

Validating Web Feature Server Milestone 3 Report



Submitted To: Program Manager
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1 SUMMARY OF WORK ACCOMPLISHED

The goal of this project is to build a Validating Web Feature Server (VWFS) by adding extra functionality to a Web Feature Server (WFS). A Web Feature Server is an application that delivers information about spatial objects across the Web.

The WFS that we will be using is called GeoServer. GeoServer is an open source implementation of the Open GIS Consortium's Web Feature Server Specification. Our project will add a level of validation to GeoServer to help maintain spatial database integrity.

During the third Milestone, a web based configuration interface has been added to the GeoServer application.

All required documents have been completed for this third milestone.

These documents are:

Phase 3.1

- GeoServer Web Based Configuration Design

Phase 1.4

- Validation Web Feature Server Implementation Report

Phase 3.2

- Web Based Configuration Implementation Report

During this milestone we have reorganized the structure of the GeoServer configuration system, morphing the application into layers. This process made use of the Web Container to provide a deterministic start up process. This allowed us to build a configuration interface, and incorporate the Validation Processor configuration process.

We also paid careful attention to providing multi-lingual support during this Milestone. Development is continuing to endeavor to provide support for both official languages.

For the third milestone we have completed:

Phase 1.4

- Validation Language Visual Constraint Editor
- Example Validation Plug-In for External Validation Source
- Example Plug-Ins for Validation Language

Phase 3.2

- Web Based Configuration Implementation
- GeoServer 1.2.0 Alpha Release

This work is publicly available at the GeoServer and Geotools2 CVS repositories.

2 ENCOUNTERED PROBLEMS AND SOLUTIONS

Below is a list of problems encountered and our solutions to overcome them.

2.1 Jira Bug Tracking System

Previously we had been unable to interact with the GeoTools2 bug reporting system called Jira. We are pleased to report that our access issues to this tool have been resolved.

The resolution of our access problems has been timely, as GeoServer development has also migrated to using this tracking tool.

In practice, Jira has proven extremely valuable and a great asset during the release of GeoServer 1.2.0 Alpha.

2.2 SourceForge CVS Repository

The GeoServer project has historically used the SourceForge Concurrent Versioning System (CVS) Repository. During the past phase SourceForge attempted an upgrade of their systems, which resulted in some losses in code and time. This also removed the project's developers' ability to share concurrently developed portions of the code base.

Our solution to this problem was to create a temporary working CVS repository at Refrations Research until such time as we can regain access to the SourceForge repository, or a similar suitable repository.

2.3 GeoServer Cite and Unit Testing

The Open GIS Consortium (OGC) offers a Web Feature Server testing service called Cite. During the last Milestone problems were encountered setting up these tests to run against an instance of GeoServer. These problems have now been resolved.

Our restructuring of GeoServer for a Web Based Configuration System has allowed better unit testing of GeoServer.

The ability to both run Cite tests and Unit tests will allow the continued improvement of the GeoServer application.

2.4 Configuration Documentation

During our last milestone we noted that the documentation of the configuration process had fallen out of sync with ongoing development. This situation has been rectified during our restructuring of the configuration process for Web Based Configuration.

3 WORK PLAN

Our work plan for milestone four is:

Completion	Event	Specific Tasks
Feb 16, 2004	Phase 1.6	<ol style="list-style-type: none"> 1) Implement any outstanding Features from previous phase 2) User acceptance testing on Validation Framework Configuration 3) Stress Test Web Feature Server and report metrics 4) Updated documentation on the Validation Framework 5) User Documentation on Validation Processor Configuration 6) Installation packaging
Mar 2, 2004	Phase 3.3	<ol style="list-style-type: none"> 1) Draft Documentation for GeoServer 2) Implement graphic design changes 3) Implement changes recommended from initial implementation 4) Implement changes requested from The Open Planning Project (TOPP) 5) Revise documentation in accordance with TOPP feedback
Mar 10, 2004	Phase 4.1	<ol style="list-style-type: none"> 1) Final project report 2) Summary materials for GeoInnovations web site 3) Register appropriate results with Discovery Portal
Mar 10, 2003		Project Completed