

Software signals shift for firefighters

Volunteer develops automated notification system

By Peter Smith

CUMBERLAND - Fire Chief Dan Small was at the Maine Mall with his wife doing Christmas shopping when he got a fire call - or rather, a fire text message.

He rounded up his kids, went out to his truck and called the station. Then he listened to the previous 10 minutes of radio traffic compressed into less than a minute.

In short, there was no rush. A Yarmouth structure fire turned out to be a vehicle fire away from buildings, which had been brought under control.

"It's very convenient," Small said. "Not to have to listen to the whole thing and just get to the punch line.

"Over the last year, Cumberland's on-call volunteers have been the testing grounds for a new notification system, which alerts them via cell phone text messaging and compresses radio chatter. The software package, called Second Signal, developed by Lt Andrew Pollack, addresses acute problems faced by small volunteer fire departments in rural towns-turned-bedroom communities.

Small said he carries a \$600 portable two-way radio unit, which his volunteer department could afford only through a federal grant. Departments can rarely spend that on units for each volunteer,

which in Cumberland total about 100. Besides, the radios have a limited range - usually about five or six miles, depending on weather and topography

.And listening to chatter and squelches on a radio scanner, besides banal, almost seems like a thing of Cumberland past. "If you're sitting in an office,"* Small said, "you're not going to have your scanner on.

"So for most volunteers, who often work at day jobs outside town, these limitations have meant wearing text pagers. But some balked at carrying an extra gadget, especially when they already had a pager with a different carrier or a cellphone. And few volunteers wanted to test their employer's resolve responding to false alarms during the 9 a.m. to 5 p.m. workday, when most calls come in.

"Our daytime staffing kills us," Small said. Additionally, departments typically attract volunteers who are busy with young families, kids' sports and the physical demands of the job - all a recipe for dwindling staff.

Two area fires this month suggest the results of this acute problem. A fire at 321 Blanchard Road was contained by volunteers, but a home at 5 Falmouth Road in Falmouth burned almost entirely before crews responded. One

contributing factor: the time of day. The Cumberland fire was at night; the Falmouth blaze was around midday.

Pollack, a full-time software programmer, came up with a high-tech solution: Computer software that automatically alerts firefighters by cell phone text message. Like radio pagers, the program screens radio traffic for a sequence of tones that indicate a fire. The computer "reads" audio waves and sends out a text message to subscribers and volunteers, who can limit their availability. A separate feature allows volunteers to receive calls on their personal computers.

"There's no human intervention," Small said. "That's the best thing."

He said while regionalization offers "a much better product," dispatchers don't have time to type a message for volunteers. With Second Signal, Small said, "the message is getting out in a more timely fashion."

Besides the software package, which Pollack plans to sell, the system only requires a cable connecting a radio scanner to a PC. As radio calls come in, the software also converts all communication into a condensed version, without pauses. After receiving an alert, a volunteer can call the station's local number, listen to what the call is, and determine whether it's worth leaving work.

So far, word has spread. Pollack says many firefighters work in multiple departments and have heard about the system through word-of-mouth.

"It seems obvious," Pollack said, but the calculus involved in the programming was not easy. Pollack, who runs a software-development business out of his home, spent years working on the code.

"This just integrates my work at work and my work on the Fire Department," he said.

That work, he hopes, will help other volunteer departments work better. By the end of January, he hopes to have 10 departments using the system.