The basis of interoperability for emergency communications.

The issue of interoperability in emergency communications has been a concern for almost as long as radios have been used by first responders and other public safety officials. However, it was not until the 9/11 World Trade Center terrorist attack that interoperability was elevated from a long-standing concern to a critical national priority.

One of the greatest tragedies of the September 11th disaster occurred due to the inability to effectively relay warnings to fire rescue personnel that the towers were about to come down, and that they needed to evacuate immediately. Many experts concur that this failure of the fire department's radio system to communicate effectively with other agencies, or even between newer and older radio models, was primarily responsible for the deaths of 343 firefighters. As a result, interoperability—the ability of first responders, emergency managers, government agencies and other public safety organizations to interact with one another—continues to be viewed today as a key element of any overall emergency communications and data sharing strategy.

As defined buy SAFECOM, an emergency communications program sponsored by the Department of Homeland Security and a presidential initiative created to achieve interoperability among the nation's public safety and first responder communities, interoperability is:

> In general, interoperability refers to the ability of emergency responders to work seamlessly with other systems or products without any special effort. Wireless communications interoperability specifically refers to the ability of emergency response officials to share information via voice and data signals on demand, in real time, when needed, and as authorized. For example, when communications systems are interoperable, police and firefighters responding to a routine incident can talk to each other to coordinate efforts. Communications interoperability also makes it possible for emergency response agencies responding to catastrophic accidents or disasters to work effectively together. Finally, it allows emergency response personnel to maximize resources in planning for major predictable events such as the Super Bowl or an inauguration, or for disaster relief and recovery efforts.

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The ability to communicate effectively with outside agencies in the event of a weather advisory, terrorist event, industrial accident or other crisis situation cannot be underestimated. For this reason, emergency managers must ensure that their communications capabilities are fully compatible with the capabilities of local law enforcement, fire and medical first responders, as well as with state and Federal agencies.

Progress is indeed being made with regard to emergency communications interoperability, but certainly not as fast as many have hoped for. For instance, in a 2008 study performed for the Massachusetts Board of Higher Education, 41% of those schools surveyed noted that their communications equipment is not interoperable with local law enforcement agencies. Additionally, two-thirds reported that they are unable to conduct two-way, real-time communications with Federal law enforcement and emergency management agencies. Though it's a safe bet that those figures have gone down over the past few years, it can also be assumed that much still remains to be done.

There are a variety of challenges to achieving comprehensive and seamless interoperability. Some of these obstacles are technical and some financial, while others stem from human factors such as inadequate planning and lack of awareness of the true importance of interoperability. A report issued back in 2003 by the National Task Force on Interoperability continues to reflect views that remain prevalent throughout the emergency response community today. That study identified the following key issues that adversely affect emergency response wireless communications:
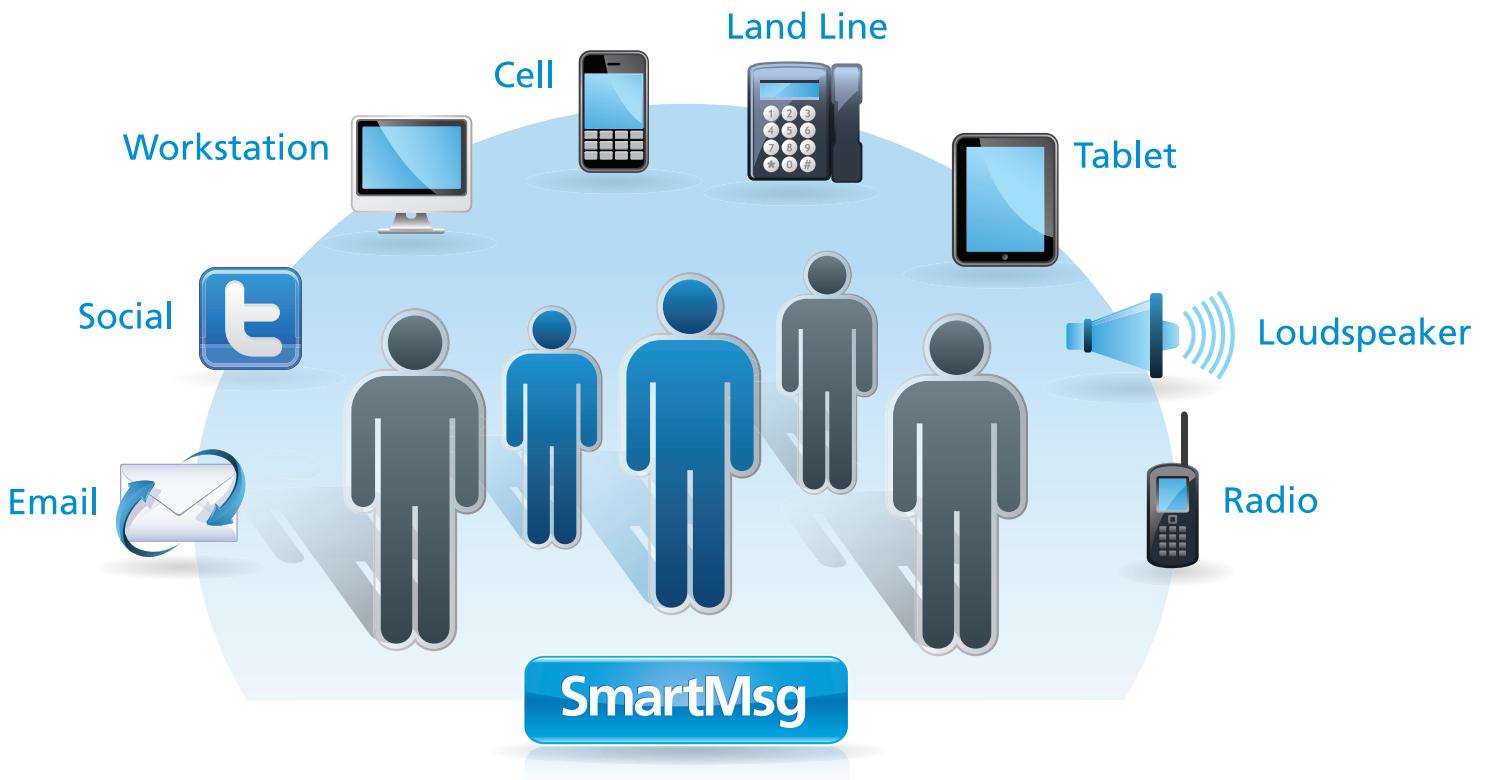
• Incompatible and aging communications equipment;

• Limited and fragmented budget cycles and funding;

• Limited and fragmented planning and coordination;

• Limited and fragmented radio spectrum;

• And limited equipment standards.

Since 9/11 there have been a number of government-inspired programs that address the issue of improving interoperability. One such program, for instance, is RapidCom, a 2004 initiative of the federal government designed to ensure a minimum level of emergency response interoperability in ten high-threat urban areas.

Among the more prominent solutions for interoperable communications is Federal Signal's software-based SmartMsg™. The SmartMsg communications platform was developed shortly after 9/11, and fully supports the ability to talk with multiple people at multiple locations who are using multiple devices, and then seamlessly bridge all these modes of communication together.

For more information on Federal Signal's SmartMsg and the unique radio interoperability features available through the RadioLink™ app, just click on:

http://www.alertnotification.com/NotificationMessaging_8587.aspx

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