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F I E L D R E P O R T



It seems simple and obvious that firefighters and first responders need to be alerted to emergencies before they can render services. However, there are many ways in which that task can be handled, and one way is through a commercial product called FIRST-IN Fire Station Alerting Systems by Westnet.

The Knoxville (TN) Fire Department is one of the agencies that has chosen Westnet for its station alerting needs.

Knoxville is a medium-sized metropolitan area in the center of the state with a population of about 180,000 residents on the Tennessee River. Its fire department has about 20 stations and 36 front-line apparatus staffed by about 325 personnel.

The department first put in a departmentwide station alerting system in 1985, one that served the city well until about two years ago, when the system flat out became obsolete and the manufacturer no longer supported the product, said Knoxville Assistant Chief Mark Wilbanks, who serves as the department's health, safety, and communications officer.

"It was a very simplistic system," Wilbanks said. "What it did was basically turn on every light in the fire station and opened up an amp and PA system, and dispatch went over our 800-megahertz trunked system and announced a call for the individual companies."

Wilbanks said the department was able to control individual stations and companies, but that was about it. The system was very reliable, easy to maintain, and easy to work on, but when parts were no longer available, it was time to part ways with the old system.

Having experience with a simple and reliable station alerting system, Knoxville fire officials were looking for a similar product when it was time to start looking for a replacement.

"We went out to bid and we demo'd a lot of products," Wilbanks said. "We came down to really three main competitors. When we started to dig into the meat and potatoes of it, one of the things we really liked about the Westnet system is it's a simple product. It doesn't require a lot of products. The core equipment is very simplistic."

And for Wilbanks, that was a very important feature, having had the experience with the previous system that did the job for about 30 years.

Another deciding factor in Knoxville's decision to do business with Westnet is the involvement the company's owner, Dick Matheny, had in the project, Wilbanks said.

"Dick took a lot of time to explain how the system worked," Wilbanks said. "He was actually pretty integral in the installation. One thing we have learned over time is that Westnet is a family, and they treat their customers a lot like family. They are very good to us. Obviously, we have a maintenance agreement with them, but they are on top of problems when we have them."

By way of example, Wilbanks said Knoxville had a huge problem with a ransomware attack over the winter of 2020, in the middle of the COVID-19 pandemic.

"They jumped right on it and made sure everything was healthy and made sure we didn't have any problems," Wilbanks said. "They went the extra mile for us when we had this problem, and they made sure we were up and running. They offered a lot of technical support for us. It was kind of above and beyond what you might expect. And, I have had a lot of good responses out of Westnet over time."

Knoxville station alerting system uses Westnet's automated voice dispatching feature, which has streamlined the response process and made the department more efficient, Wilbanks said.

"I do feel like it has helped our turnout times some," Wilbanks said. He explained the Knoxville stations have been equipped with monitors throughout the stations, which gives responders call information such as addresses, TAC channels, and other relevant information.



Westnet's Turnout Timer helps reduce response time.

"All of that has enhanced our ability to really know what we're going on and where we are going very quickly, and it helps us to get out the door quickly," Wilbanks said.

Knoxville firefighters have made the adjustment from a live human dispatcher's voice to an automated voice, and they have affectionately named the automated dispatcher Lola, Wilbanks said.

"They have gotten used to it, and everybody seems to love it," Wilbanks said, adding that Knoxville selected a female voice over the male voice and it sounds very human, unlike computer-generated voices found on cell phones and other devices.

Wilbanks said the automated voice dispatching system can be programmed to reflect local dialectic. For example, Knoxville has a highway called Dante Road, as in "Dante's Inferno"; however, locally, it's pronounced "Dainty" Road, Wilbanks said.

"So, I had to teach Lola how to say Dainty Road," Wilbanks said. "I had to teach our system how to say that, but it's a very simple system and it's easy to teach the system how to use the right terms for your location."

Knoxville's station alerting system uses Westnet's Radio Interface Controller (RIC), which Wilbanks calls a "kind of backup of the backup" system. He explained that if Knoxville's primary and secondary servers were to go down for whatever reason, the city will still have the RIC system. That allows a dispatcher to use a keypad to turn on lights, make announcements, open doors, and do all the normal dispatching processes over the radio system, he said.

"So far, it has worked flawlessly," Wilbanks said. "We have not had any difficulties with that."

One of the features most appreciated by the Knoxville firefighters is Westnet's system of ramping up lights and tones to lights to reduce cardiac stress, Wilbanks said.

"That was one of the big things our fire chief really wanted," he said. "When we looked at these new systems, we wanted to see what we could do to help with the startling of our firefighters during the middle of the night when they are asleep. We wanted to reduce the effects on the cardiovascular system."

The ramp-up system is "pretty subtle," Wilbanks said. "We went from every light in the fire station coming on, and I am talking about every white light in the station, to very subtle red lights coming on. It works really well."

In phase two of the station alerting system project, Wilbanks said he wants to convert all the white lights to red lights for nighttime responses in all the stations.

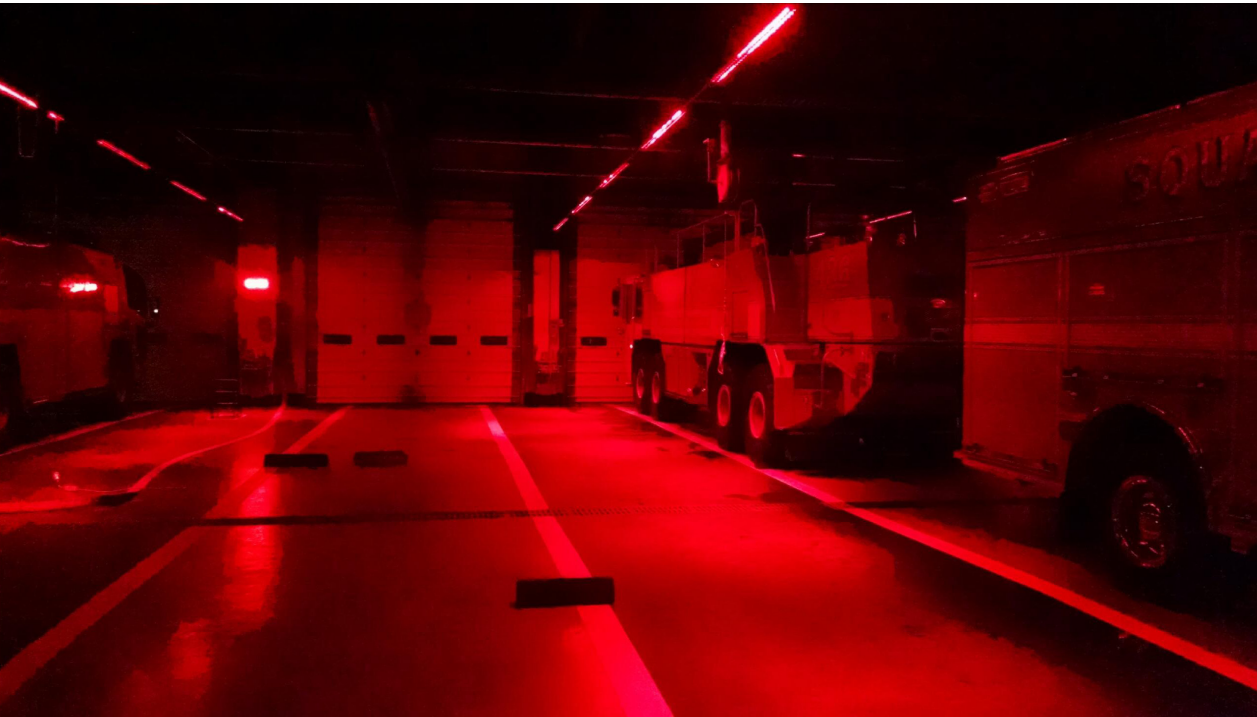
Westnet also has some products that Wilbanks said Knoxville hasn't fully adopted yet but is integrating in phases.

Dorm Remotes zone out certain sleeping quarters to minimize the disturbance to all staff at the station during nighttime alarms. Wilbanks said the only zones that are controlled presently are the battalion chiefs' quarters.

"So, the battalion chief gets woke up when he's needed, but the rest of the crew doesn't and vice versa," Wilbanks said. "We are still sleeping in large dorms in the [downtown] building, so the only person who doesn't sleep in the large dorm is the battalion chief. He has his own sleeping quarters."

Knoxville does use Westnet's turnout timer, which counts the length of response time, Wilbanks said, adding that the department has them located at the alerting and mapping monitor endpoints. The turnout timers help firefighters see the time it is taking them to respond to calls while in the station, Wilbanks said.

Knoxville has alerting endpoints and mapping endpoints located strategically throughout the city's stations, Wilbanks said.



Fire station
**Knight Vision
Lighting**

“If I had more money, I would have purchased more mapping endpoints because we’re a pretty large city,” Wilbanks said. “We are 104 square miles in size. If you are in the West District, and you’re getting sent downtown, you may not know exactly where the road is, and mapping endpoints are great to have.”

Sometimes, firefighters just need to look at maps to get oriented as to where they are going, and having the extra mapping points in the station helps with response times, he said.

“No station alerting system is cheap; they’re just not,” Wilbanks said. “So, when you are doing the budget for this kind of stuff, you really have to think, early on, what you want to buy and plan for that because if you run out of money, you’re not going to get a functioning system.”

Wilbanks was pleased with Westnet’s approach to designing the Knoxville system. “They didn’t try to throw a bunch of bells and whistles at me that I didn’t need,” he said.

Knoxville is looking at some additional equipment for its Westnet station alerting system and Wilbanks said the design team is coming back in and working with the city.

“They don’t try to overload me with a bunch of garbage,” Wilbanks said. “They come in and say, ‘Here is what you’ve asked for, and this is what we think you need to get to where you want to go.’”

In the two years Knoxville has worked with Westnet, Wilbanks said he has been impressed with the customer service the company has provided and the confidence in which the company has delivered it.

Knoxville recently added a brand new 800-megahertz trunking system as part of a statewide network that was challenging to integrate, Wilbanks said, noting that some companies were challenged by the project.

“Engineering wise, it was not that hard for Westnet,” Wilbanks said. “They were like, ‘Oh yeah, we can do that, not a problem.’ Some of the other folks out there were like, ‘I don’t know, we’ll just have to see, it’s in development.’ That’s one of the things that really stuck out for us at the early stage, and that was their confidence in making things work.”

Wilbanks said he also appreciated being treated like the most important customer the company has every time he called Westnet for assistance.

“They take my problems seriously,” Wilbanks said. “Knoxville is not their biggest customer, and I know they have a lot of customers, they just do, but they always take time to work out the issues.”

As a West Coast company, Westnet would often have staff come in early to work with Knoxville personnel to get issue resolved in a timely fashion and also has staff on the East Coast that can answer early morning calls too, Wilbanks said.

“We are a bureaucracy just like any other government agency,” Wilbanks said. “I have an IT department. They have to work with me, and they have to work with our integrated 911 system. There’s a lot of moving parts to get this working, and it has worked out well. I can’t tell you how easy they are to work with, and that’s the biggest thing about Westnet.”