Community GIS Workshop Overview

<u>Workshop Description:</u> Over the past several years NMDC has sponsored a series training events based around Mapping and GIS. These earlier events were very successful and well attended. Although well accepted, what we've found is that overall these new GIS practices were never really adopted by our local Communities. So even though we have had a successful program it has became obvious from our earlier GIS training offerings that there is still a need for a basic level of GIS.

What we have learned through our experience is that our first training events were;
1)   To technical
2)   Too expensive to implement

As the IT industry and GIS in particular become more mature there are more and more offerings of "Off-the-shelf" technology. Some of these applications that either advertise over very large audience or have taken advantage of various public funding sources have become "Open Source" applications that can be readily downloaded, for free, allowing for a basic level of user friendly utility. At the same time by identifying available sources of related information and data that are also available for free (such as road centerlines, township boundaries, water bodies, wetlands, soils, aerial imagery as well as locally created data unique to your community) we can bring a functional level of mapping and GIS to your desktop in a very cost effective way.

In preparation for this workshop we've researched and sampled several free and or open source products but in the interest of time will only be talking about a few examples.

Those of you who participated in our past training events will remember the Environmental Systems Research Institute (ESRI) ArcMap product. The ESRI products have become something of a standard for GIS here in Maine and the state has become heavily invested in this technology. ArcMap is used at NMDC and is a very powerful GIS application but comes at a cost. Users of this product are subject to maintenance fees annually and must undergo an extended training period (learning curve). Many of you may remember the technical nature of this software and have experienced a frustration with attempts to adopt GIS practices upon completion of the training exercise.

Having said all of that, ESRI does offer a free GIS viewer called ArcView. ArcView has the same basic look and feel as ArcMap but with a great deal of the functionality removed. For those who have developed a report with ArcView through past training events, this may be an avenue of interest for you.

One widely available no cost GIS/Map viewer that many will be familiar with is "Google Earth". The basic Google Earth package is a free download and comes complete with a full complement of interesting mapping information. I recommend that even if GIS is not a good fit with your situation that you take advantage of this free mapping platform. We will take some time this evening to explore Google Earth and different ways to benefit from the use of this application.

AGENDA:

6:00 to 9:00 PM

6:00-6:10 Welcome and Introductions

6:10-6:20 Workshop Overview

6:20- 6:30 Lecture: Introduction to Open Source Mapping Applications (Featuring Map Windows)

6:30-7:15 Hands-on: Working with Map Windows, Google Maps Examples

7:15-7:30 More Hands-on/Questions and Answers

7:30-7:45 Break

7:45-8:00 Lecture: No cost data that is available to all municipalities

8:00-8:45 Hands-on: Hands-on Developing/Editing maps and databases.

8:45-9:00 More Hands-on/Questions and Answers

Introduction to Open Source Mapping Applications Featuring Map Windows: For the most part, tonight's exercise will feature MapWindow. *MapWindow* is an open source "Programmable Geographic Information System" that supports manipulation, analysis, and viewing of geospatial data and associated attribute data in several standard GIS data formats. *MapWindow* is a mapping tool, a GIS modeling system and a GIS application programming interface (API) all in one convenient redistributable open source solution.

MapWindow was developed to address the need for a GIS programming without requiring end users to purchase a complete GIS system or become GIS experts. It was also developed in order to distribute data, along with a viewer tool, to many users without having to pay expensive royalties.

For example, a researcher or company may want to deploy a tool that lets communities build and interact with maps of GPS data overlaid on top of USGS quad maps. One approach is to build the tool as an extension to commercial GIS software requiring users to purchase that software to run the extension. Alternatively, the community could use *MapWindow* as a base platform and build their GIS application that performs the needed function with no need for third party software purchases.

No Cost Data Sources: While more options for open source GIS and Mapping now there also exist many options for ready-made no cost data. Here in Maine we are blessed with one of the finest State run GIS programs in the nation and with that a very comprehensive listing of available data at both regional and local scales.

The Federal Government is also a data rich environment with many departments offering up data for a wide variety of applications. Examples of data from the US Government are Census Bureau Tiger and Dime files and the USDA Data Gateway.

One word of caution is though there is abundant data available; we should always consider the source. Because of the ease of searching via the internet these searches may yield old or even incorrect data. The following is a quote from an industry news letter;

Industry News Safe Software Introduces FME 2010
By Susan Smith

"The problem with data is there is more of it coming from more sources. Organizations have to do more with it to make their whole organization run more efficiently."

So say Don Murray, president and founder, and Dale Lutz, vice president and co-founder of Safe Software, the creators of FME, their spatial ETL solution.

In short when seeking out the appropriate data consider your project and consider the data source.

Internet References:

http://www.mapwindow.org/

http://www.mapwindow.org/tutorials/

http://www.epa.gov/cupss/

http://www.epa.gov/cupss/resources.html

http://earth.google.com/

http://www.tatukgis.com/Home/home.aspx

http://www.maine.gov/dep/gis/

http://www2.census.gov/cgi-bin/shapefiles/national-files

http://megis.maine.gov/catalog/

http://www.maine.gov/geolib/wms.htm

http://megis.maine.gov/maps/

http://datagateway.nrcs.usda.gov/

http://gos2.geodata.gov/wps/portal/gos

http://www.megug.org/