

Rescuers often can't find 911 callers

By JOHN DUNBAR

Associated Press Writer



AP Photo/MARK LENNIHAN

WASHINGTON (AP) -- A new report by a public safety group throws into question the ability of police and firefighters to locate people through their cell phones when they dial 911 in an emergency.

The study is believed to be the first independent evaluation of wireless location technology and sends a clear message: Do not assume rescuers will know where you are if you call 911 from a cell phone.

The report was commissioned by the Association of Public Safety Communications Officials International (APCO), a group that has long been concerned about the limitations of the technology and the public's unrealistic expectations of what it can deliver.

The Associated Press was given an advance copy of the study, which will be officially released in May.

Carriers are required to test their location systems and to be able to pinpoint callers within certain distances. But they are not required to share their test results with 911 dispatchers, police and firefighters. And the Federal Communications Commission does no testing of its own.

So using a grant from the Public Safety Foundation of America, APCO began work in August of 2005 on Project LOCATE, to find out on its own how well the systems were working.

The answer? Not very well.

"We were hopeful that the information that they were seeing on a wireless call would be closer to the location than it was," said project chairwoman Nancy Pollock. "We were very disappointed."

Tests were conducted in seven different communities across the country - Palo Alto, Calif.; Marion County, Fla.; Jasper County, Mo.; Onondaga County, N.Y.; Rowan County, N.C.; Bexar County, Texas; and Laramie, Wyo. The cities were selected based on topography, demographics, existing technology and other factors.

APCO declined to identify the cell phone companies in its report and was careful in its criticism of the industry. But the details tell the story.

The FCC requires companies that use "network" technology - triangulating among cell towers to determine the caller's location - to come within 300 meters of the caller 95 percent of the time.

The company identified as "carrier No. 001" in the testing was unable to come within 300 meters of the 911 caller 73 percent of the time in Onondaga County; 64 percent of the time in Marion County; and 61 percent of the time in Jasper County.

Two companies tested used network technology primarily while five used "handset" technology, meaning they use global positioning system satellites to locate callers. Federal rules require companies using

satellites to come within 150 meters for 95 percent of calls.

Carrier No. 002 was able to hit inside the target area 90 percent of the time in Bexar County; 89 percent of the time in Laramie; 87 percent of the time in Onondaga County and 80 percent of the time in Palo Alto.

In the vast majority of cases, people who call 911 from their cell phone are able to provide their location. But sometimes they cannot.

William A. Cade Jr., project coordinator with APCO, recalls a one-car accident in Missouri where the caller was unable to provide a location and a young person "died by the side of the road" before help could arrive.

Location information can determine "which side of the mountain in West Virginia do I go up to get to the accident" or which fire company and ambulance company gets dispatched, he said.

Results varied based on carriers and geography. A few communities, however, stood out for poor performance, among them Marion County, Fla., which includes the city of Ocala; Onondaga County in New York and Jasper County, Mo.

If accuracy were measured at the community level, according to APCO's results, 71 percent of the tests would get a failing grade. But companies are allowed to measure their accuracy over a much larger area - an entire state, for example. That means highly accurate results in one area may drive up the average overall.

FCC Chairman Kevin Martin told the AP earlier this month that he will recommend to the commission that it order companies to begin testing at the community, or "public safety answering point" level.

Joe Farren, spokesman for CTIA, the wireless industry's lobbying association, said when customers call 911 that "the first thing you should do if you can, is to provide your location."

Farren said the technology is "certainly not perfect" and it was "was never envisioned to be perfect," but that it is "as good as today's technology allows it to be."

Each of the wireless companies tested provided service in at least two of the test markets. A total of 203 telephone calls per carrier were made from randomly selected areas within the sample communities.

Testers calculated the distance between the actual origination point of the call and the displayed location to determine accuracy.

The report didn't name carriers, but it is well known what kind of location technologies they use.

Cingular Wireless, now wholly owned by AT&T Inc., uses network-based technology. The company is the largest cell phone provider with 61 million subscribers. T-Mobile USA, with about 25 million subscribers, also uses network technology. Verizon Wireless, with 59 million subscribers, and Sprint Nextel use satellite technology.

Generally speaking, the network solution works better in urban areas where it may be difficult for a satellite signal to penetrate buildings, but not so well in rural areas because of a lack of towers. Phones that use satellite technology are excellent in rural areas where there is little overhead interference.

While the report pointed out the generally poor performance of the wireless industry in locating 911 callers, it also pointed out a need for 911 call centers to work closely with providers and the importance of public education.

A new generation of telephone customers is being raised without using land-based telephone lines. But they still expect rescuers to be able to find them.

The issue has become more critical as the number of 911 calls from cell phones exceeds those coming from land lines, public safety experts say.

CTIA reports that 230,000 calls to 911 are made from cell phones each day. The group also estimates that 8.4 percent of households are "wireless only."