

Case Study

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New Brunswick Department of Transportation & Infrastructure



Simoco Fires Up Radio Communications for New Brunswick Department of Transportation and Infrastructure

Background

There's no question that public safety communication is critical. Emergency services around the world depend on reliable radio systems to deliver wide area coverage in times of need. Without such systems, people's lives and property are at risk of being in serious danger.

The Canadian region in North America is no exception. Fires in homes, commercial buildings and forests and even on ships are regular occurrences in areas like New Brunswick. One of the region's most famous fires, the 1877 Great Fire of Saint John, destroyed 200 acres of land and 1,612 structures, killing approximately 20 people and injuring many more. Today, fires continue to threaten the 755,464 people living there. With a large forestry Industry, the threat of fires is a yearly occurrence.

As the largest Maritime Province in Canada, New Brunswick required instant and wide area coverage communications to enable its fire emergency teams at the New Brunswick Department of Transportation & Infrastructure (NB DTI) to quickly and effectively minimize any damage.

Simoco channel partner GDE Sales, which operates in North America, determined that simulcast technology would meet the department's requirements. With a wide area to cover and a limited number of frequencies available, simulcast would enable NB DTI to broadcast the same signal across multiple overlapping sites on the same frequency at exactly the same time – without interference

Implementing Simulcast for the Fire Department

Implementing Simulcast for the Fire Department GDE Sales has a 25-year strong history in providing two-way radio technologies to critical communication users in a variety of industries. The Simoco partner has been working with NB DTI for over 15 years, and has developed a thorough understanding of doing business in Canada and, more specifically, of the department's communication systems.

About New Brunswick Department of Transportation & Infrastructure

The Department of Transportation & Infrastructure is part of the Government of New Brunswick. It is charged with the maintenance of the provincial highway network and the management of the province's automobile fleet including fire engine fleet. New Brunswick has a multimodal, modern transportation infrastructure, with more than 18,000 kilometers of highways and secondary roads crossing the province, air connections to major cities as well as rail and sea connections.



Before the Simulcast implementation, NBDTI has been using a paging and voice system operating over single sites that weren't connected together, which made seamless communication impossible. Furthermore, the system became difficult to maintain.

NBDTI's requirement was for a voice and paging system that could be integrated with its existing basestations and managed internally – with ease and at low cost.

Simulcast Solutions from Simoco

During the consultation, GDE Sales identified Simoco's Solar 2 as a cost-effective solution that would enable the New Brunswick government to communicate instantly to the fire teams located in the three regions across the province. Solar 2 Voice and Paging systems were installed in the Restigouche, Chaleur and Acadian Peninsula areas of the Province. The paging systems are used to instantly communicate emergencies to the firefighters and the voice system enables good on-ground communications.

The Simoco Solar 2 Simulcast is built on an IP system, which means it can enhance the reach and quality of radio communications better than ever before. Essentially, the user can easily move between sites within each zone of coverage without having to worry about changing individual channels. From the controller or dispatcher's point of view, the transmissions are broadcast from all sites simultaneously and, when receiving, the system automatically selects the site with the strongest received signal.



With one single system able to synchronize multiple duplicated frequencies (regardless of the size and complexity of the requirements), NBDTI is able to effectively manage a comprehensive IP simulcast network and benefit from wide area coverage in the event of a fire emergency. In addition, this self-maintaining approach reduces New Brunswick's lifetime ownership costs significantly.

Simoco has a long history of simulcast installations, a commitment to working to international standards and extensive experience in IP based mobile radio networks. It took just a few months to install the full system in New Brunswick – which consisted of 15 discrete tower sites including the installation at the region's 911 PSAP Centre – and deliver training to the end users. Today, Simoco continues to offer telephone and online support and works closely with GDE Sales and NBDTI to assess the requirement to expand the Simulcast system even further.

Key Benefits of Simoco Simulcast

Simoco Simulcast solutions are a favored option for high performance wide area coverage with limited frequencies. The simulcast infrastructure components are run on an IP backbone bringing a number of distinct benefits:

- Wide area coverage using a single frequency
- Voting – ensures that the best receiver site is selected
- Enhanced mobility
- Simple set up
- Efficient operation
- Low cost of ownership
- Remotely monitor, maintain and configure network components in the field
- Scalable - the network can be easily extended without having to shut the system down or interrupt system operation

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