

SIMOCO CONNECTED RAIL

**PROVIDING RAIL OPERATORS
A PATHWAY TO A MODERNISED
DIGITAL RAILWAY**



simoco
wireless solutions



The Connected Rail Introduction

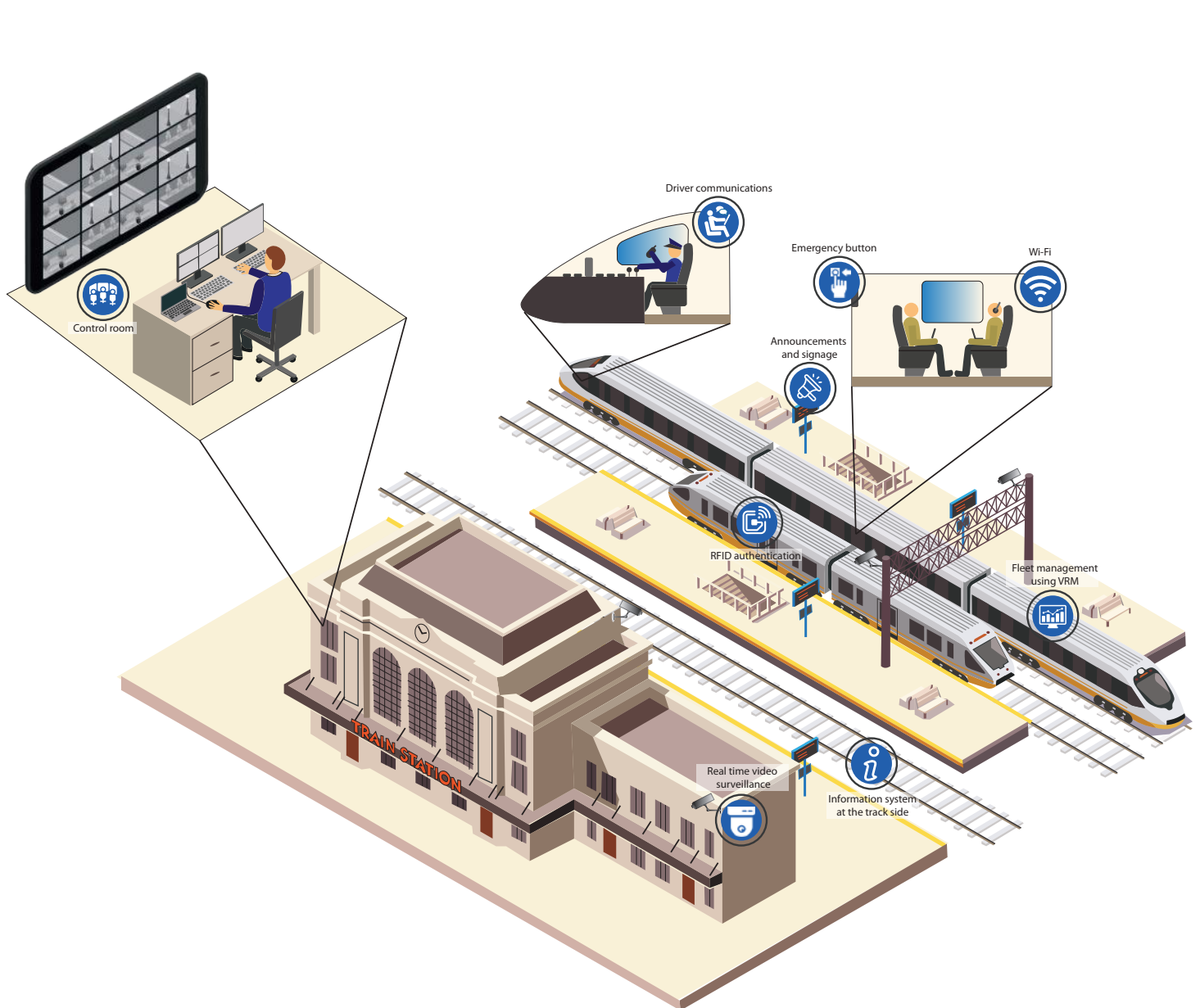
Transporting passengers and goods by rail has been a reliable and safe mode of transport for centuries with millions of people and goods being transported every day, playing a critical role in our economies. And while passenger rail traffic has been impacted due to COVID, global rail traffic is still forecast for growth which poses a challenge for rail operators, who work with complex and often aging infrastructure and technology.

Rail operators are expected to operate with fewer resources whilst meeting the expectations of passengers who have a range of transportation options at their disposal. A transformed, digital railway, can deliver new and fully connected rail experiences. That is why a reliable, secure communications network is imperative. Whether you are keeping trains running on time or responding to incidents at the track side, your communication network needs to support the daily operations and unprecedented situations. With powerful communications, rail operators can enjoy reduced costs, improved efficiency and enhance the overall service for its passengers, which they now expect.

Discover how Simoco Wireless Solutions can help you transform your digital railway and provide a converged network at the train, trackside and station.

Overview of Connected Rail technology

Connected rail deployments bring the ability for train systems to run smoothly without delays and keep passengers informed enabling them to reach their destinations safely. Effective voice and data communications are integral to provide real time information transfer, announcements and infotainment to passengers. An effective connected rail solution accomplishes more than just an on-board communications system, it integrates previously unconnected systems which help reduce OPEX costs, keeps passengers and employees feel safe and provide operational efficiencies.





A Unique Solution For The Rail Industry

For optimal safety, mobility and efficiency, rail operators require proven and well established technologies to maximise the benefits of connected rail. Velocity can be deployed at the heart of your communication system providing reliable and efficient communications. Rail operators can gain the confidence they have the foundation to build upon in the future with a ground-breaking intelligent communications platform built with Internet of Things (IoT) and LTE technology.

What sets Velocity apart from other devices is the intelligence and edge computing all in one device providing rail operators a connected rail solution to help bridge the gap in realising the future digital railway dream.

Wireless solutions built to drive efficiency



All in one intelligent communication solution

Our solutions provide an affordable and best-in-class intelligent communications solution that consolidates all your devices and peripherals, providing your organisation with the reliability and resilience it needs from a mission critical communication network.

On board passenger Wi-Fi

Today's transit commuters and leisure travellers want Internet access almost as much as they want a seat and an on-time arrival. Offering Wi-Fi is simply part and parcel of creating a good passenger experience.



Real time video surveillance streaming

Our solutions rely on constant mobile connectivity which makes possible to monitor security from a remote location and alert authorities immediately when problems arise.

Announcements and signage

Digital signage, announcement boards and configuring announcements that work off announcement speakers can be configured providing passengers information to journey times, connections and transfers enabling passengers to reach their destinations quickly and safely.



Converged Multi bearer platform

We understand the harsh terrains train operators face whether that is delivering freight cargo or passengers to their destinations. Ultimately train operators are tasked to keep drivers, cabin crew and passengers connected with reliable technology. Velocity's multi bearer platform allows train operators to stay connected with a range of common communication networks such as LMR, LTE or even satellite communications transforming operations and passenger experiences for a new era of public transit. The beauty of Velocity is the aggregation of data managed on business rules, resulting in bandwidth efficiency.

Centrally manage your fleet

Minimise one-off vehicle troubleshooting by monitoring, managing, and analysing connectivity and security issues from anywhere.



RFID authentication

Your train drivers can authenticate using an RFID tag each time a shift has started helping fleet managers keep a record of hours worked thereby addressing health and safety and wellbeing of your drivers.



Real time monitoring, maintenance and updates

Using Velocity Remote Manager allows firmware updates, configurations and maintenance to your wireless on board device from a remote location while ensuring that sensitive data stays safe.

Health monitoring

Whether you need to monitor cargo goods on your trains or provide customer satisfaction for passengers on their rail journeys, as train systems become more complex, operators are looking for ways to operate efficiently. Many are turning towards an integrated solution to address these enhanced requirements. Velocity's in-built intelligence can enable a number of use case applications. For example, temperature ranges can trigger alarms and notices if haulage goods need to be delivered to a specification or measuring the temperature of carriages to ensure passenger comfort.



Passenger counting

Interested in knowing how many passengers are in your train carriages at a given time? Our solutions can easily do that. Furthermore, our dispatchers can display visual occupancy enabling the dispatcher to increase or decrease a particular route's bus frequency.

Network Security

Velocity is designed with security in mind and includes the use of advanced security protocols such as virtual private networks (VPN). Other security features include setting up Demilitarized Zones (DMZ), MAC filtering, IP filtering, port filtering and port forwarding provide a standards-based security solution for connecting and managing remote assets, enabling customers to guard against malicious access to sensitive data.



Fare collection

Technologies like the fare payment system, which uses prepaid cards, require a continuous network connection to transmit and receive balance updates to a traveller's rail card. With Velocity on board a train, conductors can have the peace of mind to ensure collection of payments from passengers will go smoothly. This is only possible to implement with a continuous network connection.

Wireless bulk transfer

Need to offload large downloads without consuming lots of LTE data? Rail operators can configure a number of access points within Velocity for offloading large files to rail stations or depots with fixed gateways.



Experienced in delivering communications solutions in the rail sector

Simoco Wireless Solutions have decades of experience and expertise in delivering communication solutions for the rail sector.



Docklands Light Railway

The Docklands Light Railway (DLR), part of the London Rail division of Transport for London (TfL) is an automated light metro system serving the redeveloped Docklands area of London, England. Simoco Wireless Solutions have provisioned a number of modifications to the radio system over the course of several years that will result in replacing ageing analogue based systems. Simoco provide preventative maintenance on the DLR radio network both on trackside and off track side.

Pacific National

Pacific National is Australia's largest private rail freight business, offering transport services for coal, freight, steel and bulk commodities for customers across Australasia. Simoco Wireless Solutions has a longstanding relationship with Pacific National over the last 25 years in designing and delivering state of the art enhanced radio systems including a Digital Mobile Radio on-board system for the QR DMR network.



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