



- ABSTRACT INLAND NAVIGATION, RIS -

River Information Services in a multimodal Intelligent Transport domain

by

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ABSTRACT

Since the first initiatives of the European Commission on River Information Services, this concept on information exchange to support traffic and transport management in inland navigation, has found its way throughout the world. In recent years River Information Services (RIS) the development and especially the implementation of RIS has been considerable.

Multi- end Synchronodal transport and logistics will put new requirements on the RIS related services, systems, technology and standards. For RIS this brings new opportunities for improving the quality and efficiency of inland Waterway transport.

In the transport and logistics domain the focus is more and more on multimodal transport with information services in intermodal context. In this context important requirements are:

- A paper-free, electronic flow of information associating the physical flow of goods with a paperless trail built by ICT includes the ability to track and trace freight along its journey across transport modes
- The simplification of freight and transport information exchange to reduce the cost of transport.
- Freight should be identifiable and locatable regardless of the mode it is transported on.
- It is essential to create a single transport document for the carriage of goods in any mode.

It becomes more and more clear that digitisation of transport and logistics is an essential prerequisite to guarantee in the coming decade an efficient and sustainable transport. Digitisation has the objective to move from paper to electronic documents, through simplified procedures and integrated information exchanges across different sources.

A necessary condition is that standard (information) interfaces within the various transport modes are put in place and their interoperability across modes is assured.

RIS can contribute to above mentioned ambition and challenges if attention will be given to changing requirements on River Information Services in a multimodal environment and above all the focus will be on the seamless interfaces with information services in other transport modalities.

A key issue in this is to consider analyzing the interaction between RIS services with other concepts for the information services in other transport modes. In addition it can be of great benefit for the further development of RIS to consider using services, information, technologies, architecture, etc. that consists in the Intelligent Transport Systems (ITS) of these transport modes

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A pro-active attitude towards this development of multi modal transport information services is essential. Development of multi modal information standards is demanded, Assessment of these future requirements should be put on the agenda of the RIS community. A transition strategy for RIS towards harmonized multi modal transport and logistics information services environment is to be developed.

Comparing RIS and ITS

The PIANC working group on River Information Services did a restricted study on the ITS concept for roads and for railways (The ITS concept for railways is called in Europe ERMTS - European Railway Traffic Management System). The aim of this study and consequently the presentation during the PIANC World Congress is to offer, firstly, an overview of the main features of the principal key objectives of ITS in comparison with RIS. Secondly a comparison focused on the services as provided by RIS and those of ITS for roads and ERTMS for railways. The presentation will give detailed information on the comparison between ITS road-services as defined in US, EU, Japan and ISO standards as well as a comparison of ERTMS Services for railways according several standards.

Based on the study, recommendations are given regarding future interfaces with ITS development, or the extension of RIS services to other areas.

In order to obtain a reliable comparison according this standard purpose the features of ITS for roads and railways have been classified according the criteria considered for RIS and adapting, as much as possible, the concepts and definitions of roads and railways' ITS to them. Taking into account this classification criterion, a comparison considering the three levels of RIS definition: [1] Functional, [2] Services and [3] Technologies, will be made.

A classification will be given based on the Functions and Services established for RIS, and matching with them those concepts (both systems, functions, etc.) that best fit with their definitions.

Differences and Synergies

Although, from a general point of view, all Intelligent Transport Systems (considering RIS included in this category), should have, at the end, same or quite similar high-level functional requirements, it could be easily stated that actual features of the transport mode could made the stakeholders to prioritize some of them above the rest. This fact can be stated when comparing the Key functional requirements for RIS with the ones required to the Roads and Railways' ITS.

When comparing these systems, one could state that although most of indicated key functionalities are required to both of them, there are some differences in regards to the focus that is put in some areas.

Possible benefits for the RIS domain in the relation to ITS

Finally, as a conclusion of the report, a brief note on the possible benefits for the RIS domain will be provided, mainly focused in those developments in ITS domain that could best fit with inland navigation features.