

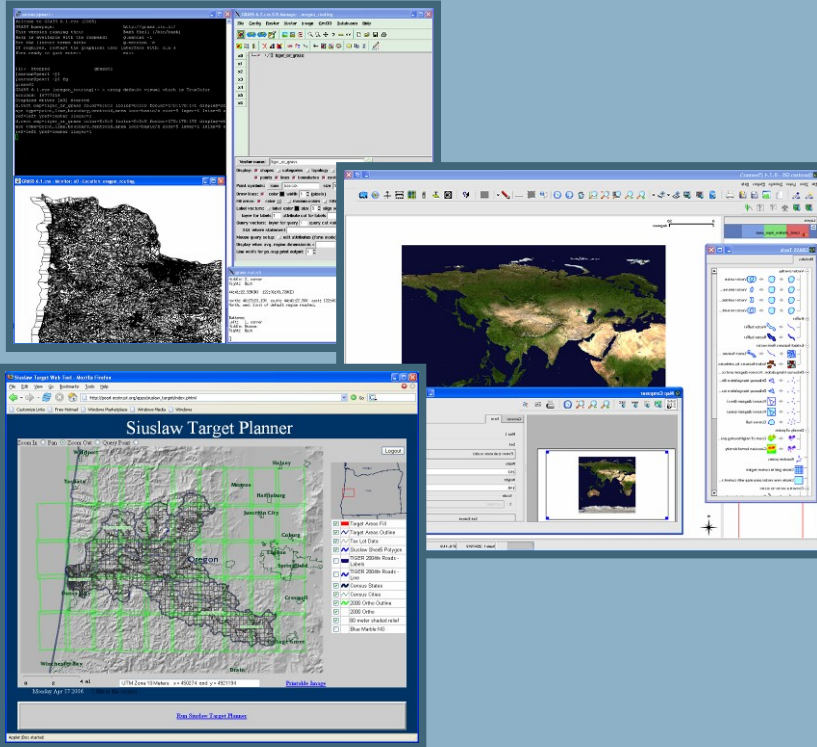
Open Source Geospatial:

Exploring the cross-roads of community organization, product integration, and acceptance in the real world

*Presented at NOAA on 07/29/08 by
Aaron Racicot – GIS Programmer, GISP*

*Z-Pulley Inc. (www.reprojected.com)
aaronr@z-pulley.com*

B.S. Computer Science

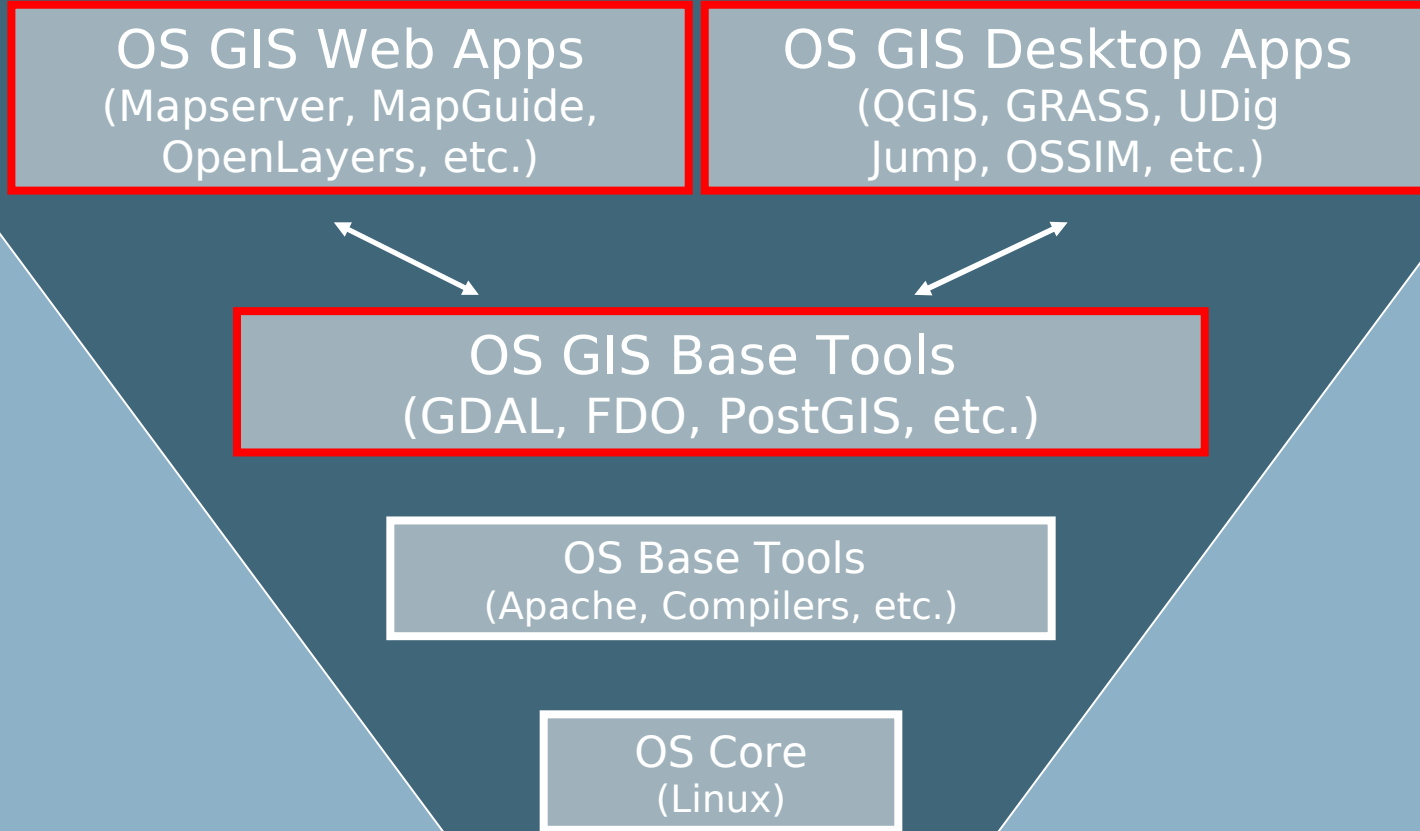


Open Source User/Developer
GIS Programmer

M.S. Environmental Science



Open Source Geospatial – What Is It?





Website

System Administration

Fundraising

Education and Curriculum

Incubation

Public Geospatial Data

Promotion and Visibility

Projects

General Members

Charter Members

Board of Directors

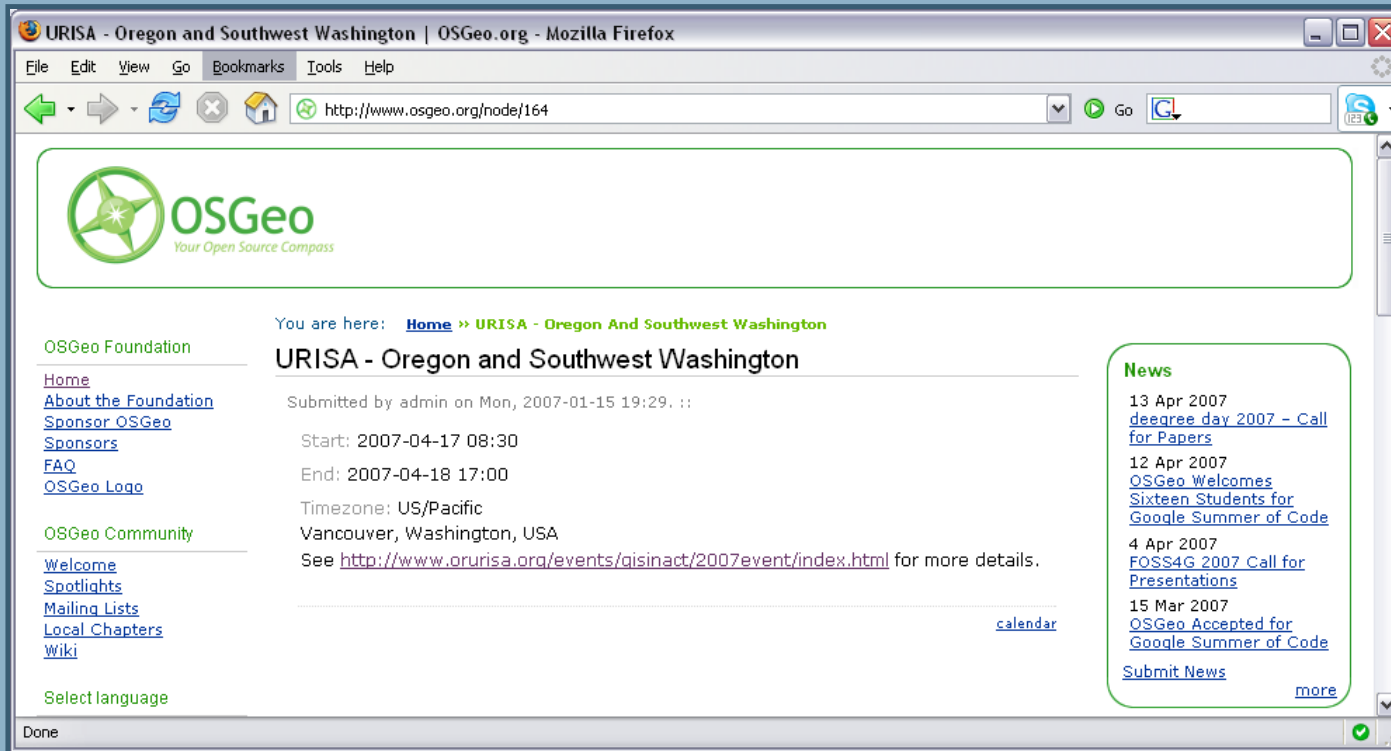
- To **provide resources** for foundation projects - eg. infrastructure, funding, legal.
- To promote **freely available geodata** - free software is useless without data.
- To **promote the use** of open source software in the geospatial industry (not just foundation software) - eg. PR, training, outreach.
- To encourage the implementation of **open standards** and standards-based interoperability in foundation projects.
- To ensure a high degree of **quality** in foundation projects in order to build and preserve the foundation "brand".
- To make foundation and related software **more accessible** to end users - eg. binary "stack" builds, cross package documentation.
- To provide support for the use of OSGeo software in **education** via curriculum development, outreach, and support.
- To encourage **communication and cooperation** between OSGeo communities on different language (eg. Java/C/Python) and operating system (eg. Win32, Unix, MacOS) platforms.
- To **support** use and contribution to foundation projects from the worldwide community through **internationalization** of software and community outreach.
- To operate an annual **OSGeo Conference**, possibly in cooperation with related efforts (eg. EOGEO).



The screenshot shows the OSGeo.org website in a Mozilla Firefox browser window. The browser title is "OSGeo.org | Your Open Source Compass - Mozilla Firefox". The address bar shows "http://www.osgeo.org/". The website header features the OSGeo logo and a search bar. The main content area is titled "Welcome to the Open Source Geospatial Foundation Website" and includes a "Support OSGeo" button with a "Make A Donation" link. The "OSGeo Projects" section lists various projects like Web Mapping, Desktop Applications, and Geospatial Libraries. The "Community Spotlights" section features profiles for Steve Lime and Tom Kralidis. The "News" section lists recent releases and events.

- Mapbender
- MapGuide
- MapServer
- OpenLayers
- GRASS
- OSSIM
- QGIS
- FDO
- GDAL/OGR
- GeoTools
- GeoNetwork


Projects



URISA - Oregon and Southwest Washington | OSGeo.org - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.osgeo.org/node/164



OSGeo
Your Open Source Compass

You are here: [Home](#) » [URISA - Oregon And Southwest Washington](#)

URISA - Oregon and Southwest Washington

Submitted by admin on Mon, 2007-01-15 19:29. ::

Start: 2007-04-17 08:30
End: 2007-04-18 17:00
Timezone: US/Pacific
Vancouver, Washington, USA
See <http://www.orurisa.org/events/gisinact/2007event/index.html> for more details.

[calendar](#)

News

- 13 Apr 2007 [degree day 2007 - Call for Papers](#)
- 12 Apr 2007 [OSGeo Welcomes Sixteen Students for Google Summer of Code](#)
- 4 Apr 2007 [FOSS4G 2007 Call for Presentations](#)
- 15 Mar 2007 [OSGeo Accepted for Google Summer of Code](#)

[Submit News](#) [more](#)

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[FAQ](#)
[OSGeo Logo](#)

[OSGeo Community](#)
[Welcome](#)
[Spotlights](#)
[Mailing Lists](#)
[Local Chapters](#)
[Wiki](#)

[Select language](#)

Done



CAPE TOWN SOUTH AFRICA
FOSS4G 2008

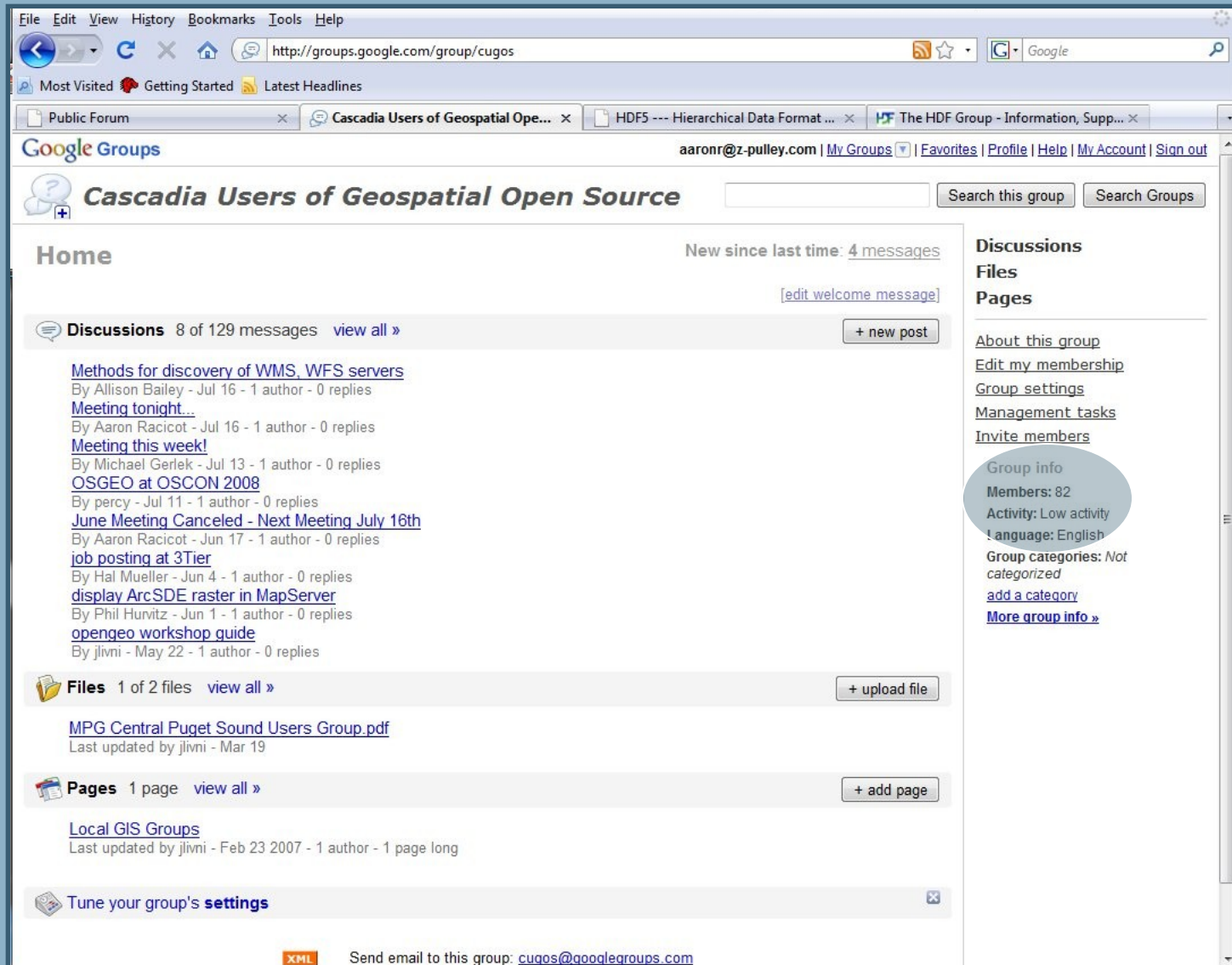
2008 FREE AND OPEN SOURCE
SOFTWARE FOR GEOSPATIAL CONFERENCE



OSGeo



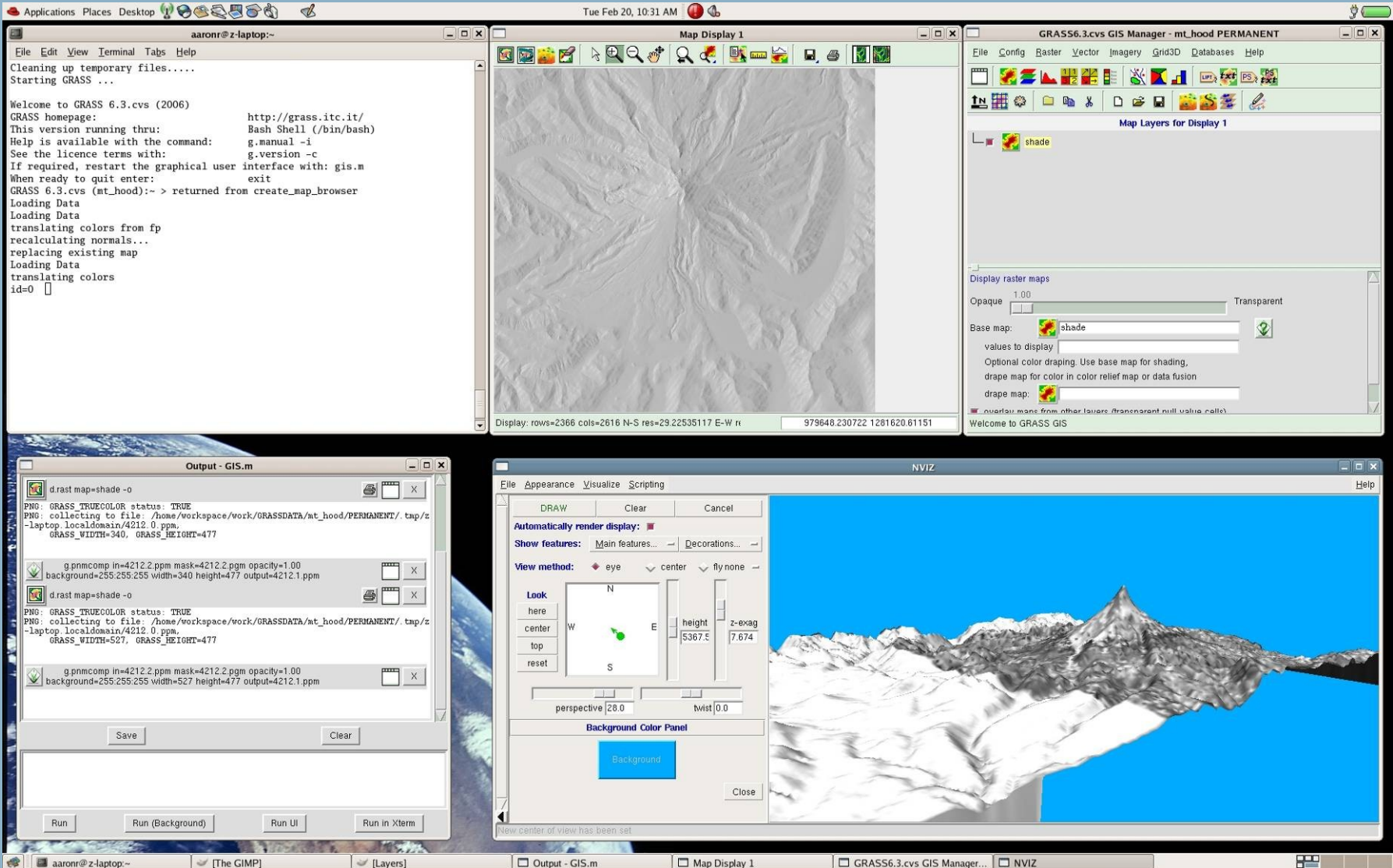
GISSA
Geo - Information Society of South Africa



The screenshot shows a web browser window with the address bar displaying `http://groups.google.com/group/cugos`. The browser tabs include 'Public Forum', 'Cascadia Users of Geospatial Open Source', 'HDF5 --- Hierarchical Data Format ...', and 'The HDF Group - Information, Supp...'. The page title is 'Cascadia Users of Geospatial Open Source' and the user is logged in as 'aaronr@z-pulley.com'. The page content is organized into sections: 'Home' with a 'New since last time: 4 messages' indicator and an '[edit welcome message]' link; 'Discussions' with 8 of 129 messages and a '+ new post' button; 'Files' with 1 of 2 files and a '+ upload file' button; and 'Pages' with 1 page and a '+ add page' button. A 'Tune your group's settings' link is also present. On the right side, there are sections for 'Discussions', 'Files', and 'Pages', along with a 'Group info' section that lists 'Members: 82', 'Activity: Low activity', and 'Language: English'. A blue oval highlights the 'Group info' section. At the bottom, there is an 'XML' icon and a link to 'Send email to this group: cugos@googlegroups.com'.

A picture speaks louder
than words...

Grass - Raster Processing



Terminal Window (aaronr@z-laptop:~):

```
Cleaning up temporary files....
Starting GRASS ...

Welcome to GRASS 6.3.cvs (2006)
GRASS homepage:      http://grass.itc.it/
This version running thru: Bash Shell (/bin/bash)
Help is available with the command: g.manual -i
See the licence terms with: g.version -c
If required, restart the graphical user interface with: gis.m
When ready to quit enter: exit
GRASS 6.3.cvs (mt_hood):-> returned from create_map_browser
Loading Data
Loading Data
translating colors from fp
recalculating normals...
replacing existing map
Loading Data
translating colors
id=0
```

Map Display 1: Display: rows=2366 cols=2616 N-S res=29.22535117 E-W rx 979648.230722 1261620.61151

GRASS6.3.cvs GIS Manager - mt_hood PERMANENT:

Map Layers for Display 1

- shade

Display raster maps

Opaque: 1.00 Transparent

Base map: shade

values to display

Optional color draping. Use base map for shading, drape map for color in color relief map or data fusion

drape map:

Warning: more from other layers, transparent null value calls

Welcome to GRASS GIS

Output - GIS.m:

```
d.rast map=shade -o
PNG: GRASS_TRUECOLOR status: TRUE
PNG: collecting to file: /home/workspace/work/GRASSDATA/mt_hood/PERMANENT/.tmp/z
-laptop_localdomain/4212.0.ppm,
GRASS_WIDTH=340, GRASS_HEIGHT=477

g.pnmcomp in=4212.2.ppm mask=4212.2.pgm opacity=1.00
background=255:255:255 width=340 height=477 output=4212.1.ppm

d.rast map=shade -o
PNG: GRASS_TRUECOLOR status: TRUE
PNG: collecting to file: /home/workspace/work/GRASSDATA/mt_hood/PERMANENT/.tmp/z
-laptop_localdomain/4212.0.ppm,
GRASS_WIDTH=527, GRASS_HEIGHT=477

g.pnmcomp in=4212.2.ppm mask=4212.2.pgm opacity=1.00
background=255:255:255 width=527 height=477 output=4212.1.ppm
```

NVIZ:

File Appearance Visualize Scripting

DRAW Clear Cancel

Automatically render display:

Show features: Main features... Decorations...

View method: eye center fly none

Look: here center top reset

height: 5367.5 z-exag: 7.674

perspective: 28.0 twist: 0.0

Background Color Panel

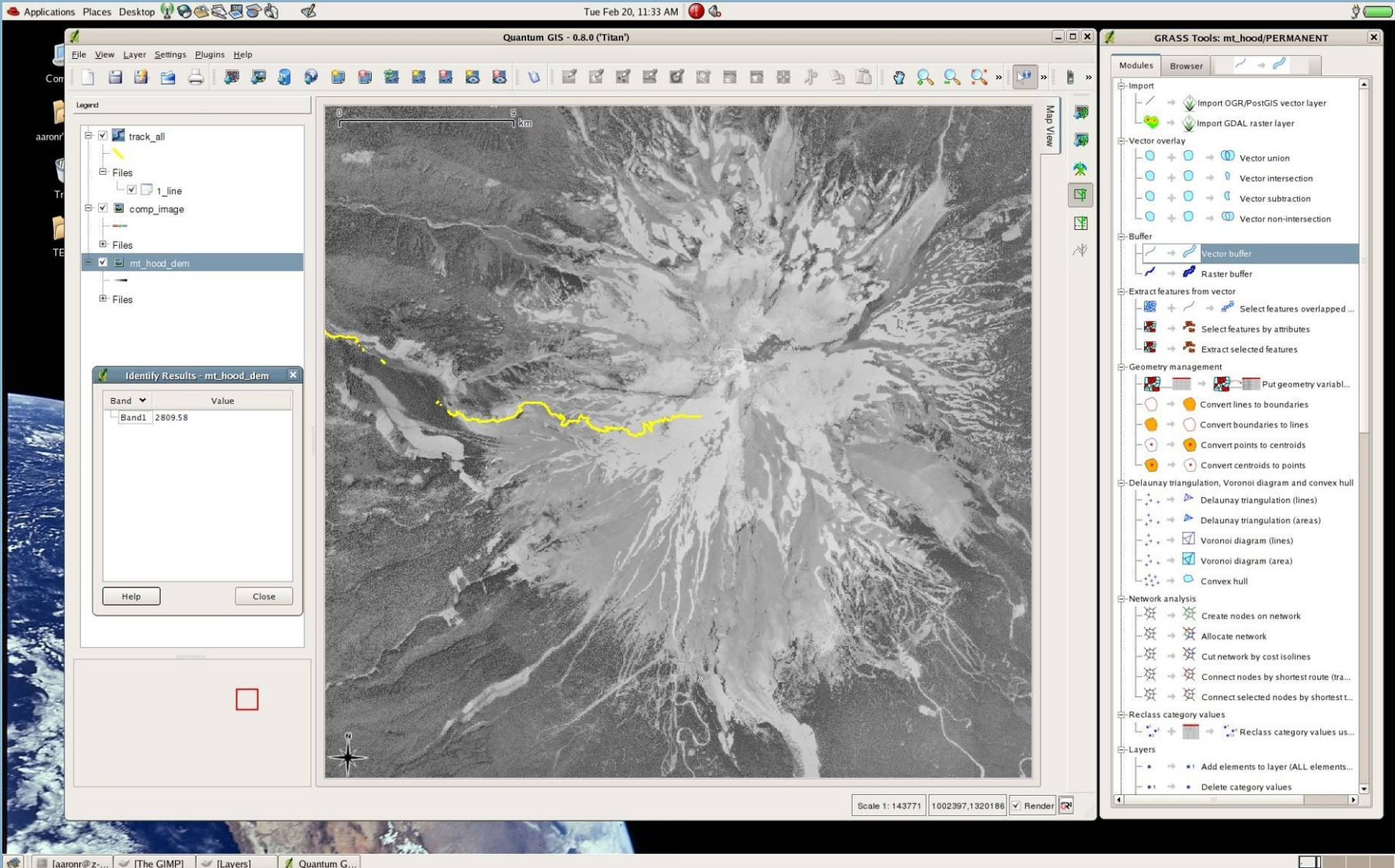
Background

Close

New center of view has been set

Examples - Desktop

QGIS

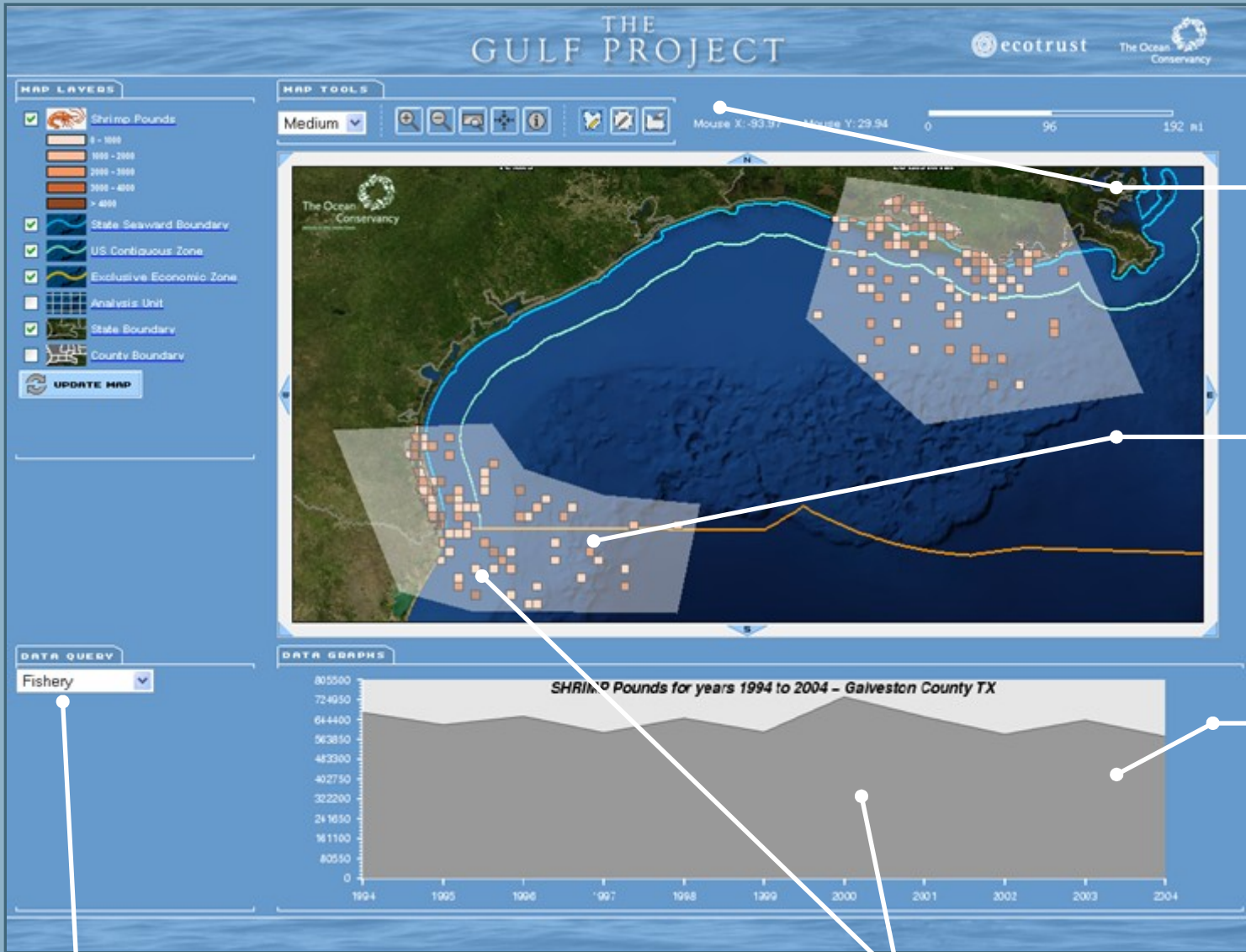


The screenshot displays the Quantum GIS (QGIS) 0.8.0 desktop environment. The main window shows a grayscale Digital Elevation Model (DEM) of Mt. Hood with a yellow line overlaid. The interface includes a menu bar (File, View, Layer, Settings, Plugins, Help), a toolbar, and a legend on the left. An 'Identify Results' window is open, showing a table with the following data:

Band	Value
Band1	2809.58

On the right, the 'GRASS Tools: mt_hood/PERMANENT' panel is visible, listing various modules such as 'Import', 'Vector overlay', 'Buffer', 'Extract features from vector', 'Geometry management', 'Delaunay triangulation, Voronoi diagram and convex hull', 'Network analysis', and 'Reclass category values'. The system tray at the bottom shows the date and time as 'Tue Feb 20, 11:33 AM'.

Examples - Web-Based



Chameleon
Mapserver
framework

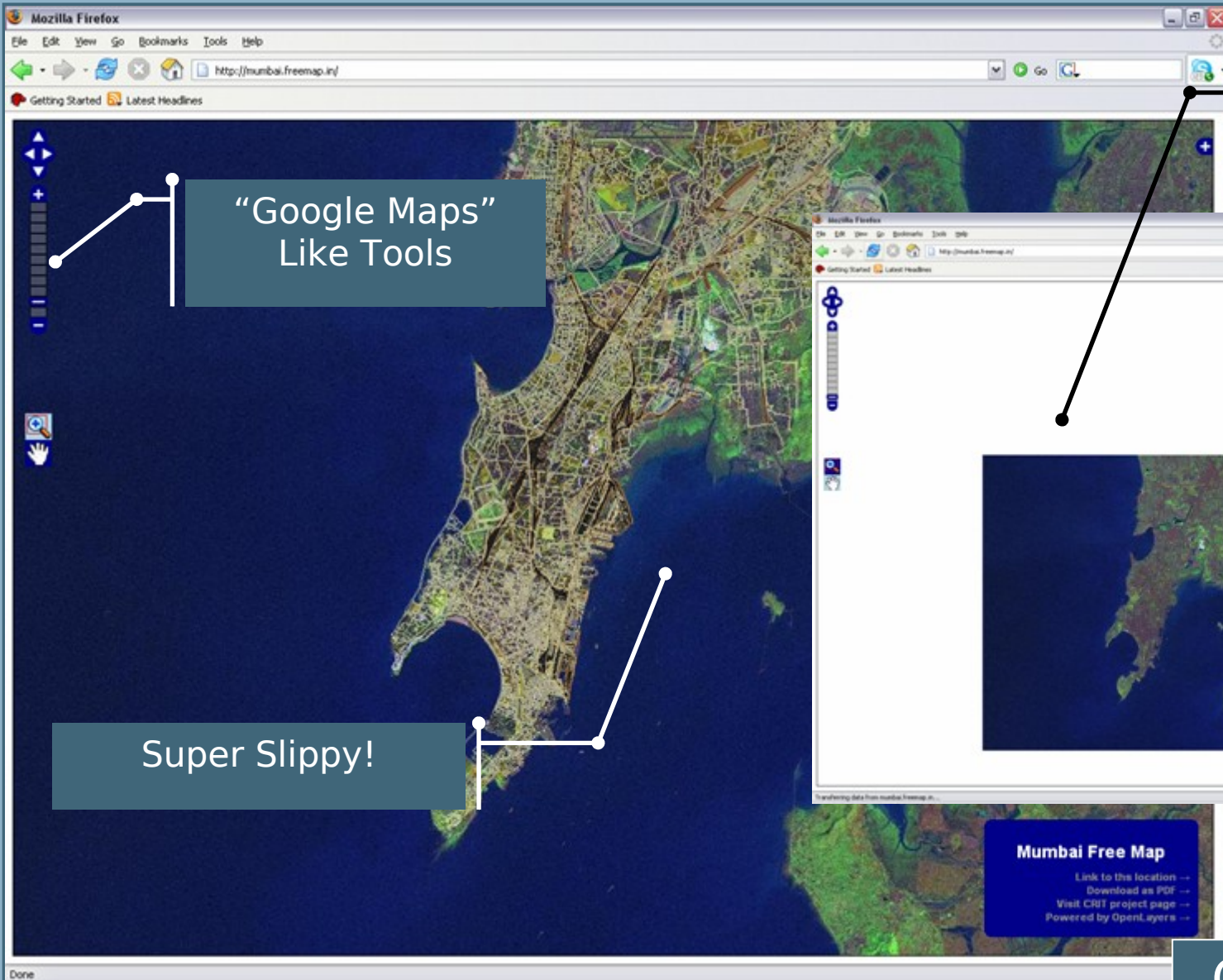
Spatially
constrained
queries and
scenarios

GMT
generated
graphics

AJAX-User Based Data Filter

PostGIS Spatial Data

Examples - Web-Based



"Google Maps"
Like Tools

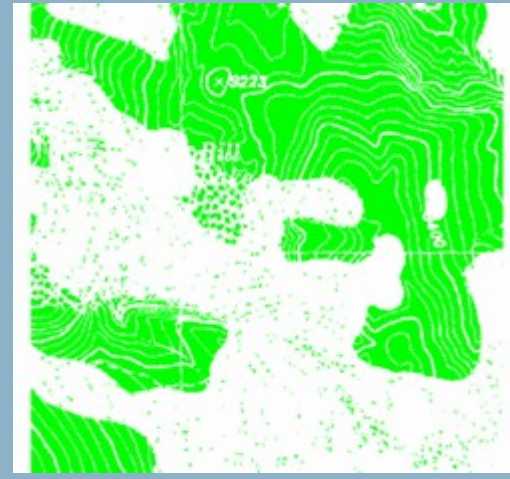
Super Slippy!

Tile based
image server

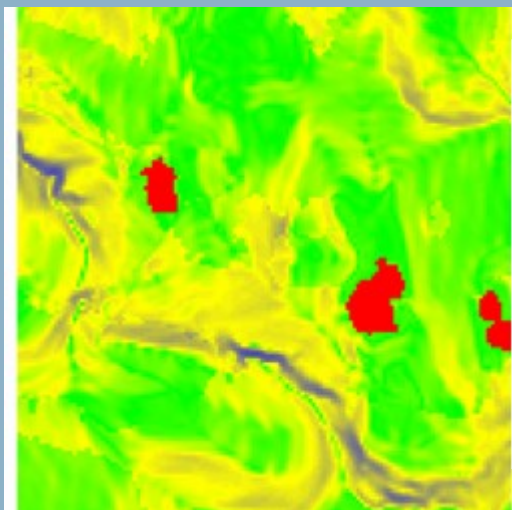
Openlayers

How is this useful to you?

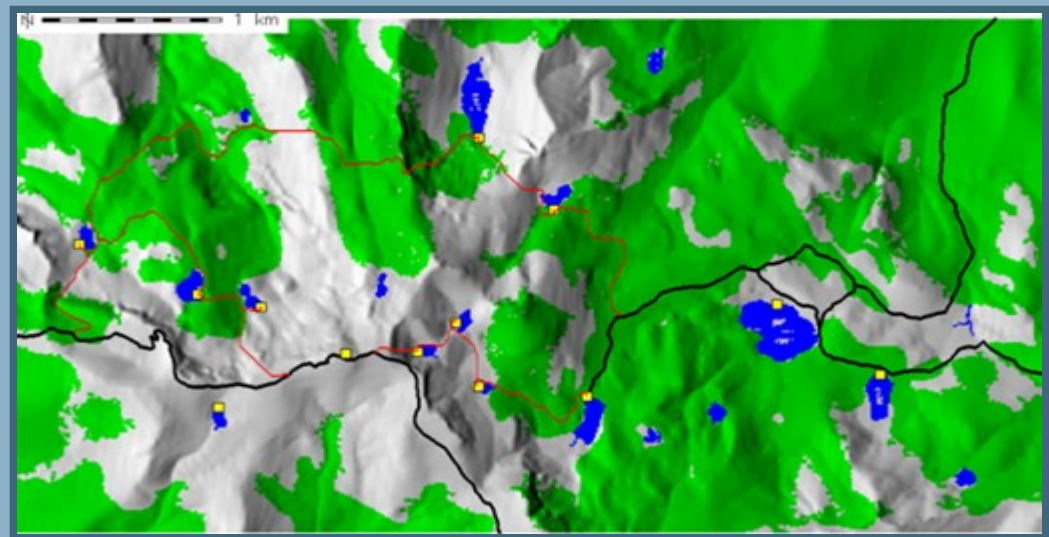
Navigating Wilderness Areas with GRASS



Classification

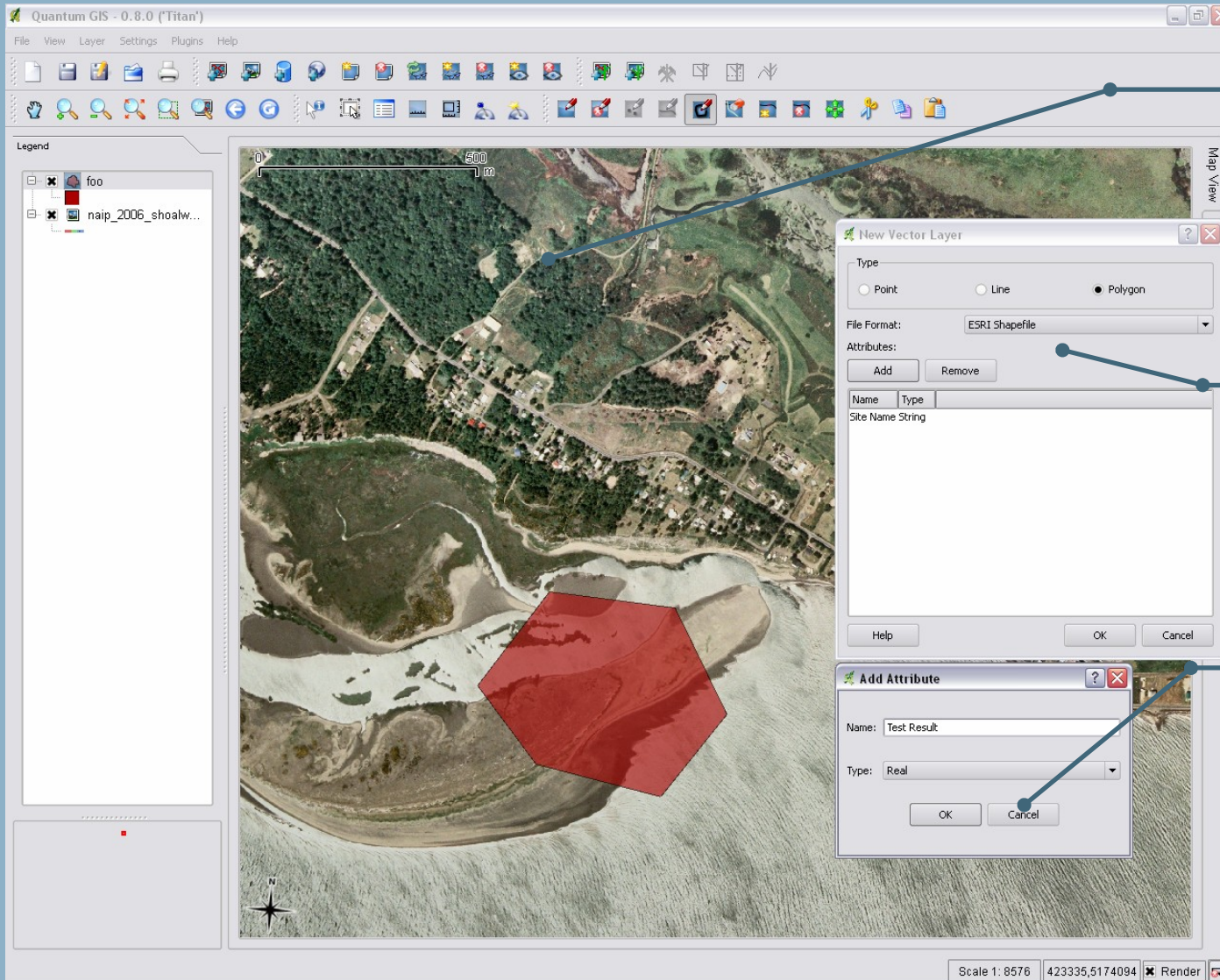


Cost Surface



Thanks to Dylan Beaudette :
<http://casoilresource.lawr.ucdavis.edu/drupal/node/244>

Digitizing, Modifying, Extracting...



Context Layer
Viewing

Create New
Shapes

Create New
Attributes



How to get coordinates in UTM to Geo-NAD83?

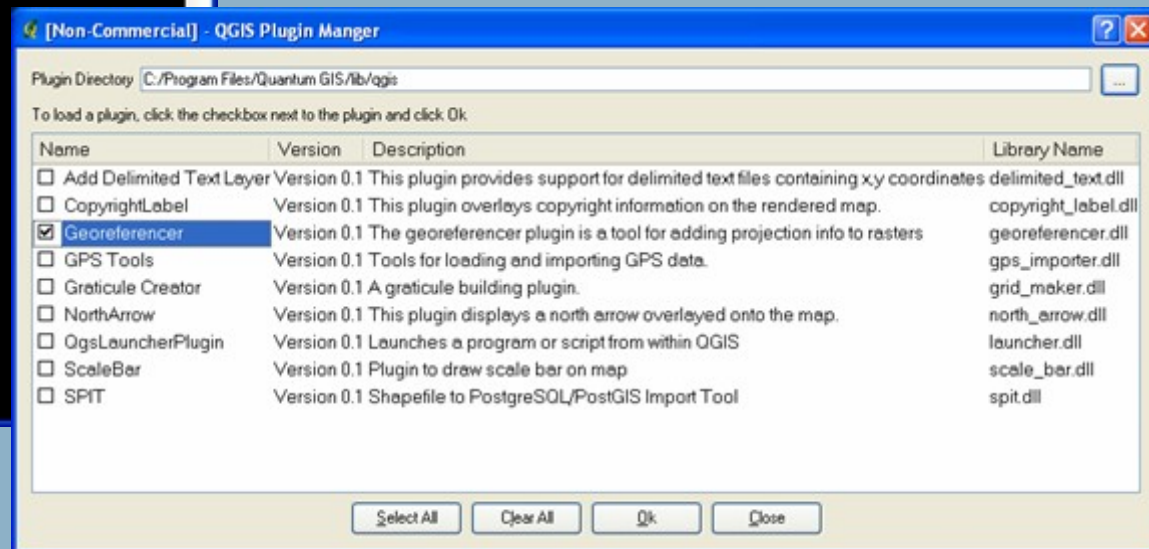
```
aaronr@pearl:-
GRASS 6.1.cvs (mike_station):~ > r.proj --help

Description:
  Re-project a raster map from one location to the current location.

Usage:
  r.proj [-ln] input=name location=name [mapset=name] [dbase=name]
        [output=name] [method=name] [resolution=value]

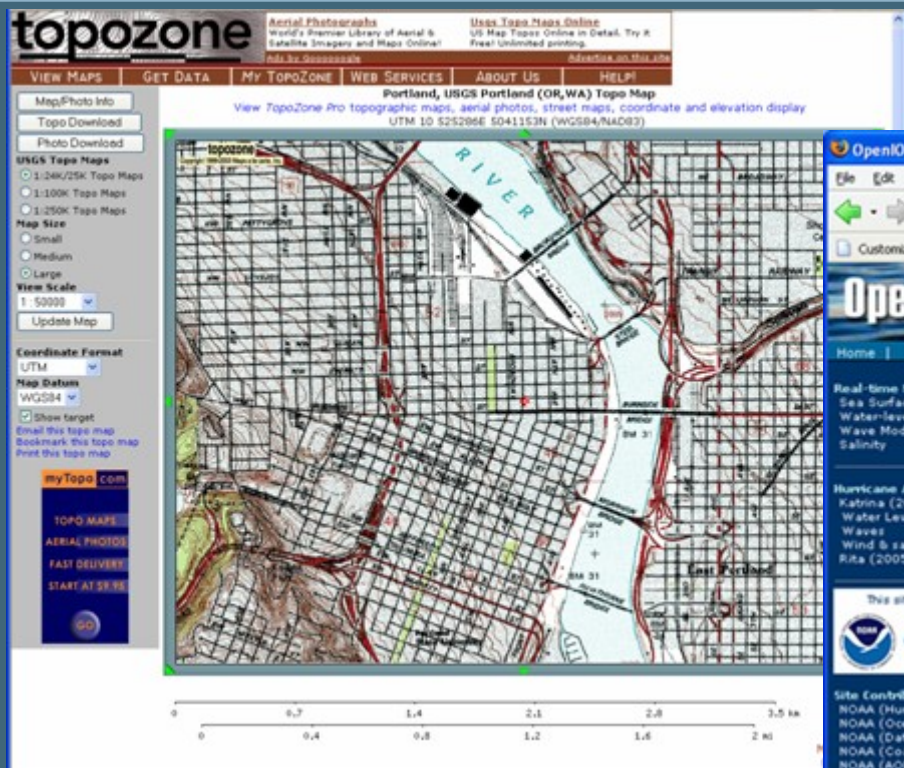
Flags:
  -l  List raster files in input location and exit
  -n  Do not perform region cropping optimization

Parameters:
  input      Input raster map
  location   Location of input map
  mapset     Mapset of input map
  dbase      Path to GRASS database of input location
  output     Output raster map
  method     Interpolation method to use
             options: nearest,bilinear,cubic
             default: nearest
  resolution Resolution of output map
GRASS 6.1.cvs (mike_station):~ > █
```



```
aaronr@pearl:-
[aaronr@pearl ~]$ gdalwarp
Usage: gdalwarp [--help-general] [--formats]
  [-s_srs srs_def] [-t_srs srs_def] [-order n] [-et err_threshold]
  [-te xmin ymin xmax ymax] [-tr xres yres] [-ts width height]
  [-wo "NAME=VALUE"] [-ot Byte/Int16/...] [-wt Byte/Int16]
  [-srcnodata value [value...]] [-dstnodata value [value...]] -dstalpha
  [-rn] [-rb] [-rc] [-rcs] [-wm memory_in_mb] [-multi] [-q]
  [-of format] [-co "NAME=VALUE"]* srcfile dstfile
[aaronr@pearl ~]$ █
```

Web enable geo-data....



topozone
Aerial Photographs
World's Premier Library of Aerial & Satellite Imagery and Maps Online!
USGS Topo Maps Online
US Map Topos Online in Detail. Try it Free! Unlimited printing.

VIEW MAPS | GET DATA | MY TOPOZONE | WEB SERVICES | ABOUT US | HELP

Map/Photo Info
Topo Download
Photo Download

USGS Topo Maps
1:24K/25K Topo Maps
1:100K Topo Maps
1:250K Topo Maps

Map Size
Small
Medium
Large

View Scale
1:50000
Update Map

Coordinate Format
UTM

Map Datum
WGS84

Show target
Email this topo map
Bookmark this topo map
Print this topo map

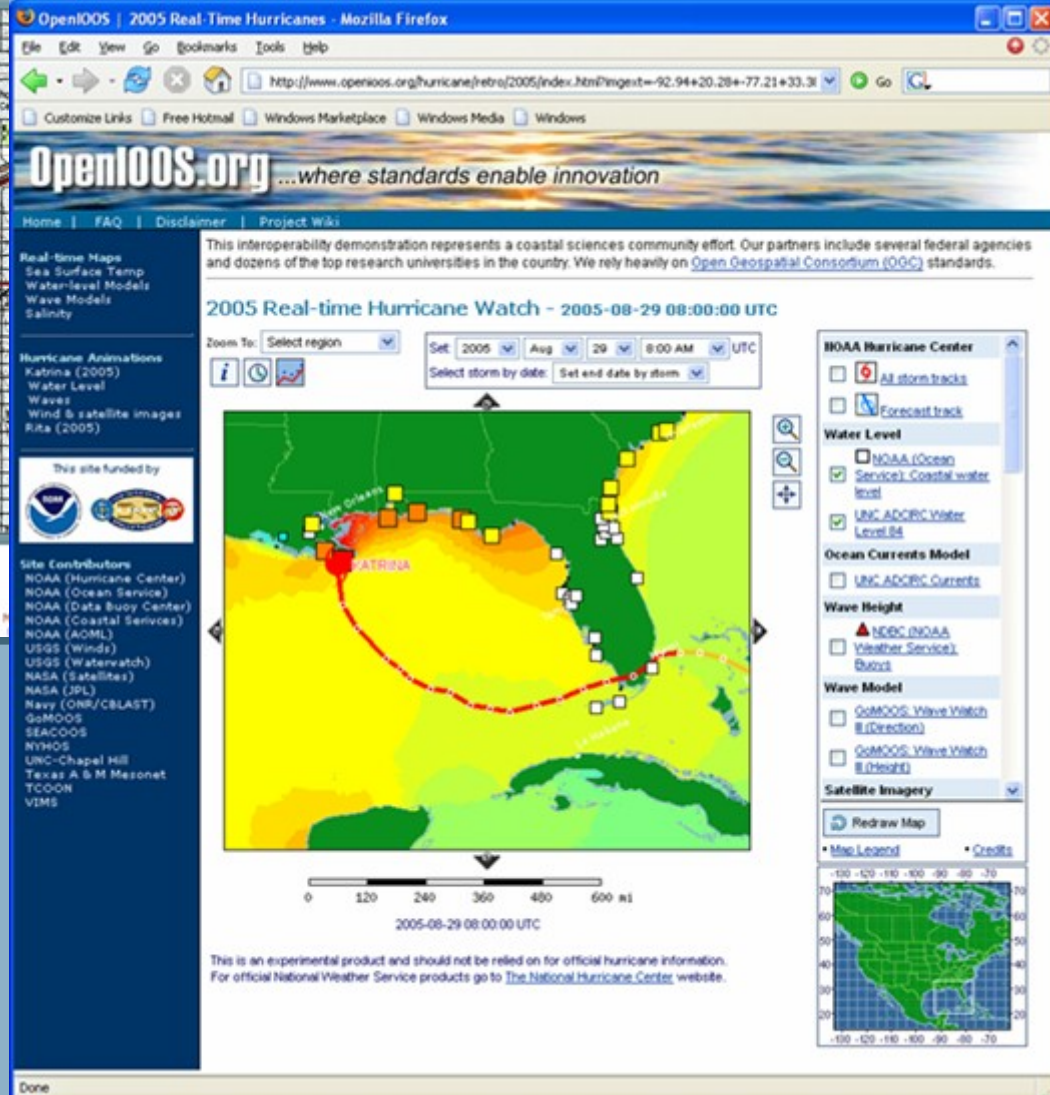
myTopo.com

TOPO MAPS
AERIAL PHOTOS
FAST DELIVERY
START AT \$9.95

Portland, USGS Portland (OR,WA) Topo Map
View TopoZone Pro topographic maps, aerial photos, street maps, coordinate and elevation display
UTM 10 S25285E 5041153N (WGS84/NAD83)

0 0.7 1.4 2.1 2.8 3.5 km
0 0.4 0.8 1.2 1.6 2 mi

Site Contributors
NOAA (Hurricane Center)
NOAA (Ocean Service)
NOAA (Data Buoy Center)
NOAA (Coastal Services)
NOAA (AOML)
USGS (Winds)
USGS (Waterwatch)
NASA (Satellites)
NASA (JPL)
Navy (ONR/CBLAST)
GoMOOS
SEACOOS
NYNOS
UNC-Chapel Hill
Texas A & M Mesonet
TCOON
VIMS



OpenIOOS | 2005 Real-Time Hurricanes - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.openioos.org/hurricane/retro/2005/index.html?imgset=92.94+20.28+-77.21+33.31

Customize Links | Free Hotmail | Windows Marketplace | Windows Media | Windows

OpenIOOS.org ...where standards enable innovation

Home | FAQ | Disclaimer | Project Wiki

Real-time Maps
Sea Surface Temp
Water-level Models
Wave Models
Salinity

Hurricane Animations
Katrina (2005)
Water Level
Waves
Wind & satellite images
Rita (2005)

This site funded by
NOAA
USGS
NASA
Navy
GoMOOS
SEACOOS
NYNOS
UNC-Chapel Hill
Texas A & M Mesonet
TCOON
VIMS

2005 Real-time Hurricane Watch - 2005-08-29 08:00:00 UTC

Zoom To: Select region
Set: 2005 | Avg: 29 | 8:00 AM | UTC
Select storm by date: Set end date by storm

BOAA Hurricane Center
 All storm tracks
 Forecast track

Water Level
 NOAA (Ocean Service) Coastal water level
 UNC ADRC Water Level RA

Ocean Currents Model
 UNC ADRC Currents

Wave Height
 NCEC (NOAA Weather Service) Outlook

Wave Model
 GoMOOS Wave Watch II (Direction)
 GoMOOS Wave Watch II (Height)

Satellite Imagery

Map Legend | Credits

0 120 240 360 480 600 mi
2005-08-29 08:00:00 UTC

This is an experimental product and should not be relied on for official hurricane information. For official National Weather Service products go to [The National Hurricane Center website](#).

Done

MAPSERVER

How to select data within a polygon area?

```
aracicot@boris:~/html/boris.ecotrust.org/gulf_project/core/SCA_Model
CREATE VIEW species_SHRIMP_revenue_1572338318_view AS SELECT bk.the_geom, bk.gid, sum(lb.pounds) as total_lbs FROM blkideg6 as bk, log_books_2004 as lb, permits as p WHERE lb.vesselid=p.vesselid and p.assigned_county='Galveston' and p.assigned_state='TX' and lb.blockid=bk.gid AND (Intersects(bk.the_geom,GeomFromText('POLYGON((-91.62285 30.24335,-93.0228 30.1745000000000002,-93.2064 27.8336,-91.5999 26.57135,-89.0754 26.61725,-88.9377 28.6598,-90.0852 30.0368,-91.62285 30.24335))',-1)) OR Intersects(bk.the_geom,GeomFromText('POLYGON((-94.37685 26.06645,-96.39645 27.328699999999998,-97.7964 27.48935,-97.658700000000001,25.1255,-97.58985 23.63375,-95.0883 23.67965,-93.0228 24.4829,-94.37685 26.06645))',-1))) GROUP BY bk.the_geom,bk.gid HAVING count(lb.blockid)>0
```

Intersects

- Distance(geometry, geometry)
- Equals(geometry, geometry)
- Disjoint(geometry, geometry)
- Intersects(geometry, geometry)
- Touches(geometry, geometry)
- Crosses(geometry, geometry)
- Within(geometry A, geometry B)
- Overlaps(geometry, geometry)
- Contains(geometry A, geometry B)
- Intersects(geometry, geometry)
- Relate(geometry, geometry, intersectionPatternMatrix)
- Relate(geometry, geometry)

Geometry Definition

- Centroid(geometry)
- Area(geometry)
- Length(geometry)
- PointOnSurface(geometry)
- Boundary(geometry)
- Buffer(geometry, double, [integer])
- ConvexHull(geometry)
- Intersection(geometry, geometry)
- SymDifference(geometry A, geometry B)
- Difference(geometry A, geometry B)
- GeomUnion(geometry, geometry)
- GeomUnion(geometry set)
- MemGeomUnion(geometry set)

What have I been doing?





Decision Support Pattern - Fisheries

Field Work

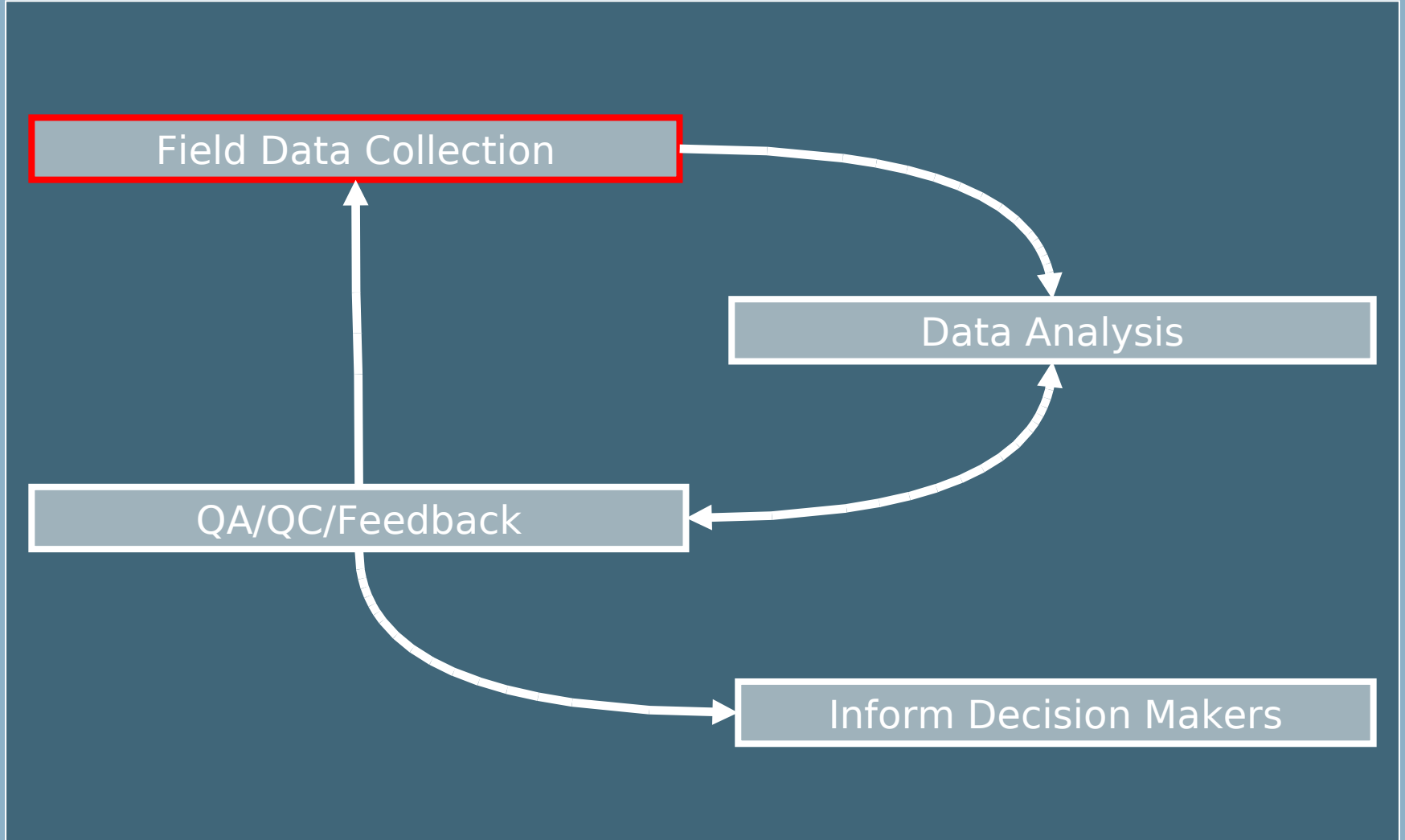
Back at the Office

Field Data Collection

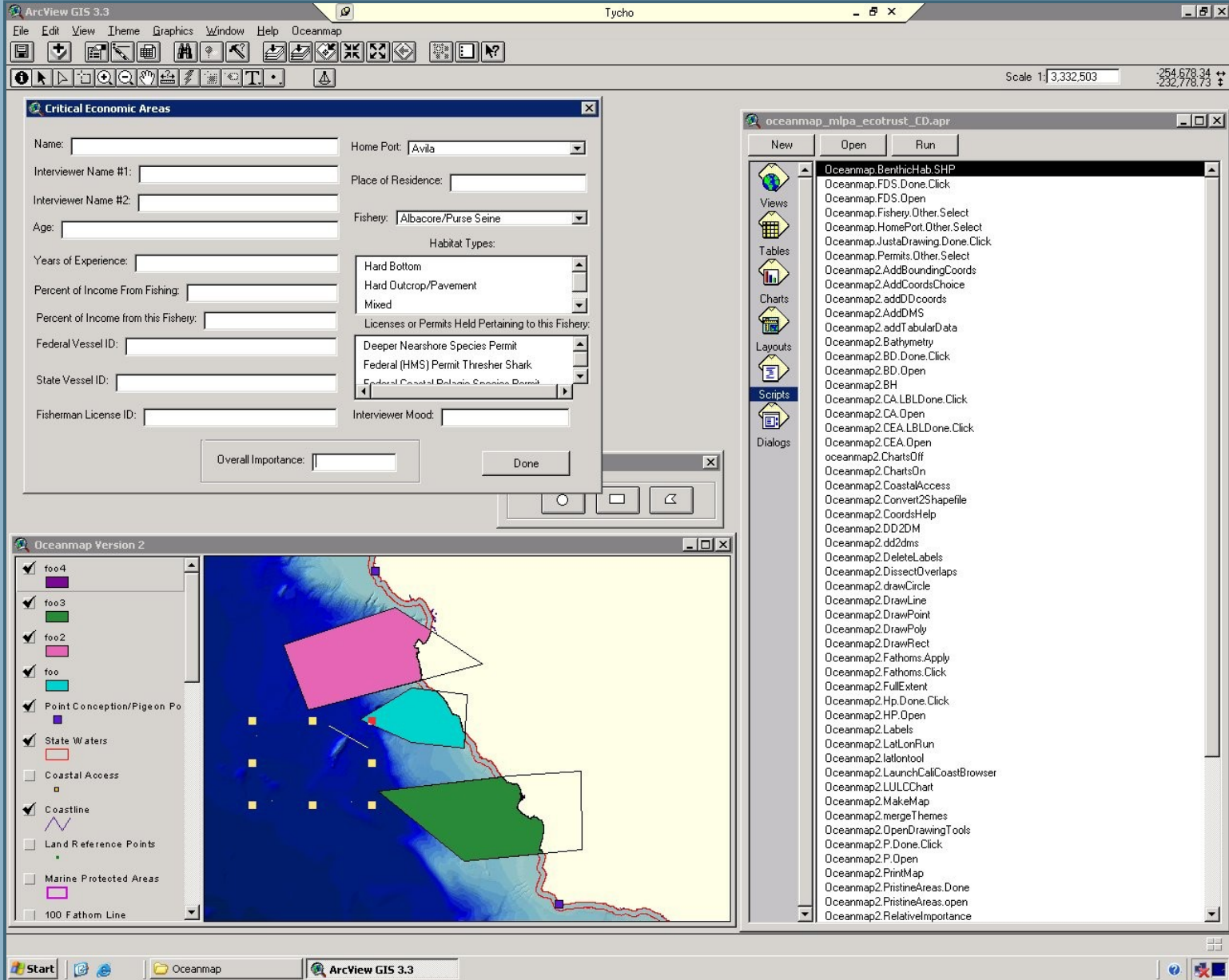
Data Analysis

QA/QC/Feedback

Inform Decision Makers



Old Version of Tool



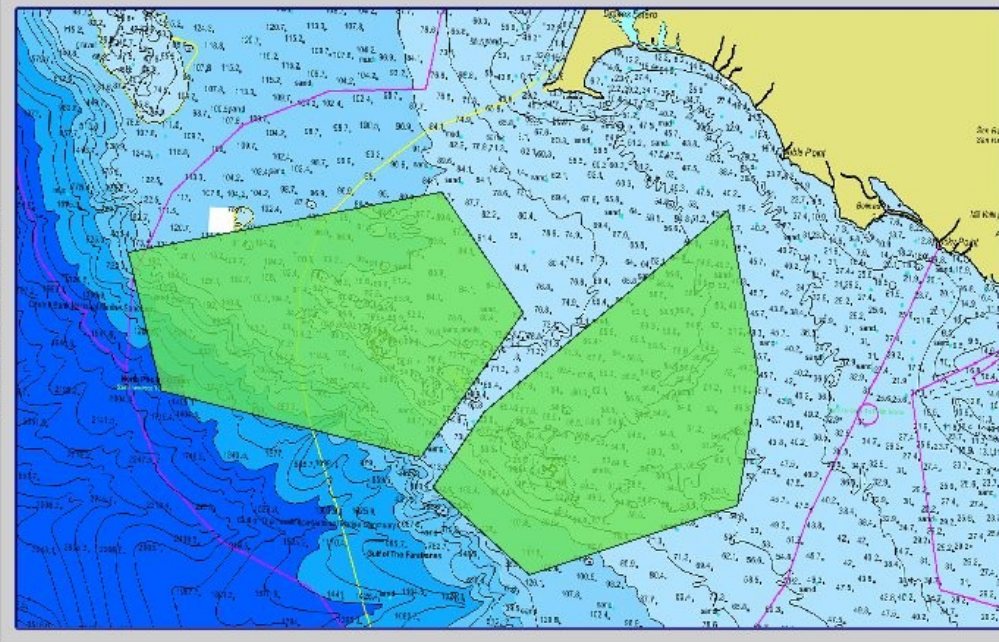
The screenshot displays the ArcView GIS 3.3 interface with the following components:

- Top Menu and Toolbar:** File, Edit, View, Theme, Graphics, Window, Help, Oceanmap. The toolbar includes various GIS tools like pan, zoom, and data entry.
- Scale and Coordinates:** Scale 1: 3,332,503. Coordinates: 354,678.34 (North), 232,778.73 (West).
- Critical Economic Areas Dialog:**
 - Name: []
 - Home Port: Avila
 - Interviewer Name #1: []
 - Place of Residence: []
 - Interviewer Name #2: []
 - Age: []
 - Fishery: Albacore/Purse Seine
 - Years of Experience: []
 - Habitat Types: Hard Bottom, Hard Outcrop/Pavement, Mixed
 - Percent of Income From Fishing: []
 - Percent of Income from this Fishery: []
 - Licenses or Permits Held Pertaining to this Fishery: Deeper Nearshore Species Permit, Federal (HMS) Permit Thresher Shark, Federal Coastal Pelagic Species Permit
 - Federal Vessel ID: []
 - State Vessel ID: []
 - Fisherman License ID: []
 - Interviewer Mood: []
 - Overall Importance: []
 - Buttons: Done
- Oceanmap Version 2 Map Window:**
 - Legend:
 - foo4 (purple)
 - foo3 (green)
 - foo2 (pink)
 - foo (cyan)
 - Point Conception/Pigeon Po (purple square)
 - State Waters (red outline)
 - Coastal Access (yellow square)
 - Coastline (blue line)
 - Land Reference Points (green dot)
 - Marine Protected Areas (pink outline)
 - 100 Fathom Line (blue line)
 - Map: Shows a coastal area with various colored overlays and points.
- Script List Window (oceanmap_mlp_a_ecotrust_CD.apr):**
 - Categories: Views, Tables, Charts, Layouts, Scripts, Dialogs.
 - Scripts:
 - Oceanmap.BenthicHab.SHP
 - Oceanmap.FDS.Done.Click
 - Oceanmap.FDS.Open
 - Oceanmap.Fishery.Other.Select
 - Oceanmap.HomePort.Other.Select
 - Oceanmap.JustADrawing.Done.Click
 - Oceanmap.Permits.Other.Select
 - Oceanmap2.AddBoundingCoords
 - Oceanmap2.AddCoordsChoice
 - Oceanmap2.addDDcoords
 - Oceanmap2.AddDMS
 - Oceanmap2.addTabularData
 - Oceanmap2.Bathymetry
 - Oceanmap2.BD.Done.Click
 - Oceanmap2.BD.Open
 - Oceanmap2.BH
 - Oceanmap2.CA.LBLDone.Click
 - Oceanmap2.CA.Open
 - Oceanmap2.CEA.LBLDone.Click
 - Oceanmap2.CEA.Open
 - oceanmap2.ChartsOff
 - Oceanmap2.ChartsOn
 - Oceanmap2.CoastalAccess
 - Oceanmap2.Convert2Shapefile
 - Oceanmap2.CoordsHelp
 - Oceanmap2.DD2DM
 - Oceanmap2.dd2dms
 - Oceanmap2.DeleteLabels
 - Oceanmap2.DissectOverlaps
 - Oceanmap2.drawCircle
 - Oceanmap2.DrawLine
 - Oceanmap2.DrawPoint
 - Oceanmap2.DrawPoly
 - Oceanmap2.DrawRect
 - Oceanmap2.Fathoms.Apply
 - Oceanmap2.Fathoms.Click
 - Oceanmap2.FullExtent
 - Oceanmap2.Hp.Done.Click
 - Oceanmap2.HP.Open
 - Oceanmap2.Labels
 - Oceanmap2.LatLonRun
 - Oceanmap2.latlonTool
 - Oceanmap2.LaunchCalCoastBrowser
 - Oceanmap2.LULCchart
 - Oceanmap2.MakeMap
 - Oceanmap2.mergeThemes
 - Oceanmap2.OpenDrawingTools
 - Oceanmap2.P.Done.Click
 - Oceanmap2.P.Open
 - Oceanmap2.PrintMap
 - Oceanmap2.PristineAreas.Done
 - Oceanmap2.PristineAreas.open
 - Oceanmap2.RelativeImportance

New Version of Tool

OpenOceanMap

Map Interview Utilities



Legend

- NOAA ENC
- Kayak Points
- Access Points
- aaronr4

Debug

-292688.836422 , -17526.3420801

information

license :

operating a boat :

of ownership :

length :

Port :

Information

Location :

Trials per trip :

Days fishing per year :

Time from home to fishing location :

Travel distance from home to fishing location :

Rec. fishing user group :

Interviewer

Date of interview (mm/dd/yyyy) :

Interviewer #1

First Name :

Last Name :

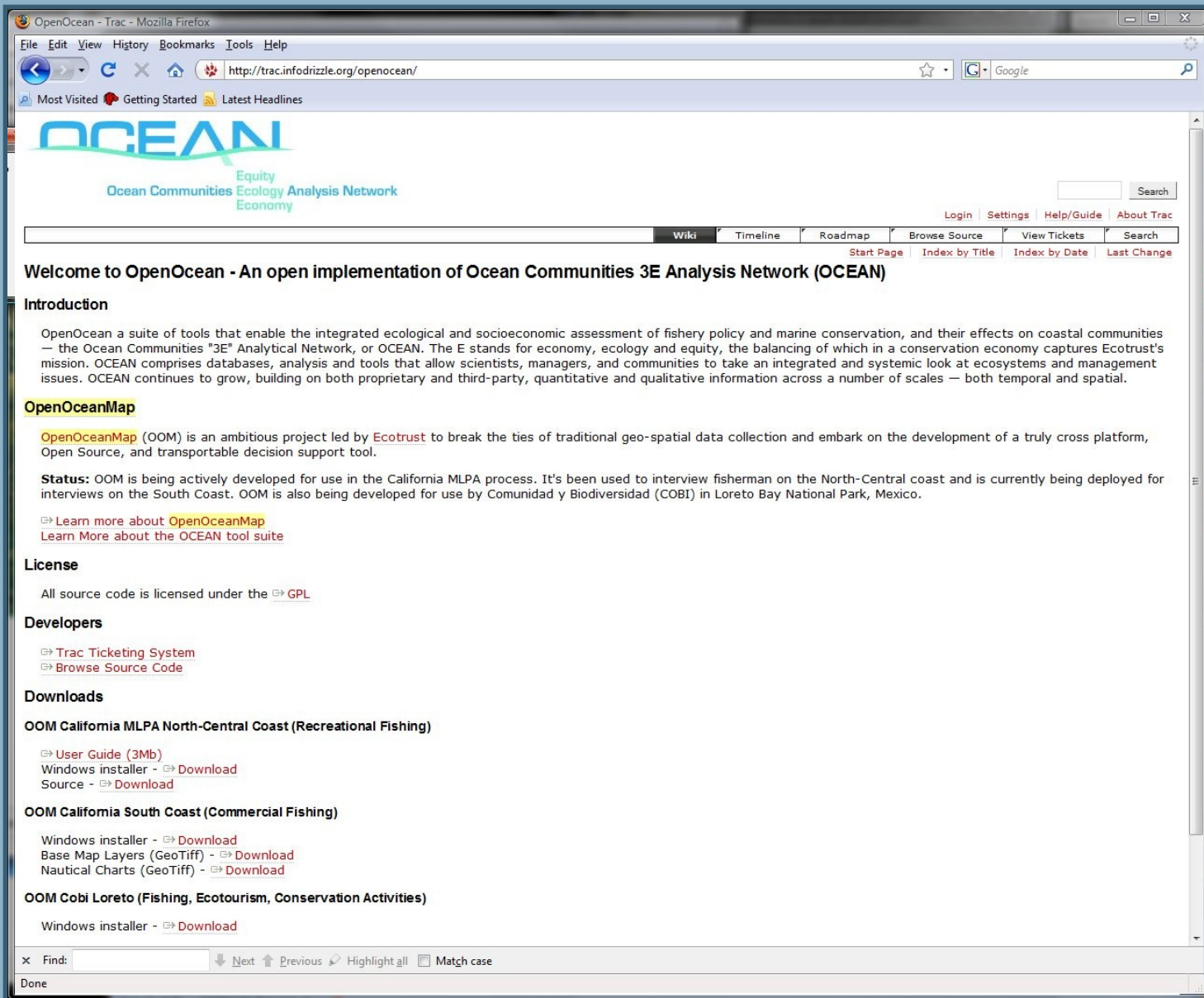
Interviewer #2

First Name :

Last Name :

Cancel Select Fishery

Being Developed in the Open



OpenOcean - Trac - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://trac.infodrizzle.org/openocean/

Most Visited Getting Started Latest Headlines

OCEAN

Ocean Communities Equity Ecology Analysis Network Economy

Login Settings Help/Guide About Trac

Wiki Timeline Roadmap Browse Source View Tickets Search

Start Page Index by Title Index by Date Last Change

Welcome to OpenOcean - An open implementation of Ocean Communities 3E Analysis Network (OCEAN)

Introduction

OpenOcean a suite of tools that enable the integrated ecological and socioeconomic assessment of fishery policy and marine conservation, and their effects on coastal communities — the Ocean Communities "3E" Analytical Network, or OCEAN. The E stands for economy, ecology and equity, the balancing of which in a conservation economy captures Ecotrust's mission. OCEAN comprises databases, analysis and tools that allow scientists, managers, and communities to take an integrated and systemic look at ecosystems and management issues. OCEAN continues to grow, building on both proprietary and third-party, quantitative and qualitative information across a number of scales — both temporal and spatial.

OpenOceanMap

OpenOceanMap (OOM) is an ambitious project led by [Ecotrust](#) to break the ties of traditional geo-spatial data collection and embark on the development of a truly cross platform, Open Source, and transportable decision support tool.

Status: OOM is being actively developed for use in the California MLPA process. It's been used to interview fisherman on the North-Central coast and is currently being deployed for interviews on the South Coast. OOM is also being developed for use by Comunidad y Biodiversidad (COBI) in Loreto Bay National Park, Mexico.

[Learn more about OpenOceanMap](#)
[Learn More about the OCEAN tool suite](#)

License

All source code is licensed under the [GPL](#).

Developers

[Trac Ticketing System](#)
[Browse Source Code](#)

Downloads

OOM California MLPA North-Central Coast (Recreational Fishing)

[User Guide \(3Mb\)](#)
Windows installer - [Download](#)
Source - [Download](#)

OOM California South Coast (Commercial Fishing)

Windows installer - [Download](#)
Base Map Layers (GeoTiff) - [Download](#)
Nautical Charts (GeoTiff) - [Download](#)

OOM Cobi Loreto (Fishing, Ecotourism, Conservation Activities)

Windows installer - [Download](#)

x Find: [Next](#) [Previous](#) [Highlight all](#) [Match case](#)

Done



PyQGIS

PyQT



Riverbank



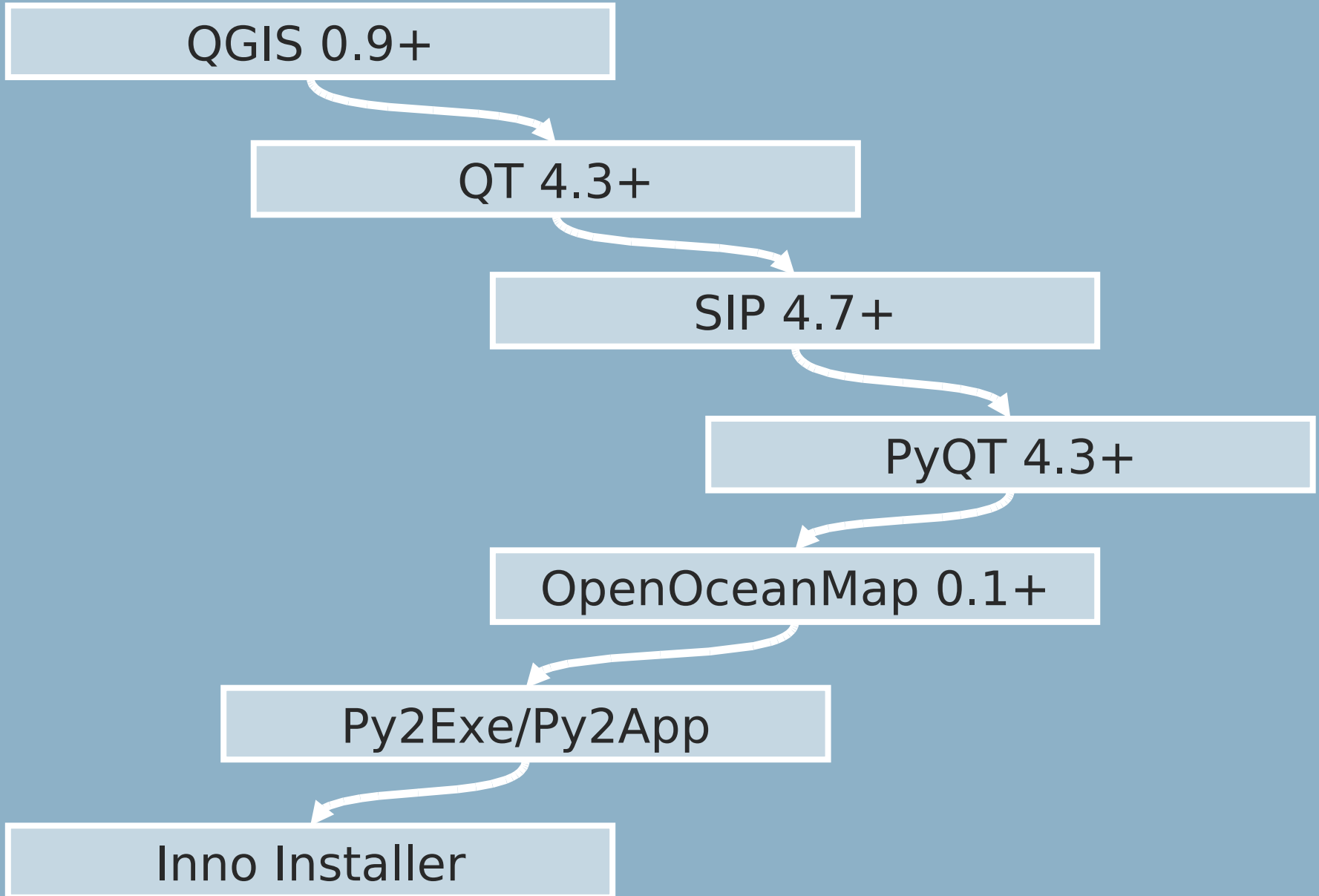
Quantum GIS

version 0.9

"GANYMEDE"



Requirements to build



```
# PyQt4 includes
```

```
from PyQt4.QtCore import *  
from PyQt4.QtGui import *
```

```
# QGIS bindings
```

```
from qgis.core import *  
from qgis.gui import *
```

```
# Main window used for housing the canvas,  
# toolbars, and dialogs  
  
class MainWindow(QMainWindow, Ui_MainWindow):  
  
    def __init__(self, splash):  
        QMainWindow.__init__(self)  
  
        # required by Qt4 to initialize the UI  
        self.setupUi(self)
```

```
# create map canvas
```

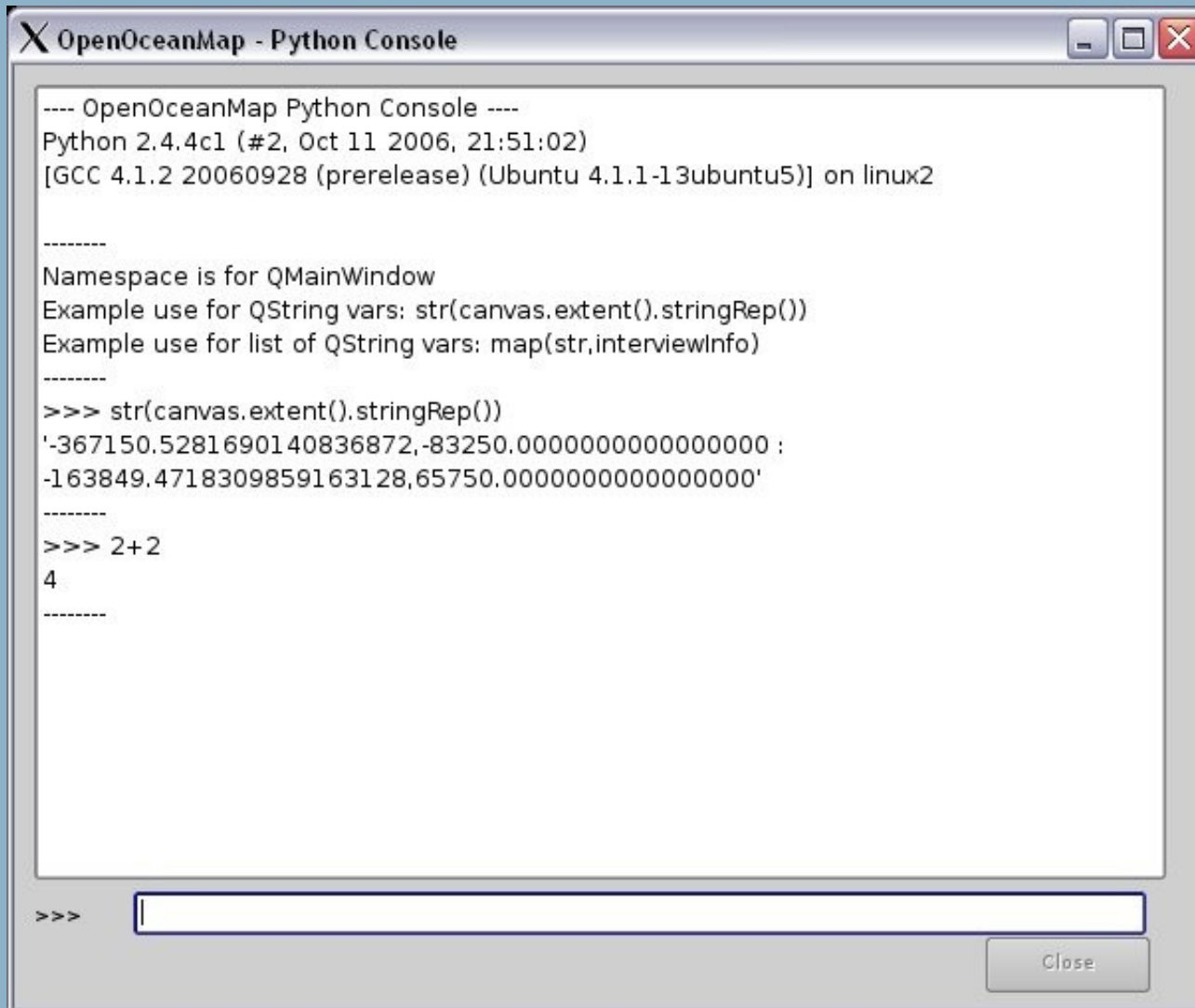
```
self.canvas = QgsMapCanvas(self)  
self.canvas.setCanvasColor(QColor(255,255,255))  
self.canvas.enableAntiAliasing(True)  
self.canvas.useQImageToRender(False)  
self.canvas.show()
```

```
# create a little toolbar for map tool
self.toolbar = parent.addToolBar("MapTool")
self.toolbar.addAction(parent.mpActionZoomIn)

self.toolZoomIn = QgsMapToolZoom(self.canvas,False)
self.toolZoomIn.setAction(parent.mpActionZoomIn)

# Connect the button signal to a slot
QObject.connect(parent.mpActionZoomIn,
                SIGNAL("triggered()"), self.zoomIn)

# Signal handler for zoom in button
def zoomIn(self):
    self.canvas.setMapTool(self.toolZoomIn)
```



The screenshot shows a window titled "OpenOceanMap - Python Console". The window contains a text area with the following text:

```
---- OpenOceanMap Python Console ----  
Python 2.4.4c1 (#2, Oct 11 2006, 21:51:02)  
[GCC 4.1.2 20060928 (prerelease) (Ubuntu 4.1.1-13ubuntu5)] on linux2  
  
-----  
Namespace is for QMainWindow  
Example use for QString vars: str(canvas.extent().stringRep())  
Example use for list of QString vars: map(str,interviewInfo)  
-----  
>>> str(canvas.extent().stringRep())  
'-367150.5281690140836872,-83250.000000000000000000 :  
-163849.4718309859163128,65750.000000000000000000'  
-----  
>>> 2+2  
4  
-----  
>>> 
```

At the bottom right of the window is a "Close" button.


```
C:\openoceanmap>more setup.py
from py2exe.build_exe import py2exe
from distutils.core import setup
opts = {
    "py2exe": {
        "includes": ["sip"],
        "packages": ["qgis","PyQt4"],
        "dist_dir": "bin",
    }
}
setup(options = opts,
      console=[{"script": "openoceanmap.py"}] )

C:\openoceanmap>python setup.py py2exe
```

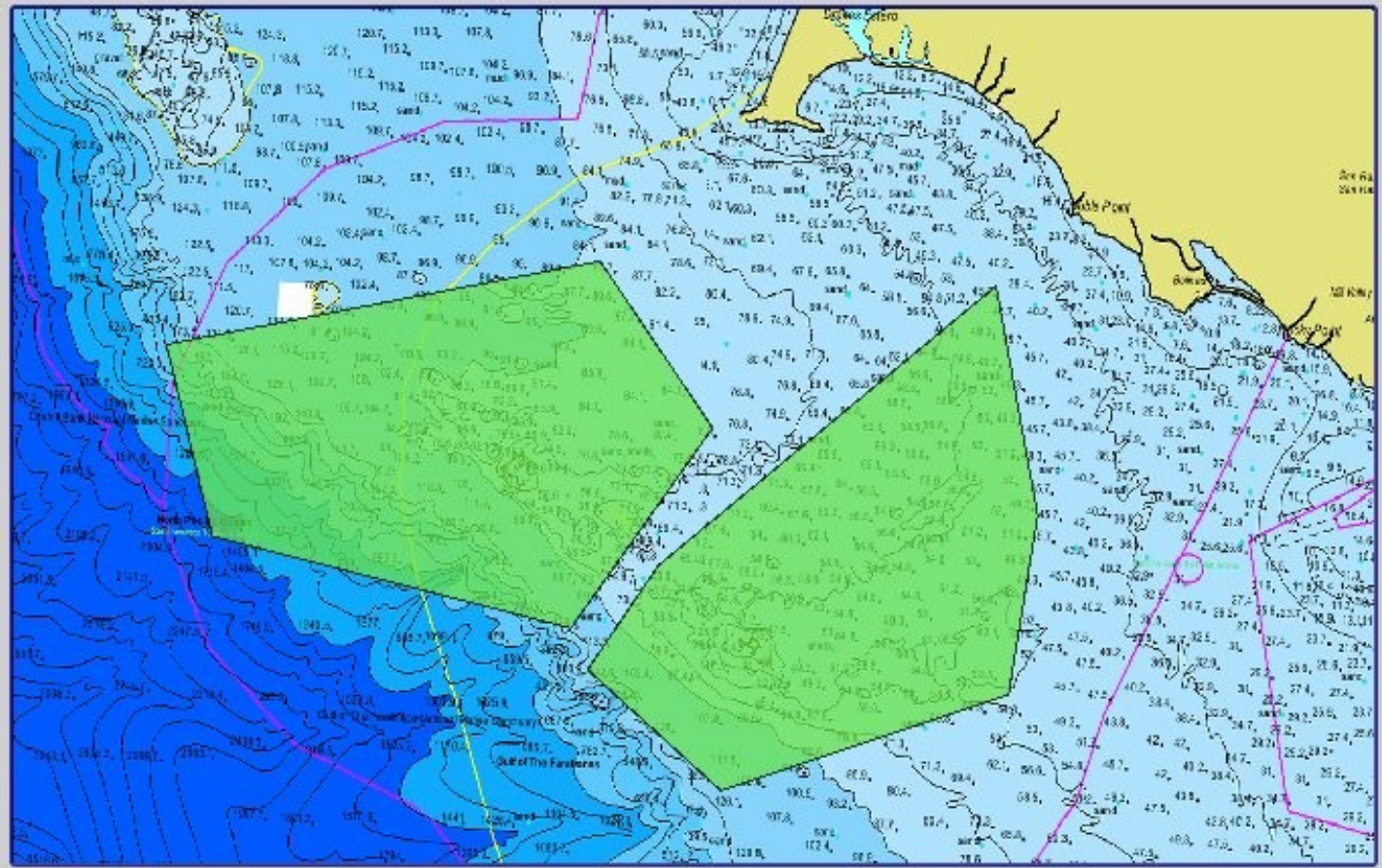
OpenOceanMap

Map Interview Utilities



Legend

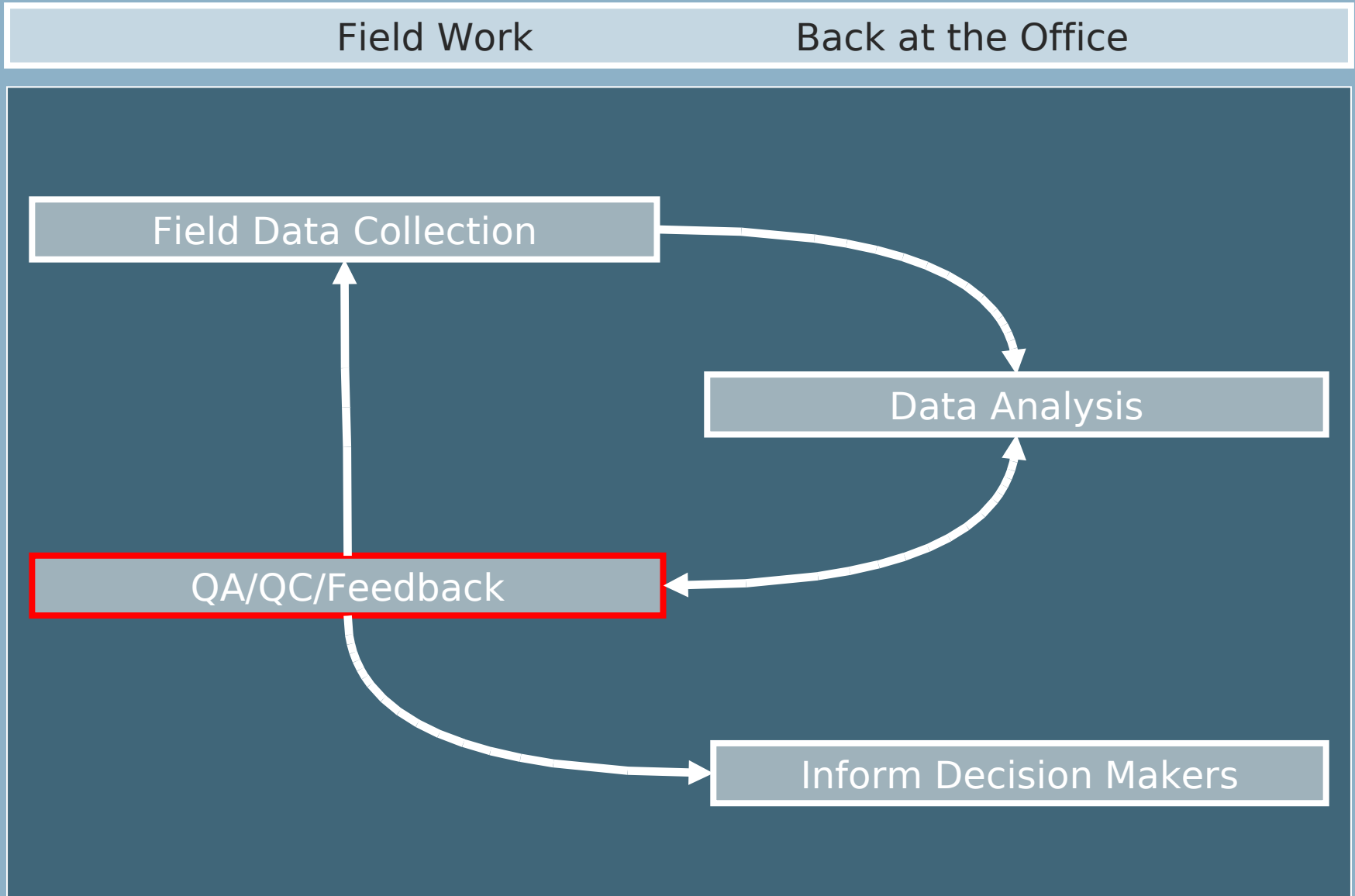
- NOAA ENC
- Kayak_Points
- Access_Points
- aaronr4



Debug

-292688.836422 , -17526.3420801

Other parts of the process...QA/QC



User Driven QA/QC...

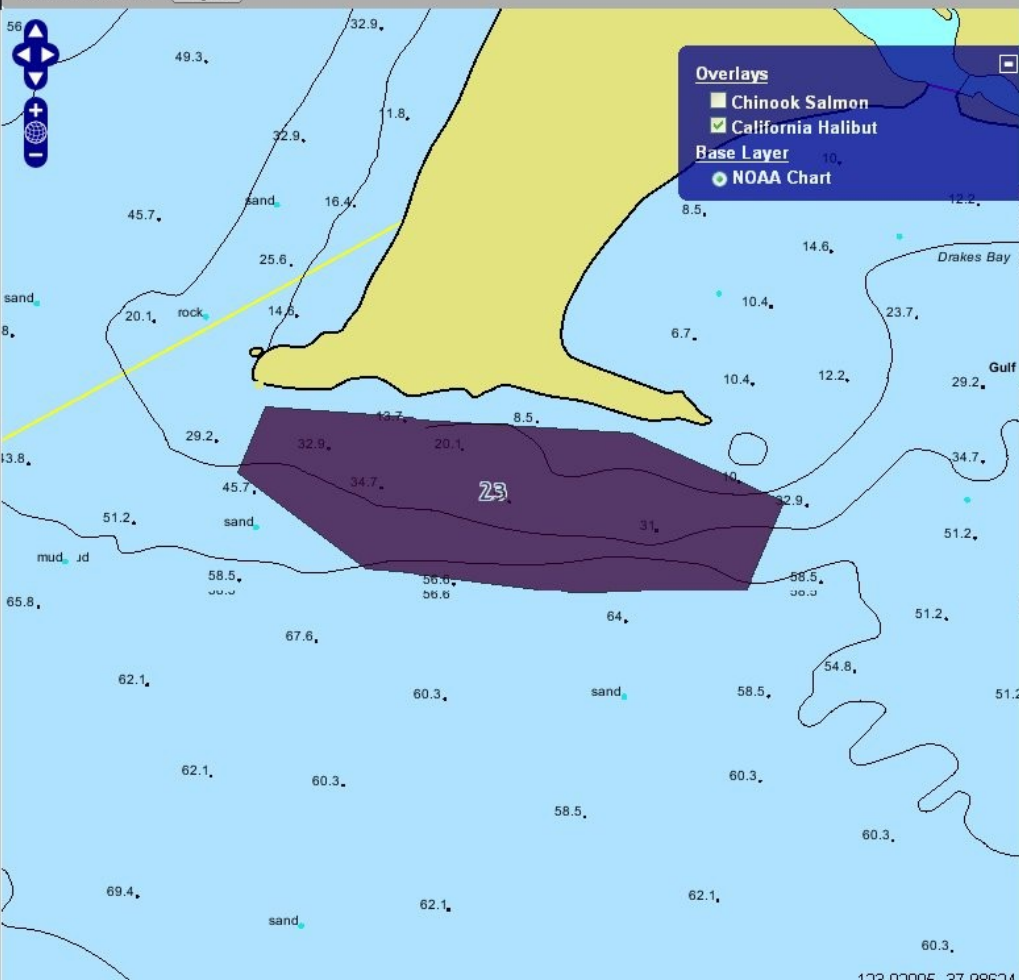
MLPA North-Central Coast QA/QC - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://pearl.ecotrust.org/apps/openocean_qa/index.phtml?login=1

Getting Started Latest Headlines

Welcome, user: **Aaron** Logout



Overlays

- Chinook Salmon
- California Halibut

Base Layer

- NOAA Chart

**Please Validate Shapes
Add Comments Per Fishery**

California Halibut

Need to move southern border of shape to touch the 60.3 fathom marker.

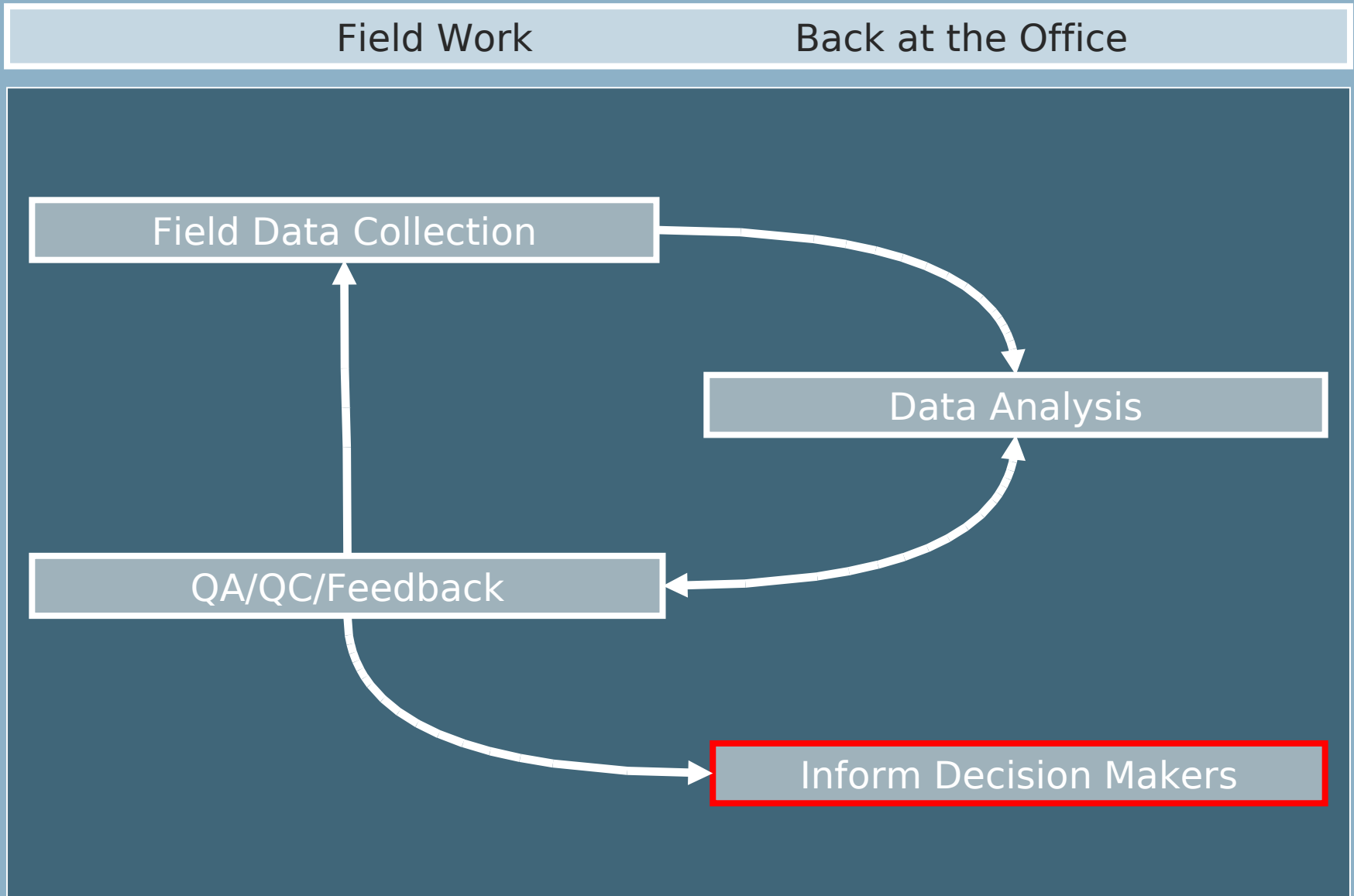
Chinook Salmon

This one looks OK.

Submit Comments

Done

Other parts of the process...DST's



CALZONE - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

CAL-ZONE Decision Support TOOL

Welcome, user: **aaronr** [Logout](#) [?](#)

Control - Done!

Marzone/v0_9_9_2

Marzone - v0_9_9_2

0.002	:: BLM
-1	:: RANDSEED
100	:: NUMREPS
1	:: AVAILABLEZONE
1000000	:: NUMITNS
3	:: VERBOSITY

Debug

Mon Apr 16 2007 16:04:08 GMT-0700 (Pacific Daylight Time) - CALZONE_WEB_DONE

The End

Time passed so far is 3 mins and 38 secs

Best solution is run 75

Time passed so far is 3 mins and 38 secs

Iterative Improvement: Value 2803.0 Cost 167.2 PUs 6389 reserve 6389 Boundary 2635.8 Missing 0 Shortfall 0.0 Penalty 0.0

Best: Value 2803.0 Cost 167.2 PUs 6389 reserve 6389 Boundary 2635.8 Missing 0 Shortfall 0.0 Penalty 0.0

Annealing: Value 2803.0 Cost 167.2 PUs 6389 reserve 6389 Boundary 2635.8 Missing 0 Shortfall 0.0 Penalty 0.0

Output

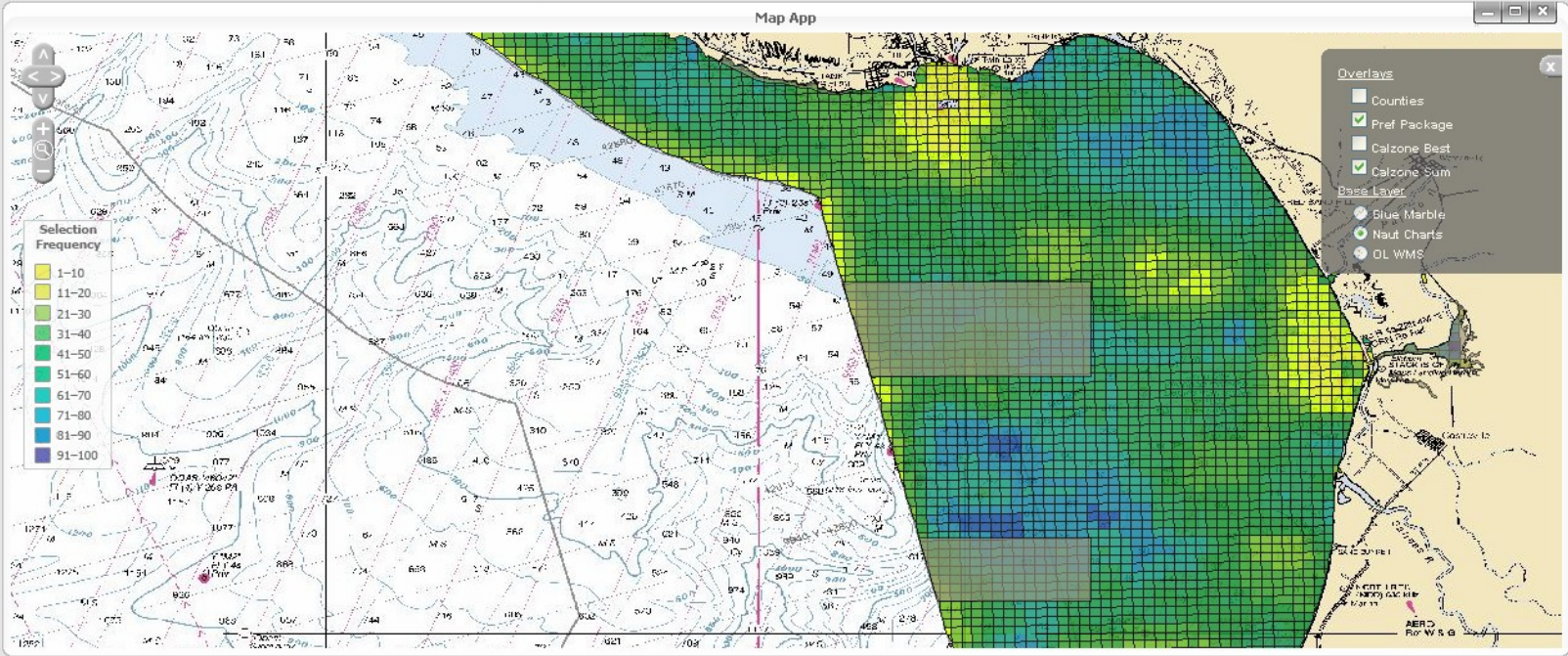
Intertidal

Coastal Marsh = 28764.399
Rocky Intertidal-ns = 127477.863
Rocky Intertidal-s1 = 387.213
Sandy or Gravel Beach = 176290.268
Tidal Flats = 21171.701
Seagrass Bed - Surfgrass = 130248.357
Seagrass Bed - Eelgrass = 1740069.803
Estuary = 6494959.506

Soft Bottom

0-30 Meters = 350095658.201001
30-100 Meters = 728304457.464001
100-200 Meters = 75123409.3380001

Map App



Selection Frequency

- 1-10
- 11-20
- 21-30
- 31-40
- 41-50
- 51-60
- 61-70
- 71-80
- 81-90
- 91-100

Overlays

- Counties
- Pref Package
- Calzone Best
- Calzone Sum
- Base Layer**
- Blue Marble
- Naut Charts
- OL WMS

Done



Forestry Referrals DSS

AMN Decision Support Tool - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Welcome aaronr

Navigation Tools

Map View Image Rectifier

My Places

Base Layer Legend

Find Location

Goggle Address Search

pemberton.bc

Find Address Clear Address

Lat/Lon Coordinates

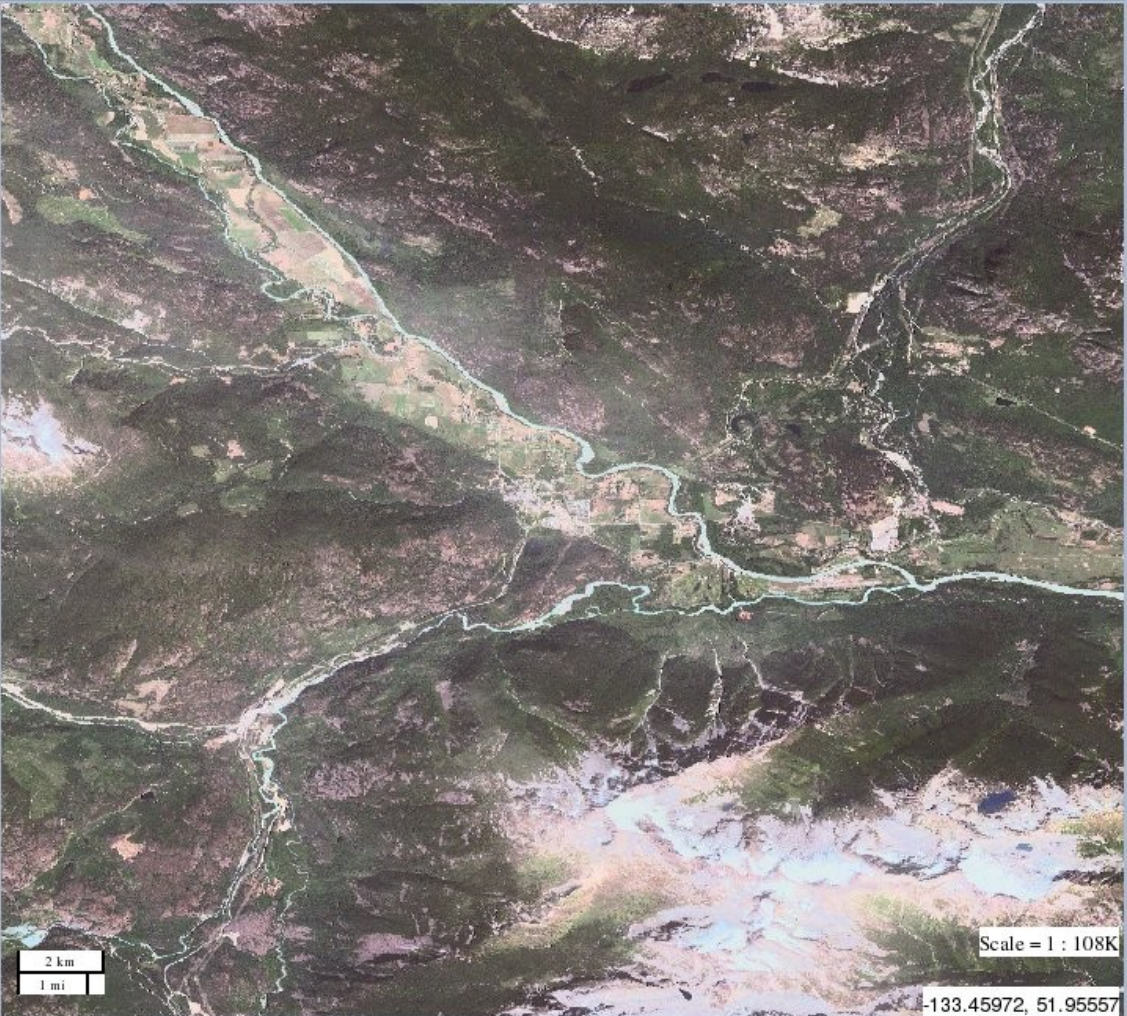
Latitude:

Longitude:

Find Lat/Lon Clear Lat/Lon

Reports and Printing

Reference Map

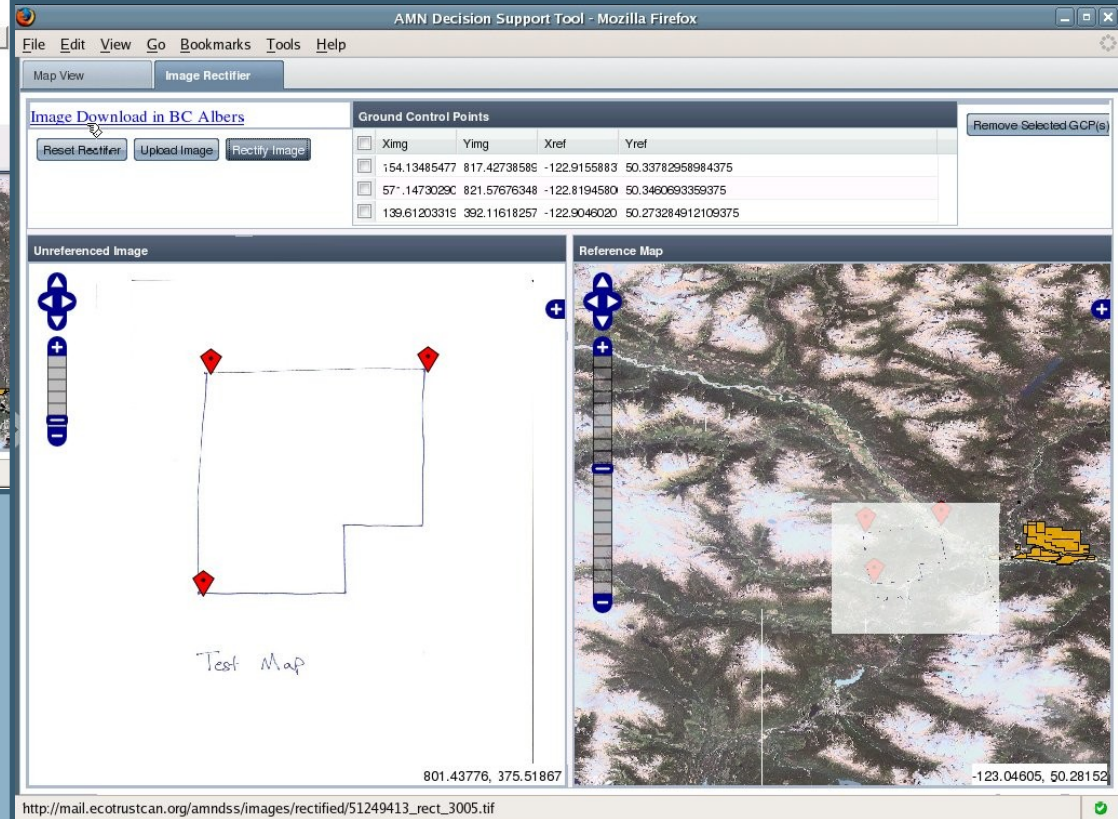
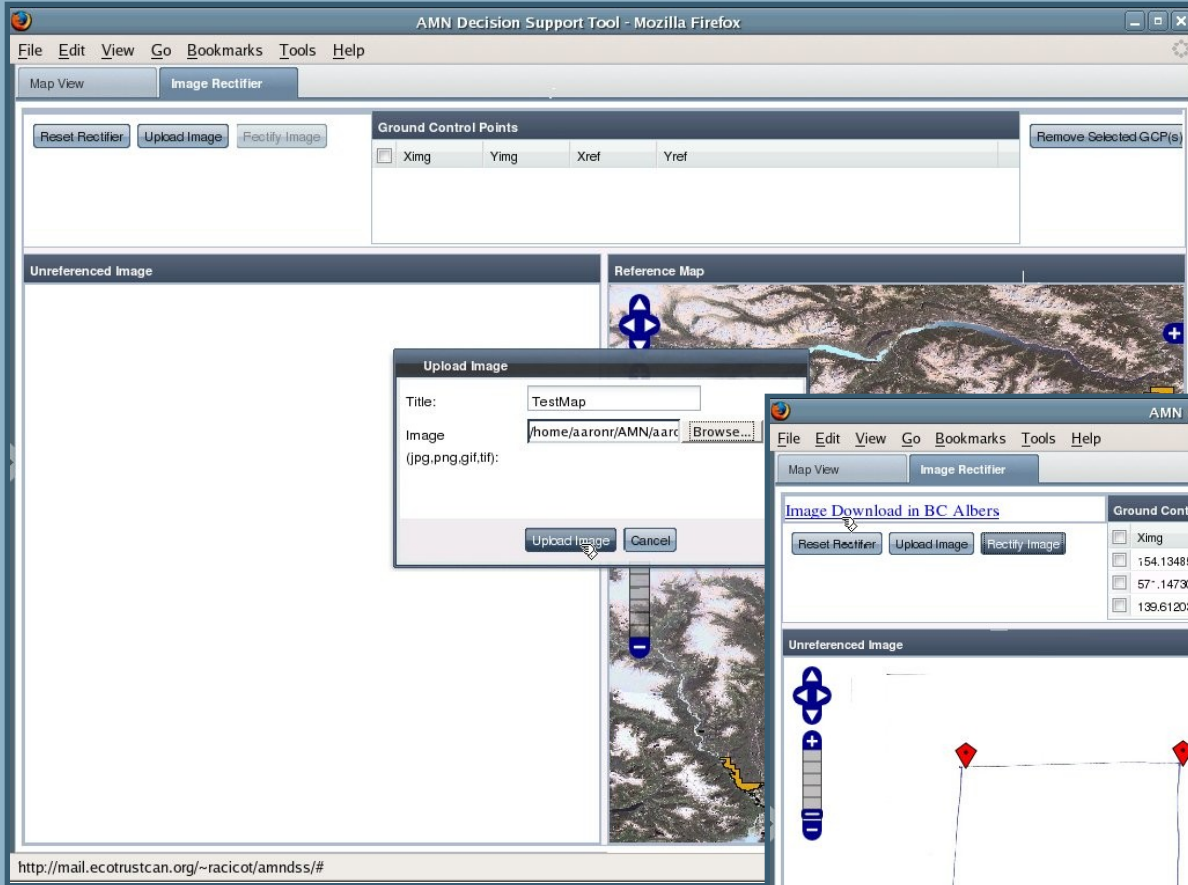


2 km
1 mi

Scale = 1 : 108K

-133.45972, 51.95557

Done



AMN Decision Support Tool - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Welcome aaronr

Map View Image Rectifier

Navigation Tools

My Places

Base Layer Legend

Legend Add Layers

Drawing tools

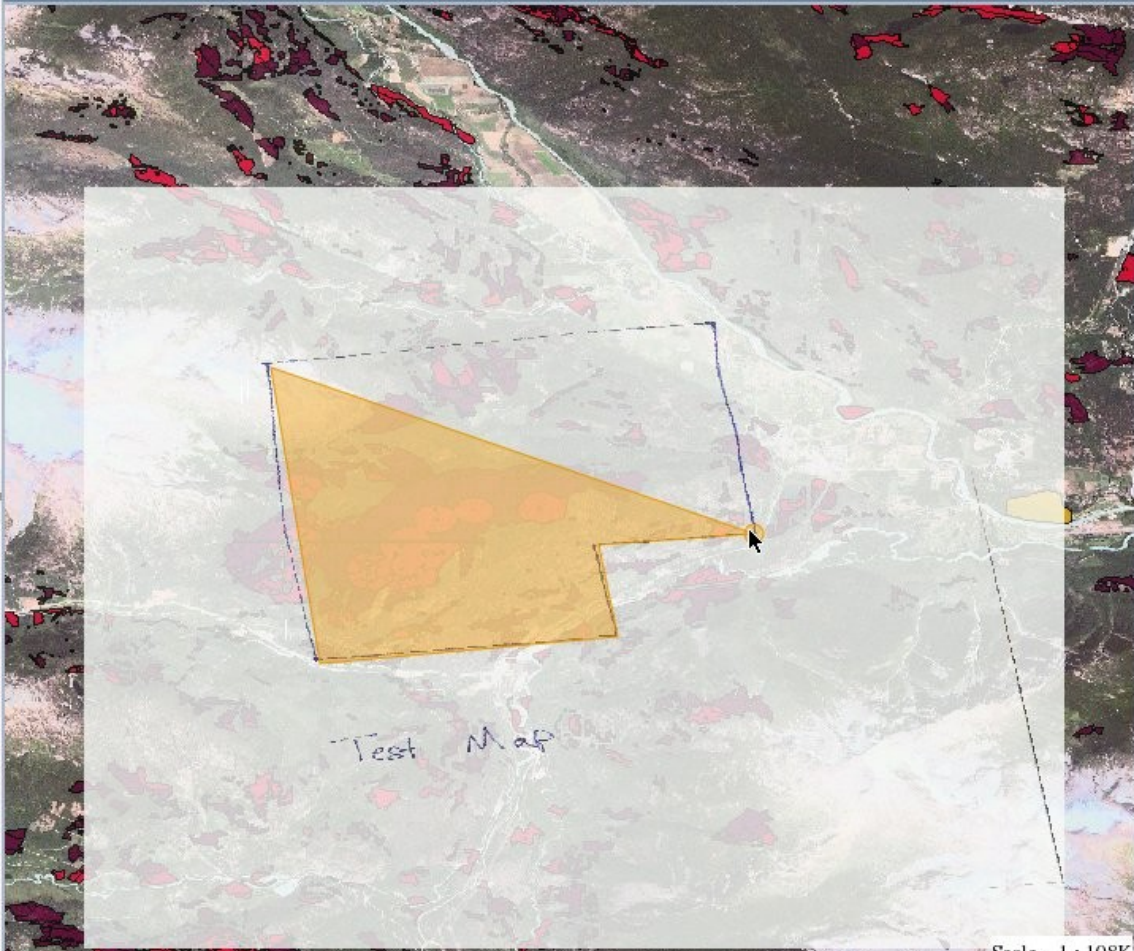
Upload Shapefile

Upload Shapefile

Find Location

Reports and Printing

Reference Map



Scale = 1 : 108K

2 km
1 mi

-122.81250, 50.30142

Done

AMN Decision Support Tool - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Welcome aaronr

Map View Image Rectifier

Navigation Tools

My Places

My Shapes My Images

Select	Visible	ID	Description
<input type="checkbox"/>	<input type="checkbox"/>	54146	Testing 123
<input type="checkbox"/>	<input type="checkbox"/>	54147	sdfasdf
<input type="checkbox"/>	<input type="checkbox"/>	54150	This is a test
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	54151	Test Shape

Reload Delete Download

Base Layer Legend Find Location Reports and Printing

Reference Map

Download Shapefile

Shapefile Download in BC Albers

OK

2 km 1 mi

Scale = 1 : 108K

-122.92579, 50.32648

Done

Run Reports

AMN Decision Support Tool - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Welcome aaronr

Map View Image Rectifier

Navigation Tools

My Places

Base Layer Legend

Find Location

Reports and Printing

Select Report Type

Recreational - Lilwat

Recreational - Lilwat

Forestry - Haida

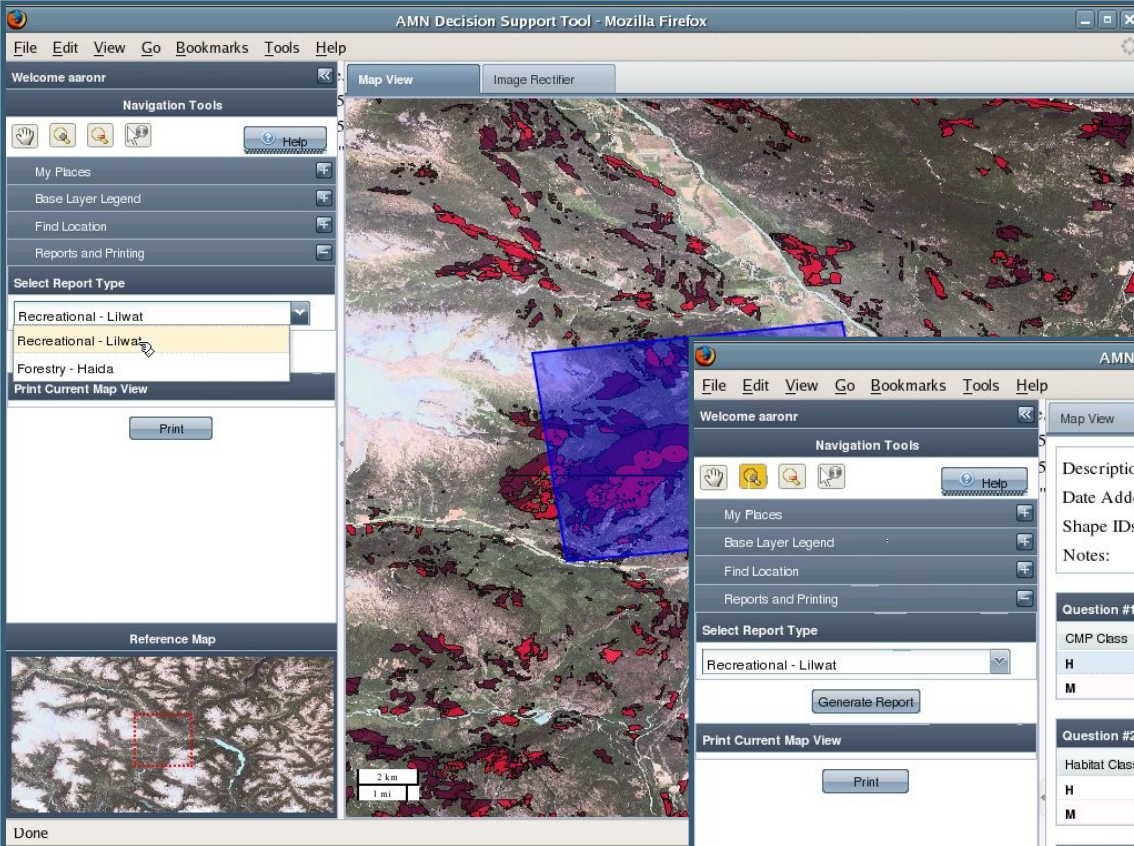
Print Current Map View

Print

Reference Map

2 km
1 mi

Done



AMN Decision Support Tool - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Welcome aaronr

Map View Image Rectifier Report

Description: AMNDSS Report - Recreational - Lilwat
Date Added: Mon, 07 Jul 2008 20:39:04 PDT
Shape IDs: 54151
Notes: These calculations are made in PostGIS based on the user defined shapes

Question #1 - CMT Class Intersections

CMP Class	Area intersecting CMT Class in Sqaure Kilometers
H	4.45705946798858
M	8.94657354863432

Question #2 - Habitat Class Intersections

Habitat Class	Area intersecting Habitat Class in Sqaure Kilometers
H	0.205507231953889
M	1.14329965670958

Question #5 - Land Use Designation

LNLUP Designation	Area intersecting LNLUP in Sqaure Kilometers
Collaborative Management	0.189839185301542
Conditional Economic Development	9.32184703609571
Managed Resource Use	35.602169883508

Question #6 - Number of OGMA and Area

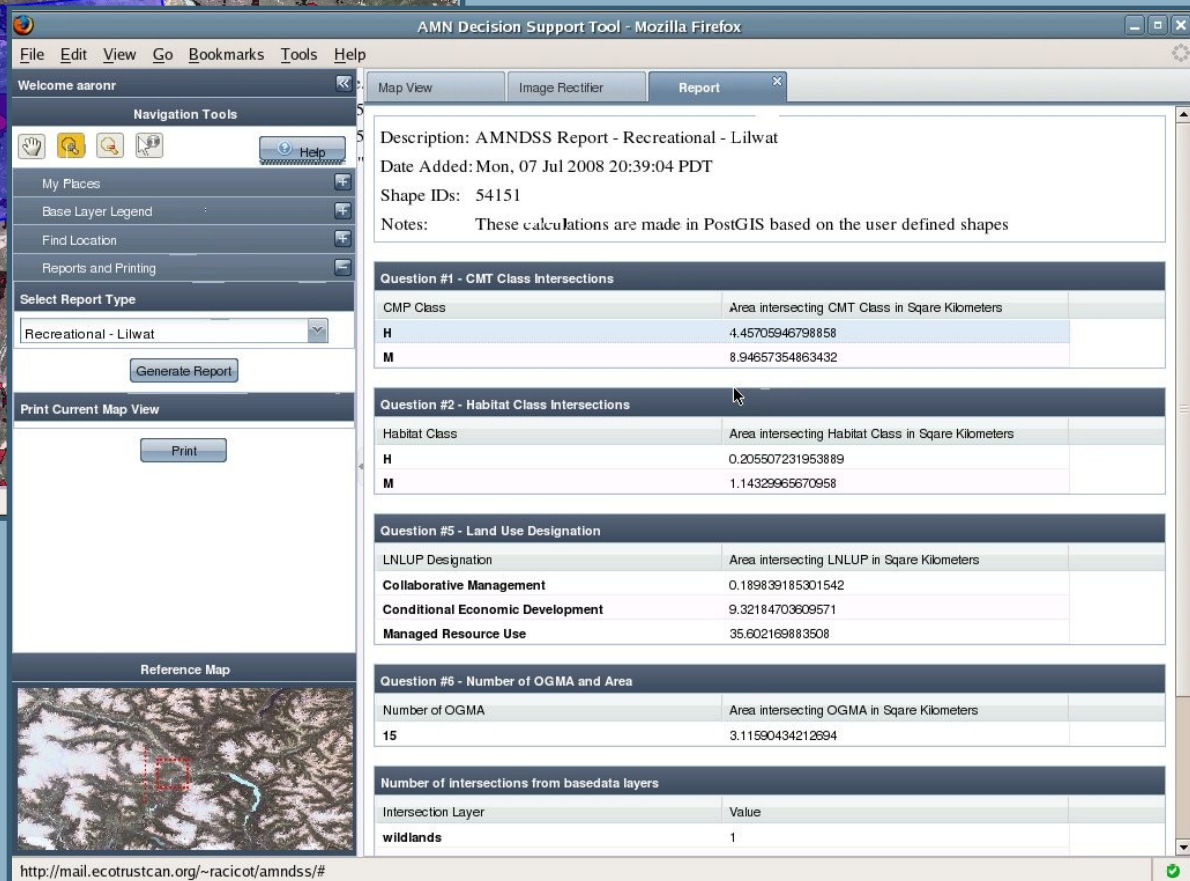
Number of OGMA	Area intersecting OGMA in Sqaure Kilometers
15	3.11580434212694

Number of intersections from basedata layers

Intersection Layer	Value
wildlands	1

Reference Map

<http://mail.ecotrustcan.org/~racicot/amndss/#>



Next?

Integrated DSS for Tidal In Stream Energy Conversion Projects



Where to go for more info

Z-Pulley Inc. - Reprojected

- <http://www.reprojected.com>

Ecotrust

- <http://www.ecotrust.org>

OSGeo

- <http://www.osgeo.org>

OSGIS

- Maptools - <http://www.maptools.org>
- FreeGIS - <http://freegis.org/>
- Open Source GIS - <http://opensourcegis.org/>

Standards

- OGC - <http://www.opengeospatial.org/>

Desktop

- GRASS - <http://grass.itc.it/>
- QGIS - <http://qgis.org/>
- OSSIM - <http://www.ossim.org/>
- UDIG - <http://udig.refractions.net/>
- JUMP – <http://jump-project.org/>
- OpenEV - <http://openev.sourceforge.net/>

Server/Web

- Mapserver - <http://mapserver.gis.umn.edu/>
- MapBender - <http://www.mapbender.org>
- MapGuide OS – <http://mapguide.osgeo.org/>
- OpenLayers - <http://www.openlayers.org/>
- EXTJS – <http://extjs.com/>
- TileCache - <http://www.tilecache.org/>
- FeatureServer - <http://featureserver.org/>

Tools

- PostGIS - <http://postgis.refractions.net/>
- Remote Sensing - <http://remotesensing.org/>
- GDAL/OGR - <http://gdal.maptools.org/>
- PROJ.4 - <http://proj.maptools.org/>
- R-Statistics - <http://www.r-project.org/>
- GMT - <http://gmt.soest.hawaii.edu/>

Blogs - Aggregators

- <http://planetosgeo.crschmidt.net/>
- <http://www.planetgs.com/>
- <http://slashgeo.org/>

Blogs - Individual

- <http://www.osgeo.org/blog>
- <http://zcologia.com/news/>
- <http://openlayers.org/blog>
- <http://blog.qgis.org/>
- <http://mappinghacks.com/>
- <http://hobu.biz/>
- <http://www.reprojected.com/geoblog>

IRC

- #osgeo, #grass, #mapserver, #openlayers, etc...

Local User Group

- <http://groups.google.com/group/cugos>