Milestone 3 Report

uDig

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1 SUMMARY OF WORK ACCOMPLISHED

The goal of this project is to build a GIS Desktop Client that integrates with Open GIS Consortium (OGC) Open Web Services (OWS).

The Application Framework we are using is called Eclipse Rich Client Platform. Eclipse Rich Client Platform is an offshoot of a popular Java Integrated Development Environment and offers a unique approach to Java User Interface development.

All required documents have been completed for this third milestone. These documents are:

Phase 3.10

- Workflow Recommendations Document
- Usability Recommendations Document
- Milestone Report (this document)

For Milestone 3 we have completed the following software release:

Phase 3.10

- Beta release of uDig application

We continue to be very pleased with the assistance provided by our partners and the open source community in supporting the uDig project.

This work is publicly available via the uDig project website, community wiki and Subversion repository.

2 ENCOUNTERED PROBLEMS AND SOLUTIONS

2.1 Catalog Services

One of our goals for this milestone was to allow users to search for services on remote Catalog servers. The majority of the problems related to creating a Catalog client are a result of choosing to implement the 2.0.0 specification.

This is a new and evolving specification, which has caused a number of issues, including limited access to sample servers, and limited access to the specification. Part-way through the milestone we acquired a draft copy of the application profiles for the Catalog 2.0.0 specification, and found a working example of a Catalog 2.0.0 server. We also had substantial difficulties understanding the intended best practices for the application profile.

Our intended solution is to send one of the team's developers to the OGC meeting in New York in January to investigate the Catalog 2.0.0 application profiles.

2.2 Printing

There is a need for the printing framework to have a Page Layout Editor.

The Eclipse Project provides a tool, the Graphical Editing Framework (GEF), that allows easy implementation of an interface to provide basic requirements. This has allowed us to implement Page Layout using moveable, re-sizeable boxes that can be connected to each other.

2.3 Eclipse Platform

We are not taking advantage of the Eclipse platform to the full extent possible. The usability document highlights several areas of concern; most noticeably concerning the Eclipse Job API, the use of Commands and ActionSets. There is a similar set of concerns at the framework level where attention to plug-in initialization, extension point processing and internationalization is required.

We have taken several steps to fix this problem. We have switched to the Eclipse Modeling Framework for project persistence. With the correctly generated EMF code, many of these issues have already been resolved. This work will continue in Milestone 4 through a scheduled series of plug-in reviews.

2.4 Reprojection Issues

During the last milestone, reprojection based on the Geotools 2.0 coordinate system implementation was added to uDig's set of features. uDig uses Geotools 2.1 which has two different coordinate system implementations, the 2.0 implementation and a new version that has become ready for use in January 2005.

When uDig's reprojection support was added, the new implementation was not mature enough to use, so a bridge class is employed for communication between uDig and the coordinate system implementation used. This allowed us to add reprojection to uDig, yet still allowed us to later use the new implementation when it was ready, with only localized changes to our system.

The next step, which will occur at the start of Milestone 4, is to switch to the new coordinate system implementation. Because the coordinate system support was developed using a bridge class, all the changes will be localized in the bridge class. When the bridge class has been changed, the more advanced features of the new implementation can be used.

3 WORK PLAN

Our work plan for the next milestone, Milestone 4, is as follows:

Completion Date	Event	Specific Goals
February 11, 2005	Release 0.8	1) Temporary File Creation 2) Address Usability and Workflow Recommendations for the Printing User Interface 3) Data Export 4) Switch to the GeoTools 2.1 Spatial Reference System for Improved Reprojection 5) QA targeting Jobs, Commands and Plug-in Initialization
March 1, 2005	Release 0.9	1) Improving Shapefile and Rendering Performance 2) Draft User's Guide 3) Draft Developer's Guide 4) QA targeting Data Handling
March 24, 2005	Release Candidate 1.0rc	1) Catalog 2.0 EBRIM Support 2) Internationalization 3) Ongoing QA 4) Final Developer's Guide
March 31, 2005	Milestone 4 Release 1.0	Milestone 4 complete: 1) Final uDig Application with installer for all platforms and languages. 2) Final User's Guide 3) French Language Pack 4) GeoInnovations Final Report

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