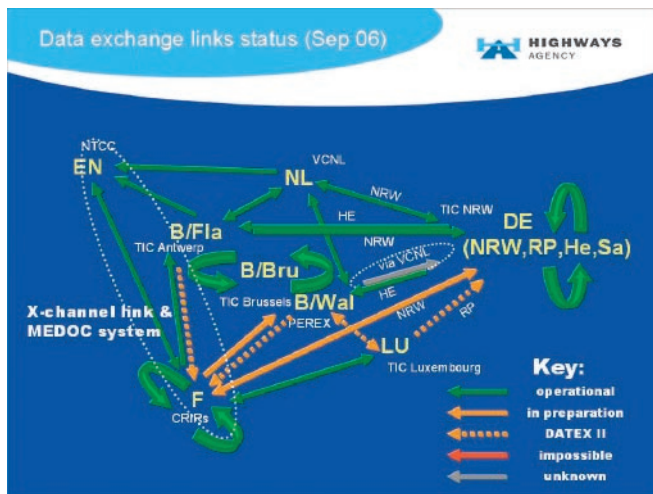


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BEST CROSS-BORDER AND INTERNATIONAL PROJECT AWARD WINNER

DATEX II

The Highways Agency's efforts on DATEX II development and deployment in CENTRICO won the award for 'Best Cross Border and International project' at the Centrico Award Ceremony in Brussels late 2006. This award recognises the OTAP/DATEX II technologies as being at the forefront in developments in the area of efficient data exchange in Intelligent Transport Systems.

INTRODUCTION

The major road network covered by CENTRICO is dense and very heavily used. The collection and dissemination of traffic information as well as the management and control of traffic is difficult when carried out by each region in isolation. The exchange of data between traffic centres is essential for the operation of trans-regional services.

This is where DATEX comes in. DATEX II provided the platform that will allow this type of exchange of traffic and traveller information between countries. It is the successor of DATEX I, the initial pre-standard for the exchange of traffic and travel information between traffic management and information centres.

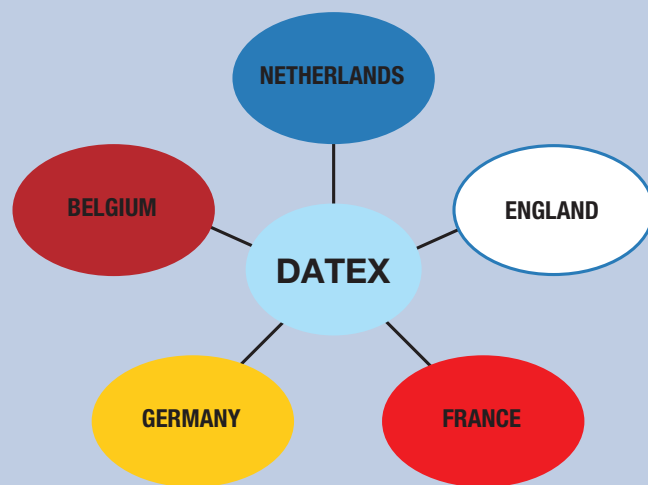
DATEX I became outdated very quickly and was not particularly successful overall. This was due to lack of quality in set pre-standards and also as a result of the rapid developments in the field of data exchange technology. The unforeseen developments in business-to-business interfaces over such a short period of time also meant the benefits to be had from DATEX I were significantly reduced.

Although the success of DATEX I was limited, the potential for a more efficient data exchange technique was based on the knowledge gained from this activity. The very few 'centre-to-centre' links that were

established pre DATEX II, proved to be too expensive to roll out, in terms of a Europe-wide data exchange interface. Therefore the full benefits of having a functioning data exchange platform could not be achieved, because the information gathered and shared was limited between only a few traffic centres. Consequently any information that is not available for everyone to use is not useful.

WHAT IS IT?

DATEX established the first common traffic and travel related data dictionary for road traffic in Europe.



Nevertheless, the outdated exchange specifications based on UN/EDIFACT messages and a circuit



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switched telephone network paradigm had to be updated (DATEX to DATEX II), and stakeholders also expected to see new data modelling technologies being applied to provide a richer data model than the old DATEX. Following the work carried out in the latter stages of the DATEX II developments, the systems proved to achieve high availability with good performance characteristics; this has validated the credibility of the internet being used as a platform for this type of exchange.

The challenge was to keep what is good while at the same time improve what was weak or outdated.

The solution was an approach that

- used the *Unified Modelling Language* (UML) for data modelling,
- used the *Extensible Markup Language* (XML) for data coding, and
- used the *Hypertext Transfer Protocol* (HTTP) for data exchange.

All three are widely accepted information and communication technology industry standards and therefore allow for the seamless integration of a DATEX interface into existing Internet service infrastructures.

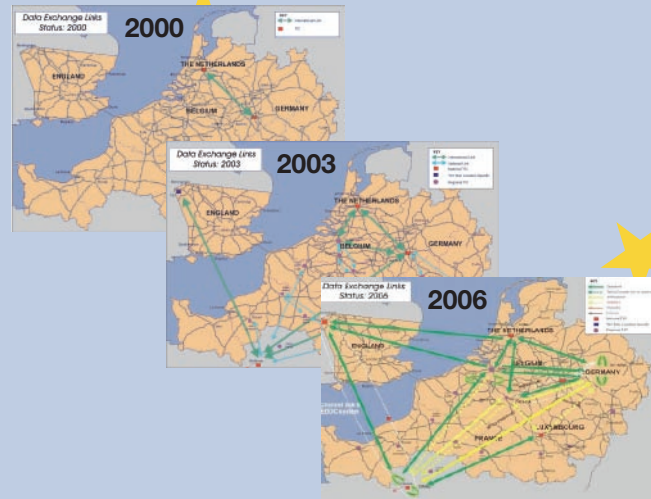
THE EVOLUTION OF DATEX

The evolution in the number of DATEX links is illustrated in the maps below:

In the earlier stages of the project, there was only one existing DATEX link, currently there are over ten fully operational data links available within the European network of traffic centres with several more being prepared to migrate to DATEX II in the nearest future.

The development from DATEX I to DATEX II was identifying the ability to use widespread IT technology that was readily available, with a low technical entry threshold and a broad support base of literature, training and tools, many of which are free of charge. The ability to use the internet brought about the possibility to introduce the DATEX II low cost profile technology which further enhanced exchange capabilities.

This allowed for the easier implementation and the deployments of DATEX II technologies, whilst still allowing for plug & play interoperability.



THE HIGHWAYS AGENCY'S ROLE

Since 2001, the Highways Agency has been leading the MIP I 'European Network of Traffic Centres activity' domain. The development of a standard enabling traffic information exchange between traffic centres formed a vital milestone of a European part to achieve the network of traffic centres.

Alan Raines from the Highways Agency was the project manager for DATEX II developments in CENTRICO.

Alan has been involved with the data exchange projects since the beginning and has participated in the implementation of both DATEX I and CEN TC WG8 standardisation.

He considered his main role in the project to be that of "providing support and advice, while steering the migration of data exchange technologies to a new generation that incorporates modern Intelligent Traffic Control ideas and technology".

In determining how the project's successes will influence planning within the Highways Agency, Alan confirmed that "the HA is taking forward the initiatives presented, as a result of activities undertaken in this project" and will go ahead in implementing the DATEX II deliverables.



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He also reiterates that the cross-border data exchange project had demonstrated well, the concept and benefits for cross-border exchange and will enable and support further developments within the UK.

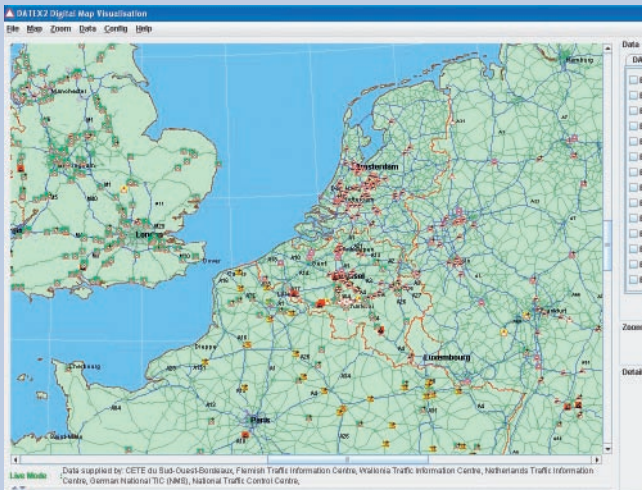
He concluded that the *“experiences and collaborative working with partners enabled best practices to be applied, furthering the end goal of improving the efficient exchange of travel information”*.



The English Minister of State for Transport, Dr. Stephen Ladyman, is being shown the DATEX II client at the ITS World Congress 2006

RESULTS

The DATEX II prototype demonstrator at the ITS World Congress and the i2TERN Conference in Barcelona 2006, was supported by a simple internet-based client software package that is available for free on the internet.

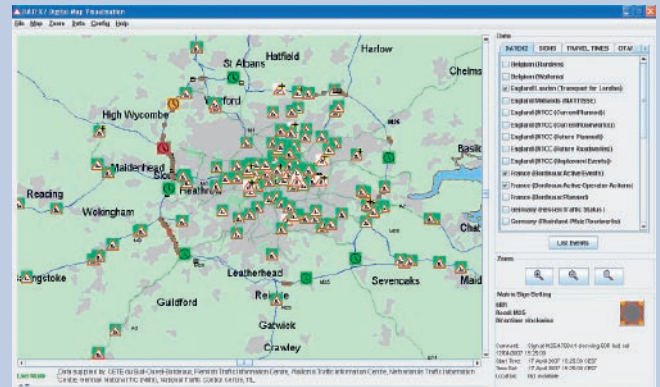


This software was able to display real-time information from no less than eight member states, without the need for acquiring any additional hardware to support the software. Further highlighting the low costs associated with the project.

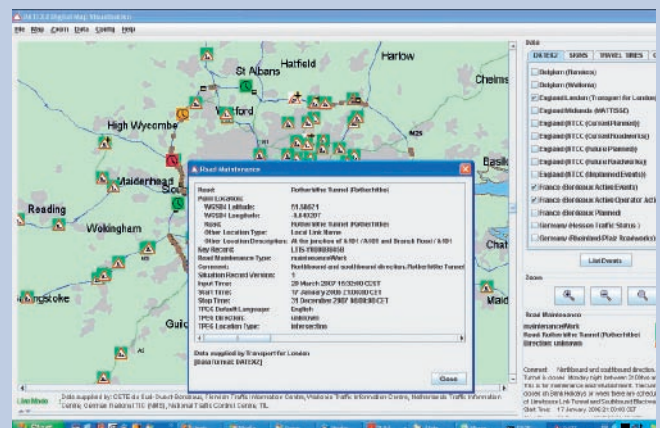
The DATEX content provided by this interface includes vehicle traffic information with the potential to include live CCTV images in the future.

In the space of only a few years, the development in DATEX II has enabled a vast range of access and exchange of real-time traffic and travel information.

The amount of detail that is available is illustrated in the screen shots below:



A variety of traffic and travel information specific to one particular area can be viewed at any time. This feature is detailed in the screen shot below:



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WHO WILL USE THIS INFORMATION?

The data/information from this system is shared between different parties:

- Other control centres;
- Value added service providers;
- General public through websites such as Transport Direct;
- Local Authorities; and
- Freight operators.

The information will support drivers when making choices, saving time and improving journey time reliability.

EUROPEAN ADDED VALUE

The development of DATEX II has enabled access and exchange of real-time traffic and travel related information in a time span of only a few years. This information already covers most of the TERN in western Europe, and with the official release of DATEX II at the end of 2006 coverage of most of the TERN can be expected very quickly.

The availability of traffic information in a standardised form stimulates and enables new services – especially across borders – and thus directly affects the objectives of EC recommendation 551 from July 2001, and it significantly contributes to the EC's whitepaper vision of a European network of traffic centres. The DATEX II specification is now progressed as CEN standard.

THE FUTURE

With the step towards the potential EASYWAY programme, as part of a Multi-annual Indicative Programme foreseen for the 2007 - 2013 period, some changes are expected for the DATEX organisation. A work programme currently in preparation is looking to ensure that the scope of DATEX is opened up to include urban traffic and travel related information. The DATEX community is expected to continue the technical work carried out in electronic user form open to all interested parties and an annual user forum

is foreseen to bring together the rapidly growing DATEX II user community.

A dedicated action in 2007 is to upgrade and extend the early prototype and demonstrator implementations that had been established during the summer 2006. A group of active European Member states is working presently to provide a dedicated proposal for such a project, with the objective to achieve a substantial coverage of the TERN with DATEX II services by the end of 2007.



For more information on this topic, please contact:

Alan Raines

Alan.Raines@highways.gsi.gov.uk

For further information on other CENTRICO activities visit:

www.centrico.org

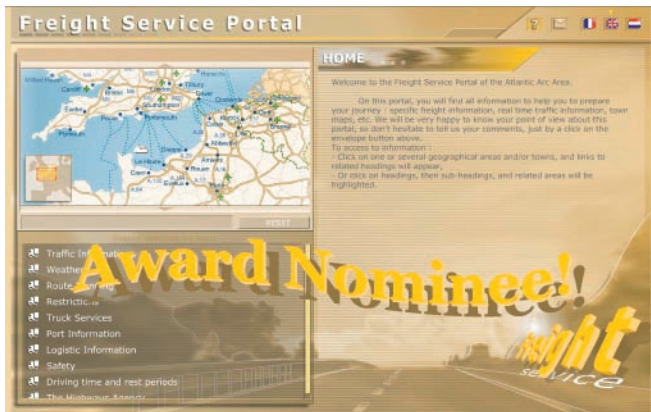


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www.freteuroservice.com website

BEST CROSS-BORDER AND INTERNATIONAL PROJECT AWARD NOMINEE

The Arc Atlantique Freight Portal

Local authorities, ports and road operators have a desire to better serve the increasing volumes of HGV traffic within the Arc Atlantique Corridor. Following a detailed study of the information needs of the freight community, these organisations have implemented an Internet portal targeted towards freight users.

GEOGRAPHIC CONTEXT

The Arc Atlantique corridor serves freight traffic heading for the major ports and provides an attractive alternate for north-south traffic wishing to avoid the Paris region.



Arc Atlantique Freight Portal coverage

USER NEEDS STUDY

Road authorities, road operators, cities and ports in the Arc Atlantique corridor undertook a detailed study of HGV (HGV drivers and freight company managers) user needs.

"Given the 300% increase in visits of the last 6 months, and the spread in geographical data coverage that the website provides, the project has been successful in terms of providing useful services, fulfilling users' needs and sustaining technical reliability."

The survey showed that communication between drivers and their managers is principally related to the location of the vehicle, navigation, and information on events and congestion. Preferred methods of obtaining such real time information were VMS, 107.7 FM highway radio and interactive voice recognition telephone services.

The Arc Atlantique Freight Portal is available in French, English and Dutch: www.freteuroservice.com

THE FREIGHT PORTAL

As a result of the study, the participating organisations decided to develop a dedicated Web portal towards the freight community. The service is being made available online as well as through dedicated information terminals that are being installed at selected motorway service areas frequented by trucks vehicles.

Service includes, amongst other things, links to: Real time traffic information; Multi-modal information (ship, ferries...); Maps (interurban and urban areas, business parks); Specialised services (parking space availability, road side assistance); Road restrictions...

NEXT STEPS

The portal architecture is highly flexible, allowing additional types of information to be added and the geographic area of coverage of other partners to be extended. After being extended to the southeast of England in 2005, coverage has also recently been extended to Flanders.

"Since the Arc Atlantique Freight Portal website became available, the number of visitors has been constantly increasing. In July and August 2006, 4500 visitors per month were recorded, and nearly 55,000 pages were viewed each month."

More information: Jérôme Ferré (SAPN), j.ferre@sapn.fr



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BEST CROSS-BORDER AND INTERNATIONAL PROJECT AWARD NOMINEE

Traffic management plan: Brussels – Beaune

Brussels – Beaune is a strategic corridor between Belgium and France, via Luxembourg. A Traffic Management Plan has been developed to minimise the impact of a major incident or crisis on this route by coordinating cross border traffic management and facilitating the provision of information to drivers prior to and during their journeys.

INTRODUCTION

Within the CENTRICO project, the TMP Brussels-Langres (extended to the Brussels – Beaune in order to offer more re-routing possibilities) involves road authorities from **France, Luxembourg and Belgium**. Recently, an experiment has been carried out to test several aspects of TMP (technical quality, knowledge of its content, appropriation of the plan by services).

THE AREA COVERED

“Brussels – Beaune facilitates cross border coordination as major road traffic organisations from France, Luxembourg, Belgium and Wallonia are involved. It also specifies the organisational methods required to disseminate information to end users on either side of borders, and coordinates traffic management and traffic information measures across borders.”

STRUCTURE OF THE TMP

The key to the success of a Traffic Management Plan is the coordination of a structured response to an incident or crises. The TMP splits organisation at an operational level into two domains: (1) **Decisional Organisation** involving road authorities; and (2) **Functional Organisation** involving the services implementing decisions.

It also specifies the organisational methods required to disseminate information to the end users and coordinates traffic management and traffic information measures.

THE COORDINATING AUTHORITIES

The coordinator of the plan informs the authorities of the other countries. These countries then place the necessary services

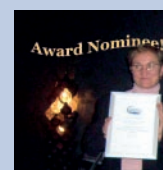
on stand by, in case international measures are considered necessary. In that case, each country would manage the coordination of the measures within its boundaries, whilst consulting the other coordinating authorities.

COMMUNICATION WITH END USERS

End-User information is one of the key elements of a TMP. It consists in delivering relevant and coherent information to as many people as possible, in real time. The partners may use either the regular information media, such as radio and press, or the available roadside equipment e.g. VMS.

RESULTS AND LESSONS LEARNED

The TMP enables a structured and coordinated approach to incident and traffic management, providing the authorities with a powerful tool to influence the route choice of long distance travellers.



On September 30, 2005, an evaluation of the TMP was carried out through a simulation. Some very interesting results were found after analysis of this information, and can be used for further improvement.

“Project partners have decided to develop a software tool to improve response capabilities. It will provide views of traffic status, travel times and VMS texts; an application to diffuse information on the Internet, by email or SMS; a log book of the operations; strategies and traffic management plans; an interface to support decisions...”

More information: Michele.Seris@equipement.gouv.fr



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