



INFORMATION SECURITY MANAGEMENT SYSTEMS IN RAILWAY TELECOMMUNICATIONS

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PRESENT STATE

Railway companies have generally its own telecommunication network which is mainly used for the management of railway traffic and for the information support of operations in company. Due to the outdated analogue telecommunication networks in most of these companies, it was initialized projects for setting up a modern digital telecommunication network and for changing inconvenient information systems to the new ones. Today are implemented new complex management information systems based on popular web technologies and they are becoming integral part of managing transport processes.

CHANGES DURING THE LAST DECADE OF TWENTIETH CENTURY

All these changes started during the last decade of twentieth century and final state could be reached in a few years. Nowadays departments responsible for informatics in railway companies or new founded specialized railway telecommunication companies are real service providers comparable to the national telecommunication providers offering fixed line or mobile services.



Slovenske železnice



Železničné telekomunikácie Bratislava



LOW LEVEL OF HOMOGENEITY IN RAILWAY TELECOMMUNICATION NETWORKS

Railway telecommunication networks in most countries are characterised by low level of homogeneity. It is absolutely usual state because initial costs to the new technologies were during the time very different, networks were built during long period of railway company existence, were built on different parts of country and railway network and unfortunately, development in information and communication technologies didn't stop. Very specific were also ways how information infrastructure and technologies affected managing of transport processes and everyday's work of railway company staffs.

DIFFERENCES IN USING TELECOMMUNICATION NETWORKS

Although the railway telecommunication network is nowadays often technically identical to the others telecommunication networks, between them exists some differences.

The most visible are:

- users are mostly railway company staffs;
- users activities depends on each other;
- network is mostly used for the management of railway processes;
- network is not publicly available;
- unavailability of network services in one part of the network has negative impact to the users in different parts of network or on complete management of railway processes;
- it exists automatic information exchange between railway networks in adjacent countries.

INFORMATION SECURITY

We could say that information is becoming the most important asset for a company and therefore we should know how to secure company's business opportunities, investments, profitability, cash flows and goodwill. Nowadays it is necessary to understand that information security is not only popular, but also very important part of securing core business activities (railway transport of people and goods). Of course, most of common problems are still present in transport, but we could await in the near future new problems coupled with information infrastructure, mainly with basic principles of information security: availability, integrity and confidentiality of information.

ISO/IEC 27001 IN RAILWAY TELECOMMUNICATIONS

In some railway companies from central European countries were implemented very favourite and well known certificates coupled with Quality management systems (ISO 9001:2000) and Environmental management systems (ISO 14001:2004). Nowadays it is the best time to implement Information security management systems (ISO/IEC 27001:2005).

Company	<u>ČD- Telematika, a. s.</u>	<u>Slovenske železnice</u>	<u>Železničné telekomunikácie Bratislava, o. z.</u>
Certificate/ Country	Czech Republic	Republic of Slovenia	Slovak Republic
ISO 9001: 2000	YES	YES	YES
ISO 14001: 2004	YES	YES	NO
ISO/IEC 27001: 2005	NO	NO	NO

ADVANTAGE OF INFORMATION SECURITY CERTIFICATION

It is not necessary only have certified information infrastructure against information risks, but advantage is have prepared suitable practises for the events when the systems fail. Nobody has publicly presented for example information about unavailability phone connection, ticket reservation system or train location information system in railway companies. In spite of the fact that the current information and communication systems are very reliable, we should still bear in mind possibility of the big system failure.

ANOTHER SOURCES OF PRACTISES FOR INFORMATION SECURITY

Although the speed of development in information and communication technologies is very fast, in information security the current situation is not very different as it was in the past. We should still know something about recent history.

That is the good reason to focus our mind not only at the coming ISO 27000 series, but be familiar also with the 5 technical reports also known as ISO/IEC TR 13335 - Guidelines for the management of IT Security. In most of European countries are still valid along with above mentioned ISO standards.

In my opinion, everybody who wants to secure their core business based on work with information and if that person knows something about the management of information security, he should firstly read these standards and technical reports and then apply their practises to his business.

CONCLUSIONS

Information security in railway transport is not very discussed problem. There has not been published papers or publications coupled with this problem and so professional society have not enough relevant information. Nowadays it is very important bear in mind new information risks, mainly if we still want to massively implement information and communication technologies in the managing of transport processes.

A close-up, artistic photograph of a glass filled with a golden liquid, likely whiskey, with a blurred background. The glass is partially filled, and the liquid has a warm, amber hue. The background is a soft, out-of-focus mix of light and dark tones, creating a bokeh effect. The text "THANK YOU" is centered in the middle of the image in a bold, dark blue font.

THANK YOU