Open GIS Consortium, Inc.

OpenGIS Test Protocol: Grid Coverage For COM

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1 Preface

1.1 Submitting Companies

The following company is pleased to submit this test protocol as a companion to the “OpenGIS Implementation Specification: Grid Coverage” (OpenGIS Project Document Number 01-004):

Computer Aided Development Corporation (Cadcorp) Ltd.

1.2 Submission Contact Point

All questions about the submission should be directed to:

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2 Overview

This document specifies a standard protocol for testing candidate OpenGIS Grid Coverage for COM implementations.

There is a single test program that checks that all of the mandatory features have been implemented, and can be called, but that does not check that the returned values are valid.

3 Architecture

The test script is written in Microsoft Visual Basic Version 6. VB6 was chosen as the test script language because it has good compatibility with COM, and is widely available.

The test script is completely implementation independent, with the user being prompted for COM object names each time the test is used. The COM object names required are those of the 'factory' interfaces in the GC and GP packages. These factory interfaces are then used to create all other objects.

The Grid Coverage sources are all file based, with no mandatory file types. Each implementation must supply sample data in an appropriate range of formats.

There are several groups of tests, and these fall into the following categories:

3.1 Mandatory Interface Tests

These tests check that objects created by the factories implement the mandatory interfaces.

3.2 Mandatory Method Tests

These tests check that the interface implementations support all mandatory methods. As stated above, the results of these calls are not checked for validity.

3.3 Optional GP_Analysis Interface and Methods Test

These tests check that the optional GP_Analysis interface, where implemented, supports all mandatory methods. As stated above, the results of these calls are not checked for validity.

3.4 Optional GP_GridCoverageProcessor Interface and Methods Test

These tests check that the optional GP_GridCoverageProcessor interface, where implemented, supports all mandatory methods. As stated above, the results of these calls are not checked for validity.

This optional test does not attempt to process Grid Coverages using the available GP_GridCoverageProcessor operations due to the complex nature of the operation parameters, and the lack of information regarding which operations are valid on which Grid Coverages.

4 Test Protocol

Follow these steps in order:

1. Install the candidate implementation
2. Create a new folder named ‘Input’ below the supplied GCTest folder. This folder must then be filled with sample data to be used by the GCTest program as source data. Note that the GCTest program recursively searches the ‘Input’ folder for suitable files. Note also that the GC interfaces do not provide metadata regarding known file extensions, so **all** files in the ‘Input’ folder will be listed. See 6., below.
3. Run the supplied GCTest.exe Visual Basic executable
4. Enter the implementation-specific object class names in the first dialog
5. Choose the tests that you want to perform (some tests are mandatory, and some are optional)
6. Choose the source data for the test from the list of available files.
7. Review the results when the tests have finished.