

# Validating Web Feature Server Milestone 2 Report



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# 1 SUMMARY OF WORK ACCOMPLISHED

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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 maintain spatial database integrity.

All required documents and have been completed for this second milestone.

These Documents are:

## Phase 1.3

- Implementation Report on Validation Processor

## Phase 2.3

- GeoTools2 Performance and Recommendations

## Phase 2.4

- Documentation for GeoTools2

During this milestone we have taken the opportunity to participate in the design of GeoTools Data Store API. This work represents a redesign of the GeoTools Data Source API and has addressed our scalability concerns and allowed for strong transaction support.

For the second milestone we have completed:

## Phase 1.3

- Validation Processor prototype
- Validation hooks to the GeoServer core

## Phase 2.3

- DataStore API incorporating our design recommendations
- Postgis, OracleSpatial and ArcSDE DataStore implementations

## Phase 2.4

- Testing of Postgis DataStore

This work is available through the GeoServer and Geotools2 CVS repositories.

## 2 ENCOUNTERED PROBLEMS AND SOLUTIONS

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

### **2.1 GeoTools DataSource Redesign**

Our previous design recommendations revolved around the GeoTools Data Source API. In September GeoTools began a task of replacing this API.

While this development showed a willingness address to concerns with the DataSource API, it also exposed our project to a risk of failure.

To minimize this risk, we played an extremely active role in the development of the new DataStore API.

### **2.2 Geotools2 development environment**

The GeoTools2 and GeoServer projects moved their bug reporting to CodeHaus using a system called Jira. We have been unable to interact with this web application since being added to both projects. Our contact James Macgill has been working on resolving this issue.

Previously we had encountered problem with the Jakarta build process tool Maven. We are pleased to report that it has matured over time, however for mostly daily work we are making use of in-house scripts to allow work in Eclipse. These scripts have been released to the community.

### **2.3 GeoServer Test Configuration**

The OGC provides a set of WFS tests. Problems were encountered setting up these tests to run against of GeoServer.

#### **2.3.1 Configuration**

GeoServer configuration has been under rapid development (in part due to Validation and the new DataStore API). The documentation of the configuration process has fallen out of sync with ongoing development.

This issue will be addressed as recent development is merged back into the main branch.

#### **2.3.2 Postgis**

GeoServer provides an SQL script to configure Postgis for the OGC tests. The script has not been updated to reflect recent versions of Postgres and Postgis.

We have provided an updated script to the GeoServer project.

### 3 WORK PLAN

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Our work plan for milestone three:

<b>Completion</b>	<b>Event</b>	<b>Specific Tasks</b>
Dec 30, 2003	Phase 1.4	<ol style="list-style-type: none"> <li>1) Validation Language Visual Constraint Editor</li> <li>2) Use Validation Language to for configure Validation Processor</li> <li>3) Example Validation Plug-In using a External Validation Source</li> <li>4) Test against existing MSRM data</li> <li>5) Report on Design Recommendations</li> </ol>
Jan 7, 2004	Phase 3.1	<ol style="list-style-type: none"> <li>1) Design Document for Web Configuration of GeoServer</li> <li>2) Revise Design Document with TOPP review</li> <li>3) Approved Web Configuration of GeoServer Design Document</li> </ol>
Jan 20, 2004	Phase 3.2	<ol style="list-style-type: none"> <li>1) Implement Web Configuration of GeoServer</li> <li>2) Submit Implementation to graphic design team for review</li> <li>3) Test interface and produce a record of all errors</li> <li>4) Submit Interface to TOPP for testing and review</li> <li>5) Report on any Changes and Recommendations</li> </ol>
Jan 28, 2003	Milestone3	Milestone 3 complete.