GISTIC RESEARCH INC

CASE STUDY

COLA2: Technology Cocktail Coming to the Rescue

Client

City of Phoenix's Development Services Department (DSD)

The Background

The City of Phoenix Development Services Department's parcel information system and permitting process starts with the loading of parcel drawings in AutoCAD® format into Oracle®. In 2008, Gistic developed a custom application, the CAD to Oracle Loader Application (COLA), using a mixture of technologies such as Visual Basic, Autodesk®, Intergraph®, and Oracle®. In 2013, the call for COLA's replacement came when DSD planned to consolidate its GIS technologies and move away from all VB applications.

The Challenge

The City wanted the new application to be web-based with a modern UI. In addition, all features of the earlier version had to be retained. This included the ability to build parcel topology from CAD files, and conduct consistency checks on a parcel's spatial and non-spatial attributes, as well as its parcel topology, before loading a parcel's geometry into the agency's Oracle database.

The City also required leveraging existing infrastructure and resources such as Windows Operating System, FME® Desktop License, Oracle and GeoServer.

How Gistic Helped

Given the requirements and constraints, the Gistic Team proposed a "cocktail" architecture as shown in Figure 1.

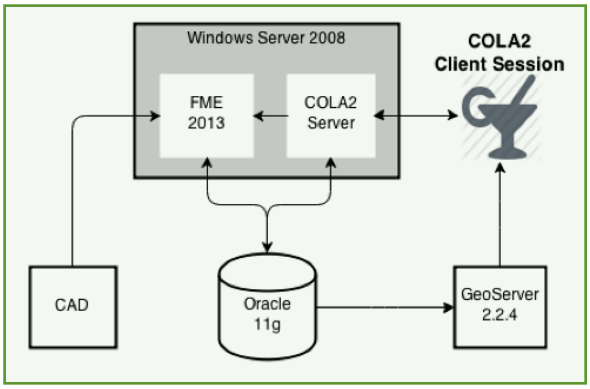

Figure 1 COLA2 Architecture Diagram

Central to the solution was the use of FME by Safe Software. FME is more than a spatial format converter; it is a very versatile and powerful ETL (Extract, Translate, Load) process engine that can be configured to do complex ETL without coding. Node.js was chosen for its ability to easily create a simple HTTP server application that could evoke the FME process. This is important as typical web servers such as IIS restrict CGI (Common Gateway Interface) calls that evoke processes on the server.

Figure 2 shows the UI in which the user specifies parameters for an FME session and subsequently reviews output from the FME session in data grids as well as on a map. The map comes from GeoServer as a WFS service.

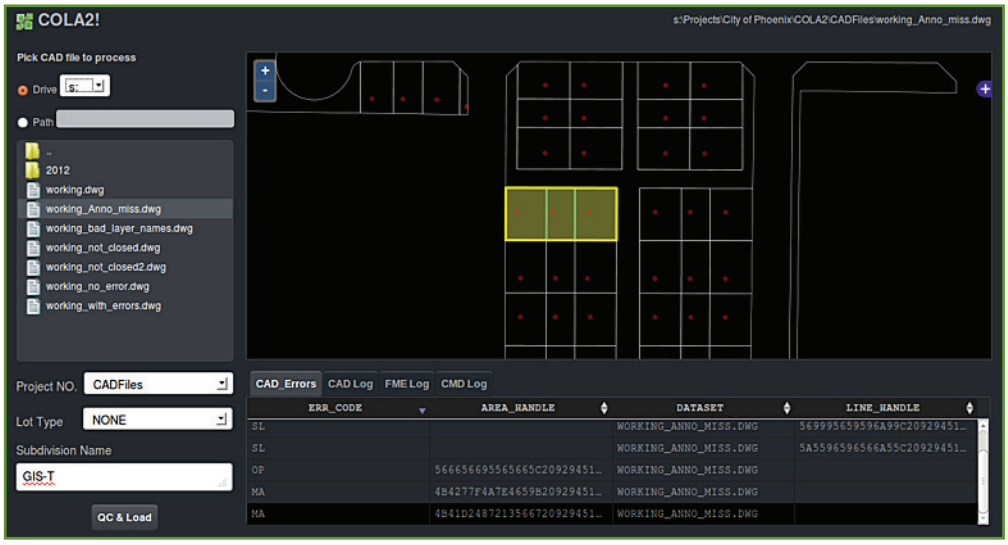

Figure 2 COLA2 Application User Interface

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The Solution

As of this writing, COLA2 has been successfully tested on the City's staging system. It is expected to be in production in May of 2014. According to the user, the "cocktail" appears delicious and healthy!

Why Gistic?

Gistic is known for its expertise in CAD to GIS integration, coupled with its strong application development capabilities and commitment to customer satisfaction.

Technologies

The following technologies were utilized in the COLA2 project:

- Oracle 11g
- AutoCAD 2014
- FME 2013
- Node.js 0.10
- Windows Server 2008

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