

A Growing Demand for Geospatial Data

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The often-touted but barely realized National Spatial Data Infrastructure (NSDI) could get a needed boost from Congress and the Obama administration, creating vigorous demand for geospatial services, products and data. Several programs could generate millions of dollars in funding, create thousands of new jobs, and expand the market for the geospatial community. The question is, will the geospatial community turn this potential into reality?

Data in Demand

There are several initiatives being discussed in Washington, D.C., requiring a current, accurate and robust set of national geospatial data layers. NSDI isn't a reality yet, but policy makers among Congress and federal agencies either assume such data already exist or are prepared to invest heavily to create the data.

Climate Change

For several years, there has been significant public debate over the issue of global climate change. Without taking sides in the question of whether man is causing changes in the atmosphere, the fact is there's no U.S. national geospatial data to quantify the effects of climate change through a system to measure, monitor, verify and validate its alleged phenomena. To quantify the effects of climate change and monitor progress in abating its effects requires data such as land use and land cover; a LiDAR layer to measure biomass, definition and delineation of the nation's shoreline; and other spatial information.

Cap and Trade

Similarly, President Obama has endorsed the idea of a "cap and trade" system to limit carbon dioxide (CO₂) emissions. The "cap" would set a maximum amount of carbon to be emitted in the United States and by individual CO₂ generators, and the "trade" would allow the low carbon emitters to trade carbon credits to those above the cap, resulting in a net, national CO₂ reduction. A geospatial program

would be needed to provide baseline and temporal data to implement and operate a cap and trade system. Moreover, current national digital ortho coverage, parcel information and other data layers will be needed to implement and enforce cap and trade.

Smart Grid

The president has proposed, a "smart grid" for new electric power and clean energy that includes wind, solar and other nonfossil, renewable energy sources. A smart grid delivers electricity generated from suppliers of new, cleaner, renewable, nonfossil sources to consumers using digital technology. Again, just as with climate change and cap and trade, this program will require geospatial data to identify distribution and transmission systems.

Highway Bill

The current highway bill—the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users—authorizes the federal surface transportation programs for highways, highway safety and transit. The bill expires Sept. 30, and Congress will consider a new bill. The Transportation Research Board has recommended that transportation organizations leverage geospatial information and tools by building and maintaining different relationships and enabling new and creative ways to do business, implementing a new model for geospatial information development and use by the transportation system.

Widespread, systematic use of geospatial data could be achieved through a focused alliance and collaboration among public, private and academic communities, recognizing that the role of federal agencies is to enable state and local agencies and the private sector to carry out their missions; solicit data from data owners and providers; and encourage data sharing among agencies, users and decision makers. A fully implemented and coordinated transportation data program for the NSDI, including geodetic control, parcels, orthoimagery, elevation, hydrography, administrative units and transportation (including street networks/road centerline data) could become one of the most widely used geospatial information activities in today's society.

DHS Reauthorization

Congress will consider legislation reauthorizing the Department of Homeland Security (DHS). Although legislation to establish a Geospatial Management Office in DHS was enacted after the department was created in the aftermath of 9/11, there's still no vibrant geospatial program in the department to meet its many agencies' missions and needs. The reauthorization bill provides an opportunity to implement geospatial activities that would be essential to our nation's homeland security and across various DHS agencies, which range from the Federal Emergency Management Agency to the Coast Guard to the U.S. Customs and Border Protection agency.

National Cadastre

The Federal Land Asset Inventory Reform Act—to provide for a current, accurate inventory or cadastre of federal land ownership—has been reintroduced in the U.S. House of Representatives (H.R. 1520 by Rep. Ron Kind, D-Wis., and Rep. Rob Bishop, R-Utah), and a companion bill will be offered in the Senate. On May 7, the U.S. government convened a summit meeting of stakeholders to explore establishing a multipurpose cadastre to inventory and manage the portfolio of mortgages Uncle Sam now has as a result of the foreclosure and financial institution bailouts, and to provide an early warning system to help identify and prevent similar mortgage trends in the future. The need for a national parcel system, or multipurpose cadastre, first recommended by the National Academy of Sciences in 1980, never has been so evident.

Widespread Benefits

These programs can create demand for hundreds of millions of dollars of geospatial services, data and products. MAPPS, a national association of private geospatial firms, has the community's most active government affairs program in the nation's capital, and is serving as a catalyst in developing recommendations that can be shared with Congress, the White House and senior federal agency officials on the role of geospatial data in these important initiatives and proposals. Sessions on these initiatives will be featured at the MAPPS Summer Meeting, which will be held June 25-29, 2009, on Cape Cod in Brewster, Mass. EJ