

GIS Aids Emergency Management

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Emergency management agencies and the general public require high-quality routing information during emergency events. It's frustrating when you can't get from Point A to Point B because the mapping system you use doesn't contain the right data — or worse yet, you get directions that are wrong.

With the advent of free mapping tools, such as Google Earth and Microsoft Virtual Earth, and the proliferation of on-board navigation systems from Garmin and TomTom, the geographic information system (GIS) has gone mainstream. Users expect to receive correct directions from wherever they are to wherever they're going.

Governments also tap mapping tools to disseminate information to employees and the general public. For example, state and local emergency management organizations use the tools to manage their resources by providing basic mapping and routing assistance. The downside of deployment, however, is that timeliness and accuracy aren't good enough for real-time operation.

During last June's floods in Wisconsin, 92 closures occurred on state roads alone. Interstates 39/90/94, the main corridors linking Chicago to Minneapolis and Madison to Milwaukee, were closed for an extended period. In Jefferson County, one of the many counties affected by the floods, 60 miles of county roads and five bridges were closed for about two weeks.

To assist motorists, the Wisconsin Department of Transportation posted a road closure map on its website using Google Earth. While this was useful, it didn't provide for real-time routing around the many closed roads. Users could see on the map which roads were flooded, but if they tried to use the map to find a detour, the application merely reverted back to old data that did not include the road closure information. Emergency managers were unable to use the information to respond to events, nor could the general public use the application to make basic decisions on whether or not to travel.

To close the loop and provide a truly useful tool, local, state and federal data managers must work together with major data providers, such as Navteq and Tele Atlas, to get better real-time information onto their mapping systems and into the hands of commercial web-mapping sites.

Consider the benefits of having this information readily accessible over the Internet for routing purposes — whether for emergency response, for commercial functions such as trucking, or for commuters. Not only could such information save lives, it also could save companies and individuals thousands of dollars in unnecessary travel costs through access to accurate routing information during emergencies.

Case in point: I recently visited a friend in Denver who had moved into a new home that had been built about six months earlier. When I called to arrange a meeting time, he told me that directions on the Internet mapping sites wouldn't get me to his house because the municipal or county assessor, recorder or building department hadn't yet transferred the data.

Whether for everyday use or to give state and local service providers better information, it's imperative for government and commercial map data providers to coordinate their efforts to provide more timely and accurate information to web-mapping Internet services.



Wisconsin Dells Disaster

Last June, flooding eroded a portion of a Wisconsin highway that served as a dam for Lake Delton.

The lake created a new channel to the Wisconsin River and emptied completely in only a few hours, wiping out homes in its path.

The Wisconsin Department of Natural Resources aims to have the lake reconstruction project complete by late spring.

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