What is Wireless 9-1-1?

In most areas of North America, citizens have basic or enhanced 9-1-1 service from their landline, or wireline, phones in their homes or workplaces. Basic 9-1-1 means that when the three-digit number is dialed, a call taker/dispatcher in the local public safety answering point (PSAP), or 9-1-1 center, answers the call. The emergency and its location are communicated by voice between the caller and the call taker. In areas serviced by Enhanced 9-1-1, the local 9-1-1 center has equipment and database information that allow the call taker to see the caller's phone number and address on a display. This lets them quickly dispatch emergency help, even if the caller is unable to communicate where they are or what the emergency is.

However, when 9-1-1 calls are made from wireless phones, the call may not be routed to the closest 9-1-1 center, and the call taker doesn't receive the callback phone number or the location of the caller. This presents life threatening problems due to lost response time, if callers are unable to speak or don't know where they are, or if they don't know their wireless phone callback number and the call is dropped.

Three Phases of Wireless 9-1-1

There are 3 phases that are referred to in implementing Wireless 9-1-1. The most basic of these, sometimes called Wireless Phase 0, simply means that when you dial 9-1-1 from your cell phone, a call taker at a public safety answering point (PSAP) answers. The call taker may be at a state highway patrol PSAP, at a city or county PSAP up to hundreds of miles away, or at a local PSAP, depending on how the wireless 9-1-1 call is routed.

Wireless Phase I is the first step in providing better emergency response service to wireless 9-1-1 callers. When Phase I has been implemented, a wireless 9-1-1 call will come into the PSAP with the wireless phone call back number. This is important in the event the cell phone call is dropped, and may even allow PSAP employees to work with the wireless company to identify the wireless subscriber. However, Phase I still doesn't help call takers locate emergency victims or callers.

To locate wireless 9-1-1 callers (called location technology), Phase II must have been implemented in the area by local 9-1-1 systems and wireless carriers. Phase II allows 9-1-1 call takers the ability to receive both the caller's wireless phone number and their location information.

Location Technology

The Gurnee 9-1-1 center is Phase II compliant, BUT be careful of this meaning. If you have an older handset that does not give off coordinate information, we will still be unable to map your location. If you would like to test your wireless 9-1-1 phone, in order to see if you can be located, please call (847) 599-7000 and ask for the 9-1-1 shift supervisor on duty. The 9-1-1 supervisor on duty will advise if it is a good time to test your cell phones. If so, they will instruct you to call 9-1-1, so that the testing process can begin.

With the handset technology, we can pinpoint you by one- (1) of two- (2) ways; the first is that you will always be in the middle of three- (3) cell towers, called trianglization. The second way is by global positioned satellites (GPS) – in this technology your handset will send a signal to the satellite. Both of these technologies will give the 9-1-1 center your longitude and latitude coordinates. Our 9-1-1 system will then decode those coordinates into a street designation. To learn more about wireless handset technology, I encourage everyone to search on anything to do with wireless handsets and public safety.

Gurnee 9-1-1 Center Stats

The Gurnee 9-1-1 center has the enhanced 9-1-1 capabilities for the wireless and wire line telephone calls. In 2004, the 9-1-1 center handled 110,911 non-emergency phone calls and received 29,702 emergency calls on 9-1-1. In 2004, the 9-1-1 center also handled 14,283 wireless 9-1-1 calls. This turns out to be a little over 48% of the 9-1-1 calls received, are coming from a wireless phone.

Calling 9-1-1 on a Wireless Phone

Some people are hesitant or convinced that using a landline phone is the only way to call 9-1-1, but as long as you have the proper handset technology and/or someone is able to talk to us, we will do our best to find you. Keep in mind that even with a landline phone, the 9-1-1 operator will verify your location, but if you are unable to talk to us and SBC does not have your address listed properly in their database, we could have a scenario just like wireless 9-1-1, in that we could have a hard time finding you.

Our motto is “Seconds Save Lives”, so please do not hesitate to use your cell phone in an emergency situation. As the FCC, the wireless carriers and public safety communities work through these wireless issues, I can assure everyone that the Gurnee 9-1-1 center will stay in the forefront of getting the best possible 9-1-1 answering equipment for the people we serve.

CURRENT NEWS RELEASE

PROJECT LOCATE TO CONDUCT WIRELESS ACCURACY TESTING

August 8, 2005, Washington, DC - APCO International's Project LOCATE (Locate our Citizens in Times of Emergencies) today announced a project to conduct independent testing of wireless location data delivered to Public Safety Answering Points (PSAPs). This announcement follows Project LOCATE's receipt of a $750,000 grant from the Public Safety Foundation of America (PSFA).

Project LOCATE seeks to further support the deployment of wireless 9-1-1 service by providing practical guidance and support to those PSAPs across the country that have deployed enhanced 9-1-1 (E9-1-1) Phase II and those still considering deployment.

Project LOCATE's effort will define test areas across the country based upon unique combinations of real world variables and will engage independent testing companies to perform accuracy tests utilizing OET-71 criteria. In addition, Project LOCATE will work with designated PSAPs to participate in the testing process, review results, and coordinate efforts to resolve issues between the PSAP and the wireless service providers.

Project LOCATE will report these results and resolution efforts to the wireless industry, the Federal Communications Commission (FCC), and the PSAP community as a whole.

APCO International firmly believes that wireless 9-1-1 accuracy requirements should apply at the local community level and that this was the intent when the FCC issued its landmark wireless implementation order in 1994. APCO International submitted a negative vote when the Network Reliability and Interoperability Council (NRIC) VII Focus Group on E9-1-1:

Near Term Issues (1A) presented a report to the NRIC VII Steering Committee in March stating that accuracy testing should occur at the state level. In addition, APCO International submitted supporting comments relative to its October 6, 2004 Petition for Declaratory Ruling to the FCC in February outlining its position. Last month, the International Association of Chiefs of Police (IACP), the International Association of Fire Chiefs (IAFC), the National League of Cities (NLC), and the National Association of Counties (NACo) sent statements to the FCC supporting APCO International's position.

"We support APCO International's petition and firmly believe that wireless 9-1-1 accuracy testing should be required at the local community level," the filings said.

Article Information

The research on this article was based on factual statistics from the Gurnee 9-1-1 center and from professional organizations like The Association of Public-Safety Communications Officials International, Inc. (APCO) and The National Emergency Number Association (NENA). All of the Gurnee 9-1-1 supervisors are members of both organizations. If you would like to learn more about each organization, and about wireless 9-1-1, please go to their websites www.apcointl.org and www.nena.org