



Ing. Jiří Konečný - Ing. Petr Špalek

Nová třísystémová lokomotiva řady 380 ČD
New tri-systems locomotive class 380 ČD

The paper describes the new tri-current locomotive class 380 of České dráhy, a.s., the description as such being divided into the following chapters: Mechanical part, Electrical part, Brake equipment, Control, Driver's cabin and Safety systems and communication equipment. The paper is completed by charts, diagrams and basic technical data on the vehicle.

Ing. Jakub Pěchouček – Mgr. Dušan Pouzar

České dráhy, a.s. rozšiřují vzdělávání o nové technologie.
Vývoj e-learningových kurzů je ve finální fázi.
České dráhy, a.s. enlarges education about new technologies.
Development e-learning courses is in a final phase.

The whole summary and detailed description of the technologies that have been developed in the framework of the 2Train project within the EU 6th Framework Programme is the first output of the project. These developed tools and technologies are going to be involved in the education system of each project partner. The reader has the possibility to find information for example about the Virtual Instructor, the Common Data Simulator interface, the Assessment Database and other tools and technologies that have been developed thanks to the project. An interesting factor of the project is the fact that all partners of the project developed different products based on the same fundamentals that complete the existing education system.

Ing. Hynek Mocek - doc. Ing. Aleš Filip, CSc.

Satelitní systém Galileo pro bezpečnostní aplikace na železnici
Satellite system Galileo for safety applications within the railway

The paper deals with problems of using the Galileo navigation satellite system for applications of safety relevance on the railway. Safety requirements on the satellite navigation signal of the Galileo Safety of Life are described first. In order to be able to read the quality criteria by RAMS terminology, types of defects of the Galileo system are being examined. Following that incorporating quality indicators of GNSS into railway RAMS concepts is proposed and their importance from the point of view of railway safety systems is explained. In conclusion the paper indicates an example of the train position locator based on GNSS integration with other sensors.



Ing. Martina Koutníková - Bc. Klára Holaňová

**Realizace projektů výzkumu a vývoje v rámci veřejné soutěže
vyhlášené Ministerstvem dopravy
Realization of research and development projects in a frame of a public tender
published by the Ministry of Transport**

The paper is the conclusion of a long lasting cooperation between CD – Telematika a.s. and its partners in the sphere of research and development of telematics application and systems financed by the Czech Ministry of Transport. The company participation in this programme belongs to one of its strategic targets, being a combination of employees` expert know-how, up-to-date technical background of the company and the latest demand on the ICT market. Each of the above-mentioned projects reflects the current needs and development in transport telematics and intelligent transport systems and the final outcome should offer an innovative and high-quality solution ready to be used in practice.

Ing. Petr Kolář

**Využití vlastností digitálních přenosových sítí pro řízení
železničního provozu
Digital communication (transmission) networks characteristics use for railway
traffic management**

The paper brings some actual information about applications of data for improvement in the quality of command at railway operation with transmissions of data to mobile users. Now there is a new chance for transmissions between infrastructure information systems and mobile terminals on a board with gradual enlargement service (SMS message, GPRS transmissions) in the new railway digital network GSM-R. Simultaneously it is also possible to use public mobile networks GSM for transmissions of data under some specific conditions.

Some applications of data transmission which have been verified in practice are described in the article. These applications are treated in the project "Application attributes of digital transmission networks for operation control and safety improvement of railway transport on traffic lines" subsidized by the Ministry of Industry and Commerce.



Ing. Mgr. David Krásenský - Ladislav Skopal

**Dispečerské řízení provozu českých a slovenských železnic
s celosíťovou podporou IT: informace na dosah ruky
Traffic management of Czech and Slovak railways with all-network IT support:
Hand reach information**

In the introduction, the contribution discusses the general significance of information for railway traffic controlling and points out at legacy railway technologies and former ways of information processing. Nevertheless its main focus are modern information systems of the railway traffic control, above all the ISOŘ family (Information systems of operation control), operated in the Czech railway network. Along with the overall conceptual structure of these systems their historical, present, and future development is presented, including their operation in the form of an outsourced service of joint development and operational expert teams.

Ing. Jiří Černý - Ing. Jiří Janšta

**Webový portál provozovatele dráhy v ČR
The web portal of an infrastructure manager in the Czech Republic**

The paper deals with the web portal of the infrastructure manager in the Czech Republic. It describes the reasons for creating this portal and its use for internal communication, communication with operators and other partners of the infrastructure manager. All internal portal applications are enumerated here together with their functionality and use. The reader will find here the technology principles of single-sign-on. The paper mentions also conditions of the web portal operation done by outsourcing, including a graphic presentation of selected statistical data.

Jiří Melich

**Náhrada Informačního systému MIS 2 novým systémem vlakotvorná stanice
Replacement of IS MIS 2 by the new system "Formation Yard"**

The paper addresses a replacement of the current informational system MIS 2 with new informational system VLASTA. The VLASTA information system holds all pre-requisites for providing more accurate and complex information about operation processes in shunting yards. Such information can be further used in a more efficient way not only in the operation process and operation management, but also in the economic sector of the company management.



Ing. Petr Sychrovský

**System diagnostiky prostorové průchodnosti tratí
Clearance gauge diagnosis system**

Railway Infrastructure Administration, state organization faces the task to ensure and control a clean profile on a more accurate and efficient level. The first step of realization is to prepare the Project Documentation for Gauging Wagon and to buy the Small Gauging System for Clean Profile.

Ing. Filip Ševčík - Ing. Lukáš Týfa, Ph.D.

**Moderní železniční spojení Brno – Vyškov
Modern railway connection Brno - Vyškov**

The paper takes from the thesis "Modern Railway Connection between the Cities of Brno and Vyškov" and describes the possibility of solving capacity increase and speed of the railway connection between these cities in a variant of modernization and a variant of new building as a part of the future high speed railway line.

Bc. Jiří Nohovec

**Odstraňování překážek bránících plnohodnotnému cestování osob
se sníženou schopností pohybu a orientace v prostředí Českých drah
Elimination of barriers inhibiting full-value traveling of passengers with
reduced mobility in the environments of České dráhy.**

Environment accessibility to passengers with reduced mobility and orientation is a widely discussed theme and also very criticized in connection with its long-time neglecting by the majority of the population and shifting aside of the society's interests. The situation is no different in the field of public transport. This paper strives for a wide-range view of the railway environment and tries to point out multi-departmental aspects of the problem and deficiencies that the effort to eliminate barriers on the railway has to deal with. The paper is completed by vivid photographs from railway operation.