

## Technology and Research / UIC Leaflets

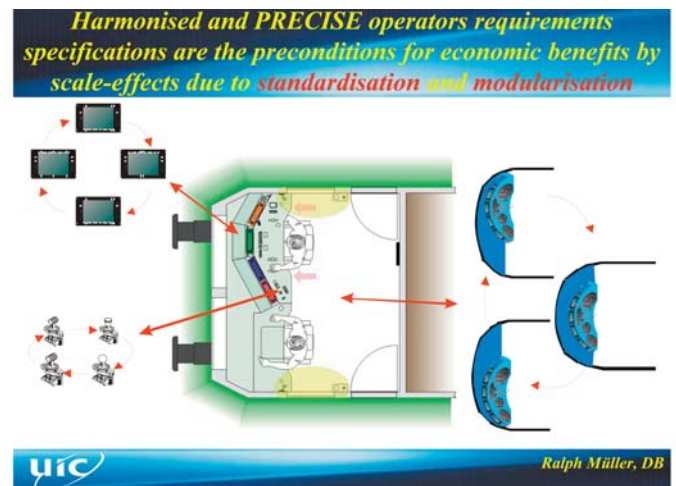
### UIC Leaflet 612 Dissemination Workshop “Driver-Machine-Interfaces, Train configurations” (Paris, UIC HQ, 3rd April 2009)



On 3rd April, the UIC leaflet 612 Dissemination Workshop on “Driver-Machine-Interfaces”, Driver Cab and Train configurations took place at the UIC premises in Paris. The workshop, gathering 21 experts from vehicle manufacturers, sub-system suppliers, railway undertakings, ERA and standardisation bodies was chaired by *Steffen Jank* (Deutsche Bahn) in his function as UIC PTR Programme Manager.

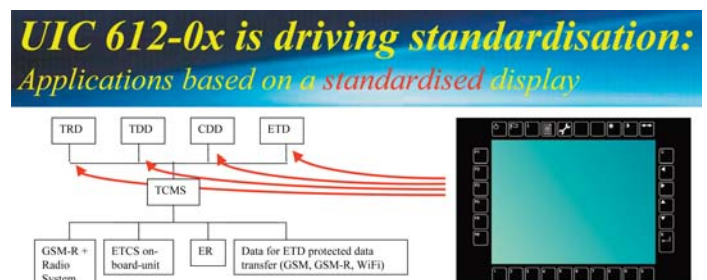
The goal of the workshop was to provide information about the leaflets family UIC 612-0, -1 and -2 and to facilitate discussions between users from different organisations.

*Ralph Müller* (Deutsche Bahn) gave an overview about the intention and background inside the former MODTRAIN project that contributed to the UIC 612 series and the way ahead. He underlined that the UIC leaflet 612 is a transverse leaflet with a system view and operational focus, which is already used in some purchasing projects. It is the expectation of the railways operators to drive technical standardisation by means of common operational requirements as they are provided in UIC leaflet 612. He reminded that ERA is working on a specification of the ETCS DMI. It is the role of UIC leaflet 612 to help focussing on rolling stock integration needs and ensuring management of nominal and degraded situations, e. g. by clever and economically feasible redundancy concepts.



*Didier Georget* (SNCF) explained the tests done on the SNCF Driving Research Simulator SIMUFER to check and validate UIC Leaflet 612 requirements from a human factors point of view.

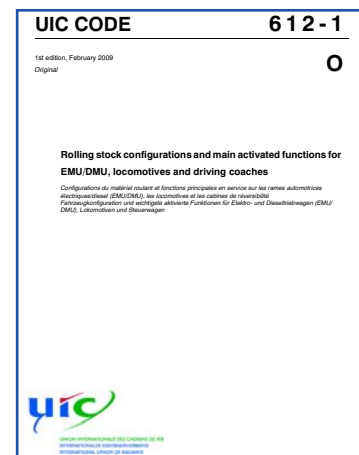
*Dominique Ligier* (ERA) added the development, background and methodology of the ERTMS/ETCS DMI specification as a mandatory document for Baseline 3.0. He highlighted the



need to find a common consistent approach for the driver between the several parties involved. He explained the principles of exchange of information between UIC and ERA. There is an agreement that CER support groups will provide input to ERA based on UIC deliverables like UIC Leaflet 612. On the other hand, if there is a request to change the ERTMS/ETCS DMI specification (e.g. for vehicle integration purposes), a formal change request process has to be triggered. The change request will be reviewed by the stakeholders and in the end need to be approved by RISC.

In the following general discussion among others the question was raised about the future development of the UIC Leaflet 612 series. *Steffen Jank* replied that the updated and revised UIC Leaflet 612-0 and -1 have been approved in November 2008 and UIC Leaflet 612-2 in March 2009. The revision work on the other parts UIC 612-0x “display systems in drivers cab” is in progress in the UIC Sector Expert Team SET 15 “cab and operation incl. Train control and monitoring system TCMS”.

In a final summary participants considered the workshop as a success. *Dominique Ligier* pointed out that the workshop helped to understand interfaces and each others priorities. ERA appreciates continuing input from UIC Leaflet 612 for the evolution of the ERA DMI specification.



Current experience shows that the commercial application of UIC Leaflet 612 will increase and stakeholders will give their feed-back from lessons learnt in current rolling stock projects for further improvement of UIC Leaflet 612. Therefore an annual exchange of experiences with increased UIC Leaflet 612 application, the evolving ERA ETCS DMI specification and the cab related standardisation work at CEN would be beneficial for the Rolling stock community. But also other highly rolling stock integrative aspects like the brake functional requirements request deeper exchange of experiences in the view of approaching interoperability. Questions and proposals are always welcome and can be forwarded to the UIC PTR Programme Managers, who will coordinate the response by the UIC Sector Expert Teams SET.

For more information please contact Steffen Jank, UIC PTR Programme Manager: [jank@uic.org](mailto:jank@uic.org)

## Technology and Research

### UIC Platform Technology and Research (PTR): Latest Steering Board meeting and Plenary Session

The latest PTR Steering Board (held on 25 March) paved the way for the upcoming challenges on the field of railway research and technology in the next years. This approach was finally agreed by the members of the PTR Plenary Session the day after.

*Gabriele Maffei*, Director of the UIC Technology and Research Department, informed the members of the Steering Board and the Plenary Session about the current status of UIC, the up-coming statutory meetings to be held on March 30th and 31st, 2009 at UIC HQ.



From left to right: *Gabriele Maffei* (UIC) and *Joachim Mayer* (DB AG).

*Enno Wiebe*, Manager Research Projects and Programmes at the UIC T&R Dept. in Paris presented the draft of the PTR Strategy Programme 2020. This PTR Strategy Programme intends to be the guideline and framework for all future PTR activities on the field of research and technology and is about to be fully harmonised with the other UIC forums and platforms.

The PTR members approved the strategic orientations of the PTR Strategy Programme 2020 with the three following goals as top priority for the future work:

- Driving the Global System (Standardisation and Interoperability)
- Environment
- Economics.

Several PTR ad-hoc teams were set up with the mission to work out several concrete project proposals matching the three above mentioned strategic goals and putting the PTR Strategy Programme 2020 “on track”. All UIC members were addressed during the meeting to support the PTR Strategy Programme 2020 and help shaping the future by having a common approach. *Mr. Mayer* will report about this programme at the UIC European Management Committee on May 25th and ask for the approval.



The UIC leaflet 612-2 on “specific sub-system requirements (traction, braking, etc...) for EMU/DMU locomotives and driving coaches” has been approved. *Steffen Jank*, DB AG, PTR Programme Manager informed the participants that a UIC leaflet 612 dissemination workshop was scheduled at UIC on April 3rd (see previous article).

*Stefano Guidi*, TRENITALIA, PTR Programme Manager, presented the UIC leaflet 508-3/OSJD 524 (common leaflet to UIC and OSJD) “Passenger coaches – general requirements for running gear with dual gauge wheelsets for railways with 1435 mm and 1520 mm gauges” which has been approved in the session. UIC will send a letter to OSJD in that sense.

The Programme Managers (*Steffen Jank*, *Stefano Guidi* and *Pierre-Etienne Gautier*) reported on their sector of activities and presented their work programme for future topics.

*S. Guidi* reported on the final report of the “Study into the suitability of a Y/Q limit value of 0.8 for empty wagons” which has been approved in the session. A forthcoming project “Evaluation of Y/Q as a safety criteria assessment” is confirmed and will be forwarded with the budget voting list 2010.

*P.E. Gautier* presented further ideas on future projects:

\* Managing extreme storms linked to the EU AEROTRAIN project. The PTR members will be asked in writing on their interest. Other UIC bodies (safety, infrastructure and environment) will also be contacted for further cooperation.

\* Optimisation of the characteristics of rail and wheel dampers, rail pads and their interaction for rolling noise mitigation: DEUFRAKO (French-German scientific and technology cooperation project in the domain of surface transport between France and Germany) will be asked to extend this project to further participants. PTR members are requested to communicate their interest in participating in this project and to nominate additional experts in the corresponding SET.

*S. Jank* also presented further ideas on future projects:

\* Optimisation of the interface between contact strip and contact wire (CoStrIM): this important proposal shall close knowledge gaps related to acceptable combination of contact wire and catenary materials. The results are expected to close an open point in the RST TSI, to reduce the number of pantographs on international vehicles and to optimize catenary maintenance regimes including an annual benefit of 25 Mio €. DB and SNCF have already started a pre-project, NR and ATOC have also announced their interest. All PTR members are requested to commit to a participation in a multilateral project already in 2009. A detailed work plan is to be elaborated by SET 11 (traction and electrical equipment).

He finally presented the common European Train Requirements Database of UIC/PTR and UNIFE EUTREQ for Standards and Regulation (S&R) and reference for tendering. PTR agreed to use a new EUTREQ workflow for elaboration of new and for reviewing of existing UIC leaflets. The progress of the EUTREQ database and experiences with the application of the EUTREQ workflow will be disseminated to the PTR members.

PTR members took note of the Memorandum of Understanding on the edition and publication of common UIC – UNIFE Technical Recommendations (TecRec). The MoU will be signed after check of UIC legal department.

Some items have been postponed to the next Steering body meeting to be held on July 9th at UIC HQ:

1. Interoperable Measurements sites (IMS)
2. Application of a rail noise forecast tool
3. Train bus feasibility study

*Gabriele Maffei* explained a first draft PTR Budget 2010. The UIC T&R Department will send out a comprehensive documentation on proposed new projects for a first written vote and ask also PTR members to express their interest in some new project ideas.

*Dennis Schut*, EU Research Manager at UIC T&R Dept. in Brussels, gave some information about the upcoming 3rd call within the European Commission's 7th Framework Programme and the current work RCG and ERRAC and their interactions.

*Enno Wiebe* informed the members that the PTR workshop "Railways Research in Europe" will be held in Vienna, hosted by ÖBB on April 15th and 16th, 2009. This workshop's aim is to provide broad information about future railway research projects, possible ways of project participation, about UIC as service provider and information platform and funding methods for various project ideas. Moreover the workshop will offer a platform for information exchange and finding partners for intended research projects.



Detailed information will be provided in this workshop about the mission of the National Contact Points, the PTR Strategy Programme 2020, the work of ERRAC and the ERRAC Roadmap, FP 7 and the 3rd call with its freight focus, ways of funding outside the 7th Framework Programme and the financial framework and rules among others. This event is a unique chance to get informed about the global framework for rail research in Europe on the one hand and contacting potential partners for research projects and programmes on the other hand.

The PTR chairman considers this event as a good step for a common approach towards new railway research projects in Europe helping to shape our railways' position for Europe in the year 2020. PTR members are again warmly invited to participate.

*Steffen Jank* informed that upon the request of the CER support group PTR members are kindly requested to check and comment on the TSI Rolling stock version 2.3 by April 20th, 2009. *Louis Michielsen* (NS) underlined the importance of the check for any PTR member, as the future TSI will be legally binding and build the frame for the railway business.

*Helmut Klaus Schimany* presented the EC action plan "Intelligent Transport System (ITS)" to all PTR members. UIC will distribute the draft EC documents with the PTR conclusions.

Finally *Gabriele Maffei* informed all participants that after more than 4 years spent in Paris he would leave the UIC very soon, his contract being finished by the end of March 2009. Nevertheless he's been asked to be from time to time at UIC to deal with urgent matters until the end of May 2009. He thanked Mr. *Mayer* and all PTR participants for their excellent collaboration. Mr. *Mayer* made also a short speech to thank Mr. *Maffei*. All participants wish good luck to Mr. *Maffei* for his future life back in Italy.

Please note that the next PTR Steering body is to be held on July 9th, 2009.

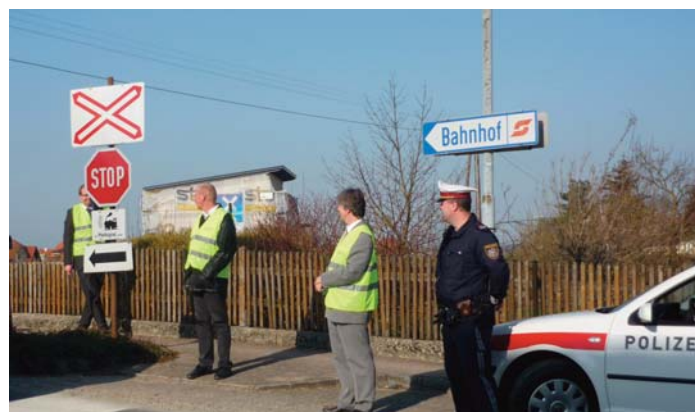
All PTR Members are invited to participate in the next PTR plenary session foreseen on October 15th, 2009.

For more information please contact Isabelle Fonverne: [fonverne@uic.org](mailto:fonverne@uic.org)

## Safety / Level crossings

### European Level Crossing Forum (ELCF): 9th plenary meeting (Vienna, 2-3 April 2009)

On 2-3 April, the 9th meeting of the European Level Crossing Forum held was held in Vienna, hosted by the Austrian Ministry of Transport. Since 2005, this forum has brought together rail and highway safety experts from Europe and beyond as well as a number of European instances including the European Railway Agency or the European Transport Safety Council, in order to exchange information, provide experience on the management, performance and key safety issues concerning the "at-grade rail/road interface".



On the governance side, *Simon Fletcher*, Coordinator Europe for UIC, active member of the forum, presented the revised charter including the necessary aspects to organise, strengthen the ELCF team and broaden its capabilities as the forum raises more and more interest and gathers a growing number of participants.

UIC also presented an action plan focusing on a number of key questions such as the engagement of key parties, better enforcement to cultivate a systematic approach to code of the route violations and education, as users behaviour at and around level crossings cause almost all accidents and fatalities.

Indeed, following the necessity to develop public awareness on the misuse of level crossings, a number of projects were presented by *Ilyas Daoud*, Interfaces Coordinator, including:



- \* The recent signature of the European Road Safety Charter by ELCF together with the rail associations CER, EIM and UIC to increase visibility in its commitment to contribute to overall reduction of traffic safety risks, and publish safety information toward users, which is one of the goals of the forum.

- \* The new ELCF website managed by the UIC and the Technical University of Braunschweig (TUBS) to become a platform of accurate, detailed information on good practices insisting on education of users, promoting events and meetings around the questions on level crossings, available at:

**[www.levelcrossing.net](http://www.levelcrossing.net)**

- \* The organisation of the European Awareness Day at level crossings based on national initiatives to help raise awareness of the critical risks at the road/rail interface faced by the rail community and developing the concept of a multi-modal approach to address the issues. This project involves currently 20 European countries and a number of European instances including the European Commission.

The meeting was followed by various presentations on technical questions including signage, use of traffic control lights, human factors issues at level crossings, or on the cost analysis of LX accidents. Good practices on maintenance were underlined as a key question to be dealt shortly. Therefore, a number of projects and subgroups have been identified and will be formally approved and created at the next steering committee to be held in June. The steering committee is also to conclude the debate on the charter and approve the action plan. The next plenary meeting of ELCF will be held in October and hosted by the UIC in Paris.



*Simon Fletcher, UIC Manager Interoperability and Safety*

# Safety / Security / High Speed

## 3rd International Railway Safety and Security Seminar in Morocco. The main theme: “Safety Requirements of High Speed Rail”

Moroccan Railways (ONCF) and UIC co-hosted the 3rd International Railway Safety and Security Seminar on the 18 and 20 March, 2009, in Morocco under the heading of “Safety Requirements of High Speed Rail”. The opening was chaired by Mr *Mohamed Rabie Khlie*, Director General of ONCF. Mssrs *Khaddour*, Director of Safety and Security for ONCF and *Ignacio Barrón*, Director of High Speed at UIC were also present as well as *Meryem Belhaj*, Head of the International Training and Human Factors Competence Centre, *Jacques Colliard*, Head of the Security Competence Centre UIC and *Paolo de Cicco*, UIC ERTMS specialist.



*Mr Mohamed Rabie Khlie, Director General of ONCF, at the floor.*

This 3rd seminar centred on exchanging lessons learnt in terms of safety in relation to high speed rail, between UIC members and was attended by over 150 heads of safety from 18 countries.

The following main topics for reflection were covered:

- \* Safety requirements for high speed infrastructure
- \* Safety requirements for high speed rolling stock
- \* Safety in high speed rail operations
- \* Safety in terms of training and management of personnel involved in high speed rail systems
- \* General safety requirements – from a national and international perspective

The choice of theme for this seminar was closely tied to the current project to build high speed lines in Morocco. The first high speed line should be opened for operations in 2014 and is to link Casablanca to Tangiers (350 Km) in less than two hours. The master plan for high speed aims to have 1500 Km of high speed line built by 2030.



UIC was actively involved in organising the 1st and 2nd of these seminars held in April 2005 and December 2007 respectively. The 2nd seminar concentrated on organisational and human factors in safety management. The human factor should indeed be used to build a company’s risk culture in order to ensure it is equipped to better manage problems and face critical situations.

Proper organisation of work, evaluation and recognition of people’s strengths and weaknesses make it easier to harness their potential and raise overall performance of the human element in sociotechnical systems.

This third seminar was of particular interest, since for the first time it provided an extensive and systematic overview of all the components which come into play and underpin the confidence that exists in high speed rail. Since high speed operations began in Japan in 1964, after the carriage of over 15 billion passengers, no train has ever been involved in an accident causing fatalities when running at speeds of over 250 Km/h. This is due in part to the successful design of the infrastructure-rolling stock system, but is also thanks to the quality of signalling, effective operating rules, good maintenance, efficient braking, accurate weather forecasting, antiseismic measures, fire prevention measures and high approval standards etc.



*Multicultural participation in the technical visit to Marrakech Station. Representatives from UIC and DB International together with the Station master of Cologne.*

All these subjects were raised and examined by specialists at this third seminar, to which participants also took a keen interest, judging by the vast number of questions following each session.

The seminar closed on a series of promotional presentations followed by a technical visit of the new Marrakesh Station.

Safety and security of high speed systems is certainly an issue which will continue to be topical and be the subject of more discussion in the future.

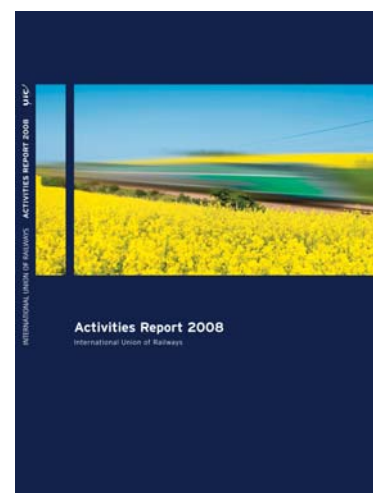
*For more information please contact Meryem Belhaj: [belhaj@uic.org](mailto:belhaj@uic.org) and Ignacio Barrón: [barron@uic.org](mailto:barron@uic.org)*

## UIC Publications

### **Publication of the 2008 UIC Activities Report: A complete overview of activities and projects undertaken by the worldwide organisation of cooperation for railway companies**

UIC has published a report of its activities for 2008. This comprehensive English language document provides a complete overview of progress on current work as well as results obtained during 2008, in all the main fields of railway cooperation

The report shows changes in the worldwide railway sector, in terms of passenger traffic, high speed and freight volumes. It then focuses on joint work carried out by members in 2008, aimed at redefining how UIC operates in order to make it a genuinely worldwide organisation of cooperation for railways serving its members' interests. These efforts led to the unanimous approval of a new set of statutes at the 31 March General Assembly, as well as the appointment of new UIC directors tasked with implementing this new course of strategic action.



One of the underlying principles adopted by the management is to bolster the autonomy of UIC Regional Assemblies and establish “regional” plans of action for railway cooperation. To this end the UIC Regional Assemblies for “Africa”, “Asia”, “Europe” and “the Middle East” will commence work, whilst preparations continue for the launch of activities for “North America” and “South America”.

The report then gives an account of progress made in the railways’ main fields of activity: Infrastructure, ERTMS, Research and Technology, Passenger Transport, High Speed and Freight Safety and Security, the Environment and Sustainable Development. It also re-introduces members to UIC support services available to members such as: training, human factor, information systems, legal, communications and documentation expertise, railway terminology as well as other services provided by UIC’s subsidiaries, such as publications and leaflet editing (ETF), interpretation and translation services (L & T) and conference room rental (UICP).

As *Jean-Pierre Loubinoux*, UIC’s new Director General, pointed out, “*This Activities Report 2008, although not exhaustive, paints a fairly accurate picture of the breadth of projects launched, steered or coordinated by the UIC. All these projects have a goal that is shared by the UIC and its members, i.e. to build an effective railway transport system; in particular one which is international in nature, attractive to customers and meets society’s expectations in the best possible way in terms of sustainable development.*”

“*By and large, UIC can be pleased about the vast majority of these projects which have led to successful cooperation actions with stakeholders – from institutions and railway industry.*”

Copies of the Activities Report (« **UIC Activities Report 2008** », 208 pages, in English), can be obtained on request from the Communications department: [com@uic.org](mailto:com@uic.org). Or can be viewed on line: [www.uic.org/activities\\_report](http://www.uic.org/activities_report)

## UIC Freight Forum/ Quality

### UIC Excellence Board meeting

In October 2008, in the face of ever-changing conditions in the deregulated railway world and as a potential instrument for combatting the economic crisis, the UIC Freight Forum mandated the UIC Quality Study Group, chaired by Mr. *Helmut Pfeiffer* (RCA AG), to set up a UIC Excellence Board.

Responsibility for leading the UIC Business Excellence Board has been entrusted to Mr. *Michael Kadow* (DB Mobility Logistics AG).



At its constitutive meeting on 19 March 2009 the Board discussed the importance of Business Excellence and the tools necessary to achieve it (Six Sigma, EFQM Excellence Model, Lean Management, etc.) with the participating railways (including representatives from the Korean railways).

The aim of the new Business Excellence Board is to utilise the internal know-how of the railways - often already highly developed in some cases - during the implementation of specific projects.

## News from UIC Members

### **Rüdiger Grube new DB Chairman and CEO He will succeed Hartmut Mehdorn on 1st May**

In an extraordinary meeting held on 25th April, the Supervisory Board of German railways DB AG appointed Dr. *Rüdiger Grube* as the new DB Chairman and CEO. The former member of the Board of Management of Daimler AG will take office on 1st May 2009. He will become Chairman of the Management Board of Deutsche Bahn AG and Chairman of the Management Board of DB Mobility Logistics AG. He is appointed for a term of 5 years. At the same time, on 30 April 2009, Hartmut Mehdorn will be leaving his position of Chairman and CEO of German railways he has held for almost ten years.

*Dr. Rüdiger Grube, 57 years old, after graduating with an engineering degree, studied vocational and business teaching, before receiving a doctorate in industrial science. He has been a member of the Board of Management of the Daimler AG automotive group for eight years with responsibility for corporate development and all North East Asia activities, including the growth region of China. He was also responsible for the group's entire global IT operations, with over 6,000 employees. Currently Dr. Rüdiger Grube was Chairman of the Board of Directors of the European Aeronautic Defence and Space group EADS.*



Dr. Rüdiger Grube

EADS

UIC takes the opportunity to express warmest thanks to Mr *Hartmut Mehdorn* for his many years of commitment in UIC international cooperation structures -in particular as the 'UIC Europe' Regional Assembly Chairman- and congratulates Dr. *Rüdiger Grube*, for his appointment as the new Chairman of the Board and CEO of Deutsche Bahn AG.



Mr Hartmut Mehdorn

DB AG

## Spain. The Spanish high speed train “AVE” Madrid- Sevilla celebrates its 17 years with a solidarity action

RENFE has carried more than 48.5 million passengers on the first Spanish high speed line Madrid-Sevilla since its inauguration on 21 April 1992. The number of trains running daily on the line has increased from the twelve to 140 (including trains to Málaga, Toledo, etc.) and operate with a maximum speed of 300 km/h with a punctuality 99,2 %

RENFE celebrated this day with a solidarity action; for each ticket sold on 21 April for travelling between Madrid and Sevilla, 2 euros have been allocated to a project called “A train of value for a better world”. This project is part of Renfe’s strategy on Social Responsibility with the goal to raise awareness on the benefits of rail transport for society.

In addition, RENFE invited all customers to participate in the project by sending an SMS with the message “VALORES AVE “. The money collected will go to 12 projects involving NGOs and international agencies. Those who sent a message will participate in a lottery and can win a trip to learn more about the project of WWF/Spain “Restoring the banks of Doñana” one of Europe’s most important wetland reserves and a major site for migrating birds that suffered from an ecological disaster in 1998.

For more information on “A train of value for a better world”: <http://www.renfe.es/rse/untrendevalores> (in Spanish)



## Russia. Russian Railways will invest 2 billion roubles in developing RIC coaches at the Tver Coach Works this year

*Vladimir Yakunin*, President of Russian Railways, announced the investment plan during today’s working visit to the Tver Coach Works by a Company delegation. “Last year it was decided to manufacture RIC coaches for international routes at the Tver Carriage Works. This will be the first time in the history of domestic coach building that coaches satisfying all international requirements and standards will be made in Russia,” said the President of Russian Railways.

At present, Russian Railways has a RIC coach fleet of 232 units, but with depreciation now standing at around 80%, manufacturing new coaches is an important task in the Company’s renewal of its rolling stock. This year will see the development of design documentation required for the production of the RIC coaches.

The RIC coaches to be developed and produced at the Tver Coach Works will meet all the requirements of the International Union of Railways on environmental performance, passenger comfort, fire safety and traffic safety. The coaches will be capable of speeds of up to 200 kmph, but after modernization, speeds can be increased to 250 kmph. The coaches will have a service life of 40 years.



## USA

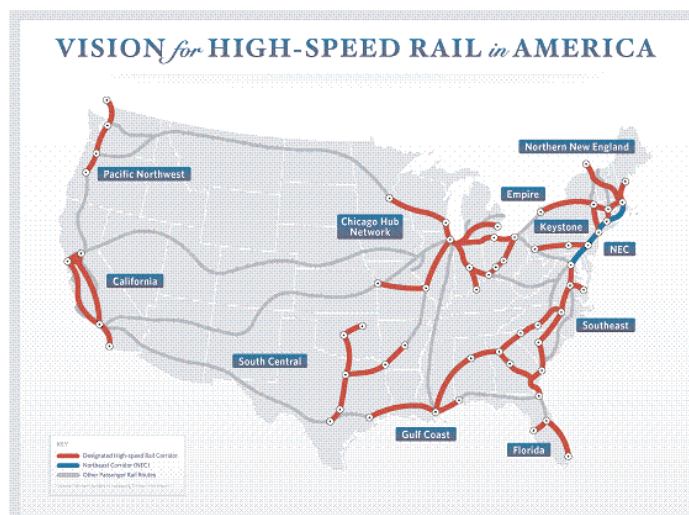
### President Obama: Call for U.S. High Speed Passenger Trains

President *Barack Obama*, along with Vice President *Biden* and Secretary *LaHood*, announced a new U.S. push today to transform travel in America, creating high-speed rail lines from city to city, reducing dependence on cars and planes and spurring economic development.



The President released a strategic plan outlining his vision for high speed rail in America. The plan identifies \$8 billion provided in the ARRA and \$1 billion a year for five years requested in the federal budget as a down payment to jump-start a potential world-class passenger rail system and sets the direction of transportation policy for the future. The strategic plan will be followed by detailed guidance for state and local applicants. By late summer, the Federal Railroad Administration will begin awarding the first round of grants.

The report formalizes the identification of ten high-speed rail corridors as potential recipients of federal funding. Those lines are: California, Pacific Northwest, South Central, Gulf Coast, Chicago Hub Network, Florida, Southeast, Keystone, Empire and Northern New England. Also, opportunities exist for the Northeast Corridor from Washington to Boston to compete for funds to improve the nation's only existing high-speed rail service.



## Next Meetings scheduled

30 April 2009: Freight Board (Konferenzraum Bahnhof Rest Basel.C)

May 2009: please visit UIC website: <http://www.uic.org/baseinfo/reunion/>

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Communications Department, 28 April 2009

Thank you for your comments and suggestions.

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