The use of QGIS and GRASS to deliver GIS applications to a wider audience

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Introduction

A Mapping Tool for the Crowsnest Pass

• Developable Lands project was initiated in the fall of 2005 and finished in the spring of 2006

• Desire to be “proactive, not reactive” about development in the Municipality of the Crowsnest Pass

• Objective – dynamic, interactive mapping tool that facilitates discussion between involved stakeholders and shows trade-offs

• Built to work with closed source software used by the Municipality
How It Works...

- 15 themes (10 development considerations, 5 conservation priorities)
- each theme converted to an “index grid” (range 0-1)
- user chooses which factors to include, and what priority each gets
- layers combined through raster calculation to produce final output
- view the results
The Problem

- The indicated version of closed source software was not installed and thus they could not run the application (this was later rectified)

- Another stakeholder had the right version of the software, but not the necessary extra licences

- Other stakeholders expressed an interest in using the model, but would not be able to afford the licence

- To use the model it was necessary to use a complicated GIS software package

- We build tools to be used, limits on this are a matter of concern
The Solution

A perfect fit for the use of FOSS:

- no licence costs and the ability to distribute
- GRASS provided the raster calculator functionality we needed to run our model
- QGIS provides a method to use GRASS as a native windows application, which fits the needs of our users, and provides a fleshed out and intuitive user interface for viewing and using GIS data
- very portable

After some research we decided upon the use of QGIS and GRASS for our model.
Applications
Demo

Hope this works...
Summary

Without loosing functionality we have moved from an application that required expensive software and no ability to share to a free application that we can share with interested stakeholders.

Future Steps

• QGIS 0.9, which is should be available as binaries shortly will provide Python bindings that will let us either add the application as a plugin directly inside of QGIS and/or let us add a basic map viewing interface to our application

• Build a change detection tool
Questions?

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