QUANTUM GIS

F I V E  Y E A R S  &  C O U N T I N G
A Brief History

- The QGIS project began in February, 2002
- We started with one developer
- The first release was in July
- The first version supported only PostGIS and had no map navigation tools or layer control
## A Brief History

<table>
<thead>
<tr>
<th>Released</th>
<th>Version</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2002</td>
<td>0.0.1</td>
<td>First release</td>
</tr>
<tr>
<td>Aug 2002</td>
<td>0.0.3</td>
<td>Support for OGR formats</td>
</tr>
<tr>
<td>June 2003</td>
<td>0.0.11</td>
<td>Plugin support</td>
</tr>
<tr>
<td>Feb 2004</td>
<td>0.1</td>
<td>Raster support for GDAL formats</td>
</tr>
<tr>
<td>Oct 2004</td>
<td>0.5</td>
<td>First Windows version</td>
</tr>
<tr>
<td>Dec 2004</td>
<td>0.6</td>
<td>First Mac OS X binary, vector editing</td>
</tr>
<tr>
<td>Nov 2005</td>
<td>0.7</td>
<td>Projection support, GRASS integration</td>
</tr>
<tr>
<td>Dec 2006</td>
<td>0.8</td>
<td>Port to Qt4, WMS, and library refactor</td>
</tr>
<tr>
<td>Sep 2007</td>
<td>0.9.0</td>
<td>Python bindings</td>
</tr>
</tbody>
</table>
How Do you Say QGIS?

- We took a poll once
  - Q-G-I-S == 42%
  - Queue-Jis == 30%
  - Queue-Gih-Is == 23%
  - Inka-Dinka-Doo == 3%
  - Qwig-Is == 2%
What Is It?

- A viewer for common vector and raster formats
- An editor for common vector formats, including shapefiles and PostGIS layers
- A front-end for GRASS data and modules
- A set of libraries and bindings for application development in C++ and Python
- An extensible platform
Plugins Extend QGIS

QGIS Plugin Manager

Plugin Directory: /home/gsherman/qgis_09/lib/qgis

To load a plugin, click the checkbox next to the plugin and click Ok.

<table>
<thead>
<tr>
<th>Name</th>
<th>Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Delimited Text Layer</td>
<td>Version 0.2</td>
<td>Loads and displays delimited text files containing x,y coordinates</td>
</tr>
<tr>
<td>CopyrightLabel</td>
<td>Version 0.1</td>
<td>Draws copyright information</td>
</tr>
<tr>
<td>Georeferencer</td>
<td>Version 0.1</td>
<td>Adding projection info to rasters</td>
</tr>
<tr>
<td>GPS Tools</td>
<td>Version 0.1</td>
<td>Tools for loading and importing GPS data</td>
</tr>
<tr>
<td>GRASS</td>
<td>Version 0.1</td>
<td>GRASS layer</td>
</tr>
<tr>
<td>Graticule Creator</td>
<td>Version 0.1</td>
<td>Builds a graticule</td>
</tr>
<tr>
<td>New PostGIS layer</td>
<td>Version 0.1</td>
<td>Creates a new empty Postgis layer</td>
</tr>
<tr>
<td>NorthArrow</td>
<td>Version 0.1</td>
<td>Displays a north arrow overlayed onto the map</td>
</tr>
<tr>
<td>PostgreSQL Geoprocessing</td>
<td>Version 0.1</td>
<td>Geoprocessing functions for working with PostgreSQL/PostGIS layers</td>
</tr>
<tr>
<td>ScaleBar</td>
<td>Version 0.1</td>
<td>Draws a scale bar</td>
</tr>
<tr>
<td>SPIT</td>
<td>Version 0.1</td>
<td>Shapefile to PostgreSQL/PostGIS Import Tool</td>
</tr>
<tr>
<td>WFS plugin</td>
<td>Version 0.0001</td>
<td>Adds WFS layers to the QGIS canvas</td>
</tr>
</tbody>
</table>
Why So Long to 1.0?

- What’s in a version number?
- Version numbers are arbitrary
- The feature set of 1.0 was established long ago
- We are working towards that feature set
- At 1.0 we want a stable API, interface, and user experience
Some Statistics

- 22 developers over the life of the project
- 26 person years of effort
- Approximately 104K lines of code

Graphic courtesy of ohloh
Users Around the Globe

1,209 Registered Users
WHO'S USING QGIS

- Faculty/Researcher: 17%
- Government: 15%
- Home: 26%
- Private/Public company: 19%
- Nonprofit: 9%
- Consultant: 4%
- Student: 9%
- Other: 1%
Who's Using QGIS

- Academia: 26%
- Business: 48%
- Home: 26%
agriculture
archaeology
cave mapping
city planning
climatology
cultural surveys
disaster management
engineering student
environmental engineering
environmental sciences
field biology
fire prediction modeling
fisheries studies
forestry
genealogy
geologic mapping
glaciology
graduate student
history mapping
hydrogeologist
local government
museum
newspaper reporter
oceanography
paleogeography
pest control
phd student
professor of ecology
public land mapping
recreation
traffic management
university professor
vehicle dispatch
water quality monitoring
wildlife studies
QGIS-GRASS Plugin Use

Yes 81%
No 19%
The Future
class MainWindow(QMainWindow, Ui_MainWindow):

def __init__(self):
    QMainWindow.__init__(self)

    # Required by Qt4 to initialize the UI
    self.setupUi(self)

    # Set title
    self.setWindowTitle("FOSS4G2007 Demo App")

    # Create the main canvas
    self.canvas = QCanvas()

    # Create a map window
    self.canvas.setColor(QColor(224, 255, 255))
    self.canvas.enableAntiAliasing(False)
    self.canvas.useQImageToRender(True)
    self.canvas.show()

    # Layout vertical box layout
    self.layout = QVBoxLayout(self.frame)
    self.layout.addWidget(self.canvas)

    # Connect each to the appropriate method
    self.actionAddLayer = QAction(QIcon(":/foss4g2007/mActionAddLayer.png"),
                                   "Add Layer", self.frame)
    self.connect(self.actionAddLayer, SIGNAL("activated()"), self.addLayer)
    self.actionZoom In = QAction(QIcon(":/foss4g2007/mActionZoomIn.png"),
                                 "Zoom In", self.frame)
    self.connect(self.actionZoomIn, SIGNAL("activated()"), self.zoomIn)
    self.actionZoomOut = QAction(QIcon(":/foss4g2007/mActionZoomOut.png"),
                                 "Zoom Out", self.frame)
    self.connect(self.actionZoomOut, SIGNAL("activated()"), self.zoomOut)
    self.actionPan = QAction(QIcon(":/foss4g2007/mActionPan.png"),
                            "Pan", self.frame)
    self.connect(self.actionPan, SIGNAL("activated()"), self.move)
    self.actionZoomFull = QAction(QIcon(":/foss4g2007/mActionZoomFullExtent.png"),
                                 "Zoom Full Extent", self.frame)

# Python Bindings for QGIS

Available at version 0.9

Create standalone applications

Create plugins
PyQGIS - Quantum Navigator

Routing
Start: (18.0534, 48.9008)
Stop: (18.0304, 48.8801)
Find route: Economic
Total distance: 4.081 km

Directions:
START: Hurbanova
Studentiska - 0.506 km
Martina Razusa - 0.173 km
Hasicska - 0.280 km
Kneizata Pribina - 0.482 km
So 507 - 0.325 km
Legionarska - 1.781 km
Beckovska - 0.165 km
28. oktobra - 0.210 km
END - 0.155 km

Simulate route

GPS
Navigation
18.035 48.899
OpenOceanMap

Wednesday 8:30 AM in Oak Bay 2
Goals For 1.0

- Stable API for developing plugins and applications using the QGIS libraries
- Improved stability and user experience
- Completion of remaining 1.0 target features

http://wiki.qgis.org/features-1.0.html
Things We Need to Improve

- Labeling
- Map layout and composition
- Raster handling (large sets or catalogs)
- General usability
**QGIS AND OSGeo**

- QGIS is an incubating OSGeo project
- Effort is still in the early stages
- Code review has begun
The Project Management Committee was established in 2006

Elections held July 2007

<table>
<thead>
<tr>
<th>Role</th>
<th>Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Resources</td>
<td>Otto Dassau</td>
</tr>
<tr>
<td>Technical Advisor</td>
<td>Marco Hugentobler</td>
</tr>
<tr>
<td>Release Manager</td>
<td>Tim Sutton</td>
</tr>
<tr>
<td>Finance &amp; Marketing</td>
<td>Vacant</td>
</tr>
<tr>
<td>Chairperson</td>
<td>Gary Sherman</td>
</tr>
</tbody>
</table>
How You Can Help

- Join the mailing lists and forum
- Answer user’s questions
- Submit patches
- Translate QGIS (application and documentation)
- Submit bug reports
- Join the development team
- Contribute programming examples/code
QUESTIONS?

http://qgis.org