

Society of Cartographers, Annual Summer School 2009
Mike Shand, University of Glasgow

Google Mapping and Mash-ups

Introduction: Map-making has traditionally been the domain of highly skilled professionals with extensive knowledge and experience in the field of cartography. With the development of GIS software, web mapping technologies and access to digital data, it is now possible for non-experts to create their own maps, with Google "MyMaps" or API's (Application Programming Interface), anyone with an internet connection can now become a mapmaker. This explosion of "popular mapping" has been driven by the technologies created by Google Maps and Virtual Earth and in particular the ability to create map "mash-ups" using Google Earth's KML (Keyhole Markup Language) and KMZ (kml zipped) file formats together with easy access to GPS for live and original data collection. A map "mash-up" is simply combination of geographic datasets and maps from various sources brought together for viewing on the Internet as a new map. An API is a collection of programming tools used for building new applications.

A [Google Maps API](#) allows anyone to combine and overlay their own data with Google Maps or Imagery as the background. Google Maps API's can be relatively simple, however they still requires a bit of effort and knowledge of scripting. Geographic data, points, lines, and areas require to be specified as HTML code in latitude/longitude.

The process of mash-ups and API's can be as simple as adding a few location points to a map or as complex as incorporating thousands of data points, lines, and areas to such map. It is clear that while map mash-ups are just beginning to impact on cartography and map-making, they have the potential to revolutionise the way people create and view popular mapping.

This Workshop uses Google Map's "My Maps" and Google Earth features to create your own personalised map mash-ups. You can add your own point, line, and area data to Google Maps and make them available as viewable map mash-ups. You are also required to incorporate text, URL links, photos, and movies to these locations.

The [Google My Maps User's Guide](#) contains clear and simple guidelines on how to create maps with your own data using placemarks (points), lines, and area shapes (polygons). The guide also shows how to edit your maps, add photos and movies (which need to be somewhere on the web), sharing your maps, and getting your maps into Google Earth. It is possible to create your own placemark symbols in software such as Adobe Illustrator and export them in png, jpeg or gif formats.

Symbols links:
<http://google-latlong.blogspot.com/2007/09/custom-icons-for-your-maps.html>
<http://makingmaps.wordpress.com/2007/10/18/custom-map-symbols-in-google-maps/>

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Some useful links referred to and used during the Workshop.

LINKS

Online Guides:

Google Maps Guide - http://maps.google.co.uk/support/?hl=en_GB
Google My Maps User's Guide - <http://maps.google.com/support/bin/answer.py?hl=en&answer=68480>
Google Earth User's Guide - <http://earth.google.com/userguide/v4/>
KML Tutorial - http://code.google.com/apis/kml/documentation/kml_tut.html

Software:

ARCGIS - <http://arcscripts.esri.com/>
Zonum Solutions - <http://www.zonums.com/>
Arc2Earth - <http://www.arc2earth.com/>
KML Creator - <http://www.andrewdavidson.com/google-earth-kml-creator/>
KML Export - <http://www.geograph.org.uk/kml.php>
Or just Google for KML to Shape etc

Mash-ups and Mash-up Blogs:

Google Maps mania - <http://googlemapsmania.blogspot.com/>
Meta Map mashup - <http://metamapmashup.blogspot.com/>
Google Earth Blog - <http://www.earthblog.com/>
Google Lat Long Blog - <http://google-latlong.blogspot.com/>
Geographic Travel - <http://catholicgauze.blogspot.com/>
Mashup APIs/Mapping - http://www.webmashup.com/Mashup_APIs/Mapping/index.php
Map Builder - <http://www.mapbuilder.net/>
Mashable - <http://mashable.com/2008/05/14/17-google-maps-mashups-to-waste-away-your-day/>

Symbols links:

<http://google-latlong.blogspot.com/2007/09/custom-icons-for-your-maps.html>
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