

Is Mission Critical Communications Stuck in 1912?

It's time for public authorities and first responders to use 21st century technology to work smarter and better.

DOVER, DE, USA, November 27, 2018 /EINPresswire.com/ -- The ability to instantaneously talk to a group of people is essential for many. A police officer needs to be able to inform his team about the actions of the suspect he/she is chasing. The fire fighter needs to be able to warn the whole brigade about dangerous conditions being experienced. The miner needs to advise the crew about the appearance of suspicious gas. The truck driver should be able to warn all other drivers in a given area about traffic delays.

The need to instantly talk to groups affects many occupations, including airport dispatchers and technicians, railroad engineers and mechanics.

The technology used today for group communications has its roots in an invention of 1912 – the two-way radio. Whatever the underlying technology is – UHF, VHF, DMR or even P25 or Tetra – all you need do is push the PTT (push-to-talk) button to speak with the group you belong to.

When it comes to two-way radios, voice is really “it”, even though the modern Digital Mobile Radios (DMR, P25, Tetra) can offer some additional capabilities, but it is all still about voice. Additionally, with traditional radios, communication is done in silos – you can't cross boundaries of your “team” even if you need to. Firefighters can't talk directly to the police in situations where joint coordination is simply a critical necessity.



The technology used today for group communications has its roots in an invention of 1912 – the two-way radio”
 . Anatoli Levine, Director, Products & Standards, Softil

At the same time, any consumer, anywhere in the world, armed with a smartphone, can go way beyond just voice. Pictures, videos, location and chat can be shared in an instant, along with the multitude of data which any smartphone can collect about their users.



. Anatoli Levine, Director, Products & Standards at MCC enabler Softil

When 3GPP started working on the next generation of technologies for mobile networks and introducing the term “5G,” the international standardization organization set out to address this disparity. The new technology, called Mission Critical Communications (MCC) became a cornerstone of future mobile networks, along with advanced network design, enhanced

broadband, and massive machine-to-machine communications in the backdrop of the Internet of Things (IoT).

The work on MCC started with 3GPP Release 13, when mission critical Push-to-Talk (MCPTT) was introduced. In Release 14, Mission Critical Video (MCVideo) and Mission Critical Data (MCData) were added. The Release 15 extended technology to the areas of interconnecting between different mission critical systems and interworking with traditional Land Mobile Radio (LMR) systems.

From the point of view of architecture, Mission Critical Communications are implemented as an application service, utilizing the concept of IMS Application Server (IMS AS), in the case of MCC known as Mission Critical System (MC System). The MC System consists of several individual service elements (servers) for group management, configuration management, security and encryption management, as well as MCPTT, MCVideo, MCData and others. As this MCC technology was designed to be a part of mobile network, the network itself provide essential services such as priority, preemption and quality of service needed to ensure that the MCC service will be always fully available to MCC service users.

Think of the implications of mass deployment of new MCC technology for users in various verticals. When it comes to public safety, think about police officers being able to receive videos from the scene of an accident before arrival and being able to share the video with fellow officers once investigations begin. Think about a dispatch center being able to easily redirect the video from the 911 caller to the responding officer, or an officer being able to obtain video from surveillance cameras in real time. Think of a firefighter who can instantly receive a floor plan outline before entering a burning building. And all of this functionality available over the reliable mobile network, providing appropriate priority for MCC needs.

Taking it one step further, we can also think of taking advantage of IoT capabilities. The advanced MCC device the police officer will use can automatically detect situations such as "shots fired" or "officer down" and propagate this information as needed without any human intervention. And maybe most importantly - the police, firefighters and emergency medical personnel can communicate with each other using all the advanced MCC capabilities - with a push of a button. No more silos.

In transportation, a truck driver should be able in real time to map the position of other trucks and can address all the other drivers within a given radius by voice or share a video with them. If needed, the same MCC application can be used to obtain remote assistance from a mechanic or a technician to fix a problem which otherwise would require a long wait for help.

In mining, communications is a crucial element to ensure safety. The ability to add a picture of a crack on the wall to the verbal description might become a life-saving advantage. Adding reliable communication and control of the robot using the same MCC device and network makes everyone's job a lot easier. Again, adding information from all the different sensors (gas, vibration, radiation) to the communication stream of any miner is truly a game changer.

Offering mission critical communications as the service of the core mobile network, properly designed from the ground up to take advantage of all the features the enhanced network offers is a giant step forward and will lead to all involved in mass communications working smarter and better.

Whilst MCC over LTE and 5G is still in its infancy, there is no doubt that the technology will have a great impact and it is much needed now and not yesterday. It's time to move forward and out of 1912 technology.

Ends

Hugh Paterson
Whoosh PR
+44 7768175452
[email us here](#)

This press release can be viewed online at: <http://www.einpresswire.com>

Disclaimer: If you have any questions regarding information in this press release please contact the company listed in the press release. Please do not contact EIN Presswire. We will be unable to assist you with your inquiry. EIN Presswire disclaims any content contained in these releases. © 1995-2018 IPD Group, Inc. All Right Reserved.