Help for the GeoMashup Web Mapping Tool

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1. Introduction

The GeoMashup Web Mapping Tool is a mash-up web application, providing the ArcGIS Server Map Services and a variety of base maps. As for the base maps, users can choose the Google Maps (Road, Satellite, Hybrid and Physical), the Virtual Earth (Road, Satellite and Hybrid) and the Open Street Map. This Web Application is modified from the ExtMap – Mashup Framework (http://www.geowebdeveloper.com/extmap/ and http://resources.esri.com/arcgisserver/apis/javascript/gmaps/index.cfm?fa=codeGalleryDetails&scriptId=16067). In addition this map application is connected to the Google Docs, an on-line documents by the Google. The spreadsheet of the Google Docs plays a role as a database.

The GeoMashup Web Mapping Tool is comprised of three panels, such as “Tool Bar”, “Layers Panel” and “Map Panel”.

The Layers Panel consists of two folders, such as Water Quality data and Basic map layers. You can see the monthly data of water quality in the “Select one month to view” folder. The “Basic map layers” folder is located below the water quality data.

The Water Quality data are layers of the Google Markers and the Basic map layers are the ArcGIS Server map layers. The Basic map layers will provide background information.
1) Water Quality Information

a. “Select one month to view” folder provides monthly water quality information with the Google Maps Markers.

b. Select one of months from the list.

c. Then the background color of the selected month will be changed to sky blue.

d. The water quality of the month will show up with the Google Maps markers on the Map Panel.
e. The Red markers (🔴) means the totals is over the coliforms federal standard (1,000). If the water quality is within the standard, the color of the marker is green (🟢).

f. When one of the markers is clicked, the descriptions of the marker will pop up with the balloon.

2) Basic map layers

a. Toggling the checkboxes under the Basic map layers folder can turn on/off the layers in the folder, such as “Water Quality”, “Current Conditions” and “Natural Protected Areas”.

b. The following image is when only Water Quality layer is checked.
c. Then the result of when only the Water Quality layer is turned on is as the following image.

2. Tool Bar


1) Zoom In

a. Click the Zoom In button (Zoom In).

b. Drag and Drop the mouse button.
2) Zoom Out

   a. Click the Zoom Out button ( ).
   
   b. Drag and Drop the mouse button.
3) Full Extent
   a. Click the “Full Extent” button ( ) and restore the original extent of the map

4) Measure
   a. Click the Measure button ( ). Then the Measurement Tool Box will show up.
b. (Line measurement tool): Draw lines on the map and measure the distances.

c. (Area measurement tool): Draw a polygon on the map and measure the area.

5) Bookmark

a. You can save the interesting area by the Bookmark ( ). The bookmarked sites are saved in the Bookmark panel on the Menu Panel.

b. Click the Bookmark icon. Then the Bookmarks window will show up. Fill out the bookmark name in the text box and click “OK”.

c. Then the location that you see on the map is saved as a Bookmark, and you can find it on the Bookmarks list.
6) Identify

a. Identify ( ) is a tool to get information about the layer on the **Layers** list. (You don’t need the identify tool to get information from the Water Quality lists).

b. Select the one of layers in the **Layers** list. Then background color of the selected layer is converted to sky blue.

c. Then select a feature on the map. The identify result will show up with a Selection Info table.
7) Base Maps
   a. Click the Base Maps button (Base Maps).
   b. The Base Maps list will show up. Then select the base map among the Google Maps, The Virtual Earth and the Open Street Map.

![Base Maps List]

8) Legend
   a. Click the Legend button (Legend) and see the legends of the layers

9) Options
   a. The Options button (Options) pops up the Configure Mashup window.
b. In the Configure Mashup window, you can set up the user interface options.
   - Navigation: change the Navigation tool types on the map
   - Scale: show/hide Scale bar
   - Overview Map: show/hide the Overview Map
   - Wheel Zoom: Zoom in/out by the wheel on the mouse

3. Layers Panel

The Layers Panel is comprised of the Layer panel and the Bookmark panel. In addition latitude and longitude of the mouse on the map are described on the bottom of the Layers Panel.

1) Layers
   a. Water Quality: On the Water Quality folder, there are layers of water quality from 2008-Jan to 2008-Nov.
   b. Layers: The list includes the ArcGIS Server services. The ArcGIS Services are Current Conditions and Natural Protected Areas on La Paz.

2) Bookmarks
   a. The Bookmarks are the list of interesting areas. The default
Bookmarks are La Paz and Loreto. In addition users can add their interesting areas as a bookmark by using the **Bookmark button** on the Tool Bar.

b. When you click one of the bookmarks, the map will automatically move the bookmarked area.

3) Select Layer

   a. When a layer is selected, the background color shifts to sky blue

   ![Selected Layer](image)

   b. Selecting layer has to be done before using the **Identify button**.

4) Context menu

   a. Each context menu shows up by clicking a layer on the Layers lists. Context menu is comprised of “Remove”, “Layer Options”, “Attribute Table” and “Zoom To Layer”.

   ![Context Menu](image)

   b. Remove: removes the layer

   c. Layer Options: makes the Layer Info window show up. The Layer Info window describes information of the layer such as Layer Name, Layer Type, Layer URL and Data fields. In addition, you can set the **Layer Transparency**.
d. **Attribute Table**: will show up Selection Info window, the table window about all records of the layer.

e. **Zoom to Layer**: Zoom in the layer extent.
Map Panel includes the Navigation Tool, Scale Bar and Overview Map as well as the Map.

a. Scale Bar: shows the scales with the Meters unit and the Miles unit.
b. Overview Map: The Overview map indicates where the map that the user sees on the Map Panel. **The Overview Map is not default function.** To see the Overview Map, you should change the configuration on the Options.
c. Navigation Tool: The zoom level can be controlled and you can move to North, East, West and South by clicking the arrow buttons.