GIS and the Public Mapping Movement

Leveraging public mapping programs to extend the power of GIS

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The United States is experiencing a "movement" in public mapping systems. From Google Maps to Windows Live Local and Mapquest – internet users young and old are becoming more adept and familiar with using maps as part of their daily business.

Geographic information systems (GIS) provide a powerful method to "see" the spatial distribution of features across a given geographic area, often helpful for discerning patterns or alternatively, data gaps. Sometimes it is helpful to provide access to GIS information to others that may not have or be proficient in GIS software. Open access to GIS based information extends the power of GIS analysis by allowing anyone to see spatial distribution patterns.

There are various ways to share GIS data with individuals that do not have GIS software. One very effective method is to overlay a GIS file in Google Earth, a freely available public browser-based software. Google Earth is a stand-alone program, and although free, does need to be **downloaded and installed on each computer** that will be reviewing the files. You can **NOT** view Google Earth through a standard browser like Internet Explorer or Mozilla Firefox. Using Google Earth provides an **easy and intuitive interface** with clear land imagery in most locations, allowing the user to easily recognize their area of interest.

Listed below are some links to information where you can learn more about using GIS data in Google Earth. The first two links reference free scripts that someone with ArcMap can use to export data into a Google Earth friendly format (KML).

We at 1000 Friends of Minnesota are exploring the intersection of these two powerful mapping technologies. How can decisions be informed with the power of GIS yet with the ease of public mapping programs? We have been experimenting with these technologies and invite you to learn more by visiting the links below.

ArcMap Resources –

Listed below are some links to more information where you can learn more about using GIS data in Google Earth. The first two links are to scripts that someone with ArcMap can use to export data into a format (KML) that Google Earth and Google maps can read.

- ArcMap Scripts – Export Shapefile to KML

Export to KML 2.4.5: **http://arcscripts.esri.com/details.asp?dbid=14273**
Last modified March 20, 2008 – **This one is my favorite.**

- KML Hope Companion: **http://arcscripts.esri.com/details.asp?dbid=14495**

(more on reverse)

Google Resources –

Below is a list of resources that can help you learn more about Google map products and learn how to import GIS data with a subscription module.

- Google Maps API: **http://code.google.com/apis/maps/**
- Google Mash Up Editor: **http://code.google.com/gme/**
- Google Earth central: **http://earth.google.com/**
- Community discussion of Google Earth:
  http://bbs.keyhole.com/ubb/ubbthreads.php/Cat/0
- Technical specifications and tutorial for KML files:
  http://earth.google.com/kml/
- A rather pleasant online interface to the same information:
  http://www.keyhole.com/kml/docs/webhelp/

Further information:
http://www.ogleearth.com/index.html
http://www.googleearthhacks.com/

Microsoft Virtual Earth and Window Live Local API and Maps

- **http://www.programmableweb.com/api/microsoft-virtual-earth**
- A fun interface to play with
  http://preview.local.live.com/

Free Geocoders – locate addresses on a map

- **http://geocoder.us/**
- **http://www.batchgeocode.com/** (can handle address lists!)

Worldwide addresses

- **http://worldkit.org/geocoder/**

GPS Visualizer

- **http://www.gpsvisualizer.com/geocode**

GIS Data Sources:

- **Land Management Information Center: http://www.lmic.state.mn.us/**
- **DNR Data Deli: http://deli.dnr.state.mn.us/**
- **MetroGIS: http://www.metrogis.org/data/getdata.shtml**

Online Mapping Sites:

- **Northstar Mapper: http://www.lmic.state.mn.us/chouse/northstarmapper.html**
- **Metropolitan Council: http://gis.metc.state.mn.us/index.asp**