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This series of articles is intended to provide a general conceptual understanding of Interoperable Communications as they pertain to Public Safety Communications and Emergency Management/Incident Response support.

Radio History (Article 2)

Radio technology has evolved drastically in the last 70 years. In the 1930's we used Low-Band (or the lower end of) VHF (literally- ***Very High Frequency***) for most of our public safety voice communications. In the 40's communications improved quickly. Most of those improvements were results of WWII and the communications requirements brought forth by the military.

In the 1950's we used more UHF (*Ultra High Frequency*) communications, this was due to improvements in component manufacturing capabilities. At this time we also started to use a Motorola innovation called "Private Line". This was the use of sub-audible tones to create grouping within a radio system. This was the precursor to "Trunking".

The 1960's and 70's provided improvements to manufacturing and reliability. During this time urban populations began to grow rapidly. With the increase in population came the increased need for larger and larger public safety agencies to support the increase. This created the need for more and more communications channels to be put into use. In the late 70's the first "Trunking" systems were deployed for better utilization of radio networks.

In the 1980's it became apparent that the public safety portions of the communications spectrum were all but used up and that another part of the spectrum must be employed. About this time the first 800MHz Trunking systems were employed. Soon these radio systems began to use various methods to maintain group integrity.

At this point, we have seen the introduction of at least 4 separate frequency bands, there are more and as of today there are at least 5 different formats or architectures in use throughout the United States. None of these various systems is inherently compatible with the others.

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