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Traffic control and information centres measures in the Corvette project (2001-2006)

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1. **Introduction**

The Multiannual Indicative Programme (MIP, 2001-2006) of Directorate-General for Energy and Transport (DG TREN) has finished and many achievements in Domain 2 “European Network of traffic centres” within the Euro-regional Project (ERP) CORVETTE had been made.

The CORVETTE region covers Italy (North-East regions), Germany (Bavaria region), Austria and Switzerland, in other words the Eastern Alpine Area of the Trans European Road Network (TERN) which is characterised by a high density of traffic and a high relevance for the European traveller as the CORVETTE region represents an Alpine crossing corridor (s. Fig.1).

Purpose of this Domain is the establishment of a European network of traffic centres and cross border information exchange services. Traffic management and information centres act as the centre node of traffic management, traffic control and information measures, since the collected data are transferred to a centre which, in turn processes these data for further use (such as within roadside traffic management systems and pre- and on-trip information services).

Within the past phases of the Corvette MIP numerous projects were undertaken to upgrade the available technologies in Corvette’s traffic centres, resulting in a better information and data quality. These measures range from the integration of new detectors into existing systems, the erection of new centres, the merging of functionalities into larger, integrated entities to the improvement of the centre-internal technologies. The measures were also set to provide improved and easier access of service providers to the collected traffic data for an increased coverage of the regions with traffic information. Big efforts have been made to improve the data quality respectively the applications for traffic management within the traffic centres. These efforts follow the same schema a modern quality management system offers – the process approach. This means an ongoing control of all processes which belong or are related to TICs/TCCs. The result is a continual improvement of processes based on objective measurement (s. Fig.2).
Several connections for traffic data exchange purposes had been established during the MIP. These data exchange activities are faced now with the availability of new technologies, e.g. DATEX II, and also with new requirements, e.g. cross-border traffic management and cross-border acting service providers. These new conditions will deeply influence further activities.

2. **Main achievements**

All motorways partners of CORVETTE were engaged during MIP I in updating or even building new Traffic Centres with the most advanced technologies, both hardware and software.

Main objectives were to improve the operators capability to better manage the traffic and to give their users more timely and complete information about weather, traffic and travel time forecast, aiming first at ensuring the highest level of safety.

To such a scope all the Traffic Centres updating activities were connect from one side to the monitoring and automatic data collecting systems and from the other side to the information and assistance services.

Many detailed achievements could be described:

- the new Traffic Centres implemented in Autovie Venete, Autostrade Centro Padane, Autostrada del Brennero (all in Italy), in Northern Bavaria (Germany) and in Vienna Inzersdorf (Austria).

### DATEX network CORVETTE

A significant result achieved in common by almost all CORVETTE regions (Switzerland will join the network in the upcoming years, when the new Traffic Centre, covering whole Switzerland, is ready), concretely introducing the realization of the “network of Traffic Centres” concept, was the implementation of the DATEX protocol in all Italian involved Traffic Centres and the start up of the automatic data exchange between the Italian Centres and between the CORVETTE regions themselves.

Figure 3 shows a schema of the CORVETTE TCC/TIC network and DATEX nodes, highlighting also the link to France (SERTI area). In Italy Autostrade per l’Italia is leading the
DATEX diffusion process, which allows various applications, in particular in the field of information services for institutional purposes (national Teletext, CCISS, RAI RDS-TMC, other public authorities: Road Police, Carabinieri, etc), for information Data Exchange user oriented (ISORADIO and other SP centres: SUS, SINELEC) and for commercial usage (TV networks News, Mobile Communications operators, Private network radio RDS-TMC channel).

Some highlights of such applications can be seen, as examples, in the following pictures (s. Fig.4).

In the CORVETTE area the Network of Traffic Centres is becoming shortly a reality.

**New TIC Bavaria**

One result of the project “BAYERNINFO” (project started in the mid 1990s in CORVETTE phases I-IV) is the traffic information portal www.bayerninfo.de with current and forecasted traffic situations. The services are generated in the TIC Bavaria based on the collection and processing of traffic data.

To ensure a steady improvement and expansion of the traffic information services the Traffic Information Agency Bavaria (Verkehrsinformationsagentur Bayern – VIB) was developed within the project IMO 21.

The VIB is a self sustaining organisation which closely works together with the public road authorities in Bavaria in a PPP-similar construct.
The traffic information agency was tendered in 2003 by the OBB (Board of building and public works within the Bavarian state ministry of the Interior) and is now operated by the successful bidder. The VIB supports the administration in ITS related tasks such as providing a high quality free-of-charge basic service for end users, supporting national and international data exchange with other centres and services as well as providing tools and data to the administration for example for roadwork management, road weather information and statistical services on traffic data. The VIB offers a real inter-modal routing as its data platform includes and as well is able to combine all traffic relevant information (s. Fig. 5).

The use case of the PPP model developed in the study covers several specialities relevant for other regions in Europe. The study shows, that the tool of PPP can be successfully implemented within a relatively limited geographical coverage thus enabling as well smaller European regions to utilise this tool to provide improved traffic information services (TIS) with limited funding.

**Traffic management and information centre (TMIC) in Wien-Inzersdorf (Austria)**

Another main achievement during the MIP was the construction of a new traffic management and information centre in Austria (s. Fig. 6). At present the TMIC is pursuing the most modern concept all over Europe. There is only one centralised data handling, processing and monitoring point for all traffic control units (TCU), one uniform standardisation and quality assurance, as well as a single maintenance management for all components and no isolated applications. Thus every future development stage of the traffic management and information system (TMIS) can be monitored centrally by the TMIC of the ASFINAG Verkehrstelematik GmbH in Wien-Inzersdorf. [1]

3. References