



SANGOMA CaseStudy

RideOnTrack Partners with Sangoma to Deliver Mission Critical Communications to Railways in Belgium

CHALLENGES

RideOnTrack needed gateway solutions to incorporate legacy TDM platforms into their IP (SIP) solution in order to have one single voice recording solution.

Replacement of track side multiplexers which were used to connect track side analog phones, radios and alarm systems, in order to communicate with their IP (SIP) solution

SOLUTIONS

- » Sangoma A-series E1 PCIe Telephony Card
- » Sangoma Vega 3000 Series VoIP Gateway

The Customer

RideOnTrack is a Belgian based company specialized in delivering state-of-the-art communication solutions for mission critical networks. They cover customers in railway, public safety, air traffic controllers, police and military. Their products range from voice recording, gateway products, VoIP (fixed) operational telephony and dispatching. Besides the specific products, RideOnTrack also designs customer specific solutions as is required in most integration projects.

Business Challenges

As organizations of mission critical services are being asked to modernize their infrastructure to meet growing safety and security requirements, limited budgets are leading them to adopt and migrate to IP-based communication solutions. Typically in these large networks there are many different telecommunication solutions, based on different standards, and so the migration period will span across many years due to such complexity. This means that support for multiple protocols will be required.

A perfect example is a company called Infrabel, the Belgian rail infrastructure provider required to migrate to IP (SIP). Infrabel selected RideOnTrack for their fixed operational communication solutions. RideOnTrack's challenge was that Infrabel, as well as many mission critical organizations, own quite a bit of legacy systems that cannot connect directly to IP-based communication solutions without analog / TDM to IP conversion. For example, they record voice calls to help improve operations, provide training opportunities for employees and to have on file for legal reasons for emergency situations. While some of the phone calls are made over IP devices, many are still made over legacy TDM communication systems. RideOnTrack needed to build a bridge between the old and new communication world and therefore called on Sangoma's expertise in this line of business.

Another challenge RideOnTrack faced was the replacement of all Infrabel's track side multiplexers, which were used to connect track side analog phones, radios and alarm systems, in order to communicate with their IP (SIP) solution. These



devices are typically used by track workers, train drivers, or in case of emergency, to manually control train movements. The analog phones connect to the SIP/IP dispatcher solution of RideOnTrack at the train control center. Typically a gateway appliance is used to make the translation between old and new world (in this case an analog-to-SIP gateway). But these track side phones were up to 12 km distance from their multiplexers. They were also subject to interference due to EMI when trains passed by, and these unique gateway requirements are not typically supported by traditional gateway vendors.

The Solution from Sangoma

To meet these challenges, RideOnTrack partnered with Sangoma Technologies to ensure the co-existence of legacy telecommunication equipment with their IP (SIP) counterparts.

For Infrabel’s voice recording requirements, RideOnTrack selected Sangoma’s A-series E1 PCIe telephony cards, which proved to be highly compatible, flexible and worked with their software. Combined with RideOnTrack’s software, these telephony cards were integrated into gateway platforms which could interface with the ISDN, CAS, QSIG and IP (SIP) world simultaneously. With available configurations from 1 x E1 up to 16 x E1 in a single PCIe interface, Sangoma was able to provide not only a solution for Infrabel’s requirements but for all of RideOnTrack’s (fixed) operational telephony needs.

To solve the challenge of replacing all the track side multiplexers which connected to analog phones, RideOnTrack used Sangoma’s Vega 3000 series VoIP gateways. Each of these gateways can connect up to 50 analog phones up to 12 km distance from the gateway and connect directly to their IP (SIP) solutions. RideOnTrack worked closely with Sangoma R&D to design special software/firmware to cope with the EMI interference caused by trains and poor line conditions.

“These VoIP gateways are the perfect solution for our customer Infrabel who have track side analog phones up to 12 kilometers distance from IP-based network and experience high interference due to EMI when trains pass by. These Vega VoIP

gateways helped us win a tender in 2016 to replace all old track side analog multiplexers for Infrabel.”

The Results

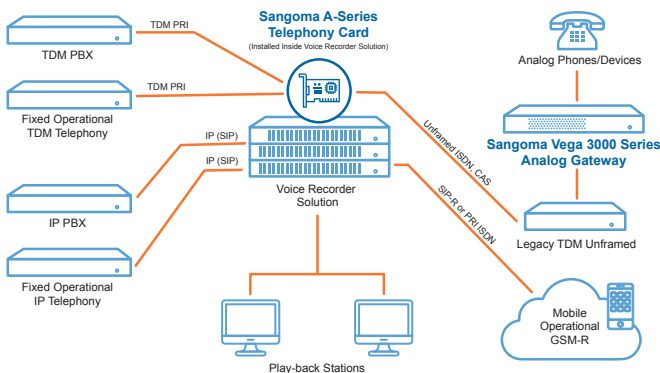
Sangoma has proven to be a great strategic partner for RideOnTrack, and with their continued success with Infrabel they are now deploying Sangoma A-series telephony cards in all their voice recording and gateway products.

“Sangoma’s products have allowed us to provide solutions for all companies that need (fixed) operational communication, such as railways, public safety, police, fire brigades, 911 and airport navigation”

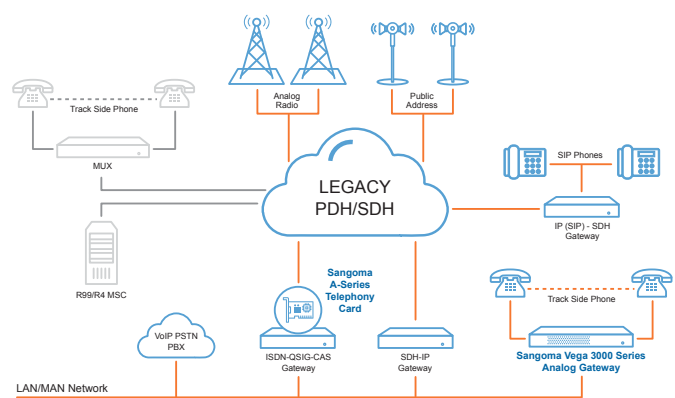
The implementation of Vega 3000 family of VoIP gateways for track side analog phones and devices proved to be a huge success and are being used for all of RideOnTrack’s projects where a high performance SIP-to-Analog gateway is required for high tolerance to poor line conditions and interference.

Today, RideOnTrack is continuing to address fixed operational communication opportunities all over the world.

Voice Recording Solution Using Sangoma Telephony Cards



Track Side Analog Phone Solution Using Vega Gateways



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