

One map to rule them all...

— by Frank of the anonymous surname, WebMapping, September 17, 2005

Maps are cool. Geographers have known this for years. The rest of the world is just figuring this out. Stuff has a spatial relationship to other stuff and we can easily show what it is—with a map! Luckily there has been an explosion in online map making tools recently. No headline here —online mapping is hot. Hotter than hot. Everybody and their brother is putting out an online map now. We have maps for subways, for byways, for houses, for apartments, for looking for love in all the wrong places, for pictures, for pictures of looking for love in all the wrong places... You can hardly swing your web browser around without hitting a map these days.

For all their coolness, the downside to maps is that they have to be accurate to be of any use. Sure, pictures are worth a thousand words, but you want to make sure you're saying the right ones. Otherwise we're just talking about a picture with some lines and photos and stuff, and that's art.

The cold hard truth is that, with the exception of certain places on the planet, most of our current online maps aren't that great—either because the data they're based upon is inaccurate or the tools used to make them are entirely too difficult to use.

Data is a tricky subject. People more knowledgeable than I am spend their entire careers on the stuff (God love them, someone has to). What we do know about data is that normally the people with the best view are usually closer to the ground. Think about it—you probably know more about where your garage is than the mayor of your town. The

mayor knows better than your governor, and he knows better than your U.S. Senator. We also know that data is useless sitting around. You have to be able to DO something with it to make it worthwhile.

The toolset matters too—if the tools aren't robust enough or they're too complicated, you can't make the maps you want to make.

Right now, the world of online maps is dominated by two major groups—your data people and your tool people. Data people are focusing on getting the best data from the best sources and serving it up to the public. Tool people are trying to make the best tools to get the maps produced. Data people and tool people talk together about as much as mountain lions and cruise directors do.... Which is to say not at all.

What needs to happen is for the tool people and the data people to go have a group luau or something. They need to go and have a good old time. Then, in the morning, they need to sit down and figure out how to get their approaches to making maps work together.

Good tools need to sit on good data. Distributed data systems can feed good cartographic tools to make great online maps. Furthermore, those tools don't have to be complicated and difficult to work with.

As hot as online maps are right now, they'll be kicked up twenty or so notches when these two groups can get together. An accurate, locally stewarded data source driving robust simple tools could become a development platform for so much more than just maps. That's when it will be time to get excited. ■

Animated time-varying data for free

Applied Science Associates, Inc. (ASA) recently released TimeSlider, an extension for ArcGIS 9.1 that helps animate feature data with date and time information.

"One of the challenges with managing 2 and 3-dimensional geospatial data is displaying and understanding data as it evolves over time," explains Eoin Howlett, ASA's CEO, who has assigned a dedicated software development team to develop more freeware and useful GIS tools.

Geographically based phenomena ranging from geological processes to short-term movement of vehicles or marine mammals require temporal analysis. ASA's TimeSlider extension allows ArcMap users to specify a field that contains date and time information for geographic features. The TimeSlider can manage multiple time-varying layers, including layers that have different time steps.

The TimeSlider extension has been used to manage time series observation data from multiple points (e.g., current meters, wind stations, water quality sensors); satellite-derived observation data (e.g. sea surface temperature); moving objects (e.g., drifting buoys, vehicles, vessels); numerical model results (e.g., oil spills, hydrodynamic simulations, sediment transport); and many others.

"We've built and have been using this tool ourselves for a number of key projects related to climate change, oil spill response and maritime search and rescue, and we felt that it could help GIS professionals and scientists using ESRI GIS tools," Mr. Howlett mentioned as he discussed the freeware release.

The TimeSlider extension has been made available by ASA for free download and use via the ASA Web site at <http://www.asascience.com/downloads>. [<http://www.asascience.com>.] ■