

# Centrico BRIEFING NOTE

Using ITS to manage Europe's busiest roads



## Exploring Innovative Approaches in ITS

### SUMMARY

Traffic problems, on the TERN and in conurbation areas, are likely to increase significantly in the coming years. Technical developments in ITS offers many new options to fight congestion and prevent accidents. CENTRICO partners are pursuing several innovative approaches, which might in the future belong to the traffic manager's standard toolbox. Some of the most interesting of these are described in the present briefing note.

### THE NETHERLANDS

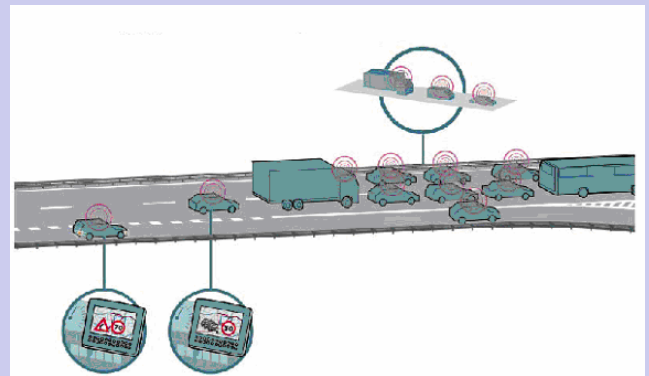
In the Netherlands a programme was started in 1996 called: Roads to the future. The mission of this programme is to initiate innovations that contribute toward making road transport in the Netherlands perceptibly less congested, cleaner, safer, quieter, and more comfortable. In the Roads to the Future program about 10 opportunity-driven innovative projects are launched every three years. In these projects public and private partners join forces. Some of these projects use advanced forms of ITS. Two of these projects will be highlighted:

- Belonitor; and
- Road Wise.

In 2003 the 'Belonitor' project was started. It is a study on the promotion of socially acceptable behaviour by rewarding motorists instead of punishing them. If this proves to increase traffic safety, the approach could be adopted by the private market. In the test phase 65 lease cars are being equipped with a device that records speeding and tailgating. Participants who drive properly will be rewarded. An evaluation report is expected by autumn 2005.

The Road Wise project is a pilot testing in-car communication, with an emphasis on traffic safety. An in-car device will be used as a tool for local/individual traffic management. The influence of in-car communication on traffic safety will be tested

virtually (distraction, effectiveness, driver perception), followed by a real on road test. This pilot will provide a starting point for implementation of similar systems. First results are expected in autumn 2005.



Road Wise Pilot

### GERMANY

In Hessen (Germany) a project was started called: "Staufreies Hessen 2015" translated 'Congestion free Hessen for 2015'. The objectives of this project are very clear and very ambitious. Hessen has decided to combine all possible measurements to fight congestion with the outcome being a congestion free Hessen in the future.

In April 2005 experts from all over Germany discussed possible measurements such as intelligent infrastructure, improved telematics (inter-car

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communication, FCD), intelligent parking, change driving attitude and speed control. The outcome was that only by combining useful ITS measures this ambitious objective could be reached.

DIANA, Dynamic Information And Navigation Assistance, is one of the first projects of the Hessian programme. This system can improve traffic information with the help of floating car data.

Since September 2005, a pilot project on telematics-controlled parking (TCP) for trucks is running by a PPP in Rheinland-Pfalz at the service area Montabaur at the motorway A 3. The system of TCP is aimed at the optimisation of the existing service areas as well as enhancing their capacities. The system provides for trucks consecutively parking in-line according to their declared departure time. The departure time is to be fed into a computer terminal by the truck drivers when entering the parking area. The experiences of the test-operation phase show that most of drivers accept the system when understanding that the capacity of the parking lot in Montabaur has been increased by 100 %. In the next step the experiences made in Montabaur might be used to transfer the system of TCP to other service areas, and, by interlinking these rest areas, to build up a parking guidance and information system for trucks.



Entrance situation for trucks at the service area Montabaur

## ENGLAND

The Highways Agency aims to provide safe roads, reliable journeys and inform travellers on their road network. Different, innovative approaches to achieve this are being carried out. Two examples of highly innovative projects are:

- ProbeIT Project; and
- Intelligent Road Studs.

The ProbeIT project developed and demonstrated an

end-to-end driver information concept. A combination of dynamic and static information provides road network status and basic re-routing to avoid traffic jams. The ProbeIT project provided experience of location referencing, data integration and modelling, interface management, GPS (Global Positioning System) and wireless communications technologies and the potential for telematics to improve road network management.



Example of in-car unit for ProbeIT

A feasibility study on Intelligent Road Studs (IRS) aims to prove that IRS can improve road marking and safety in adverse driving conditions. An IRS has a detection/monitoring function and can therefore be used for different measurements, besides plain road marking. It can:

- Detect vehicles (count/speed/classification);
- Detect incidents and provide warning of vehicles ahead (this is particularly useful when there is poor visibility) and
- Monitor weather

The Highways Agency is reviewing potential locations and has carried out off road trials. Subsequent testing using a traffic simulator may also be undertaken. The final future phase may extend to an on-road trial and consider the approval process for implementing the studs, where appropriate, nationwide.

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