

FIRE RESCUE'S

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GEAR TEST

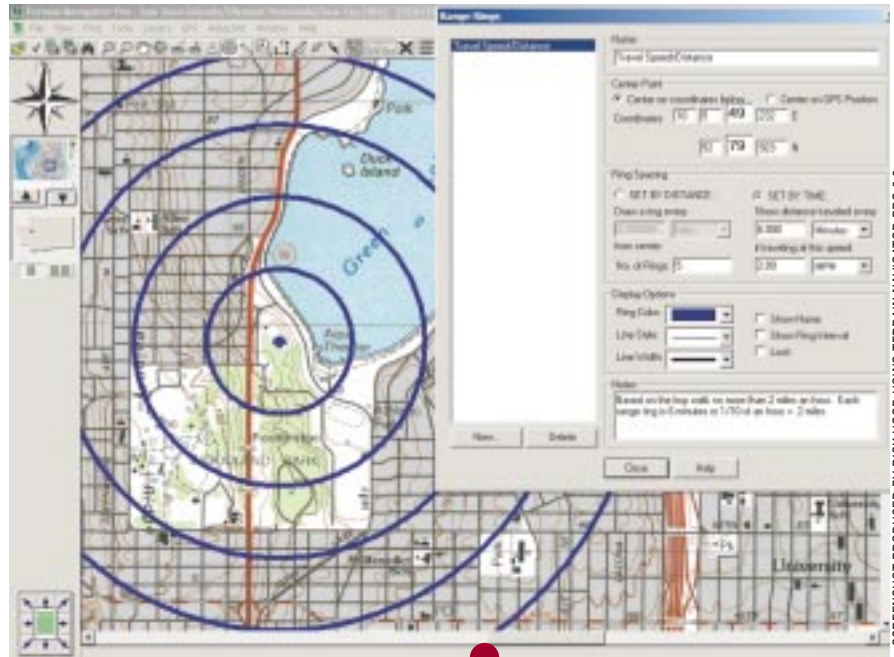
## Terrain Navigator Pro

Maptech adds rescue-friendly tools to mapping software

By Rick Hood

**S**treet maps are core informational tools for the emergency responder business. However, when a response involves going beyond the streets, topographic maps are the maps of choice because they depict detailed terrain information, including elevation. Even in town, topographic maps prove extremely useful when planning for or responding to urban emergencies such as flooding, large-scale hazmat concerns or homeland security issues.

Today, the U.S. Geographical Survey's (USGS) 1:24000-scale or 7.5-minute quadrangle is the most readily available and recognized hardcopy map. Each map costs



SCREENSHOT PRODUCED BY RICK HOOD USING TERRAIN NAVIGATOR PRO 6.0

around \$6, measures approximately 22 x 27 inches and covers roughly 50 square miles. In Washington state, we might need 10–50 of these maps for full county coverage, and about 1,500 for the entire state (which we might need to provide mutual aid).

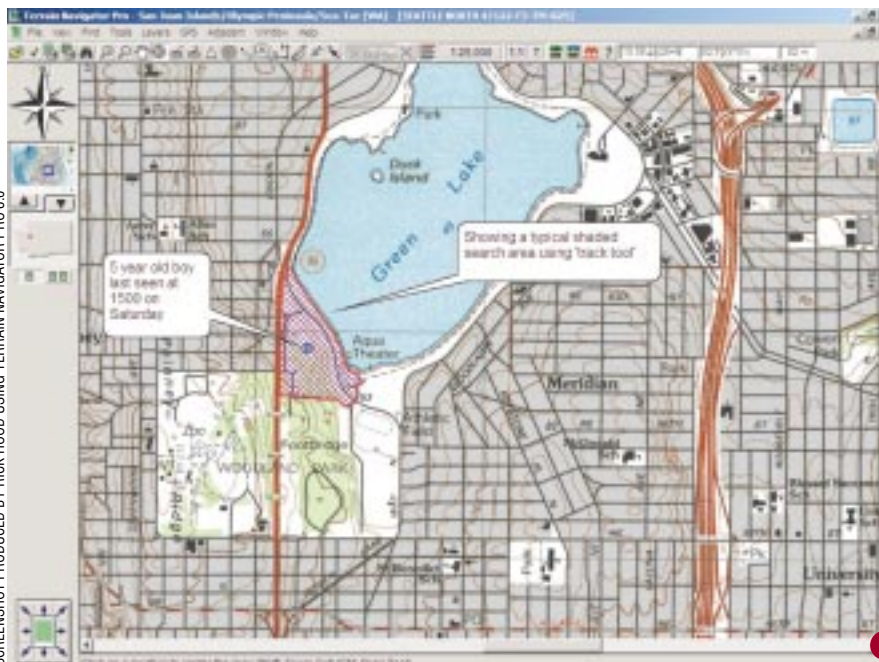
CD-ROM- and online-based maps

**By placing range rings on a map, users can estimate how far a victim might have walked in specific increments of time.**

exist, including Maptech's exceptional flagship product, Terrain Navigator. This software package costs roughly \$300 per state, and you receive a complete set of scanned USGS 7.5-minute quadrangles, the associated aerial photos and the corresponding 1:100,000-scale maps for the state you choose. In essence, they are the actual maps; if your printer or plotter supports it, you can print out the entire map, including the surrounding collar information. You can also print a map segment on a standard sheet of 8.5 x 11" paper. The software does this quickly and cleanly, and it will print just the area you want even if it crosses the "seams" between multiple quadrangles—you won't even know the seams were there. Terrain Navigator's screen display is sharp, and the default scale matches that found on USGS paper maps.

Terrain Navigator's rich database has a

**Users can shade an area on a map to illustrate a high-priority search area.**



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rapid finder tool that can look up a map via a map name, geographic coordinates, a zip code or a location. A rescuer could leverage this capability, for example, by finding a particular city, then locating the nearest 15 lakes. The software's navigation buttons work well, but I really appreciate the ability to access almost any function or tool by performing a right click on the mouse.

Maptech recently released Terrain Navigator Pro 6.0, and the company carried a host of other Terrain Navigator rescue-grade features and functions into the upgraded version, such as incident command system marker symbols, individual map or seamless toggle capability, GPS unloading/downloading/real-time tracking, a 3-D display and side-by-side viewing, show/hide/delete layering and Palm and Pocket PC utilities, to name a few. However, Terrain Navigator Pro 6.0 substantially extends the functionality in many areas useful to incident responders, planners and managers. My personal "top five" upgrades include:

**1. Map copying**—You can select any or all of the maps on a particular CD from a graphic display or a list and copy them to your computer's hard drive. Each map requires about 4MB of space. (I put the entire set of maps for Washington state on my hard drive, which consumed about 3GB of my 30GB hard drive.) This eliminates the "CD boundary" problem that can arise if you use one of the perimeter maps on one CD but need to use the adjacent map found on another CD. The maps and database seem to run just as quickly off the hard drive as they do off the CD.

**2. Better annotation**—You can now quickly shade closed routes or tracks with colors and patterns, which can prove useful for area assignments or spill/plume coverage, for example. It's easy to display the area, leg lengths and other information. In addition, a handy label tool allows users to customize the text they place on maps, and you can resize marker and route symbols the same way. These features help users make sure that if they print a map at 300 percent, for example, the symbols remain appropriately sized.

**Above:** Add shaded areas to maps and aerial photos and place the two side by side to aid a search.

**Right:** Place a typical topographic map next to a 3-D map of the same area.

**Pros**

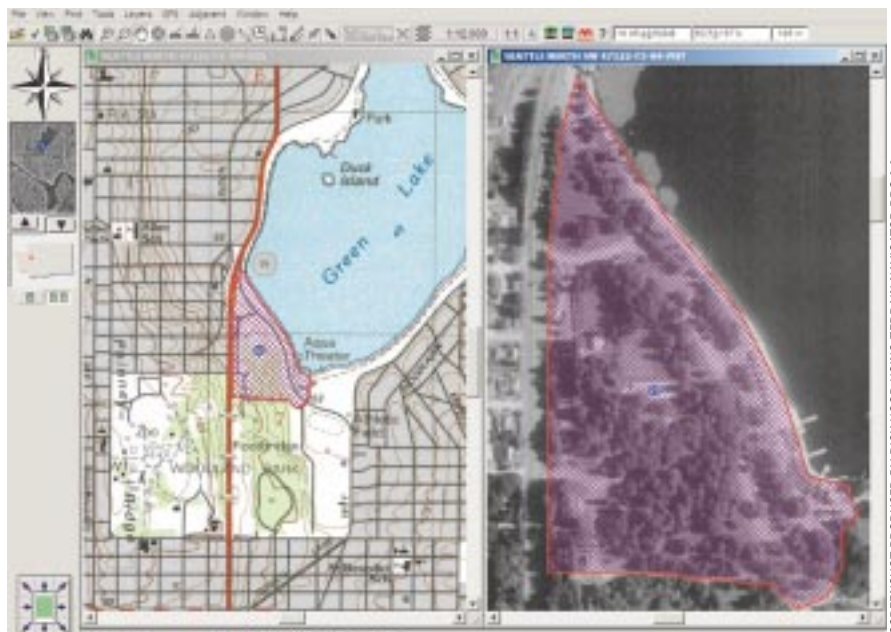
- + Costs \$300 per state, including aerial photos;
- + Includes actual USGS topographic maps scanned in at high quality;
- + Includes value-added software features including find, view, mark and print options;
- + Aeronautical and nautical charts are available as well; and
- + Works well with GPS and Pocket PC/Palm systems.

**Cons**

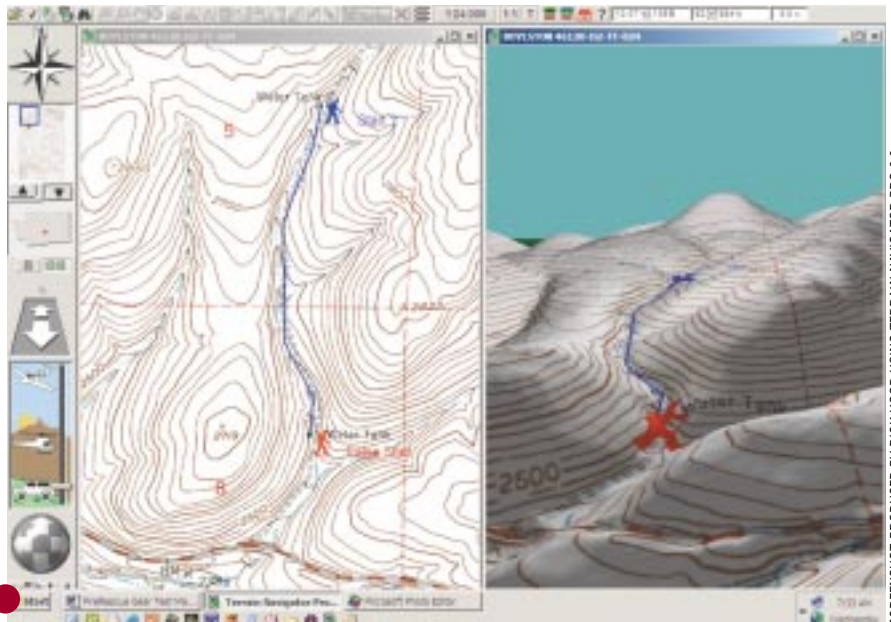
- USGS 7.5-minute series may not be up to date;
- The raster-based maps only enlarge so much before they grow fuzzy;
- You can't download a demo of Terrain Navigator Pro;
- You must download any aerial from the Internet, and, after the first year, you must pay a renew fee for this feature; and
- No automatic on-screen grid display.

*For More information contact Maptech Inc. at 978/792-1000, [www.maptech.com](http://www.maptech.com).*

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SCREENSHOT PRODUCED BY RICK HOOD USING TERRAIN NAVIGATOR PRO 6.0



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**3. Data rollovers**—With the GeoTip feature, an information text box will appear if the user places the cursor over any part of the displayed map. For example, if you stop the cursor over a building, the street address appears even if there is no mark on the map itself. (The database behind this feature is more current than the maps.) It's easy to change the defaults for this feature, too. *Example:* If you pause the cursor over a general area of the map, you can set GeoTip to display the area's grade, though GeoTip will still display the street or feature name if you roll the cursor over these kinds of features.

**4. Online aerial photos**—If you are connected to the Internet (or have previously downloaded the aerial photos), you can quickly obtain the corresponding aerial photo for any map displayed. This feature works extremely well; with a 56K modem, it takes about a minute to download each photo, but you get the exact area you want every time, and the photos are high resolution, too. If you have placed any markers or routes on your terrain map and then select the two-map side-by-side view, all those annotations appear on the aerial as well. In addition, you can display the aerial in 2-D or 3-D mode, and the photos are usually more current than the topographic maps, which proves helpful when you work in an ever-changing urban environment.

**5. Range rings and lines**—You can place rings on a map to display a set distance or distance as a function of time. *Example:* If a missing person was last seen at a certain location, you can display via rings how far they could travel each hour from that location by entering an assumed speed. This should prove useful for disaster and homeland security preplanning as well. The range lines can illustrate a scale of any distance you choose across a map, and you can cross two lines or use the quick-repeat option to generate parallel magnetic north/south lines or grid search lines, for example.

In sum, if you work with USGS topographic maps, you should find Maptech Terrain Navigator Pro 6.0 an excellent fit. You can download the complete, standard version of Terrain Navigator (version 5.03) with one of three sample maps from Maptech to form your own opinion of the product.

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