



Intelligent Transport Systems (ITS) combine Information Technology (IT) and communication to offer online resources to road, rail, sea and air travellers and administrators. Applications such as traffic, tolling, parking, passenger, information and ticketing systems benefit from real-time information. Benefits include improved efficiency, reduced congestion and enforcement of traffic regulations. A better informed traveller reduces the frustrations that often lead to subsequent problems and accidents.

However, limitations within existing communication systems and processes are becoming more apparent as:

- Legacy equipment and back-office systems are migrating to IP networks - proprietary protocols and interfaces need to be adapted to IP.
- GPRS & the Internet prefer "client initiated" communications from each remote device - many ITS management systems are designed to poll e.g. SNMP.
- Alarms raised by remote equipment are often not easy to support by polling systems since dedicated infrastructure is often required.
- IT and enterprise integration is often limited, where management of remote equipment remains stand alone and separate to IT business systems.

Applications:

- Urban Traffic Management & Control (UTMC)
- Car Parking Systems
- Passenger Information Systems
- Variable Message Signs (VMS)
- Toll Systems
- Payment Systems
- Ticketing Systems
- Rising bollard Systems
- Road Weather Systems
- Traffic Count and Congestion Systems
- Automatic Number Plate Recognition (ANPR)
- Road, Rail, Sea and Air Equipment

Comtech overcome these limitations by offering Intelligent communication solutions - business benefits are derived from a simple, step by step approach to rollout implementation

Designed to complement and enhance transportation systems and equipment, Comtech offer communication hardware, software and services which can be rapidly deployed in order to "bridge the gap" between machine and IT worlds!



Comtech's solutions can be taken whole or in part to extend your existing communication infrastructure. Business benefits can be derived in the short term, with a road map to higher integration, enhanced features and further reduced costs in the long term.

Step 1 Communications hardware gives remote access to ITS equipment

Comtech's PSTN, GSM and GPRS eRouter products enable remote access to Ethernet-based ITS equipment; to transport IP-based protocols such as SNMP. We also support serial and I/O equipment interfaces in box and module forms. Equipment protocols can be integrated for subsequent web-based remote monitoring, data logging and alarming.

Step 2 Management software offers standalone ITS asset monitoring

µWEAVE remote monitoring and content delivery applications manage remote ITS equipment centrally via the Internet. They offer robust communications and integrate alarm processing, notification, online reporting and administration of users & Intelligent Transport Systems equipment.

Step 3 Enterprise software integration brings ITS equipment data into the IT world

µWEAVE software interfaces and automatically delivers ITS equipment data directly to 3rd party enterprise systems. This makes it easy to integrate "machine data" with IT systems for business process management. Through our partnership approach, we can also offer standalone enterprise business systems.

Benefits:

- Gain reliable and robust communication.
- Solve data collection, alarming and IT integration problems.
- Focus on ITS end user needs rather than underlying machine communication.
- Derive value from real-time information to reduce costs and increase revenues.

Case Study - Bombardier Transportation

Rail equipment benefits real-time communication to improve maintenance efficiency, safety and security by targeting issues accurately.

Company

A global leader in the rail equipment manufacturing and service industry. Bombardier Transportation provides after sales service and equipment maintenance for up to 30 years in service use.

Problems and Needs

In an industry dominated by recent high profile accidents in the UK, the key needs were to address business critical issues which primarily include safety and security. Furthermore, there was need to improve maintenance efficiency, cost & reliability and to expand the business by offering maintenance services to the rail industry.

Solution

The complete rail equipment monitoring solution comprised an end-to-end system utilising the GPRS network and the Internet.

- A control unit within each carriage monitored critical parameters such as wheel adhesion, door closing times, engine performance, location etc.
- Comtech integrated network and equipment protocols into a GPRS asset monitoring device to deliver information reliably to a central application via the GPRS network.
- The central management application provided alarms and reports to equipment

maintenance staff and train operators.

Benefits

The rail equipment monitoring solution created efficient maintenance operations and improved end user service, through: -

- Business critical information supplied to rail industry on a service basis
- Targeting issues accurately
- Planning daily equipment maintenance schedules more efficiently
- Smoothing the workload to staff

“ Comtech worked closely with Bombardier Transportation to deliver an intelligent GPRS solution using their existing technology. This phased development resulted in a solution that was deployed on-time and within budget ”

Vince Smedley, Technical Director,
Bombardier Transportation



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