

Case Study

ITELAZPI Inter-Agency TETRA Network



Basque Country provides LMR service to public safety, transport and utility organizations with PowerTrunk TETRA

Situated in the north of Spain, the Basque Country has a population of approximately 2.1 million and comprises a total area of 2,800 square miles. The Basque Autonomous Community is currently the wealthiest region in Spain, with gross domestic product per capita 40% higher than that of the European Union and 33.8% higher than the Spanish average in 2008.

An inter-institutional agreement between the Basque government, 3 provincial Councils and EUDEL (Basque Country Association of Municipalities) was subscribed for the implementation of a TETRA radio communications network for the entire Autonomous Community.

ITELAZPI is a public entity dependent upon the Department of Justice and Public Administration. It has been established as an operator offering services to public administrations and guaranteeing the maintenance of the network.

A competitive tender commenced in 2007 and following a thorough evaluation, PowerTrunk's parent company, Teltronic S.A.U., was named as one of the three finalists due to its outstanding technical offer. Having passed the first stage, a protocol of specific tests in two different sites defined by ITELAZPI was established in order to compare the three providers' infrastructures under the same conditions.

At the end of this process, Teltronic was the preferred bidder; not only because it offered the simplest and most flexible solution compared to other providers, but also because its Nebula TETRA infrastructure achieved unprecedented levels of coverage. The Teltronic Nebula system is exactly the same as the TETRA equipment sold in North America under the PowerTrunk-T brand name purely for trademark reasons.

"Teltronic was selected for the strength of its technical offering, which is fully compliant with the requirements of the ITELAZPI network. Teltronic has consolidated its position as a proven provider of professional radio communications systems". Ricardo Lizundia, TETRA Network Manager, ITELAZPI.

CHALLENGE:

Implement a new digital infrastructure to improve inter-agency communications

The current communications systems were becoming outdated as the analog systems needed to be upgraded to new digital based solutions. ITELAZPI specified a set of requirements to achieve the levels of excellence for the new network.

Up to this time, local and provincial administration services had not been integrated in a common infrastructure. Not every institution – for example, local police or transport companies – is financially strong enough to invest in its own proprietary network. As customers, such institutions are only interested in purchasing terminals and managing their fleet. For that reason, it became necessary to leverage economies of scale: the ITELAZPI network was conceived.

The requirements for a diverse range of public safety professionals from local police to transport and emergency services demand high levels of adaptability. Bringing them all together in a single network enables interoperability which is of vital importance. The flexibility to comply with the demand for growth and future evolution is also essential. Moreover, the coordination of mission-critical services leads to the migration to a modern IP solution.

Main Products	Applications
140 Base Station Sites	Global Positioning System
HTT-500 Handportables	Automatic Vehicle Location
MDT-400 Mobile Terminals	Billing system
CeCoCo Command and Control Center	

SOLUTION:

PowerTrunk's parent company, Teltronic S.A.U., selected for its coverage, functionality and ease of use

The purpose of the new TETRA network is to provide services to all Basque public administrations. TETRA was the chosen technology because of its total fulfillment of voice communications requirements, ensuring security and privacy.

A competitive and effective solution was provided by Teltronic's Nebula TETRA system. Teltronic is supplying the main switching and network infrastructure, consisting of approximately 140 base stations, ensuring coverage of the length and breadth of the mountainous Basque country.

Teltronic has worked closely with ITELAZPI and its local partners to guarantee the success of the project. Teltronic can count on its local partner GRUPO CYS, for local support and logistics, as well as the Basque technology company, SATEC.

The system is easily integrated with third-party applications thanks to the versatile Teltronic Nebula interface. For example the Automatic Vehicle Location (AVL) applications from GTS-Thaumat XXI S.A linked to 7 Command and Control Centers manage communications. There is also an NMS Client and an integrated billing system supplied by Facturnet (FNET). The mobile terminals integrate Global Position System (GPS) and DMO Gateway functionalities adapted for public safety.

The application of the TETRA standard is focused on mission-critical solutions normally required by the full range of professional public services.

- **Local police forces** want a solution that ensures greater safety and efficiency as well as clearer radio voice quality and an exceptional territorial coverage. They also require interoperability among different mission-critical services and access to data base applications for their current work activities.

- **Ambulance crews** require robust reliable real-time communications and fast response times. Moreover, communication between ambulance services in different provinces and regions should be enabled thus favoring cooperation. Control room dispatchers have been implemented so that any ambulance can be communicated with at any time.

- **Public transport** companies are joining the network with as many as 1,000 users already connected. The ITELAZPI network offers them robust mobile real-time communications for programmed tasks, operation, maintenance and rapid response to customers' requests.

- **Utility companies** are also benefiting from telemetry and telecontrol services provided by the network. Road maintenance and public works brigades have access to real-time meteorological and hydrological telemetry data by integrating sensor, data logging and SCADA systems using TETRA data modems.

- ITELAZPI is also providing value-added solutions supporting end-to-end communications between public safety professionals and Command and Control Centers with a high degree of personalisation to adapt to each customer's needs.

BENEFITS:

A shared network with autonomous management

Since 2009, the ITELAZPI network has been offering multiple benefits to its users providing a wide range of voice and data services, the possibility of private dispatching, independence for each organization to handle its own services, and a 24/7 customized help line, among others. The number of subscribers is increasing progressively due to the high quality and satisfaction of available services.

Additionally, one single operator is better in terms of coverage, security, privacy and resilience. Interoperability between different organizations is easier, providing significant scope for co-operation with emergency services and public safety organisations, enabling an even more integrated and effective response.

Teltronic's project knowledge combined with the flexibility of its TETRA solution designed over a powerful, field-proven, end-to-end IP design decreased the expected deployment time by 6 months.



About PowerTrunk Inc.

Headquartered in New York City, PowerTrunk Inc. is the wholly owned subsidiary of Teltronic® S.A.U. responsible for business development, distribution and customer support for Teltronic land mobile radio products and projects in North America. Teltronic S.A.U., with headquarters in Spain, has a direct commercial presence in over 25 countries throughout Europe, Asia, the Pacific Rim, the Middle East, Latin America and the United States. Itelazpi purchased the Teltronic S.A.U. Nebula TETRA system, the same system sold in the Americas under the PowerTrunk-T brand for trademark reasons.

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