TECHNICAL ARTICLE



Modern voice communication

as the key to smooth public transport operations

Reliable voice communication is essential for public transport operators. Dispatchers must be able to reach vehicles, operations supervisors and other operational partners quickly at all times, especially during disruptions and incidents. At the same time, many operators face the challenge of modernising their existing communication solutions to meet new operational and technological requirements.

Traditionally, control centre communications have relied on public mobile networks alongside operational radio. These systems have evolved over time, often resulting in fragmented communication channels, additional training requirements and limited operational flexibility. Modern Intermodal Transport Control Systems (ITCS) are therefore increasingly designed to integrate communication technologies directly into operations control systems and present them to users through a single, intuitive interface. This allows dispatchers to focus on their work rather than on the different radio systems behind it.

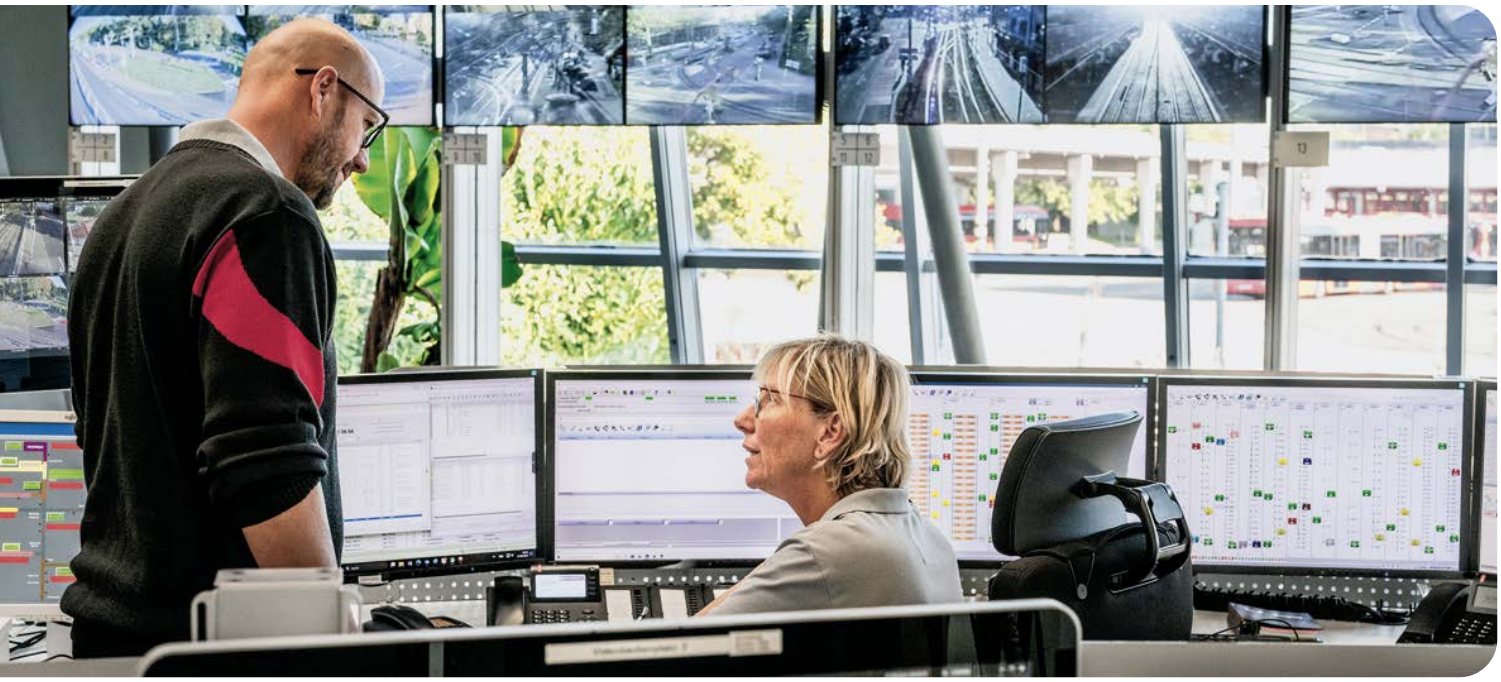
LIO-Talk

As part of the partnership with TASSTA, the TASSTA system has been extended with ebblo-specific interfaces and functions and optimised for ITCS customers. In this form, ebblo offers and continues to develop the voice radio system under the product name «LIO-Talk».

With LIO-Talk, ebblo can offer ITCS customers a broad range of functions and integrations for radio systems and subsystems.

Integrated voice communication with LIO-Talk

This is where LIO-Talk comes in. The platform is based on the mission-critical communication solution developed by our partner TASSTA and is seamlessly integrated into the LIO operations control system. Voice calls can be initiated directly from the familiar ITCS screens. Dispatchers can contact individual employees, vehicles, vehicle groups or routes without switching systems, making day-to-day work in the control centre considerably easier. Together with TASSTA, ebblo is continually developing voice communication within the ITCS to deliver a sustainable, future-ready solution.



TASSTA has many years of experience in operational voice communication and works with a range of mobile network operators. TASSTA and ebblo have an exclusive partnership in the ITCS and private railway sectors.

The solution supports multiple communication channels on a single platform. Alongside mobile network and telephony connections, additional communication systems can also be integrated. The result is a seamless communication environment that meets both current and future public transport requirements. Existing ITCS data communications and interfaces to the radio systems remain unchanged.

Practical support for dispatchers, from handling call requests to fallback operation if individual subsystems fail

In addition to voice communication, LIO-Talk provides a wide range of functions for day-to-day operations. These include displaying call requests, emergency calls and distress calls, as well as supporting individual, group and route calls. Calls can be parked or redirected. Further functions include monitoring workstations or channels, a call history with voice recordings, a call queue, role management, a searchable telephone directory and a map view with geo-zones. A fallback interface is also available, ensuring that call requests, emergency calls and distress calls can still be displayed, signalled and handled if the LIO server is unavailable.

LIO-Talk also offers operations supervisors a smartphone app with an extensive range of functions. It complements ITCS-based operational communication for supervisors working in the field, particularly in exceptional situations such as major events. The app also supports route calls within the ITCS.

One of the key advantages of a modern communication platform is its close integration with operational processes. Dispatchers continue to work in their familiar ITCS environment, while the communication functions operate seamlessly in the background. This reduces complexity for users, even as the range of available functions expands significantly.



Connected communication between vehicles, passenger information and passengers

Flexible, scalable and ready for the future

From a technical perspective, LIO-Talk offers numerous advantages. Modern software-based communication solutions require no dedicated hardware, can be scaled flexibly and run on current operating systems. The user interface can also be tailored to the specific requirements of different control centre and organisations of any size.

IT security and long-term viability are also becoming increasingly important. New solutions must take account of requirements relating to availability, bandwidth and communication security in accordance with ISO 27001. LIO-Talk supports end-to-end encrypted voice transmission. By integrating different communication channels and evolving continuously, the platform provides a strong foundation for the control centre solutions of the future.

These developments clearly show that voice communication now involves far more than simply connecting the control centre with a vehicle. It is becoming an integral part of the ITCS, helping public transport operators make their processes more efficient, flexible and secure. Modern communication platforms lay the foundations for future-proof control centre communications and make an important contribution to reliable public transport services.

LIO-Talk at a glance

Functions

- Individual and group calls
- Route calls
- Parking and redirecting calls
- Monitoring workstations and channels
- Call history with voice recordings
- Call queue
- Role management
- Searchable telephone directory
- Geo-zones for radio users
- Smartphone app for operations supervisors and field staff

Technical features

- Seamless integration with the LIO operations control system
- Existing ITCS data communications remain unchanged
- End-to-end encrypted voice transmission
- Push-to-talk communication over LTE, 5G, Wi-Fi and telephony
- Integration of operational radio systems, including analogue radio and TETRA
- Scalable platform for organisations of all sizes

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