

THE CANADIAN PACIFIC POLICE SERVICE EXTENDS ITS REACH TO CONNECT OVER 14,000 MILES OF RAIL

WAVE BRINGS PUSH-TO-TALK INTEROPERABILITY ACROSS A WIDE RANGE OF CARRIERS



CUSTOMER PROFILE

CANADIAN PACIFIC POLICE SERVICE

- The Canadian Pacific Police Service oversees the safety and security of the Canadian Pacific Railway, a 14,000-mile rail network that extends from the Port of Vancouver in Canada's West to the Port of Montreal in Canada's East and into major rail hubs in the U.S.
- The Police Communications Centre handles over 150,000 calls a year
- The Canadian Pacific Police Service needed a solution that would help maintain consistent and reliable communications across the many miles – and many networks – in its coverage area

Launched in 1881 with the goal of connecting Canada's populated Eastern cities to the largely unexplored West, the Canadian Pacific Railway encompasses 14,000 miles of track that traverses prairies, mountains, cities, and ports throughout Canada and the U.S.

Transporting commerce across Canada, the railway shoulders a great responsibility to operate safely and efficiently. Paul Murray, inspector at the Police Communications Centre notes, "We carry a large number of commodities right across our network and that ends up on the shelves of the supermarkets out there on the street, so any delay or impact to our flow of traffic can have an impact to those on the streets."

In addition to delivering cargo safely, there are the people who work for the railway and those who live or travel near the rails to consider. When it comes to safety issues, there are often hundreds of people who could be impacted by a stalled train or an accident, so safety is always top-of-mind.

Officers of the Canadian Pacific Police Service (CPPS) act as first responders to problems that impact the rails and any land adjacent to the rails. A force of 102 officers is responsible for dealing with more than 150,000 calls a year. Providing reliable communications tools to these officers and the railway personnel they work with is a top priority for CPPS.

MOTOROLA SOLUTION

- WAVE



THE CHALLENGE

Because of the expansive area that the railroad covers, the CPPS relied on broadband push-to-talk (PTT) as a way to communicate within their agency. However, this same expanse meant that no one carrier provided service across all of the territory the Canadian Pacific Railroad covered. As a result, members of the CPPS used different carrier solutions depending on where they were stationed. The team encountered difficulties communicating due to interoperability issues with multiple carriers in various service areas. Without a unified PTT service, employees frequently could not reach their teammates over PTT, often resorting to phone calls or even email. Communications with their dispatch center in Winnipeg were also compromised – at any given time, the dispatch center was unable to communicate via PTT with a significant portion of the workforce.

“Lack of interoperability was one of the big issues that we faced,” says Murray.

INTEROPERABILITY IS A SAFETY ISSUE

Cullen Bonnell, signals and communications supervisor, stresses the importance of fluid communication. “Two-way communication is critical, especially for trains” says Bonnell, adding, “you need to be in contact with the trains and other people on the ground at all times because if the [track] signaling system crashes, it’s the only communications systems that’s left to rely on.”

Julian Benavides, a systems engineer for Canadian Pacific Railroad, felt limited by the communication system they had. “We didn’t have the opportunity or the possibility to patch other agencies and to operate outside our area of work,” he noted.

The CPPS team began to search for a better solution, hoping to find a product that would help them overcome the serious challenges to interoperability that threatened their long-term success.

THE NEED FOR A FLEXIBLE SYSTEM

“We were looking to find a product that would be scalable, meet our specific needs, help us with the large area that we cover and all of the challenges that caused,” said Murray. While there were a few products out there, the force didn’t want to be stuck with a proprietary system that would create more problems than it would solve. “We needed a product that we could use the way we wanted,” Murray said.

THE SOLUTION

The team continued their search for a product that would help with interoperability. They focused on finding a solution that would allow them to communicate across the large geographic region they served throughout the U.S. and Canada, using the networks that were already in place. WAVE appealed to the team because it provided a communications interoperability platform for push-to-talk over various cellular networks – in both the U.S. and Canada – and over Wi-Fi networks that were already in place. Since these networks jointly provided coverage across the extent of the Canadian Pacific Railway, the CPPS could leverage this existing infrastructure to get the PTT coverage they needed.

AN INTUITIVE SOLUTION

When the team saw all the benefits available through WAVE, they wanted to devise a thorough test for the system to make sure that it could accommodate all of their needs. "We deployed WAVE in a test phase," explains Murray, "and we ran that for about a year and then we put it into production in the U.S. as a replacement for our large telecommunications product there." The success of that program helped persuade the team to roll out the program in Canada.

Once the system was implemented, Benavides noticed the ease with which people adapted to the system and realized his workload would be lighter, particularly when it came to fixing all the equipment that supported the systems they were migrating away from.

With WAVE, the team now had interoperability within their own system, and with their partners and agencies. They had a more reliable day-to-day communication system and could be confident that they could reach the most remote areas when needed. "Canada is a big place," notes Benavides, "so there are very remote places with a sole means of communication."

The CPPS also decided to leverage the WAVE Advanced Desktop Communicator to dispatch out their entire workforce, without having to worry about carriers.

THE BENEFITS

WAVE has noticeably improved communication at Canadian Pacific Railroad. "The company has officers in locations as diverse as Philadelphia, Montreal, and Saskatchewan, and any officer in those cities can have immediate access over the network. "There's very few systems that allow officers who are that far apart to communicate seamlessly," Says Murray.

INTEROPERABILITY MEANS INCREASED COLLABORATION AND FASTER RESPONSES

With WAVE, the team has gone from situations where there were officers who could communicate only by telephone or email, to a system where all of the officers can use push-to-talk, including those on either side of the border during any kind of incident. Partners who work closely with CPPS, such as HAZMAT have also on-boarded with WAVE.

"We provided our dispatch communicator licenses to CN, and using the web browser and web dispatch portal, they can talk with us using WAVE where, before, no one was able to," says Murray.

The success of this program is encouraging the team to consider connecting with other radio networks, as well. CPPS is hoping to increase interoperability with about a dozen rail yards and switch yards. The yards use various radio systems, but all can be connected via the WAVE platform to support PTT interoperability, providing increased opportunities for collaboration.

A TRUSTWORTHY SOLUTION

Security and safety are additional benefits of WAVE. As Benavides mentions, "WAVE is a trustworthy solution. Big agencies in the U.S. are using it and trust in it, and that is a big thing for this type of operation. You need to know that you are communicating in a secure, private way and WAVE provides that."

"The new approach to communication at CPPS helps everyone on the job feel a bit safer. I think safety is important because it is the base for good and steady operations," says Benavides.





INCREASED VISIBILITY FOR BETTER RESOURCE MANAGEMENT

Knowing who is on each channel, and being able to use GPS tracking to know where they are, leads to better resource management and a higher level of safety.

“We want to be able to know where people are on the ground, and where the resources are,” says Murray, noting that the GPS capabilities supported by WAVE help to provide a continually updated picture of where the resources - people and trains - are at any given time, allowing for better coordination throughout the system.

Murray explains that one of the defining factors in deciding to go with WAVE had to do with their relationship with Motorola. “The relationship we built up over the last two and a half years is a two-way street,” says Murray. “I reach out to team members on a personal level to their direct line – I don’t have to go through a corporate entity – and I get the support directly and get action taken on any issue I may have.”

INDEPENDENCE TO BUILD THE RIGHT SYSTEM

Under the old system, it was difficult to maintain the right kind of partnership for ongoing operations. “The carriers were hosting the system for us,” explains Cullen, “but they didn’t understand how critical it was for us to maintain ongoing operations, so when we had issues, the support was often slow or non-existent.” Team members wanted a solution they could have more control over.

WAVE offered the scalability and independence the team was hoping to find. “On our previous solution, everything was hosted outside and we didn’t know what was happening. WAVE gave us the autonomy to implement the solutions within our data centers, so we are able to configure on-the-go based on our demands or needs.”

Making updates to the WAVE system is easy. Bonnell explains that all it takes is a phone call or a click of the mouse to add a license for more channels, when they’re needed, and there’s a new channel to use. As the team explores new options and ways to use WAVE, Benavides feels good about the possibilities.

“WAVE is a new technology, so every day we are learning about it, we are performing, improving, enhancing the functionality of it. I think we have a good future with WAVE.”

Learn more at motorolasolutions.com/wave

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