ROAD TRANSPORT

CLIENTS

Highways Agency
DTLR
Driving Standards Agency
Welsh Office
RAC
Devon County Council



ROAD CHALLENGES

Road traffic and travel sustainability continues to be one of the Government's highest priorities. Indeed, the strategy for Integrated Transport and the Transport 2010 ten year plan has road transport at its heart.

The pressing issues of safety, congestion and the provision of information to the travelling public remain high on the political agenda. It is considered that the role of telematics will continue to play an ever-increasing role in solving many of transport's major problems.

IPL'S COMMITMENT TO ROAD TRANSPORT

Since 1990, IPL has been assisting the Highways Agency (and its predecessor, the DoT) with the design, specification and management of a number of high profile pilot schemes and also with the redevelopment of the National Motorway Control Systems (NMCS2) that are used in Police Control Offices across England to manage roadside devices. The NMCS2 redevelopment has been a key enabler for the deployment of new technologies on the motorway network. Our level of involvement in NMCS2 and related systems has been such that our depth and breadth of knowledge of them is unparalleled.

IPL has been actively involved in studies aimed at defining the architecture of the next generation motorway and trunk road control systems. We are also assisting the Highways Agency with its contribution to European and International standards initiatives in the field of telematics.

TECHNICAL RELATED PROJECTS

The following are examples of technical related projects undertaken by IPL:

New Generation NMCS2

IPL has managed all three suppliers of the new generation core NMCS2 systems during their development of the systems, formal acceptance and commissioning at Police Control Offices. Our role has included:

- Review of project, quality, testing and configuration management plans, and development methods
- Monitoring development progress
- Managing supplier queries and contract change control
- Review of system designs
- Project audits
- Factory and site acceptance tests review and witnessing
- Control Office installation and system switchover/commissioning.

As part of a QA Consultancy contract with the Highways Agency, IPL has also undertaken tender evaluations, audits and reviews of related systems under development and in operation, communications performance assessments and system hazard analyses.

Central Logging

The NMCS2 systems are connected via a Wide Area Network to a central logging system which records all system-detected events such as device settings and equipment failures, and provides querying and reporting facilities for remotely connected users. IPL defined the requirements for this system, prepared the Invitation to Tender and assisted with tender evaluations and supplier selection. IPL subsequently managed the supplier through to system installation and commissioning, and continues to assist with system administration and maintenance activities.

Message Signs

The increasingly widespread motorway message signs were originally trialled along a section of the M25. IPL was appointed to assist with the trials. Our responsibilities included trials programme management, specification and procurement of an interim controller system for the signs, and supplier management through to commissioning of the system. IPL also developed the requirements specification for a message sign subsystem to integrate with the NMCS2 system.

IPL was subsequently selected to assist with the procurement of message sign subsystems for installation at a number of Police Control Offices. This again involved supplier selection and management, through to installation and commissioning of the subsystem.

Controlled Motorways and MIDAS

The Controlled Motorways pilot scheme was the UK's first ever automated scheme aimed at reducing stop/start driving conditions, smoothing traffic flows, improving journey times and reducing accidents. The scheme also incorporates Motorway Incident Detection and Automatic Signalling (MIDAS) to detect incidents and protect the back of traffic queues. It is now operational on the busy south-western sector of the M25.

IPL was responsible for the overall design of the control systems for Controlled Motorways/MIDAS. After producing the detailed specifications for the major system components and communications interfaces, IPL consultants assisted with supplier selection and with supplier management through system development to installation and commissioning of the system. IPL continues to be involved with operational data collection and analysis, working closely with the Transport Research Laboratory to refine the traffic detection algorithms and signal setting strategy.

Ramp Metering Pilot Scheme

As part of a consortium, IPL was responsible for investigating the system design options for a control system for a ramp metering pilot scheme at motorway junctions along a section of the M27. The scheme involves monitoring traffic flows along the motorway and using stop/go lights on the slip roads to meter traffic onto the motorway without causing flow breakdown. IPL subsequently produced the detailed system specifications and assisted with the evaluation of tenders from suppliers. IPL will continue to assist with supplier management as the system development gets underway.

Next Generation Systems and Standards Development

IPL has undertaken a major study into the architecture of the next generation traffic management systems for the Highways Agency. Key aspects of this are harmonising with European and International standards initiatives, greater integration with other organisations' systems, dissemination of traffic and travel information, and utilising new technologies.



FURTHER INFORMATION

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