

**Supplement to Boggs et al. (2012) Grotto Creek, Front Ranges, Canadian Cordillera: An Example of Google Earth Models, in *Geoscience Canada*, Vol 39, Number 2 August 2012**

This supplement outlines the steps and methodology for creating Figure 10 in Boggs et al. (2012). You will need Google Earth (GE) on Microsoft Windows to access the GE COM API. To see any operations underground you will need GE versions 5.x or 6.2 in order to “hide” the GE Primary Database.



**Figure 10** – WxAzygy® Tools operating in 3D on the selected COLLADA cross section. The WxAzygy interface provides the ability to “point and click” on a COLLADA surface without leaving Google Earth. This add on uses the GE COM API to interpret a user click event on the GE surface as an intersection with a COLLADA model along the user’s line of sight. Note that the coordinates of the selected point provide the real world location {long,lat} and height {metres} above the geoid, which in this example is below ground level. The ability to remove the Primary Database (“A”) is currently supported only in Google Earth 5.x and 6.0. In version 6.2, the Radar item in the Weather folder must be made transparent. User highlights the COLLADA surface (“B”), then selects that surface as the Focus Layer (“C”) and uses the geoCursor (“D”) to click on that surface.

## 1. Download and Install WxAzygy® v21r

The WxAzygy® Fair Use software is available for Windows courtesy of NOAA National Climatic Data Center SBIR Phase III funding under Contract NEEF4100-10-18847. NCDc conducted a security review of the source code and approved it for release with some modifications. A manual for this version is available at [http://wxanalyst.com/WxAzygy/WxAzygy\\_Users\\_Guide\\_v21r.pdf](http://wxanalyst.com/WxAzygy/WxAzygy_Users_Guide_v21r.pdf). The software is provided to you under a Fair Use license agreement, available at

[http://wxanalyst.com/WxAzygy/WxAzygy\\_v21r\\_License.pdf](http://wxanalyst.com/WxAzygy/WxAzygy_v21r_License.pdf).

Download [http://wxanalyst.com/WxAzygy/Release\\_WxAzygy21r\\_beta.zip](http://wxanalyst.com/WxAzygy/Release_WxAzygy21r_beta.zip).

Unzip to some folder. Find and run setup.exe.

## 2. Sample KML

Sample KML are provided as KMZ at [http://wxanalyst.com/WxAzygy/Grotto\\_Creek/](http://wxanalyst.com/WxAzygy/Grotto_Creek/). The cross sections for Boggs et al. (2012) were created using Google SketchUp 8.x, which is currently advanced beyond the capability supported by WxAzygy® v21r. Thus we are providing a version of the cross sections “B” and “C” which are reverted to COLLADA model formats for Google SketchUp 6.x. An update to WxAzygy® is in progress and is expected to be released in 2012.

## 3. Turning OFF the Primary Database

This is step “A”. For GE 5.x or 6.0, open the Layers Database, highlight the Primary Database then move the transparency slider all the way to the left. The Google Earth surface will disappear, leaving My Places and Temporary Places visible. For GE 6.2, highlight the Radar layer in the Weather folder then move the transparency slider all the way to the left.

Removing the Primary Database is essential for geological applications. Please consider writing to your Google representative to request that this capability is preserved in future versions of Google Earth.

## 4. Run WxAzygy®

WxAzygy® will connect to Google Earth upon startup. If Google Earth is not running, then a new GE session will be started. WxAzygy® connects to Google Earth using the GE COM API. Although the GE COM API has been deprecated, as of this writing it is still supported by all versions of GE through 6.2 which are running on the Windows operating system.

## 5. Connect to a Focus Layer

This is step “C”. Select “Focus Layer” in the WxAzygy® User Interface (UI). This will open WxCOLLADA™. Use File/Open to locate and load COLLADA models that are referenced in KML or KMZ documents. Select a COLLADA model in the right hand panel and click the “Fetch DAE” button. Click “Compile DAE” to create the point/line KML models for this COLLADA surface.

The latest DAE compiled becomes the Focus Layer in version 21r. Note that step “B” is a capability in the next release of WxAzygy®.

## 6. GE or Focus Object

Find the GE/Focus Object radio buttons in the UI. These are to the left of the Focus Object button, and to the left and right of the label “GE”. Select GE (left of GE) to click on the Google Earth surface. Select Focus Object (right of GE) to operate on the COLLADA surface which is the current Focus Layer.

## 7. geoCursor

This is step “D”. The geoCursor is moved by click (or touch) and dragging the image of Typhoon Linda (1997). When the drag is complete, the contents of the UI will update with information appropriate for the upper left hand corner of the geoCursor. See the User Manual for a complete description of all information presented in the UI.

## 8. Other geoBrowsers

Since Google has deprecated the GE COM API, a version of WxAzygy® is in development for NASA World Wind Java. WxAzygy® has also been demonstrated on Google Earth web API.

## **9. Comments and Suggestions**

Any comments or suggestions received may be included in this next release. Please send comments to [wxazygy@wxanalyst.com](mailto:wxazygy@wxanalyst.com).

## **10. Acknowledgments**

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