

# NEXT GENERATION CONFERENCING SAVES LIVES

By Paul Nave



Norman Byers at his Guardian Intelligent Workstation.

**S**he could be anyone's mother or grandmother ... a senior of 78 years, driving at dusk on unfamiliar roads just outside Owensboro, Kentucky, earlier this year. She takes a wrong turn and is lost. Her car swerves, rolls and crashes down an embankment, coming to rest on its side against a wall, trapping her inside.

There are no bystanders coming to her aid, no witnesses; she is alone in the twilight and the temperature is dropping. Dazed and bruised, she manages to retrieve her mobile phone and dial 9-1-1.

Normally, wireless Phase II technology would triangulate the mobile phone and provide first responders with a close approximation of the victim's location. Unfortunately, her phone is an older clamshell model that does not have GPS capability. Her call to 9-1-1 is answered by Norman Byers, Lead Supervisor at Owensboro-Daviess County Dispatch.

Byers, an experienced first responder with eight years as a call taker and 13 years of ambulance service, knows that finding her before nightfall is critical. The caller does not know her location, so Byers asks where she started from, and her destination, to deduce possible routes taken.

The search party is joined by the local sheriff and units of the fire and police departments — all scouring the area surrounding the rural cell tower that picked up the call. The fire truck periodically sounds its siren in the hope she hears it. She, in turn, uses her horn to alert rescuers — to no avail. Forty-five minutes later, her car battery dies. She can no longer flash the lights or sound the horn, but she still has her lifeline to Byers: her mobile phone.

Byers reaches out for helicopter support, and PHI Air Medical Helicopter service out of Greenville, Kentucky, joins what is now a nighttime search. The helicopter flies a grid pattern using a powerful searchlight.

In the dispatch center, there are initially two call takers: Byers on the phone with the victim and the police, and a second dispatcher

relaying information to the fire department. This becomes too cumbersome, so Byers uses the unlimited conferencing ability of their Next Generation 9-1-1 Guardian call management system to join all parties in a single conference call. This also allows him to control the audio of each participant.

"She was scared and nervous, and getting confused about who she was talking to, so I had to mute participants to control the flow of information," said Byers. "Once she spotted the helicopter searchlight, it was just her and the pilot talking, honing in on her exact location, with me keeping the other participants informed. I was very impressed with the quality of the sound, especially coming from the chopper, it was crystal clear."

The firemen spot the helicopter searchlight zeroing in on the crashed vehicle. They are soon on the scene and use cutters to free the victim. Approximately two and a half hours after her accident, she is rushed to the hospital for treatment — today she is fully recovered.

The ability to call in multiple parties and dynamically mute and control each end point of the conference played a key role in the successful outcome of this story. Prior to Next Generation 9-1-1 call controllers with Internet Protocol (IP) and Session Initiation Protocol (SIP), it was not possible to patch in multiple conference participants and have any degree of control over the call legs or audio quality.

Most Next Generation 9-1-1 call taking systems now perform audio mixing at the system controller level instead of at the call-taking position. This not only provides superior audio, it allows significantly more communication channels for up to dozens of participants, and enough channels for redundant recording of all audio related to the incident.

Listening to that helicopter pilot converse directly with a caller with complete digital clarity, and being able to bring fire, medical and police in whenever necessary, is truly a huge advancement in public safety call taking — hearing is believing. ●

*Paul Nave has been Director of the Owensboro-Daviess County 9-1-1 Director for the City of Owensboro, Ky., since its infancy in 2010. Prior to that, Paul served for 12 years as a call taker and supervisor with the County Sheriff's Office. Paul is a member of APCO.*