



Use of Paging in Crisis Situations

Critical Alert Systems

Paging's Performance In Crisis Situations

- ▶ **The Arlington County After-Action Report on the Response to the September 11 Terrorist Attack on the Pentagon* (the “AAR”) contained the following:**
 - ▶ “Almost all aspects of communication continue to be problematic, from initial notification to tactical operations. Cellular telephones were of little value in the first few hours and cellular priority access service (CPAS) is not provided to emergency responders. Radio channels were initially oversaturated and interoperability problems among jurisdictions and agencies persist.” (AAR at p. 9)
 - ▶ (AAR at p. 9). . . pagers were cited as “the most reliable means of notification”.
 - ▶ “Every firefighter and EMS responder should have a pager to receive dispatch notices both on and off shift.” (AAR at p. 20)
 - ▶ (AAR at p. 34). . . pagers were cited as the “the most reliable recall device” for first responders.

* Full report available at <http://www.co.arlington.va.us/departments/Fire/edu/about/FireEduAboutAfterReport.aspx>.

Paging's Performance In Crisis Situations

- ▶ **Lisa Thompson, Wireless Communications Systems Manager, Arlington County, VA, Public Safety Emergency Communications Center, regarding the events of September 11, 2001:**
 - ▶ “I wanted to take a moment to tell you how fantastic paging has been throughout the Pentagon incident. From the initial wireless message to notify our Police, Fire, EMS, County Manager and ECC staff, to the recall of all dispatchers, Police Officers, Firefighters, paging has performed flawlessly.”
- ▶ **At Women's Hospital and Tulane Lakeside Hospital:**
 - ▶ “Pagers were used by Medical Staff for communicating with the doctors and nurses in transporting the Mom's and Babies from one facility to another. Text messaging was the only way to get critical messages out to the doctors and nurses since phone lines were all down or all circuits busy.”

Paging's Performance In Crisis Situations

- ▶ **The Katrina Independent Panel Report cited:**
 - ▶ “Paging systems seemed more reliable in some instances than voice/cellular systems because paging systems utilize satellite networks, rather than terrestrial systems, for backbone infrastructure.”
 - ▶ “Public safety personnel did not seem to have adequate training on alternative communications technologies, such as paging . . .”

Why Paging in Emergency Situations?

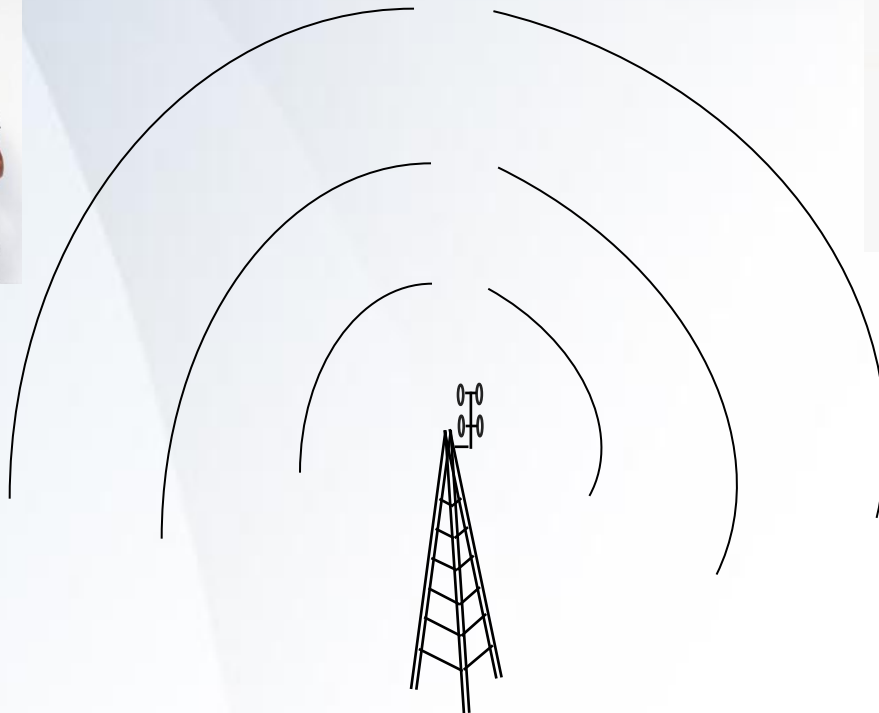
- ▶ **Group Call** -- a feature that allows paging users the ability to alert almost an unlimited number of people with one single radio transmission
- ▶ **Simulcasting** -- a feature that allows the same radio message to be broadcast over multiple transmitters simultaneously:
 - ▶ Better penetration into, under, and around buildings
 - ▶ Less likely to be blocked by obstructions
- ▶ Paging infrastructure can be individually controlled over satellite links and do not need land lines
- ▶ Paging devices have long battery life.
 - ▶ 1-way messaging devices offer up to 4 weeks of battery life and use readily available AA or AAA batteries

Why Paging in Emergency Situations?

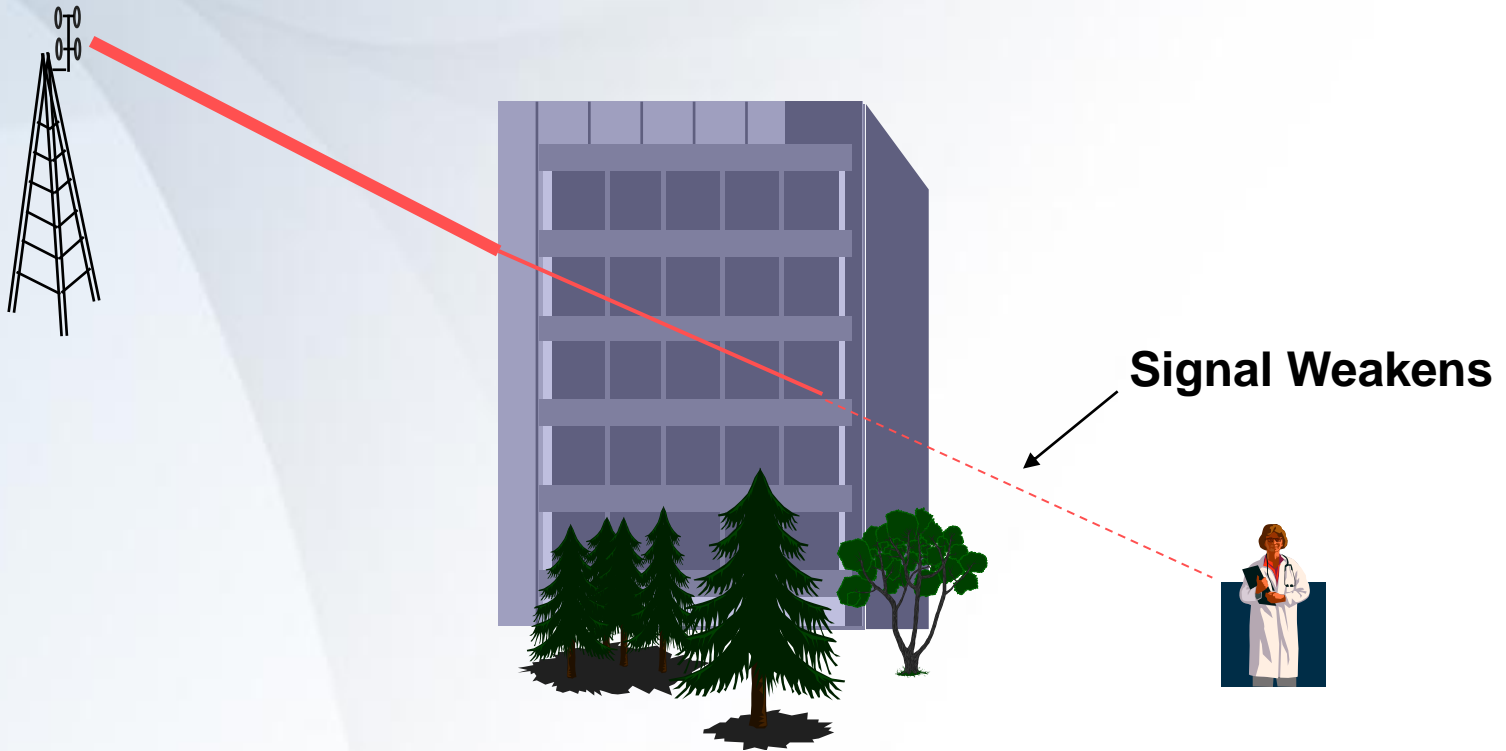
- ▶ Paging is a mature technology and costs a fraction of other technologies:
 - ▶ It has been refined and perfected over many years
 - ▶ It is here today and available to be used RIGHT NOW
- ▶ Pagers and paging-based devices can be accessed by:
 - ▶ Phone
 - ▶ Internet
 - ▶ Email
 - ▶ Modem
 - ▶ Cell Phone
 - ▶ 2-Way Pagers

Messaging with Group Call

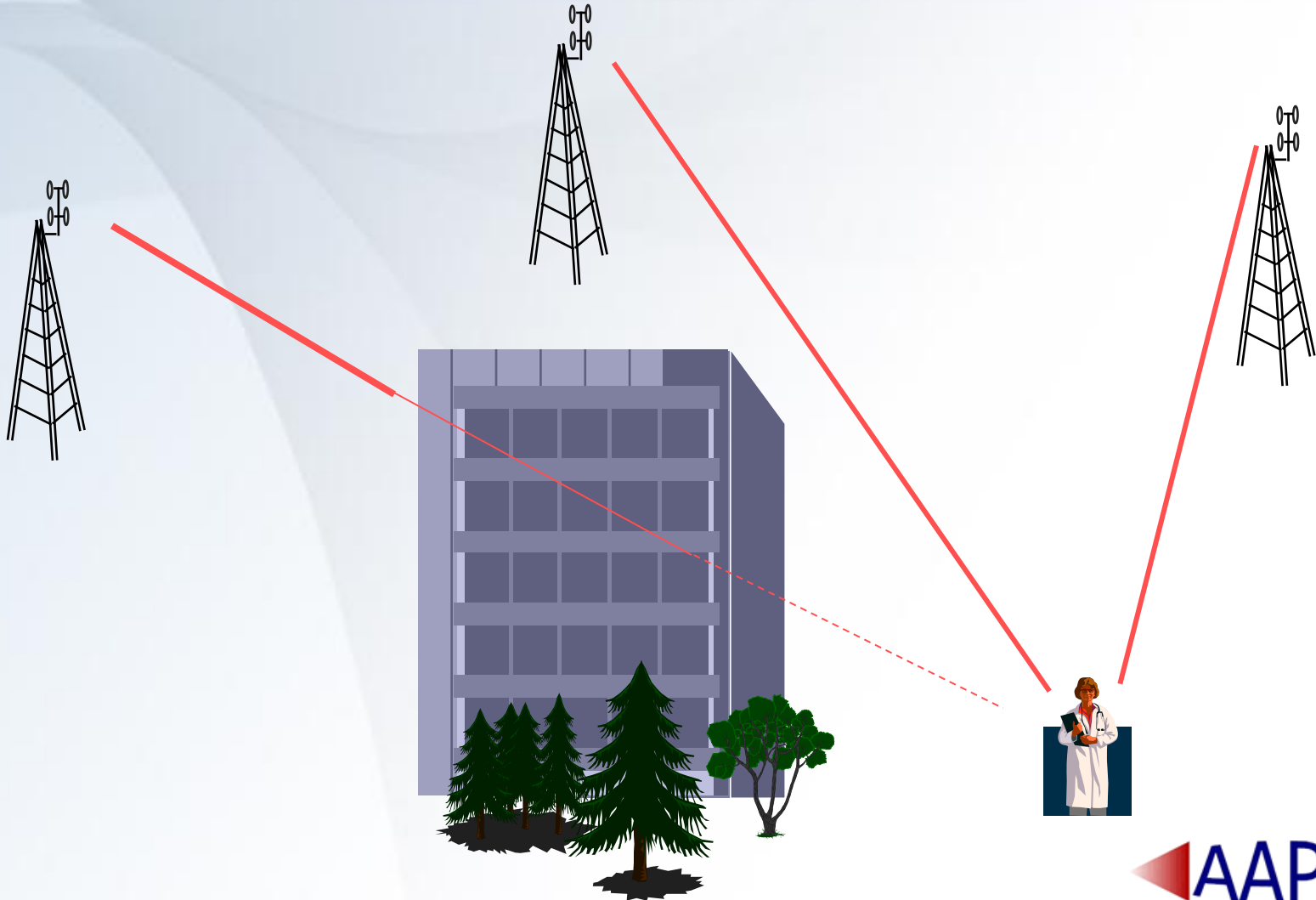
- ▶ A common message is sent simultaneously to unlimited responders
- ▶ Significantly reduces response time



Single Transmitter Solution Used in Cellular Systems



Simulcasting via Paging Significantly Improves Messaging Reliability



Paging, A Solid Communications Resource

- ▶ Continues to be an essential wireless communication tool for First Responders, Health Care Professionals, and Businesses for over fifty years.
- ▶ Is an industry that continues to innovate the design of networks, to improve speed and reliability of message delivery.
- ▶ Provides critical communications link to first responders in crisis environments, when voice communication networks are overloaded or otherwise fail.
- ▶ Usefulness and effectiveness of paging in crisis situations are well documented during 9/11, the London 7/7 bombing and the recent Katrina disasters.

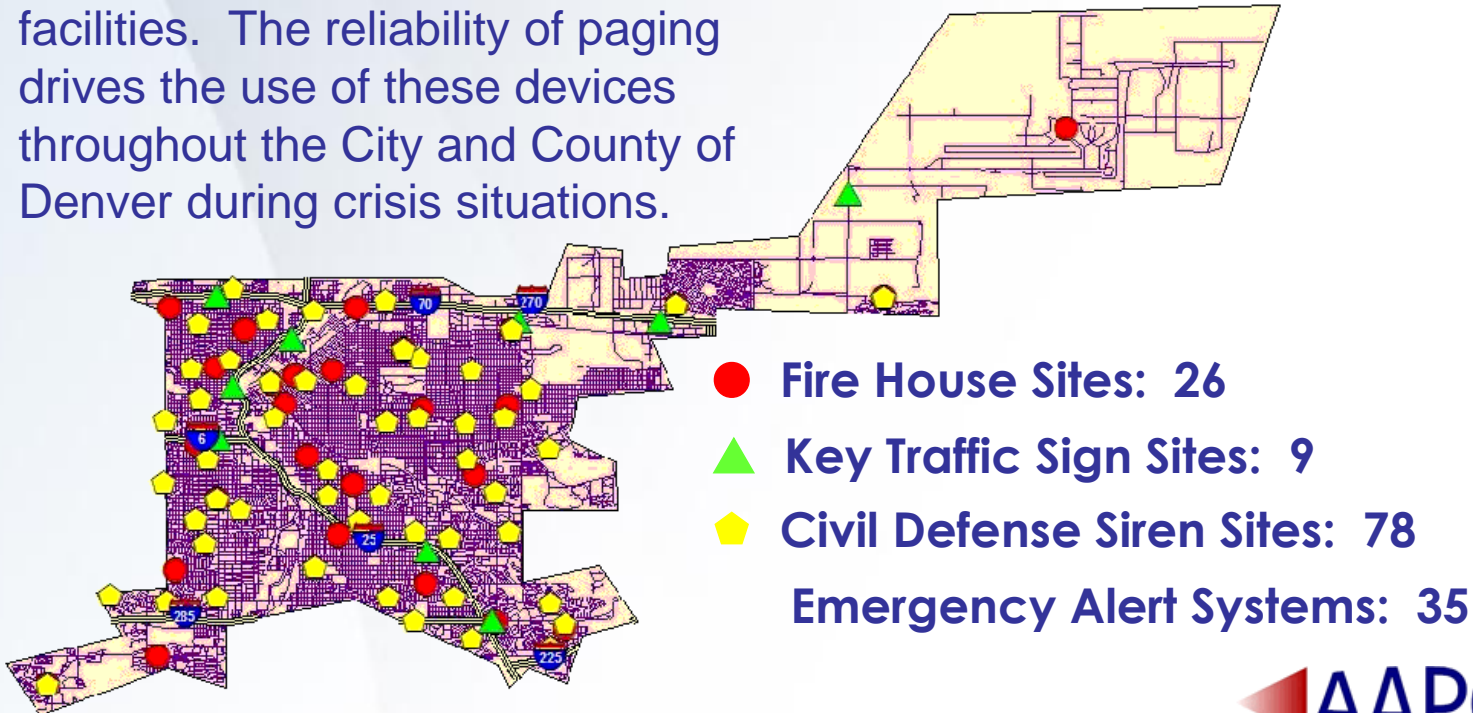
Paging, A Solid Communications Resource

- ▶ Is a time-tested and proven technology that is deployed extensively throughout the United States today; providing the most affordable and reliable emergency wireless communications solution.
- ▶ Has a number of inherent features that gives it a significant advantage over alternative wireless solutions in crisis situations.
- ▶ Paging is a viable Industry:
 - ▶ Greater than \$1B in revenue
 - ▶ Over 10M users
 - ▶ Operating in all 50 States, covering 90% of the population
 - ▶ Highly reliable systems
 - ▶ Quality, high performance and economical devices

Paging in Crisis Situations – Telemetry Case Study

▶ The City of Denver

- ▶ Utilizing paging-based devices, first responders are automating firehouses, activating civil defense sirens, activating roadway warning signage, and activating emergency alert systems in government facilities. The reliability of paging drives the use of these devices throughout the City and County of Denver during crisis situations.



In Conclusion

- ▶ No First Responder wants to be “out of touch” in a crisis situation.
- ▶ Paging should be an integral component of your existing crisis communications plan.
- ▶ Join millions of other first responders and be prepared for your next emergency situation utilizing paging technology from Critical Alert Systems.