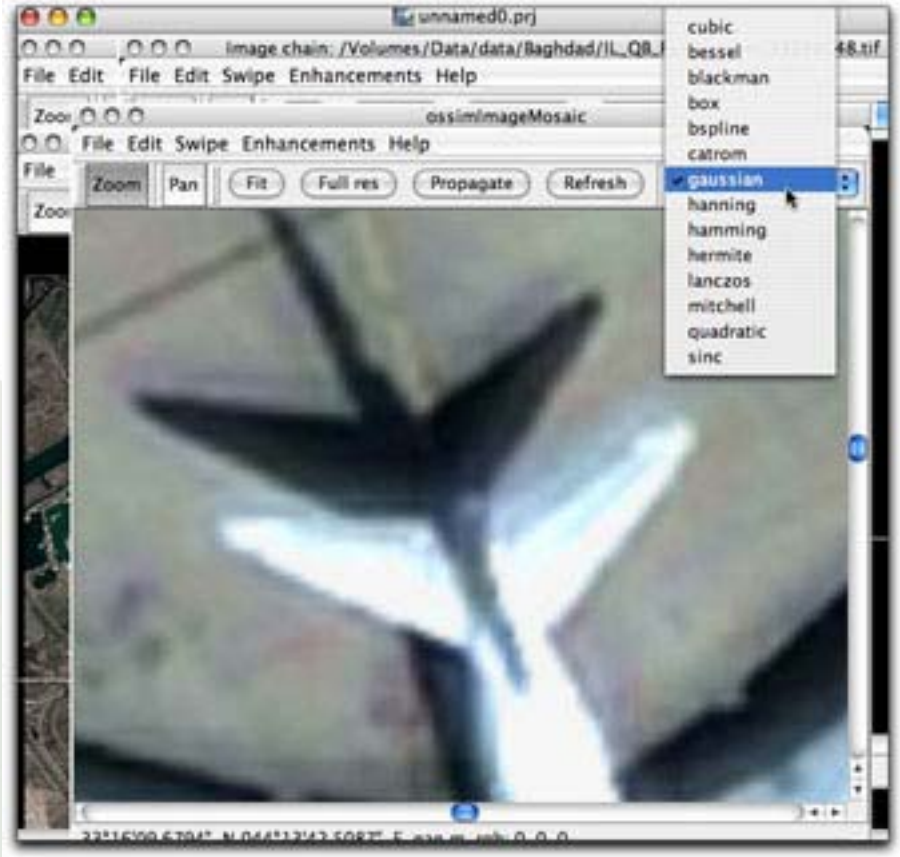
Super Sampling



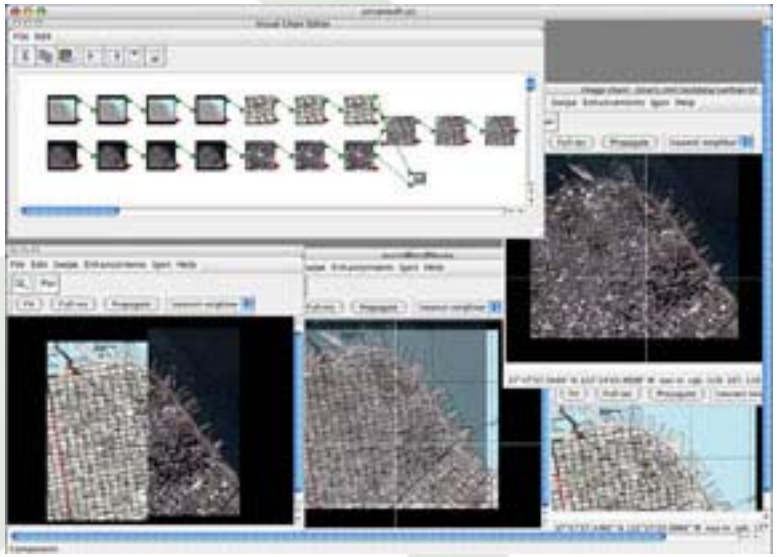
OSSIM

Various resamplers



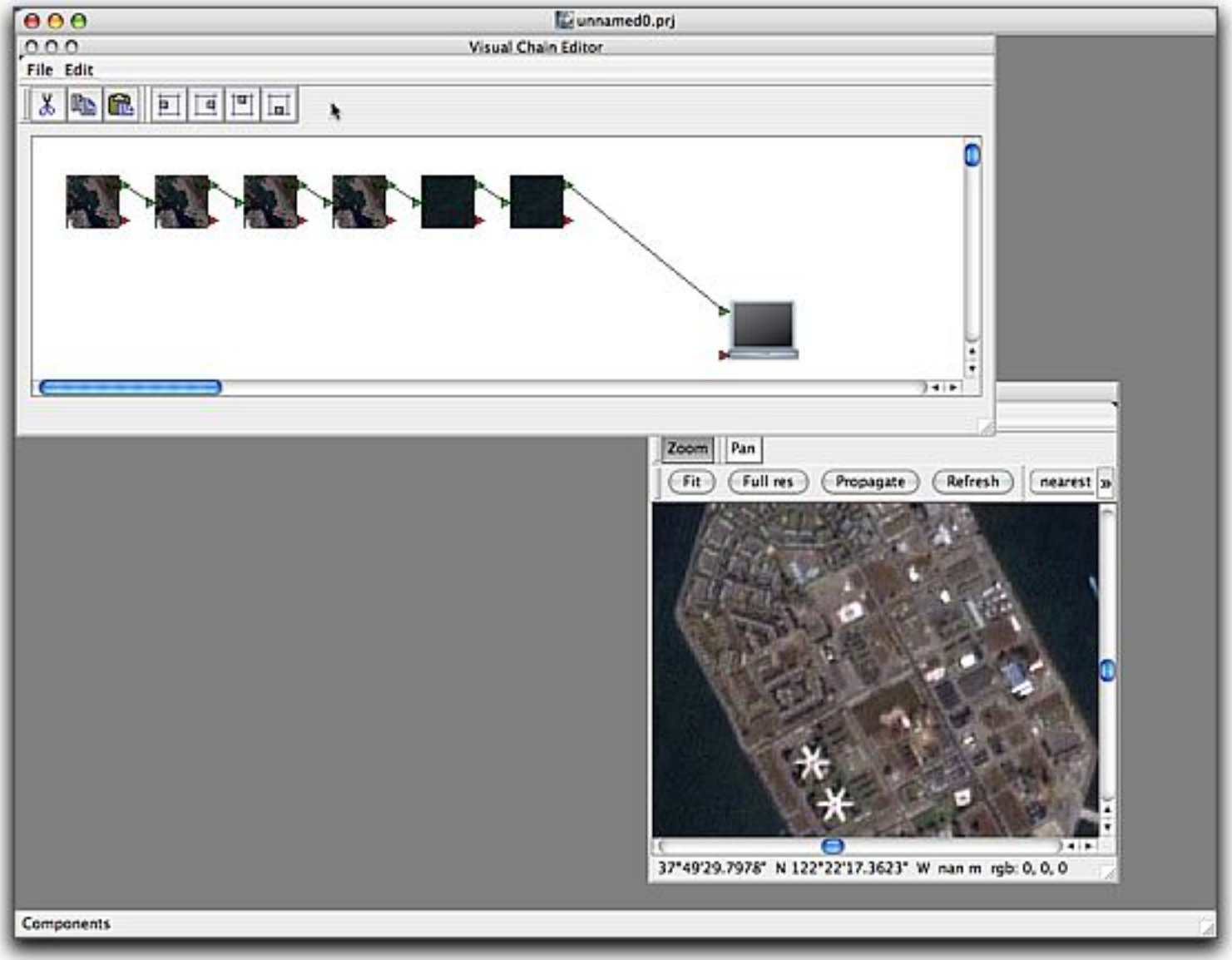
OSSIM

Advanced Prototyping



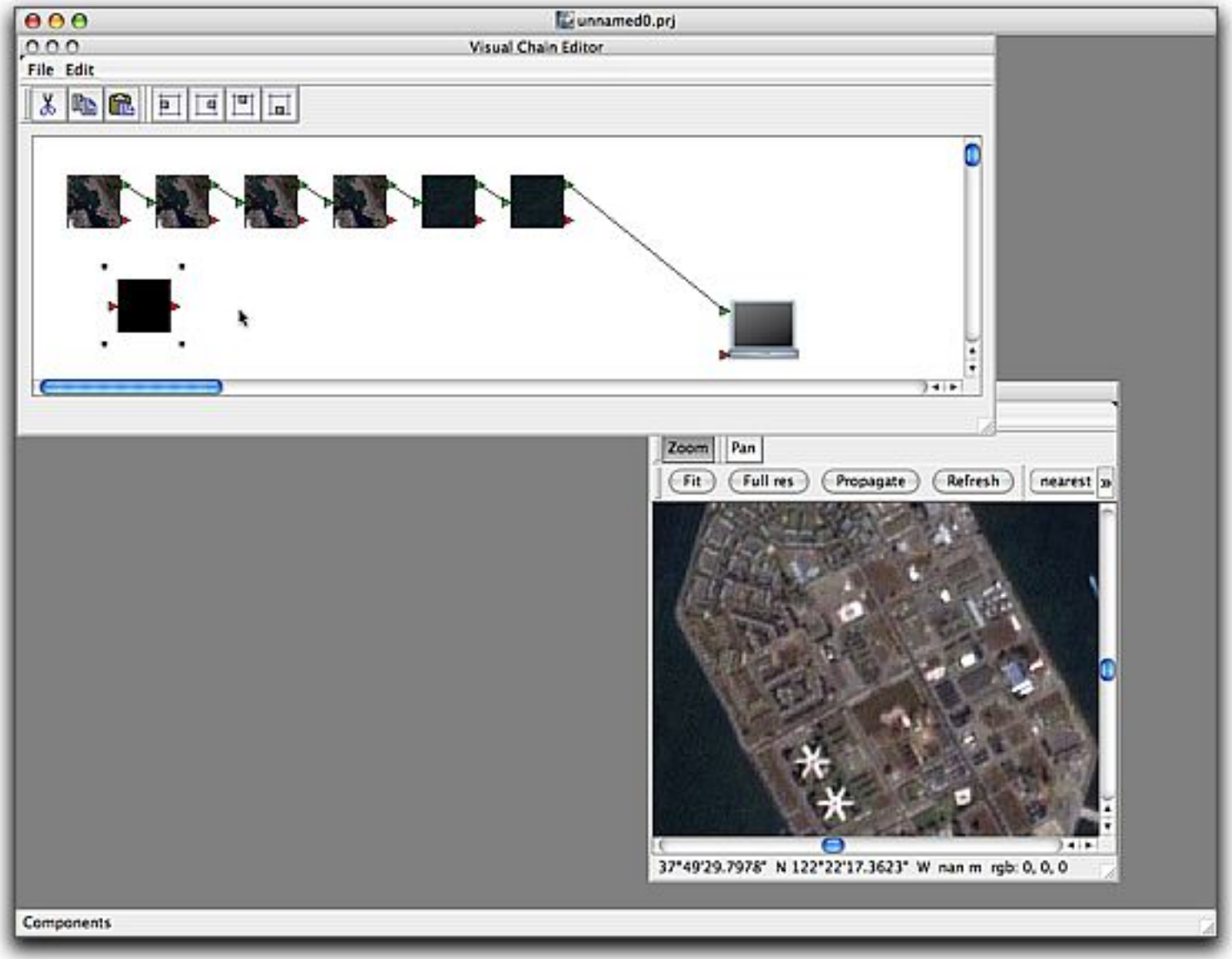
OSSIM

Visual Chain Editor



Edge Filter

OSSIM



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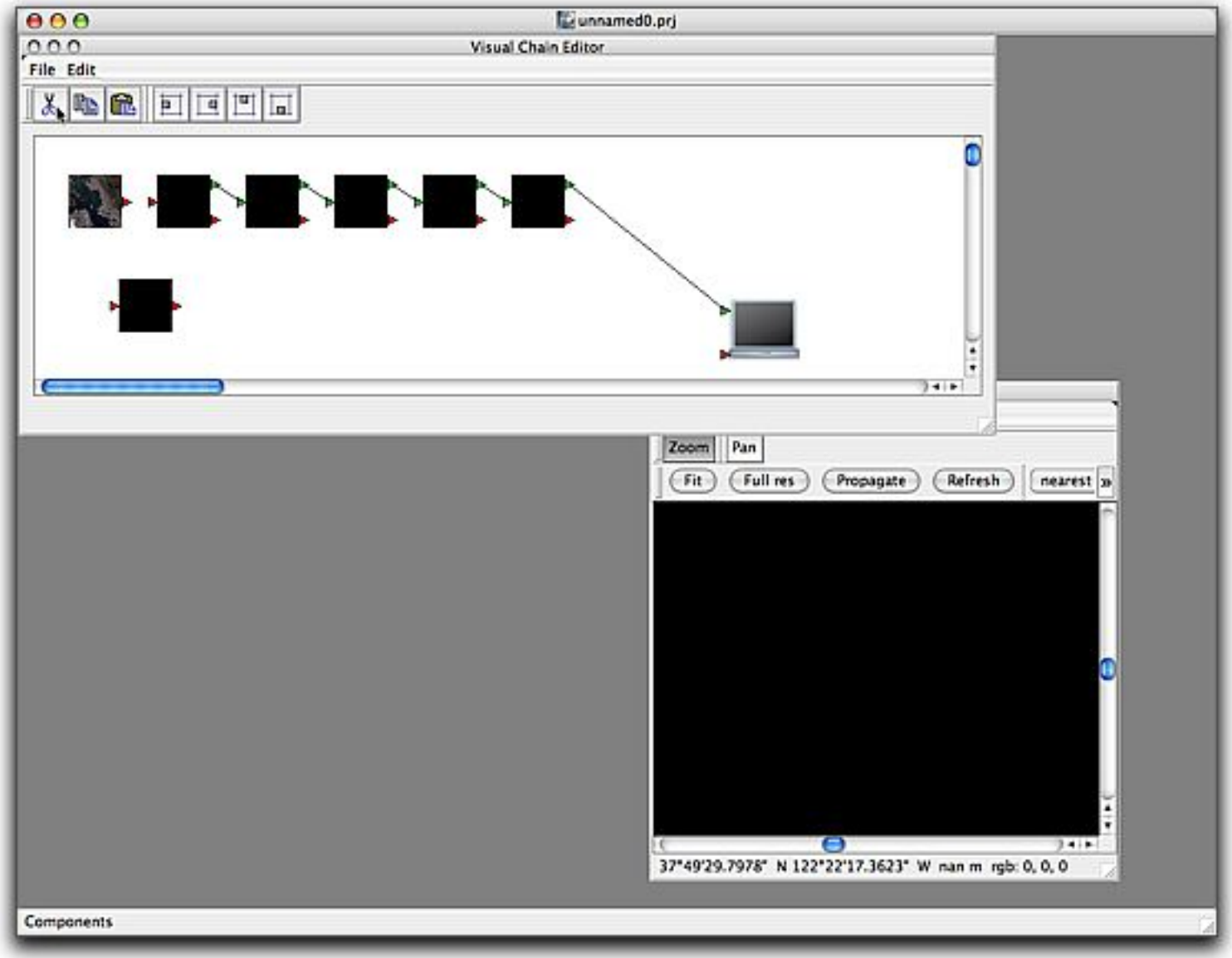
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File Edit
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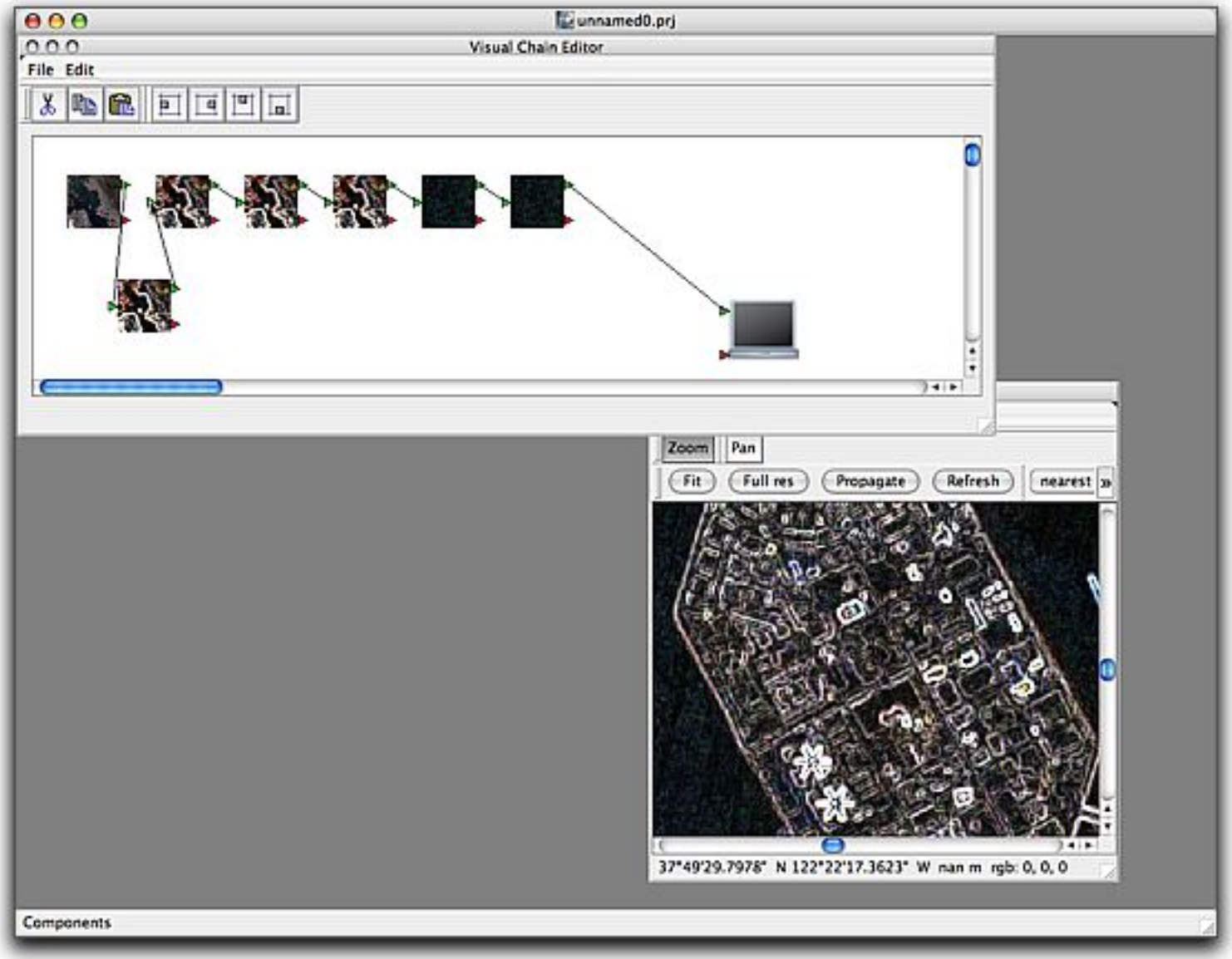
Components

OSSIM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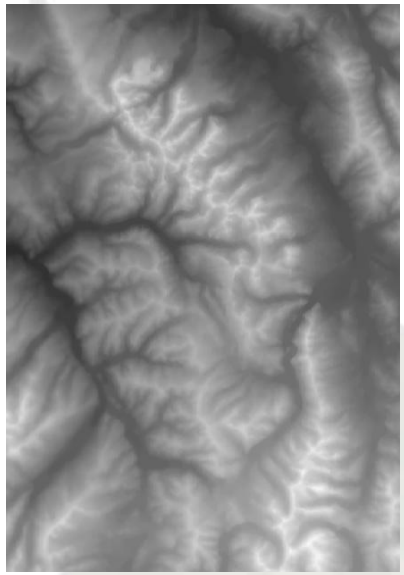
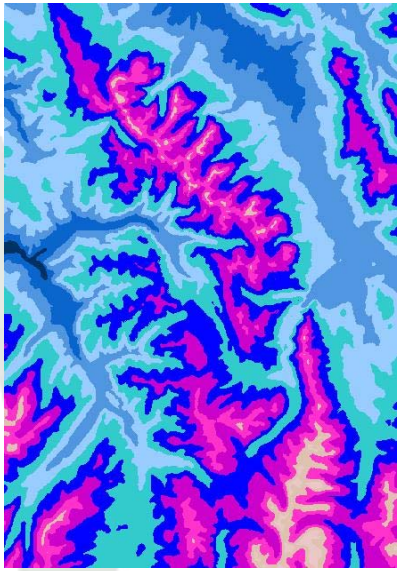
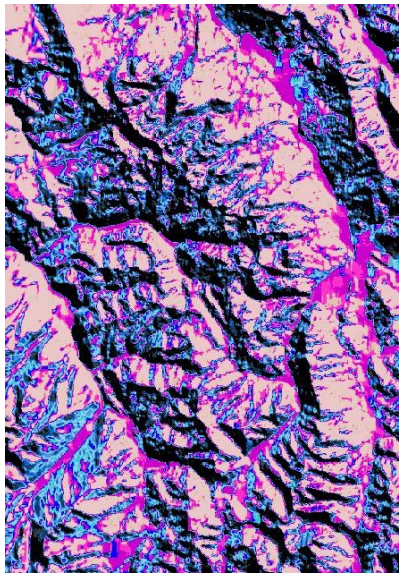
Components

Polygon Masking

Elevation Processing



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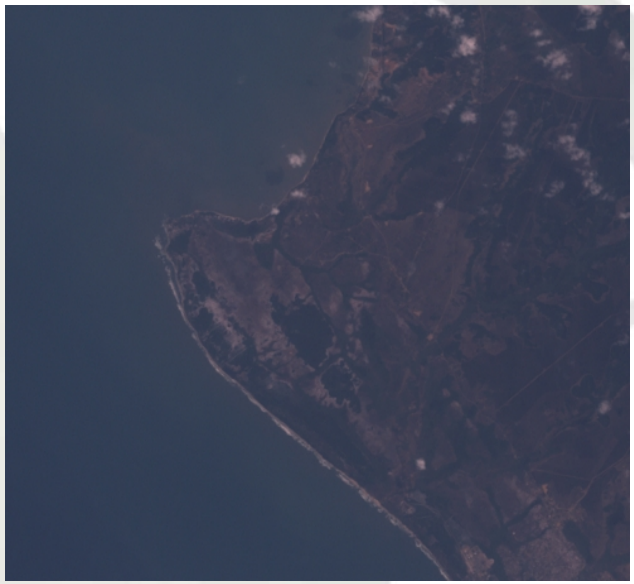

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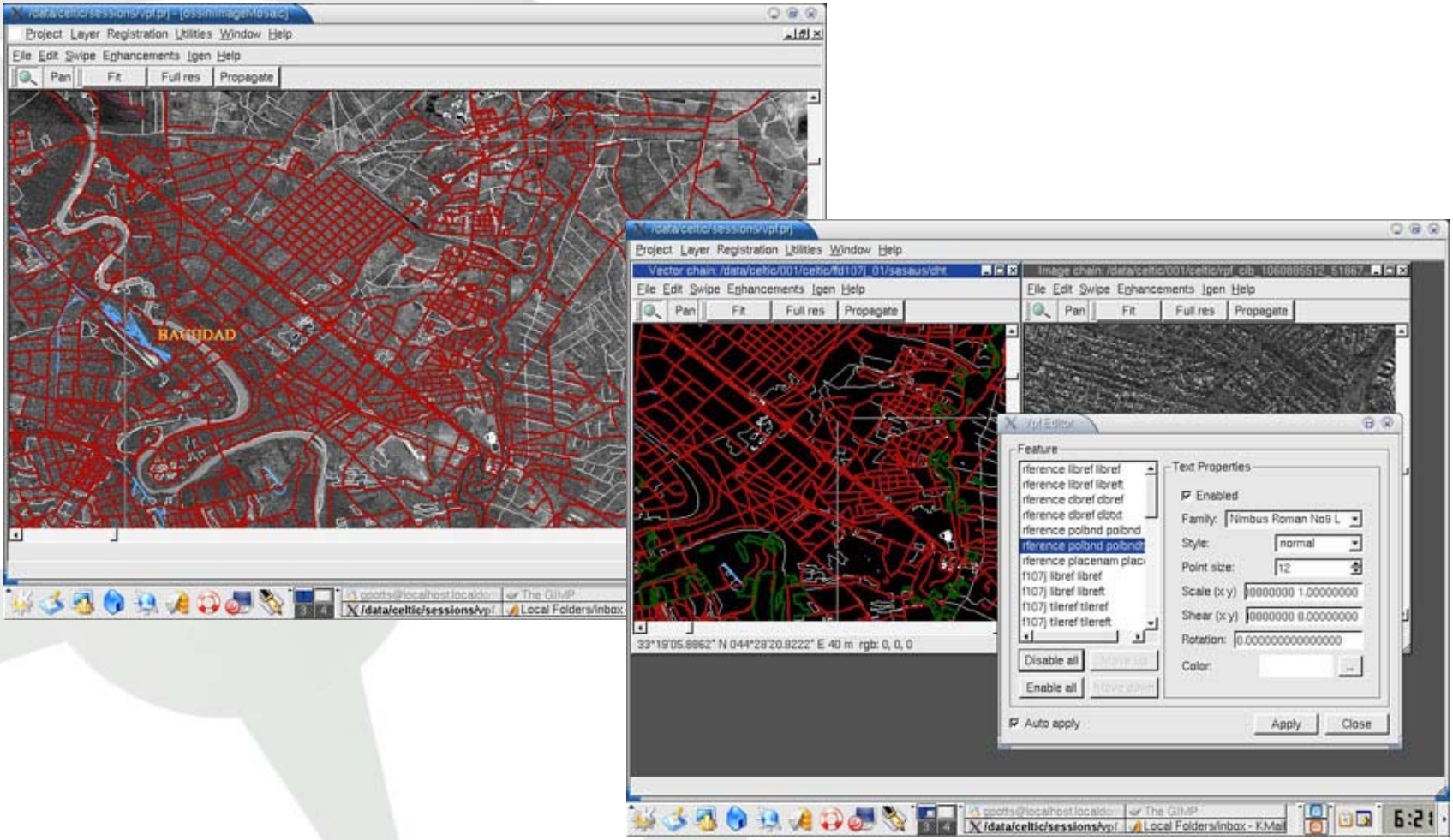

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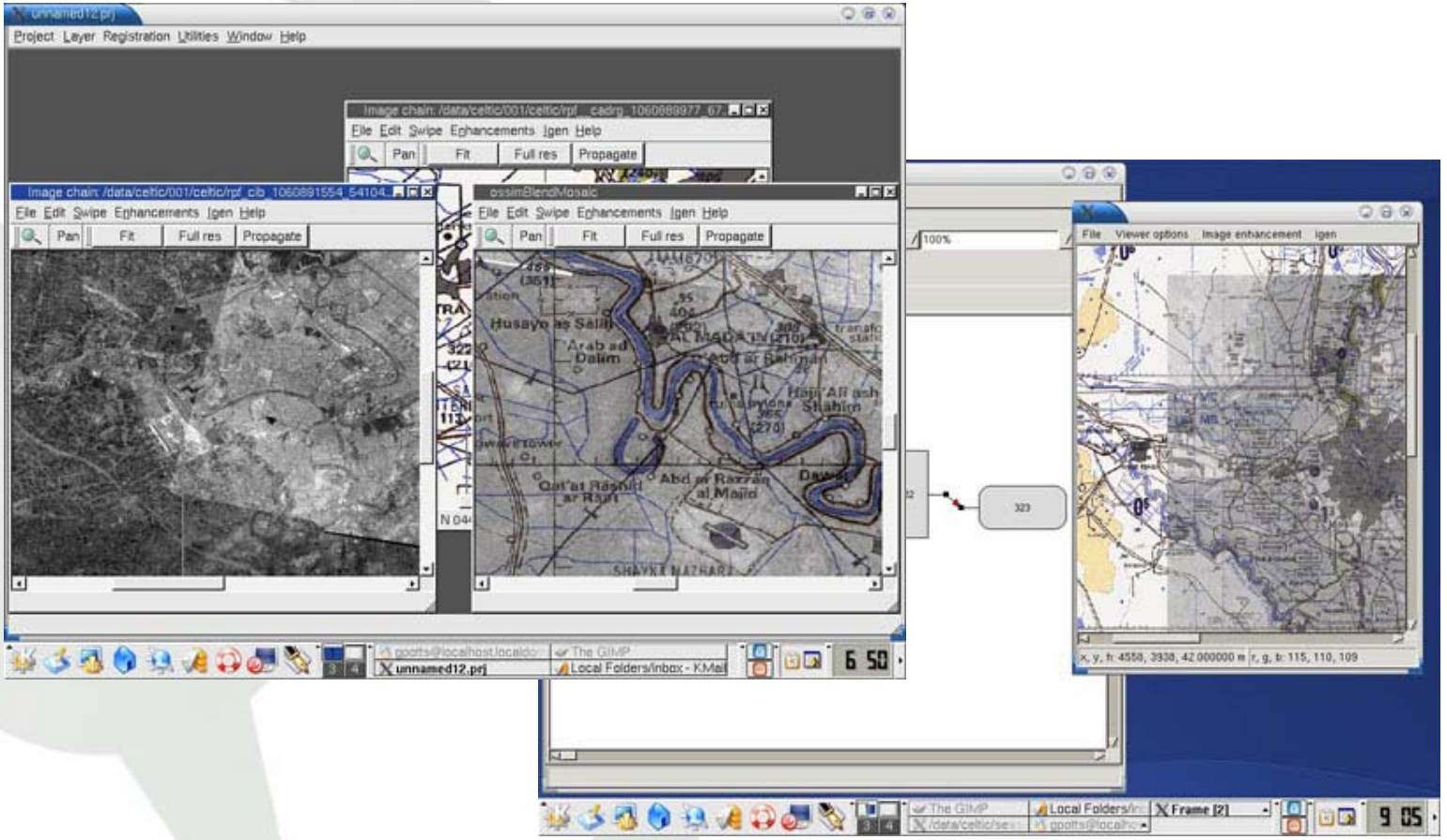
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File Edit Swipe Enhancements Igen Help
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ossimBlendMosaic
Husayo as Salih
Arab ad Dalim
Qal'at Rashid ar Rafi
Abd ar Razzaq al Maiid
SHAYKH NAZHARI
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Local Folders/Inbox - K-Mail
The GIMP
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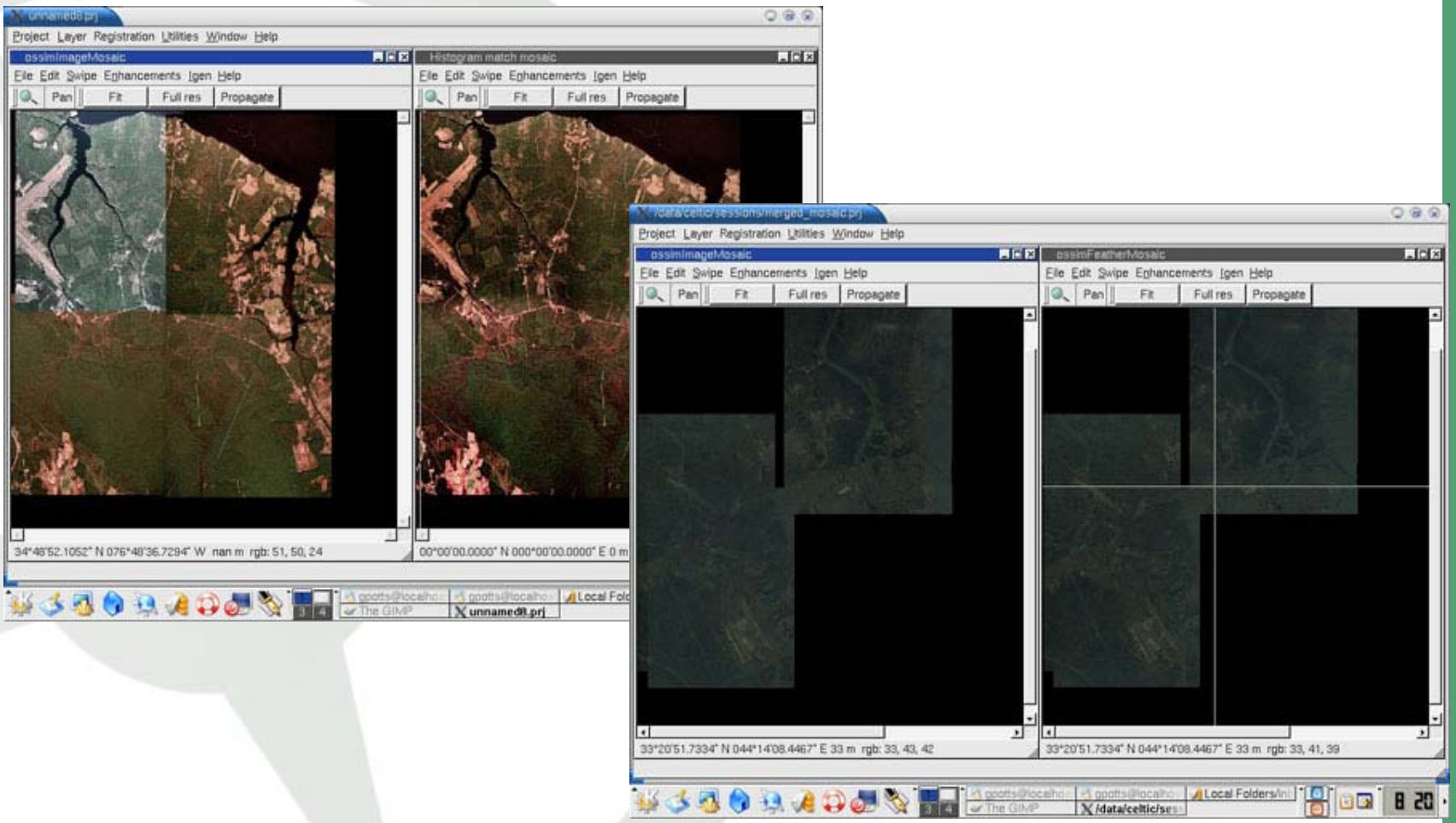
9 05

Mosaics and Histogram Matching



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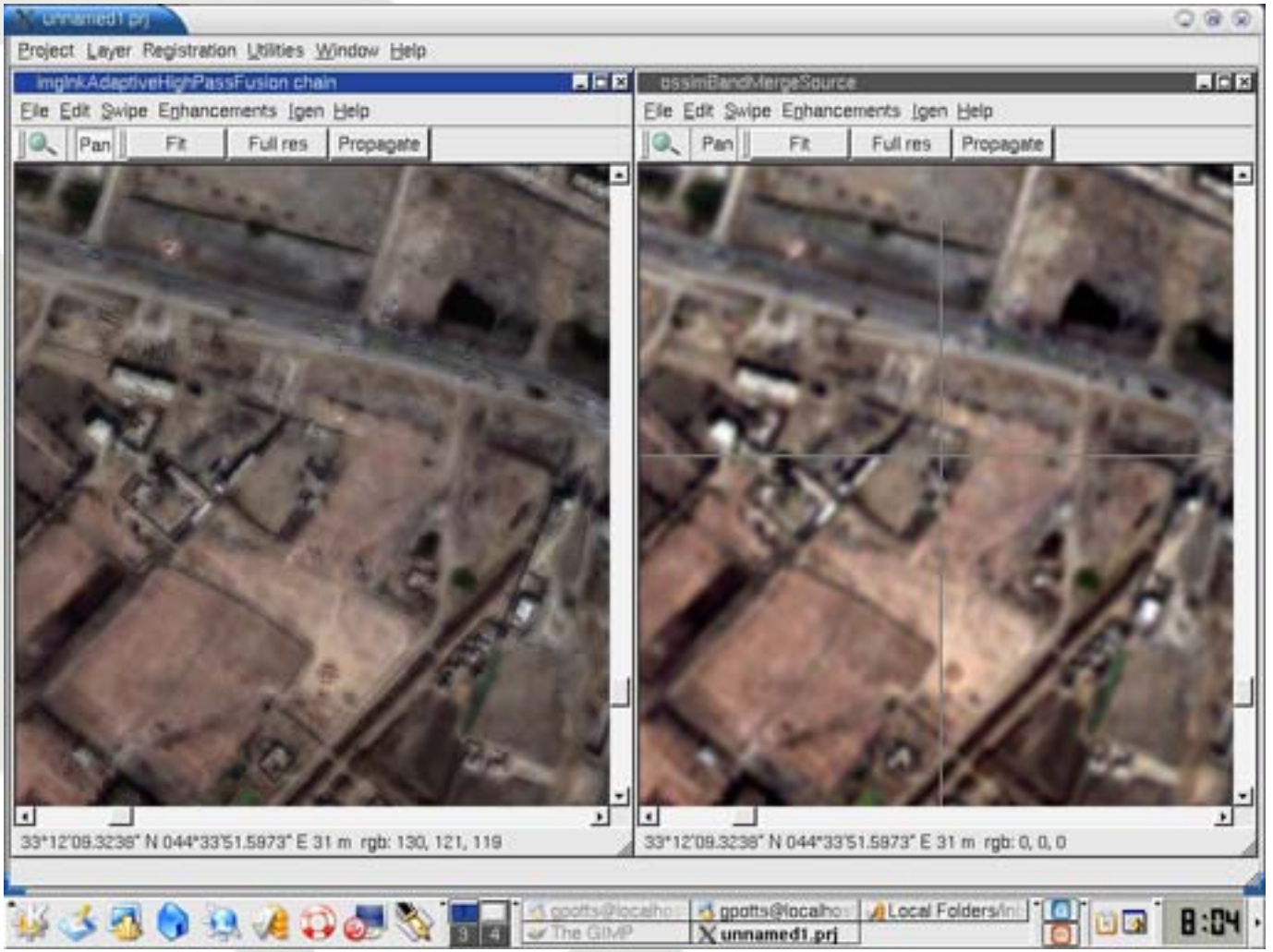
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imgInkAdaptiveHighPassFusion chain
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ossimBandMergeSource
File Edit Swipe Enhancements Igen Help
Pan Fit Full res Propagate
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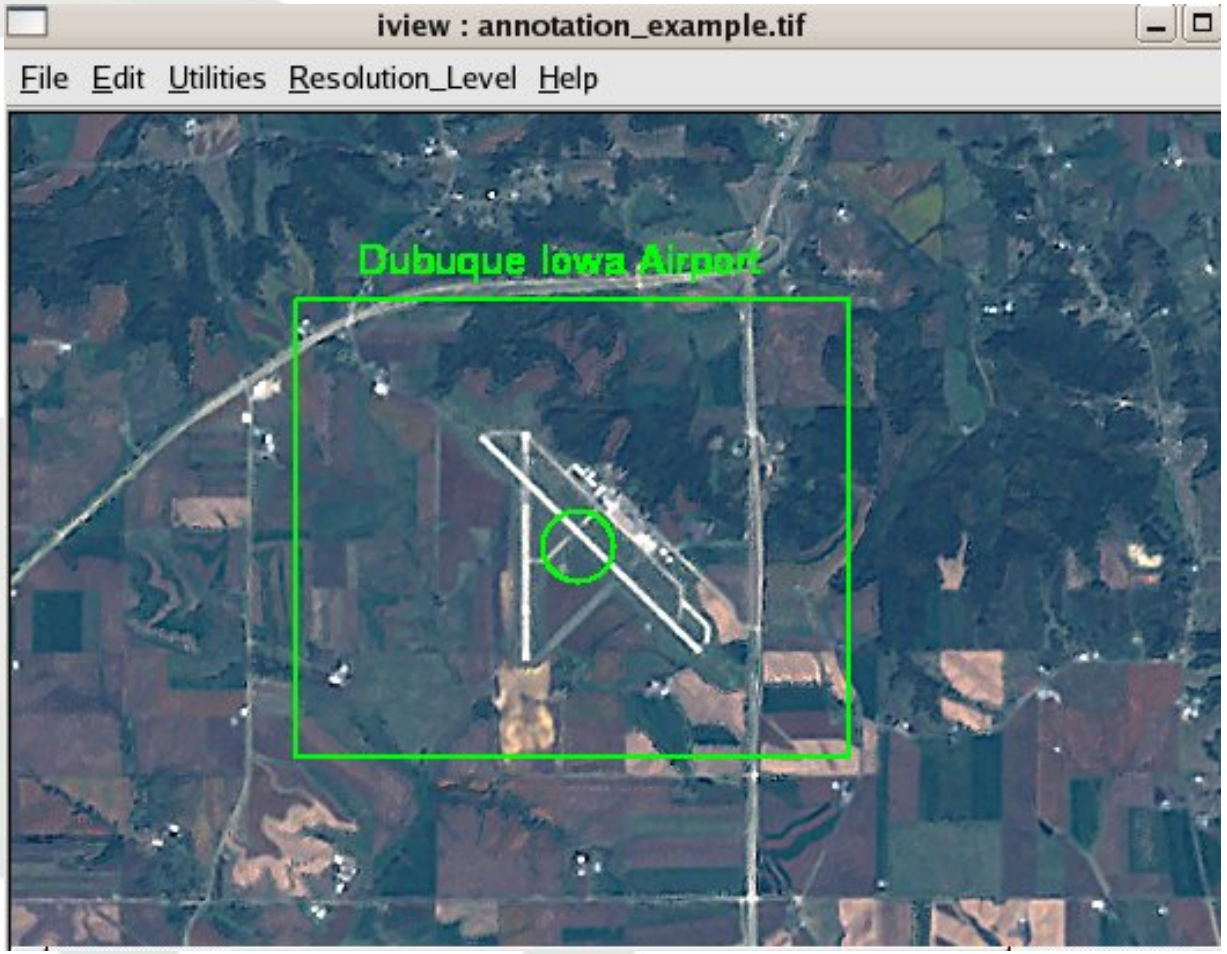
OSSIM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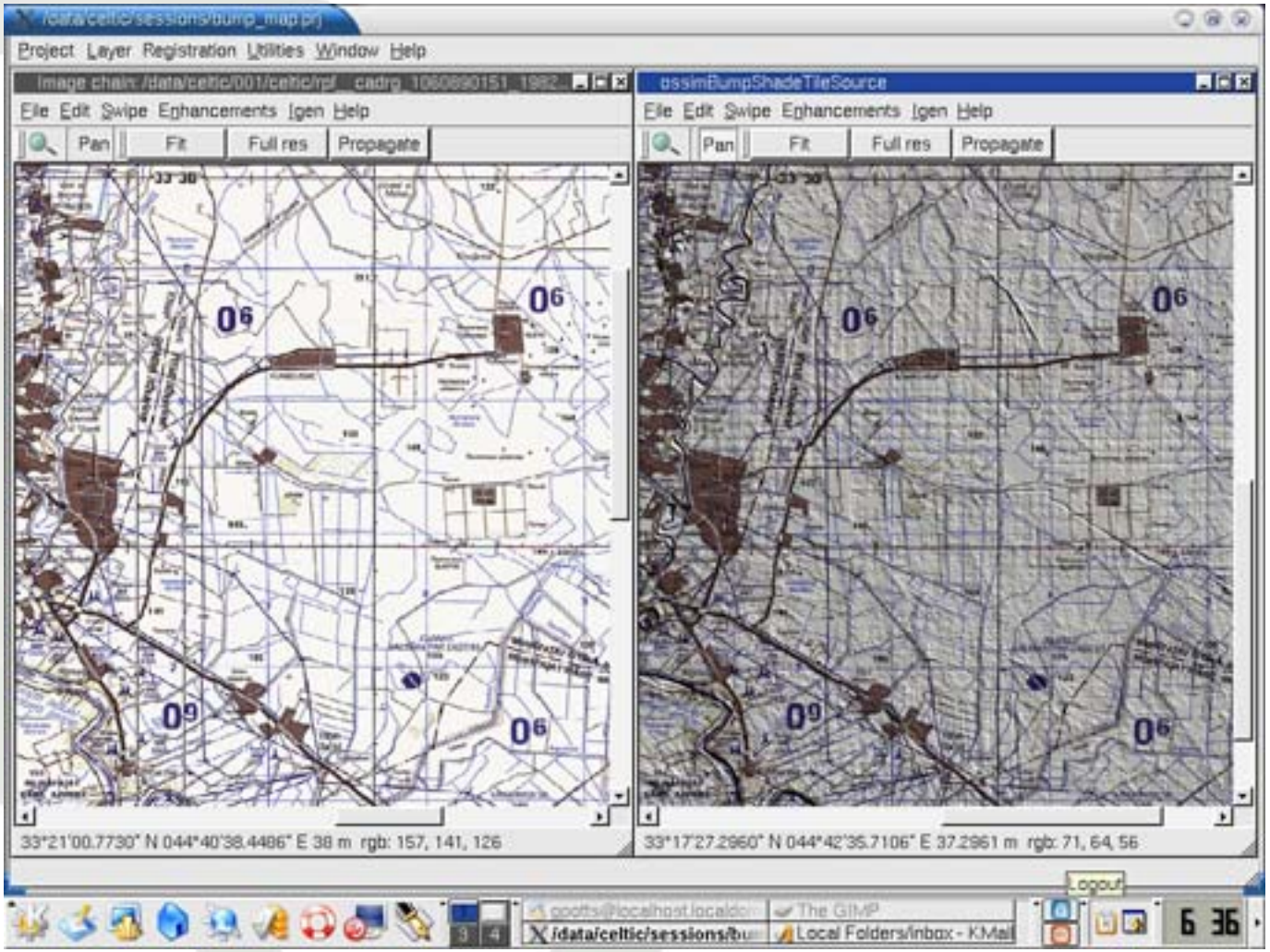
Dubuque Iowa Airport

OSSIM


Project Layer Registration Utilities Window Help
Ele Edit Swipe Enhancements Igen Help
Pan
Fit
Full res
Propagate
ossimBumpShadeTileSource
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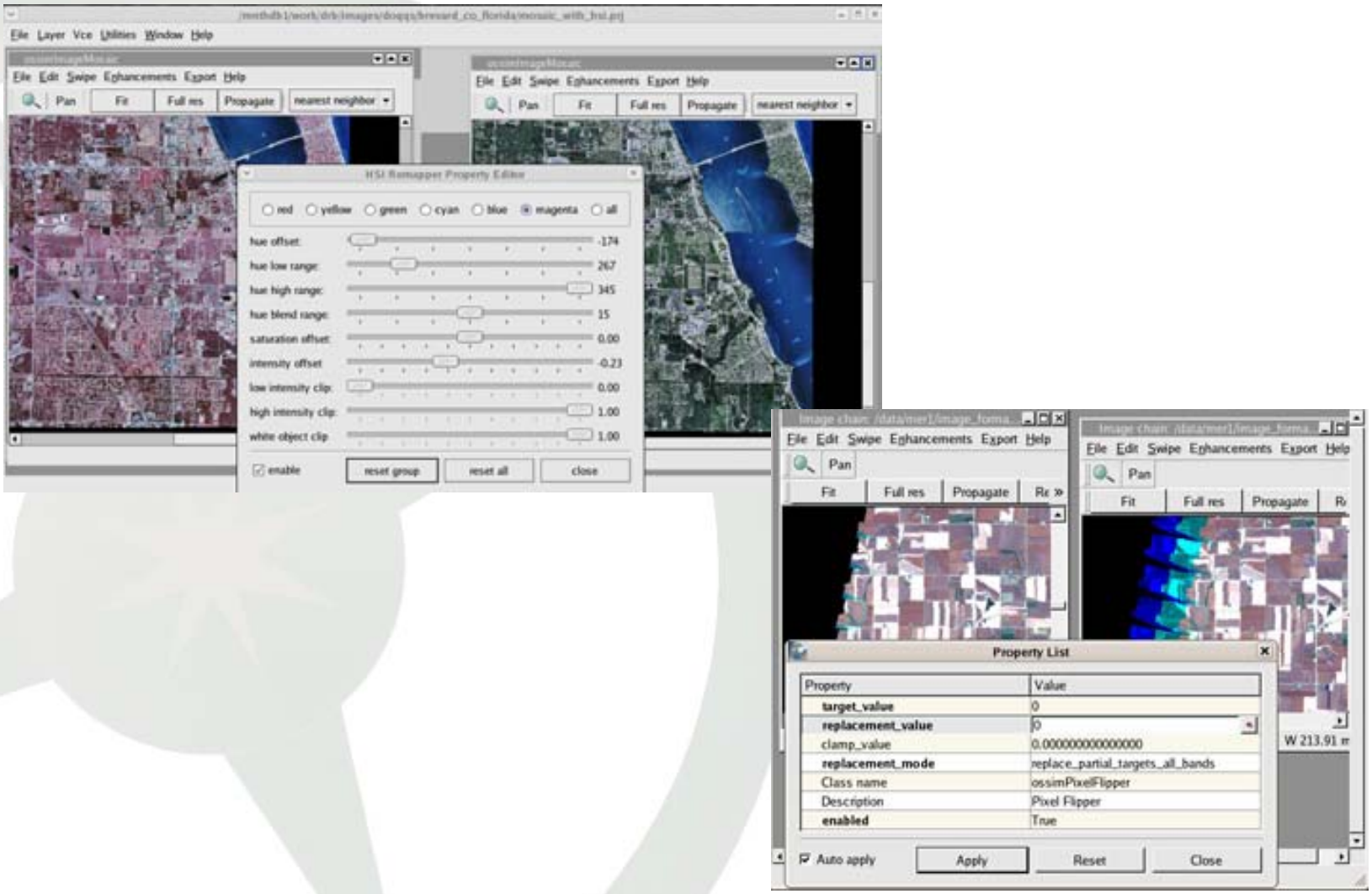
Logout
The GIMP
Local Folders/Inbox - KMail

OSSIM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Full res
Propagate
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HSI Remapper Property Editor
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hue offset
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hue high range
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high intensity clip
white object clip
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0.00
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1.00
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reset group
reset all
close
Property List
Property
Value
target_value
replacement_value
clamp_value
replacement_mode
Class name
Description
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ossimPixelFlipper
Pixel Flipper
True
Auto apply
Apply
Reset
Close

OSSIM

unnamed0.prj
File Layer Vce Utilities Window Help
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File Edit Swipe Enhancements Export Help
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Fit
Full res
Propagate
Refresh
nearest neighbor
imagelinker
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osgPlanet

Similar to Google Earth and NASA World Wind, main focus..

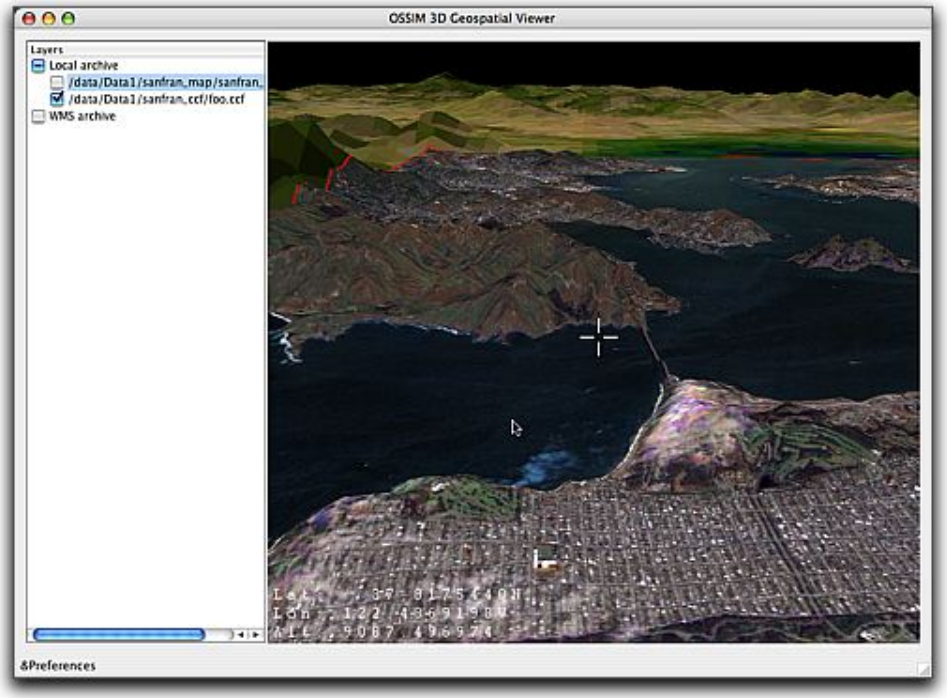
Open Source Software runs on multiple platforms

Photogrammetric Accuracy

Native file access, does not require precooked layers

OGC WMS compliance for Distributed access

Builds on top of OSSIM and OpenSceneGraph

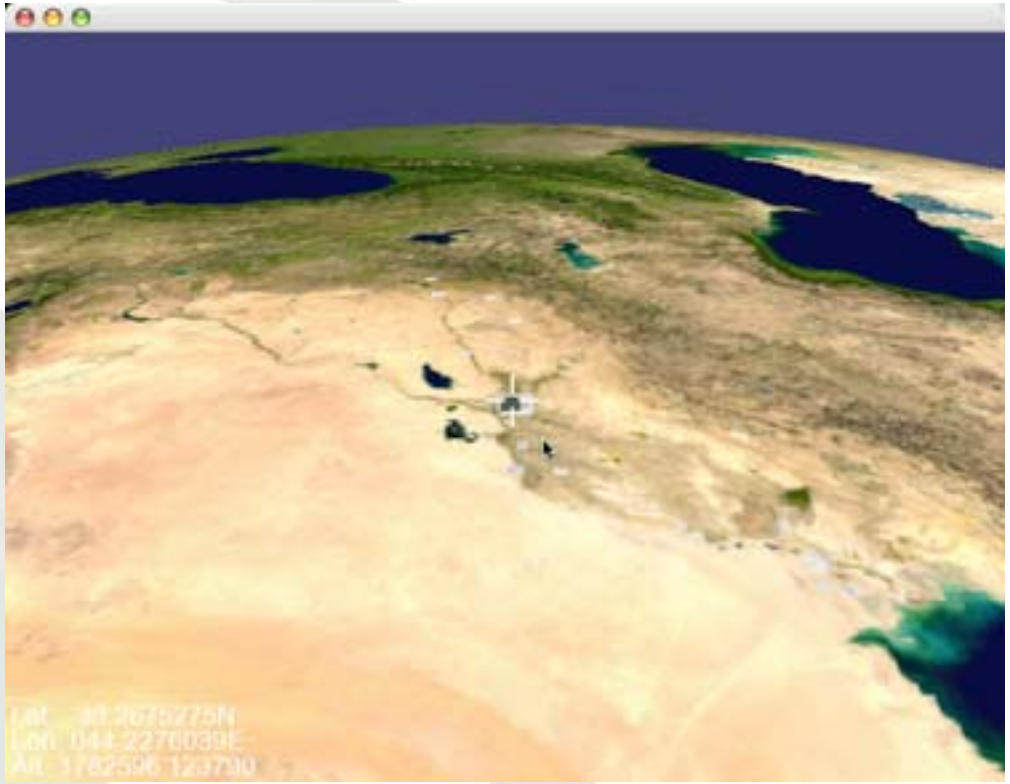


OSSIM

Advanced Visualization osgPlanet

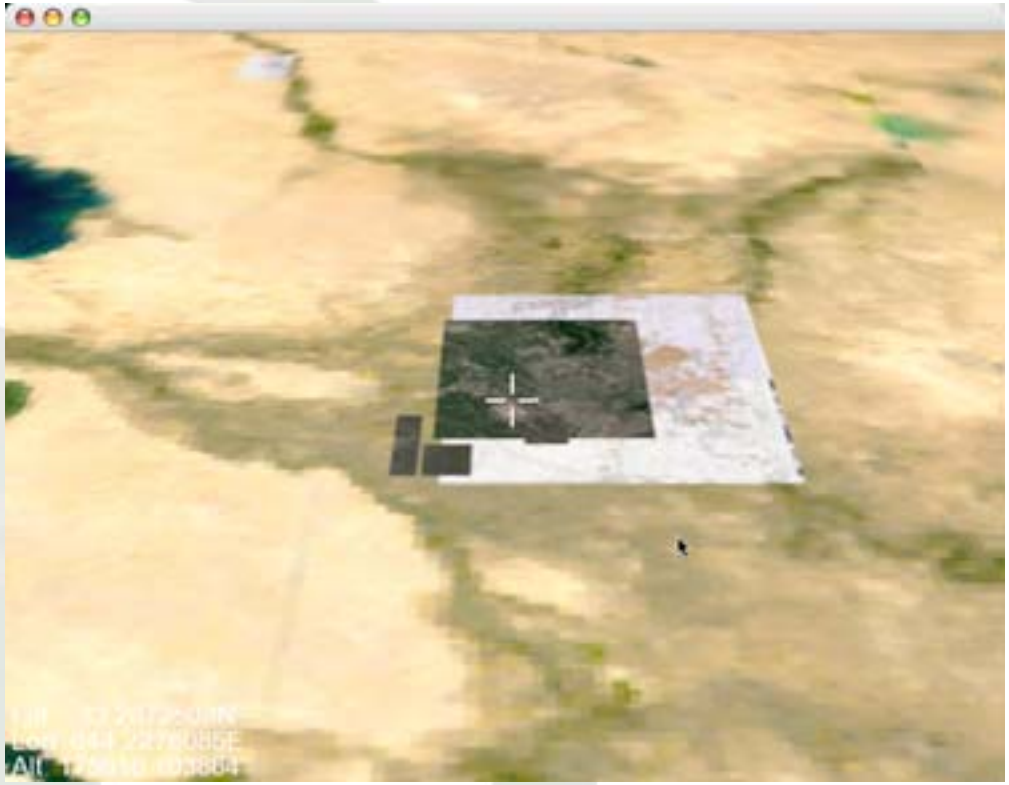
OSSIM

Advanced Visualization osgPlanet



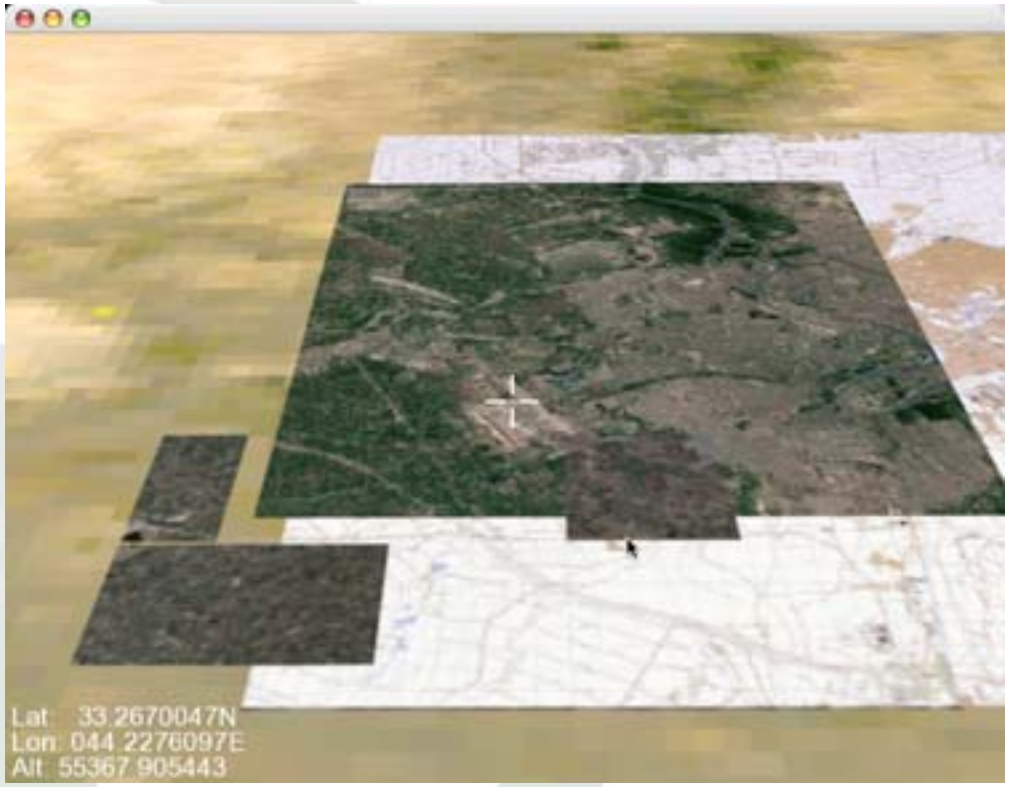
OSSIM

Advanced Visualization osgPlanet



OSSIM

Advanced Visualization osgPlanet



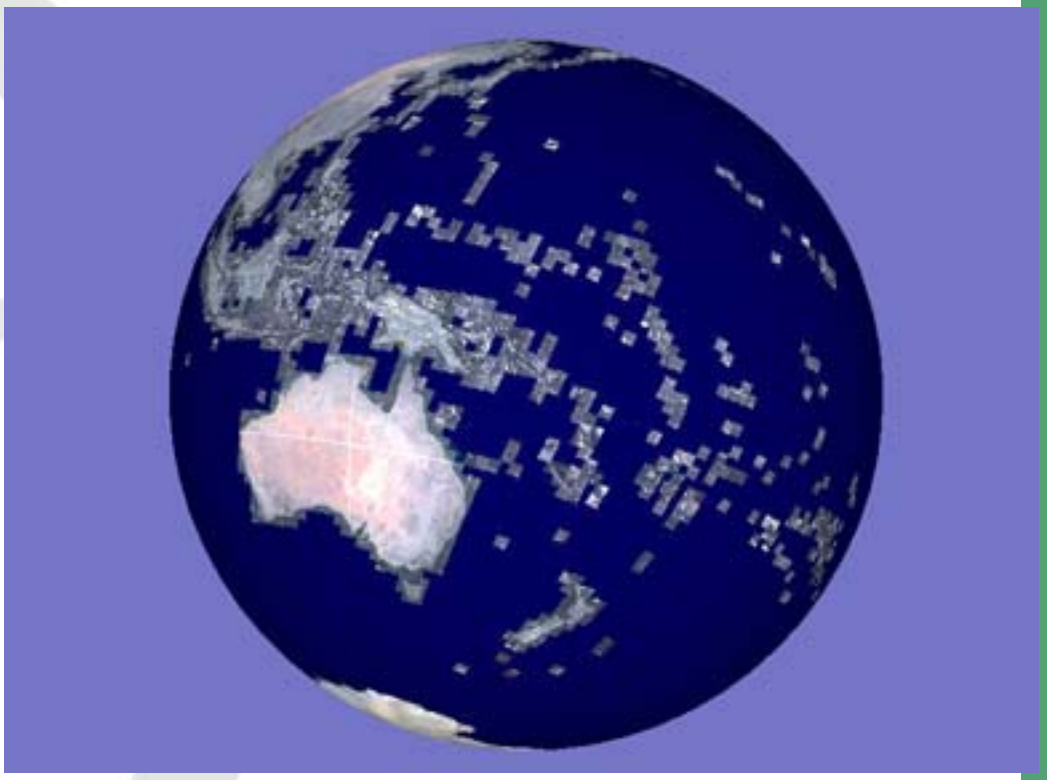
OSSIM

Advanced Visualization osgPlanet

OSSIM

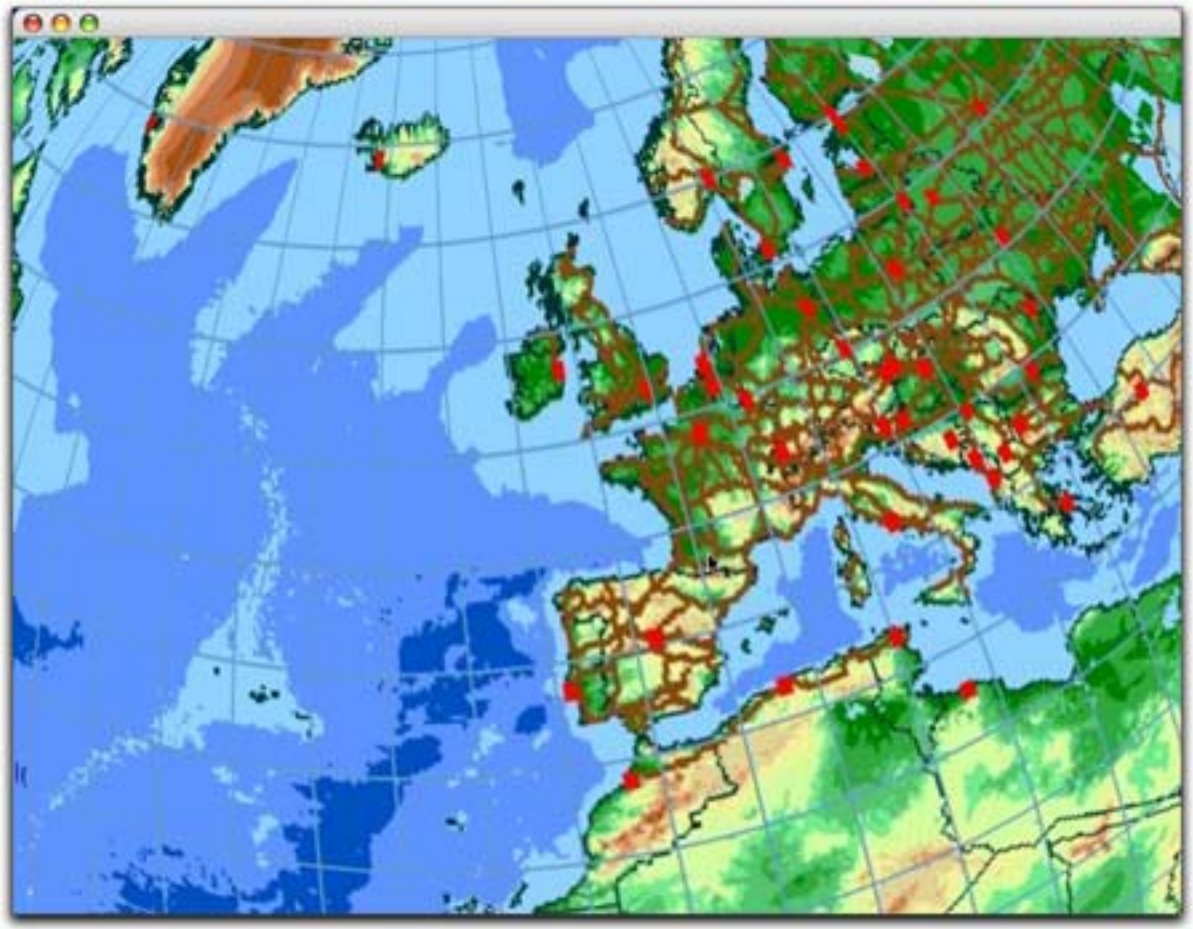
OGC Web Mapping Service Interface

NASA JPL



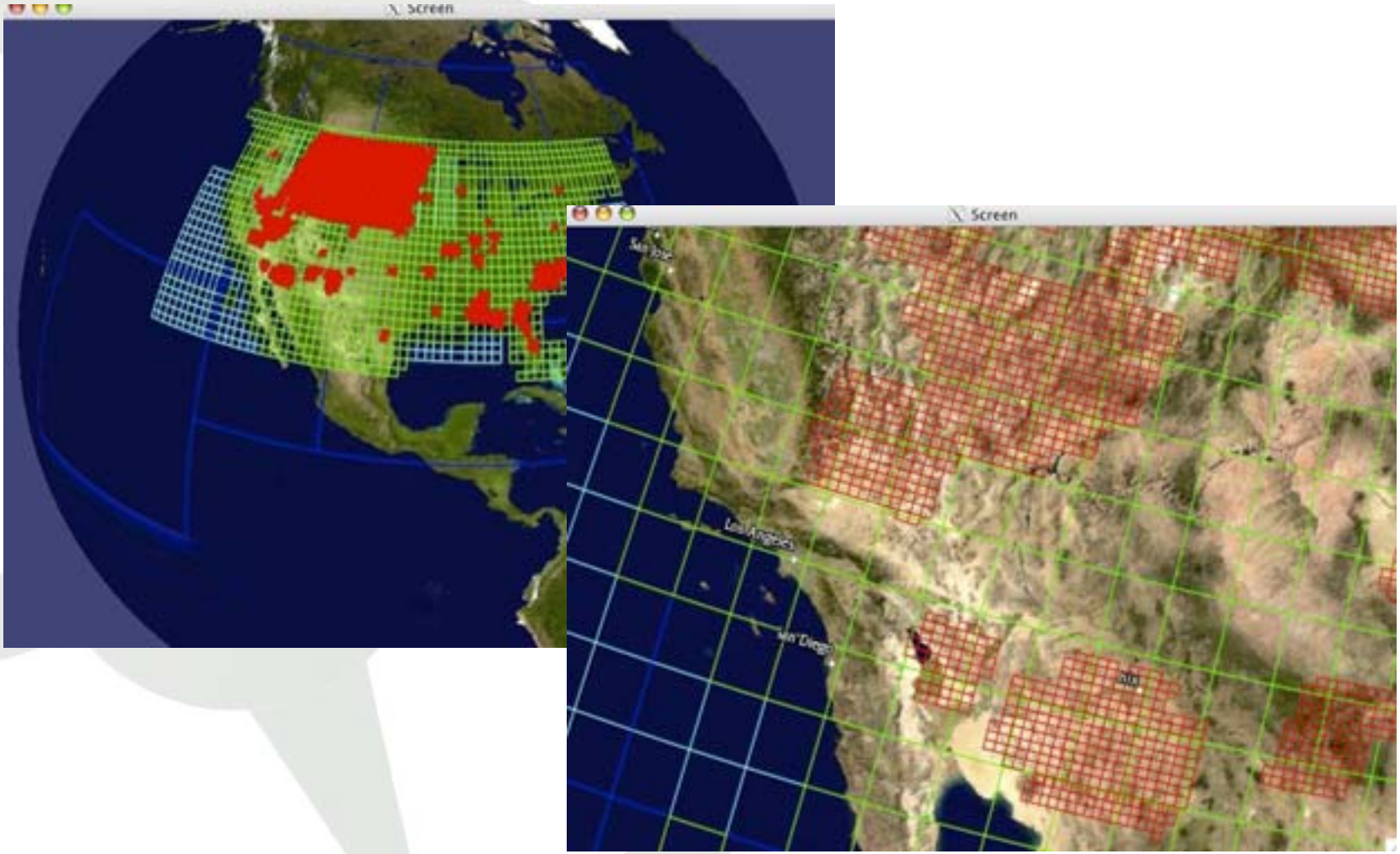
OSSIM

OGC Web Mapping Service Interface



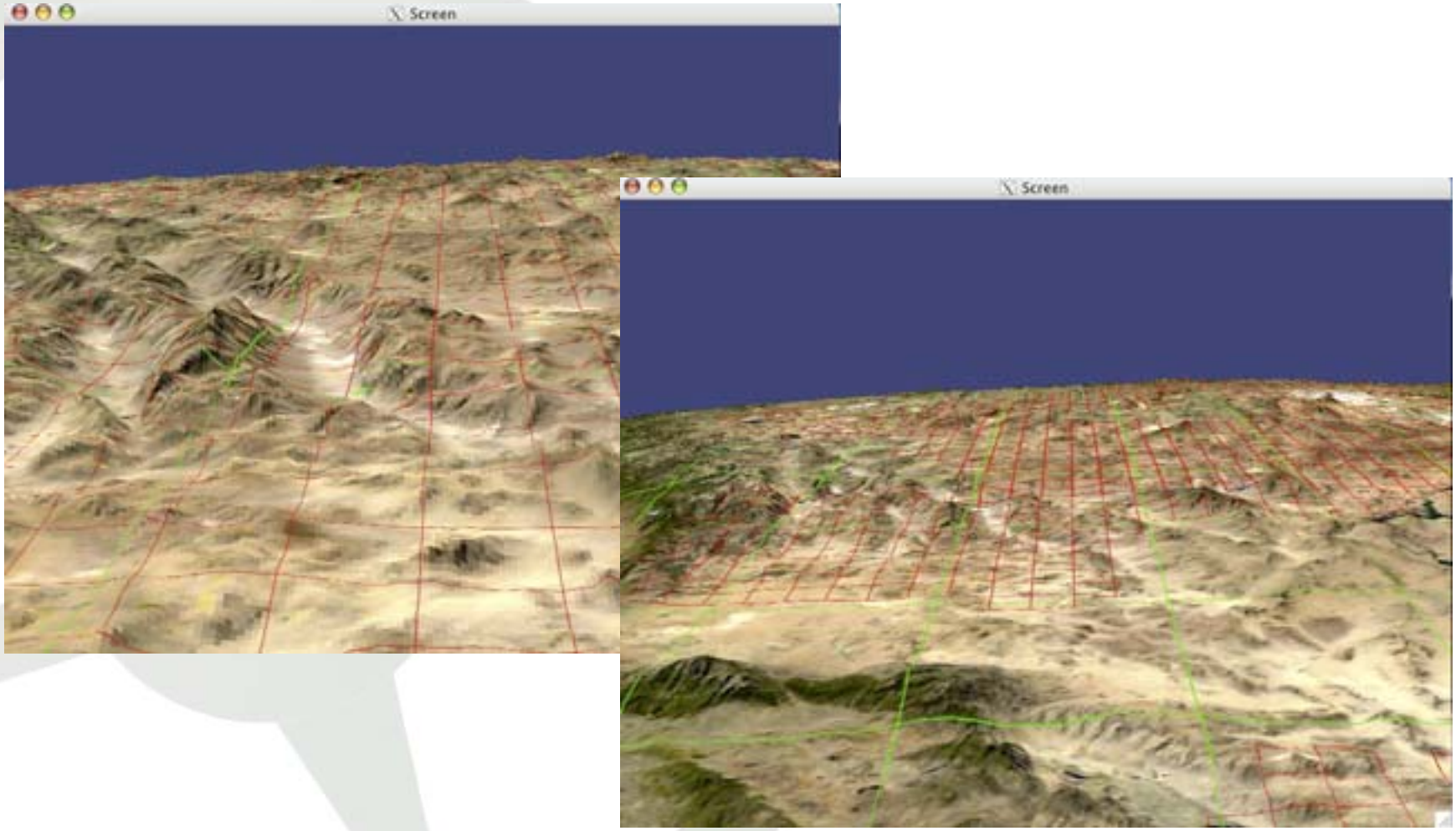
OSSIM

OGC Web Feature Service Interface



OSSIM

OGC Web Feature Service Interface

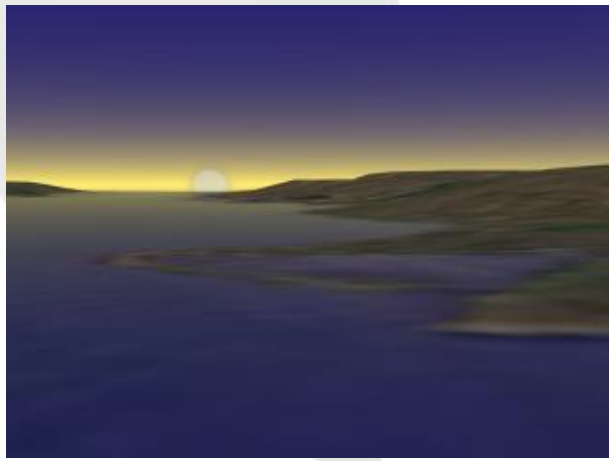


Open Technology Development Leverage

osgPlanet
- OSSIM
- OpenSceneGraph
- OGC WMS
- World Wind Servers

NRL MOADB
- Manipulators
- Navigation
- Hot Links
- Algorithmic Improvements

osgEphemeris
QGIS
Delta3D



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Postgres/PostGIS
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