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TELEMATICS IN INLAND NAVIGATION

One of the goals of EU transport policy is the implementation of integrated control systems to control transport processes in all means of transport, including the systems for water transportation. Recent deployment of information and communication technologies on inland waterways brings noticeable impact in security and efficiency of transport. Based on this, the European Council and Parliament issued the directive concerning harmonized River Information Services (RIS) on inland waterways around European Union Member States. Its aim is the harmonized implementation of information and communication systems on the network of European inland waterways.

1. Introduction

The application issue of information, communication and telematic services in transportation including water transport falls into key areas of WHITE PAPER “European transport policy for 2010: time to decide” [KOM(2001)370 dated 12th September 2001].

In the past few years the penetration of information services applications on inland waterways raised quickly around EU Member States. Many of these applications have nowadays noticeable impact in security and efficiency of transport processes. The European Commission therefore emphasizes the necessity to negotiate common requirements and technical specifications for this area.

As a result of such negotiations a harmonized system of navigation assistance and an information system covering inland waterways in EU should be established.

Based on mentioned requirements the European Council and Parliament issued the directive 2005/44/EU dated 7th September 2005 concerning harmonized River Information Services on inland waterways around European Union [2].

The application of directive fully covers the establishment and operation of River Information Services around all class IV and up waterways in EU Member States which are interconnected together with neighbor states by class IV and up waterways. This directive also covers harbor infrastructure on such waterways.

2. The purpose of RIS project implementation

The River Information Services in this case represent harmonized information services supporting inland navigation and transportation processes administration including interconnection to other means of transport. River Information Services concentrate

services for all parties concerned (freighters, shippers, transport operators etc.). Such services deal with actual waterway status information – tactical planning, statistics, inland navigation support, harbor fees, custom services, accident recovery support and other.

The directive forms the framework for deployment and utilization of harmonized River Information Services around European Union with the aim to support inland navigation, enhance transport security, efficiency and environmental friendliness. This framework also covers the issue of interconnection between water transport and other means of transport around Union [2].

Another important part of this directive establishes the outline for negotiation of common requirements and technical specifications in this area. Basic requirements and technical specifications are due to be developed by European Commission taking in account the directives already issued by international organizations (PIANC, CCNR a UNECE). This step should guarantee further continuity of development services for transport process control in other means of transport including the interconnection to maritime transport systems.

In case of River Information Services (RIS) deployment to EU Member States it is very important to guarantee further system interoperability and system application efficiency. Such information system should easily cooperate with information systems already in service in other means of transport at least around European Union countries. Therefore all Member States for purposes of system establishment should:

- provide to RIS users all relevant data concerning navigation and transport planning in inland navigation,
- supply geographical information system maps suitable for inland navigation for all inland waterways class Va and up,
- arrange administration reports reception with required data from communication with vessels for responsible RIS authorities,

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- guarantee that the messages for boatmasters are provided as a standard downloadable encrypted messages. Such messages should carry information at least with data necessary for safe navigation. Optionally these messages should also carry additional information concerning ice rung, maximal allowed draft etc.

The local law regulations, rules and directives around all intended Member States concerning such waterways should come in force before 20th October 2007. This step should lead to accordance with global RIS harmonization and EU directives [2].

3. The scope of the RIS project

As a result of last research studies in the area of River Information Services around several EU Member States the project IRIS Europe (Implementation of River Information Services in Europe) was issued in late 2005. Its aim is to stimulate activities in field of telematics and intelligent transport systems in inland navigation by implementation of a testing platform of harmonized River Information Systems. This effort should result in early deployment of RIS around EU inland waterways, should lead to elimination of existing barriers and to demarcation of consequential functions and services in Danube and Rhine – Seine regions.

The IRIS Europe project is a part of European program TEN-T (Trans-European Transport Networks) covered by European Commission with the highest investment priority.

The project RIS Europe is maintained and developed by Austria, Slovak Republic, Hungary, Netherlands, Belgium and France state authorities. By affiliation of Bulgaria and Romania to EU also these countries joined the project development. Other European countries – Czech Republic, Serbia and Ukraine are involved as observers to interchange experiences and know-how.

The membership of Slovakia in IRIS Europe project is a natural consequence of successful activity of Slovak government and commercial organizations in projects aimed to define, harmonize and specify River Information Services.

4. The structure and goals of RIS project

The project is formally divided into 6 separate sections:

Section 1: Infrastructure for tactical traffic situation planning applications

In this field in the area of RIS testing platform installation the Slovak Republic aims to cover establishment of coast-line infrastructure and to cover preparation of support program for ship equipment with necessary devices (installation of AIS base stations on the Slovak part of the river Danube and on borderline parts of the river, establishment of national RIS centre, tracking and tracing electronic data interchange with a group of RIS users) [3].

Section 2: Inter-border services of electronic public administration – “e-government”

Slovak Republic should define requirements of administration concerning “e-government” services (for example electronic reporting of dangerous goods transport, electronic reports for custom procedures, statistic data acquisition etc.). This definition should also cover the needs of commercial users. Very important part of this area is the definition of legislation and the definition of the set of service and technical conditions for international RIS data interchange including pilot infrastructure implementation. The goal is to allow national public administration authorities to receive electronic reports of goods being transported in Austria, Slovakia, Hungary and France [4].

Section 3: Environmental services testing infrastructure

In this area the Slovak Republic covers the vessel waste management issue and the issues of navigation information interchange with the aim to decrease accidents and to provide disaster recovery solutions.

Section 4: Coordination in corridor VII (candidate countries and third-parties), the Rhine – Seine region coordination and Baltic countries coordination – the knowledge transfer

Activities in this area are covered by project partners in Austria and The Netherlands.

Section 5: Open issues in harmonization and standardization of RIS

The Slovak Republic based on requirements defined in RIS directive covers the harmonization and standardization issues in the area of River Information Services. Its application aims to the field of Intelligent Transport Systems, where the Slovak Republic defines the framework for cooperation of interconnected systems in transport services. The solution includes also risk analysis for passenger and crew members, identification of services and functions for crew and passengers safety in inland navigation including law and technical regulations in this area [3] and [5].

Section 6: The project control

Last section deals with control and supervision activities, knowledge transfer and application including national and international activities in water transport not covered directly by this project and the initiatives in the area of off-shore maritime navigation.

4. Conclusion

The Slovak Republic joined the project preparation and planning in accordance with its national policy directive (“Dopravná politika Slovenskej republiky do roku 2015” – Slovak government decree No. 445 issued on 8 June 2005) with the aim to fulfill its commitments from RIS directive (2005/44/EU). The intention of the RIS directive places liability for local governmental institutions (in case of Slovakia responsible person is The Ministry of Transport, Post and Telecommunication of the Slovak Republic) to provide expert capacity and to control the process of project financing to reach the demarked targets.

During passed few years the main activity of Slovakia in the River Information Services project concentrated on the COMPRIS (Consortium Operational Management River Information Services) project. Local national institutions mainly involved in this project were Transport Research Institute, Inc. Zilina, a branch for development in water transport in Bratislava, State Navigation Administration Bratislava, Slovensky vodohospodarsky podnik, the company OZ Bratislava Ltd. in the area of digital maps for inland navigation and KIOS, Ltd. Piestany in the area of software application development and electronic data interchange with public admin-

istration authorities. The company Slovenská plavba a prístavy, a.s. Bratislava, which provided vessels for the COMPRIS project testing and assisted in development of the messaging system for boatmasters, participated in this project as a cooperator. The institution Slovenský hydrometeorologický ústav provided necessary data concerning water-level stage and meteo-data [1].

Total project cost estimation value figures 4.146 million EUR. The project is financed from the European Union TEN-T program up to 50% of its costs for solution and test projects.

References

- [1] SOSEDOVA, J. et al.: *Project VEGA MS SR 1/3831/06 - Transport - Juridical Conditions of Inland Shipping and their Economic Consequences for Carriers after the Entrance of the Slovak Republic to the European Union*
- [2] DIRECTIVE 2005/44/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 September 2005 on harmonized river information services (RIS) on inland waterways in the Community, Official Journal L 255, 30/09/2005 P. 0152 - 0159
- [3] COMMISSION REGULATION (EC) No 414/2007 of 13 March 2007 concerning the technical guidelines for the planning, implementation and operational use of river information services (RIS) referred to in Article 5 of Directive 2005/44/EC of the European Parliament and of the Council on harmonized river information services (RIS) on inland waterways in the Community, O.J. L 105 of 23 April 2007, pp. 1-34
- [4] COMMISSION REGULATION (EC) No 415/2007 of 13 March 2007 concerning the technical specifications for vessel tracking and tracing systems referred to in Article 5 of Directive 2005/44/EC of the European Parliament and of the Council on harmonized river information services (RIS) on inland waterways in the Community, O.J. L 105 of 23 April 2007, pp. 35-87
- [5] COMMISSION REGULATION (EC) No 416/2007 of 22 March 2007 concerning the technical specifications for Notices to Skip-pers as referred to in Article 5 of Directive 2005/44/EC of the European Parliament and of the Council on harmonized river information services (RIS) on inland waterways in the Community, O.J. L 105 of 23 April 2007, pp. 88-253
- [6] www.iris-europe.net
- [7] www.iris-europe.sk
- [8] www.telecom.gov.sk