

# Railway use of Touch Screens

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**Dave Farman,**  
Siemens Communications' Project Manger

Siemens Communications has successfully utilised touch screen technology to provide a signaller's interface for UK railway Signal Post Telephones. The system utilises Servers and Operator Touch Panel PC's to give a clear and intuitive interface for signalling staff of all communications associated with the safe running of the network. High reliability is implicit in such systems as the safety and punctuality of the service depends upon it.

Each trackside signal, level crossing and other such element of the system is by the main automatically controlled. However, it is a fundamental requirement that there be a simple method by which incidents can be quickly reported for signalling action. The user of the Signal Post Telephone (SPT) has only to pick up the handset and communication is made to that section's signalling station. In the past this was indicated on a simple key and lamp system. With the new system the touch panel displays the type and status of all SPT's and a call is recognised by a change of colour on the screen and a digitally recorded ringing indication. The screen displays can be designed as per the signallers requirements with priority and restriction attributes configured per SPT indication. Each signalling panel has either 1 or 2 handsets and can handle call from/to the switched telephone network as well as the operational telephones.

Siemens Communications has been awarded several SPT Concentrator upgrade contracts for UK railways. A standard for the upgrade has been built around Siemens' VAS-B SPT communication software, a product that is thoroughly tested and approved. The hardware comprises of a Siemens HiPath PBX, Advantech Servers and Advantech Touch Screen PC's. These complex projects are subject to rigorous Factory and Site Acceptance Testing by the customer prior to acceptance.



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Industrial Automation Hardware

## Client

Siemens, headquartered in Berlin and Munich, is one of the world's largest electrical engineering and electronics companies and holds leading market positions in all its business areas.

## Industry sector

Transport, storage and communication

## Challenge

To deliver an assembled and tested IT system to meet with the user's specification that is available on a flexible basis.

## Solution

Advantech 15" screen PC  
IPC 602 19" rack server

## Implementation

SolutionsPT Ltd undertook all the stages of pre-production needed to deliver an assembled system which was then loaded with the Siemens VAS-B software and tested prior to shipping to Siemens.



HardwarePT offers a comprehensive range of world-class industrial hardware and connectivity tools suitable for all environments.

#### Integration...

Siemens needed a partner that could deliver an assembled and tested IT system that met with the user's specifications and was available on a flexible basis. SolutionsPT Ltd in Stockport undertakes all the stages of pre-production that are needed to deliver a complete cabled 19" rack with three IPC 602 servers, system administration screen and event log printer. The interface to the Siemens HiPath PBX also resides within the rack, as well as an Ethernet switch.

Each rack is completely assembled, together with pre-configured servers, by SolutionsPT. The Siemens VAS-B software is loaded and the whole system (including the operator touch panel PC's) is tested prior to shipping to Siemens. The servers are physically removed from the rack for shipping and are quickly replaced on arrival at Siemens factory for mating up with the PABX. At the factory the actual customer database is loaded, making the system dedicated to a particular signalling station. The success of the project has involved SolutionsPT engineer's becoming part of the team and understanding the broader requirements of the complete system.

#### Hardware...

The signalling operators gain access to the system by Touch Screen PC's. The Advantech PPC 153T is a 15" screen PC that has been utilised across the world in unmanned ticketing systems and other environmentally difficult applications. All PC components are mounted at the rear of the panel that is enclosed in a heavy duty steel case, making a compact solution that is easy to both install

and maintain. Several panels are used in each application.

The IPC 602 19" rack servers are only 2U high, thus occupying minimal space in the rack. The design of the servers allows for easy access for routine maintenance by the server cooling fan air filters being mounted on the front side, the fans and power supply being quick-change items. Physical security is enhanced by a lockable drive bay.

#### Support...

Support is critical to such systems. SolutionsPT hold ready-available configured spares ready for fast dispatch to wherever they are needed, should they be needed. All parts used in each system are recorded by SolutionsPT for traceability and ease of support and diagnosis.

Dave Farman, Siemens Communications' project manager says "SolutionsPT provide us with a complete system that is tested and fully build-documented, this is a particular assistance to us in Factory Acceptance Tests". The partnership between Siemens Communications and SolutionsPT has significantly contributed to the success of the project.

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We present a complete range of services and support packages for longevity supply including design work, custom builds, legacy support, on-site repairs and site scans. In addition we offer pre-sales and post-sales consultancy delivered with first class technical expertise.