

What is Push-to-Talk Over Cellular (PoC)?

Push-To-Talk Over Cellular (POC): the essential tool for teamwork communication

Portable transceivers in the VHF and UHF bands have for fifty years been a popular choice for professional applications where stations need to communicate with each other when working remotely or in isolation. However, advances in technology in mobile data and the networks that support it have resulted in more and more companies and organisations switching to push-to-talk communication solutions using mobile push-to-talk (PoC) devices. Also known as PTT (push-to-talk), PoC has gained popularity in many business and government organizations around the world due to its distinct advantages over traditional radio networks.

In this guide, we'll explain what Push-to-talk over Cellular is, how it could benefit your organisation and how, at FreeBytes, we can provide reliable PoC devices and solutions to help your staff stay in constant contact with each other.

What is Push-to-talk over Cellular?

Push-to-talk over Cellular, also known as broadband push-to-talk, allows mobile device users to connect to each other over broadband networks such as 3G, 4G, 5G and Wi-Fi. Unlike conventional radio networks, users often do not need to install any additional infrastructure (repeaters) to achieve coverage over vast geographical areas. With mobile data and Wi-Fi networks so prevalent, it is possible to communicate with other users in cities, counties, countries and continents.

To communicate directly with colleagues in a private or group call, users simply press a designated push-to-talk button on their device. While PoC is not a new technology, rapid advances in mobile data have meant that push-to-talk is more reliable than ever, providing crystal-clear communications that improve the quality and content of conversations.

While regular mobile calls use traditional circuit-switched networks, PoC uses VoIP technology (Voice over Internet Protocol) technology to transmit voice data packets over the Internet. VoIP allows for faster and more efficient transmission of voice data and enables simultaneous communication with multiple recipients.

Push-to-talk over Cellular technology offers users exceptional flexibility in a variety of situations and settings, who can choose a dedicated PoC device that meets their needs or use existing smart mobile devices and personal computers for direct communication. This flexibility ensures that individuals and organisations can adopt PoC without the need for additional and often costly hardware investments.

What are the benefits of push-to-talk versus mobile?

Push-to-talk over Cellular technology offers numerous advantages that make it an attractive option for organisations looking for efficient ways for their staff to stay in touch, even when they are dispersed over a wide geographical area:

1) Instant global communication

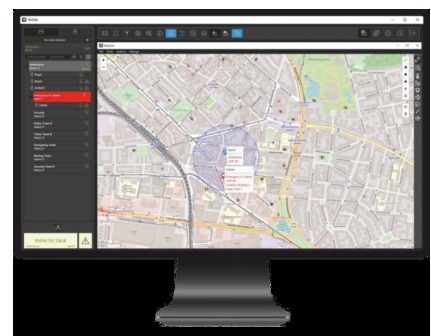
Because PoC uses established mobile data networks, users can communicate directly with others in large facilities, in the region, or even around the world! At the touch of a button, users can connect with team members or colleagues in different locations, improving communication and collaboration and eliminating the problems caused by unreliable or intermittent network connections.

2) Cost efficiency

PoC devices typically use SIM cards that can be pre-loaded with data and paid for through contracts. Compared to investing in dedicated radio infrastructure, this is a more cost-efficient solution that also reduces equipment and maintenance costs.

3) Enhanced security

PoC devices are equipped with a GPS tracking feature that allows you to know exactly where your team members are at any given time. In emergency or critical situations, you'll be able to locate them instantly and your staff will be comforted by the reassurance that, should anything untoward happen, they can be found and supported.



4) Compatibility with existing devices

One of the major advantages of Push-to-talk over Cellular is compatibility with existing smart mobile devices and computers. By simply installing a PoC application, these devices can be transformed into highly efficient and reliable



communication tools, eliminating the need for separate devices and reducing hardware costs.

However, for practical reasons and for the sake of more efficient and more reliable communication, it is important to have a more efficient and reliable communication system. ης επικοινωνίας συνίσταται η χρήση εξειδικευμένων συσκευών POC.

5) Access to applications and service

In the past, organisations had to maintain radios that served only one purpose: to allow users to communicate with each other. To access the Internet, separate devices were needed, increasing operating and maintenance costs. Many PoC devices, however, run on the Android system. This allows users to access a range of applications and services on the same device they use for push-to-talk communication, enhancing productivity and flexibility.

6) Unlimited range and excellent sound quality

PoC is based on mobile and Wi-Fi data, offering unlimited communication wherever these networks are available. In addition, PoC systems typically provide excellent sound quality, ensuring clear and reliable communication even in particularly noisy environments.

7) Reduced infrastructure

Finally, PoC eliminates the need for additional costly and specialized repeater infrastructure. Leveraging existing mobile networks minimises the need to install and maintain infrastructure, simplifying deployment and reducing long-term costs.

8) Ability to interconnect with existing Tetra, DMR and analogue communication networks.

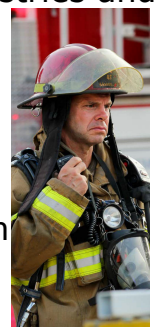
POC networks can be interconnected with existing Tetra, DMR or analogue communications networks already in place in your organisation. In this way the transition to the new system can be done gradually and without problems.

How can POC improve team communication?

When investing in any new technology, it's vital that you can earn a healthy return on investment (RoI) to maximise the benefits for your team and your business. Fortunately, Push-to-talk over Cellular technology has the potential to significantly improve team communication across a variety of industries and use cases.

In Security

In situations that require immediate and real-time communication, such as in emergency situations, PoC allows seamless communication between team members over vast distances. Security guards and emergency first responders



can coordinate effectively when a critical incident occurs, improving safety and response times.

On Transport and Logistics

PoC can revolutionise communication within the transport and logistics sector. Distributors, drivers, warehouses and logistics hubs can use PoC to coordinate routes, track shipments and improve delivery times. PoC devices can also be used for additional tasks, including barcode scanning, capturing delivery signatures and accessing navigation applications, to streamline operations, achieve efficiency savings and improve customer satisfaction.

In Hospitality

In the hospitality industry, PoC can be used to coordinate hotel operations, manage high-traffic events and improve guest satisfaction. Staff members from different departments can communicate seamlessly to ensure smooth service delivery and initiate a proactive response when problems occur.

PoC devices can also integrate with guest reservation systems, order management software and other hospitality-related applications to improve productivity and the guest experience.

On Production

Efficiency is vital in production to boost profits and maximise profit margins. With PoC, team members can coordinate production schedules, manage inventory and address maintenance issues immediately to eliminate unplanned downtime. Push-to-talk over Cellular devices can also integrate vital production-specific applications such as work order management applications and building management systems (BMS) to optimize workflow and efficiency.



In Healthcare/ EMS

Communication is vital in healthcare, where misinterpreted or misunderstood messages could have a direct impact on the quality of patient care. With PoC, healthcare professionals can communicate effectively to share patient information, request urgent support or ensure key decisions for individual patients. PoC also integrates with medical applications, enabling secure messaging, access to records and improved communication within healthcare facilities.

While PoC technology is invaluable in these sectors, it can also play a vital role in many other areas of commerce and industry, such as construction, retail, agriculture and education, where real-time communication is essential for operational efficiency, success and safety. By leveraging PoC, organizations can enhance collaboration, improve response times, streamline processes and better outcomes for consumers or service users.

At FreeBytes we have extensive experience in implementing POC communications. We have a very large installed user base from both the public and private sectors. We can tailor each network to the needs of each customer and assist them in their choices. We provide support for both the devices and the POC applications and networks we have. You can consult with us about your options for POC devices and networks to get the best performance for your communications.