Innovation and Design

PARK SIGNALLING
a Unipart Company

Park Signalling identified the requirement for a Train Protection System based on Global Navigation Satellite System / Inertial Navigation System (GNSS / INS) as part of its low cost signalling development initiatives, including Verbal Exchange Radio Block (VERB) and Virtual Lineside Signalling (VLS) projects.

Innovating for you

Following a high-profile incident on a UK Tram system, Park Signalling realised that our innovative low-cost signalling concept, could be developed into a tram vigilance system, which would have stopped this accident and others occurring. This system is TRAMSAFE.

Our TRAMSAFE idea is very simple in concept. The system comprises a GPS receiver that continuously monitors trams' speed and position which is compared to a bespoke digitised map of the transport system speed transitions that is stored on the Tramsafe Unit The map data is relevant to the line over which the vehicle operates and contains the permissible speed profile information relevant to the line.

As the tram travels through the network its speed is continuously compared against the required speed profile. If the tram exceeds the permitted line speed then an alert tone is sounded. Should the driver fail to respond (i.e. apply the brakes) a more urgent intervention tone sounds and the tram brakes will be applied automatically.

All speed and position events are recorded and logged for a minimum of 24 hours. It is possible to remotely download and update new mapping software to the device by means of wifi.
The device will provide an alarm to the control centre if an intervention occurs. A mechanism to reset the brakes is provided following an intervention.

The data for the line is programmed into the device by an office-based support computer. This computer allows the creation of the necessary map and permissible speed data for the line to be defined and programmed into TRAMSAFE device. All trams are fitted with devices which have identical programs and data. It will be possible to download new map and speed data to the tram by means of Wifi and/or GSM/GPRS. This allows the possibility of introducing and managing temporary speed restrictions on an hour by hour basis if required.

Park Signalling continues to engage with the UK's Tram Operators and hopes to commence trials of TRAMSAFE in the near future.

The Benefits

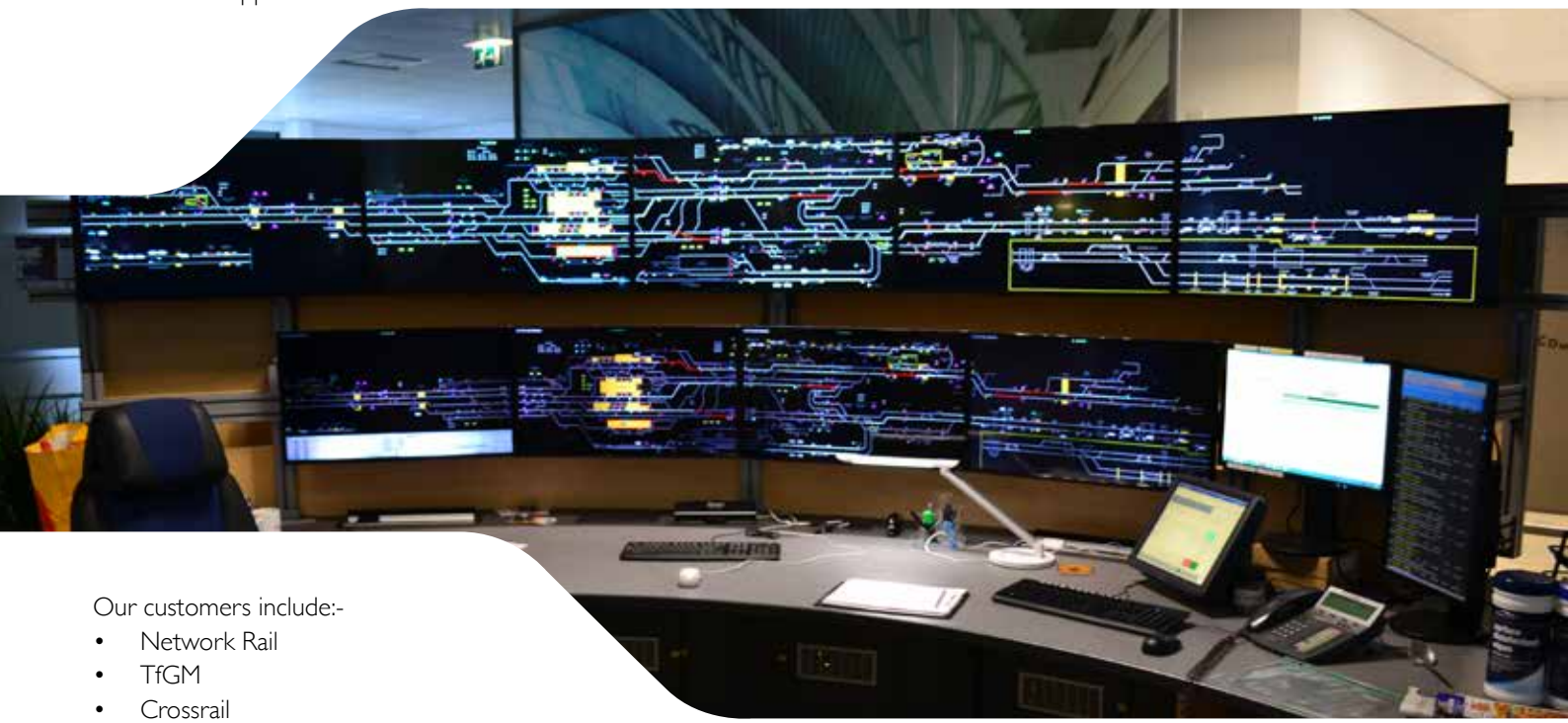
- Use of COTS materials wherever possible to reduce cost and to future proof TRAMSAFE
- Designed from the ground up to meet Tramway Operators' needs
- Enables Operators to minimise disruption to their timetables after an intervention
- Only intervenes if Tram Driver over speeds or drives outside of the route speed profile

Consultancy

Park Signalling Ltd has a long and successful record of providing high quality, high value consultancy services to the Railway Industry in the UK and overseas. Whether you are new to the sector, or have years of experience, Park Signalling can help with your signalling or control systems.

We can provide consultancy in the following areas:-

- Heavy rail signalling and train control
- Light rail and metro train control
- Obselesence management
- New and innovative signalling systems
- Complex problem solving
- Reverse engineering
- Product approval



Our customers include:-

- Network Rail
- TfGM
- Crossrail

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