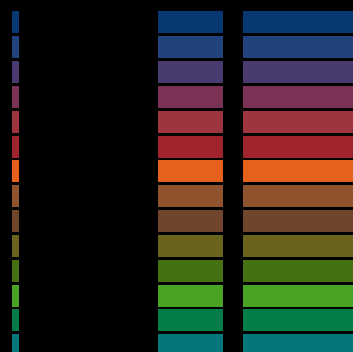




INTERNATIONAL UNION OF RAILWAYS  
**Annual Report 2006**





# Contents

## INTERNATIONAL UNION OF RAILWAYS (UIC)

### HEADQUARTERS:

16, rue Jean Rey - F - 75015 PARIS (France)

Tél. : +33 (0) 1 44 49 20 20

Fax + 33 (0) 1 44 49 20 29

Courriel: info@uic.asso.fr

www.uic.asso.fr

### Published by:

the Communications Department

Managing Editor: Paul Véron

Coordination : Marie Plaud

### English edition (Coordination):

Nicholas Marks

Translations: L&T (UIC)

Lay-out: Quentin Design,

Daniel Tessèdre (UIC),

Printing: SB Imprimerie

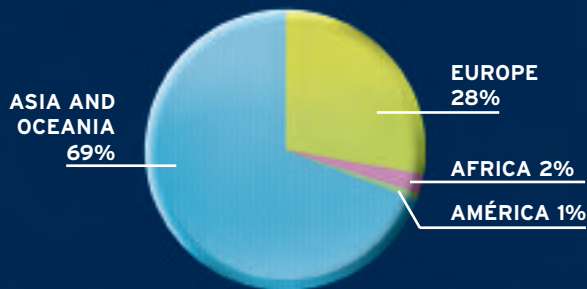
With special thanks to UIC member railways and photographers for their contribution (photographs, statistics)

Reproduction of parts of this report permitted with attribution of the source (UIC) ISBN 2-7461-1222-1  
Copyright deposit: December 2006 UIC Paris

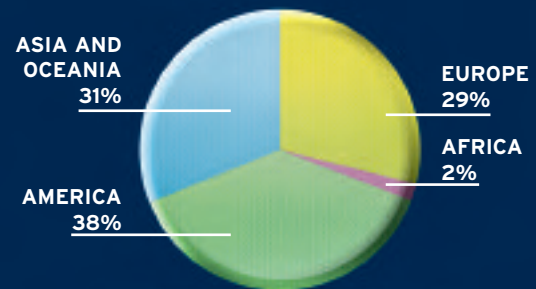
UIC MEMBERSHIP - UIC's MISSION	CHAPTER 01.	1 TO 9
THE 'NEW' UIC: A TRULY GLOBAL ORGANISATION	CHAPTER 02.	10 TO 15
TOP LEVEL UIC MANAGEMENT MEETINGS IN MONTRÉAL	CHAPTER 03.	16 TO 27
KEY PROJECTS IN INTERNATIONAL RAILWAY COOPERATION	CHAPTER 04.	28 TO 31
INFRASTRUCTURE	CHAPTER 05.	32 TO 49
SAFETY	CHAPTER 06.	50 TO 57
TECHNOLOGY AND RESEARCH	CHAPTER 07.	58 TO 71
ENVIRONMENT : UIC, SERVING SUSTAINABLE DEVELOPMENT	CHAPTER 08.	72 TO 79
PASSENGER TRANSPORT	CHAPTER 09.	80 TO 95
FREIGHT TRANSPORT	CHAPTER 10.	96 TO 107
SECURITY	CHAPTER 11.	108 TO 113
CONTROLLING	CHAPTER 12.	114 TO 117
INFORMATION SYSTEMS	CHAPTER 13.	118 TO 123
UIC SUBSIDIARIES - PRODUCTS AND SERVICES	CHAPTER 14.	124 TO 128

# UIC members' results in 2005

**PASSENGER TRAFFIC TRENDS AROUND THE WORLD**  
IN BILLIONS OF PASSENGER-KILOMETRES



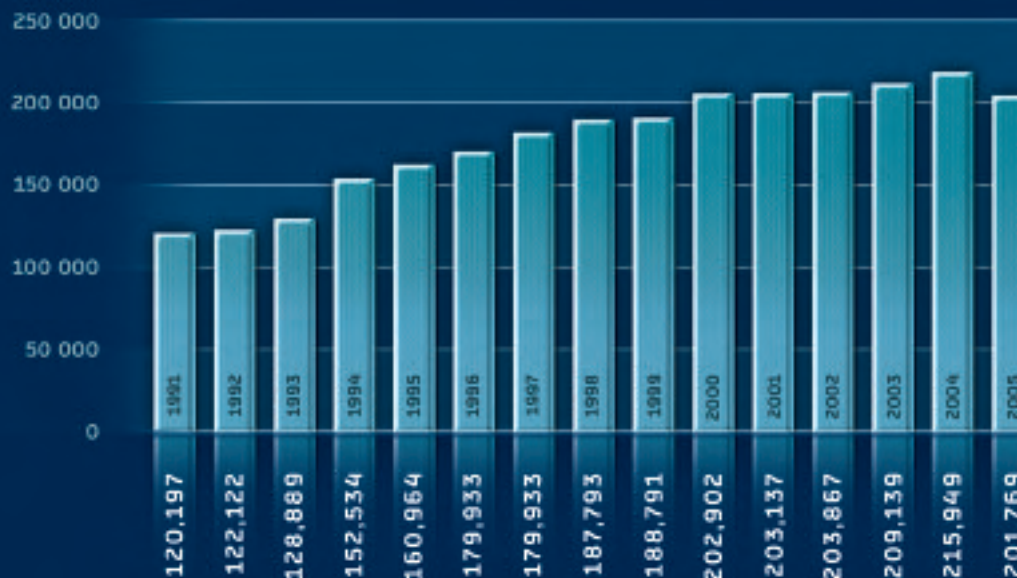
**FREIGHT TRAFFIC TRENDS AROUND THE WORLD**  
IN BILLIONS OF TONNE-KILOMETRES



	2002	2003	2004	2005
Europe	596 087	599 438	604 879	618 455
Africa	49 069	49 324	49 330	49 064
America	17 959	18 854	18 579	18 499
Asia and Oceania	1 344 005	1 348 951	1 479 542	1 551 365
WORLD	2 007 120	2 016 567	2 152 330	2 237 382

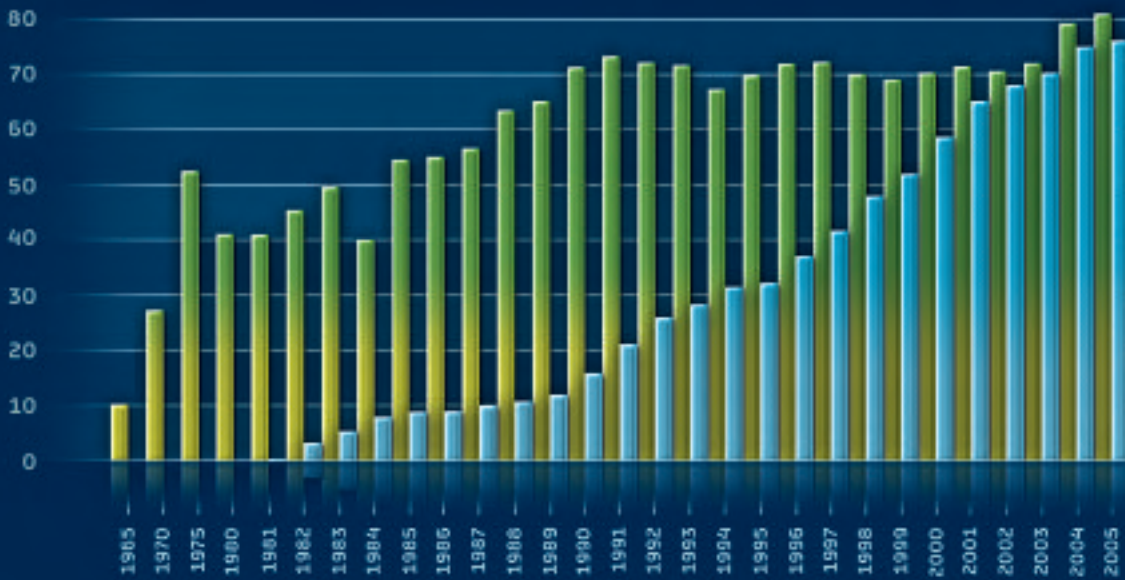
	2002	2003	2004	2005
Europe	2 141 348	2 339 392	2 504 710	2 482 422
Africa	130 613	130 374	129 628	130 893
America	2 732 989	2 827 647	3 042 213	3 345 976
Asia and Oceania	2 148 105	2 315 209	2 542 659	2 688 219
WORLD	7 153 055	7 612 622	8 219 210	8 648 126

**TRENDS IN INTERMODAL TRAFFIC CARRIED BY RAIL**  
IN THOUSANDS OF TONNES



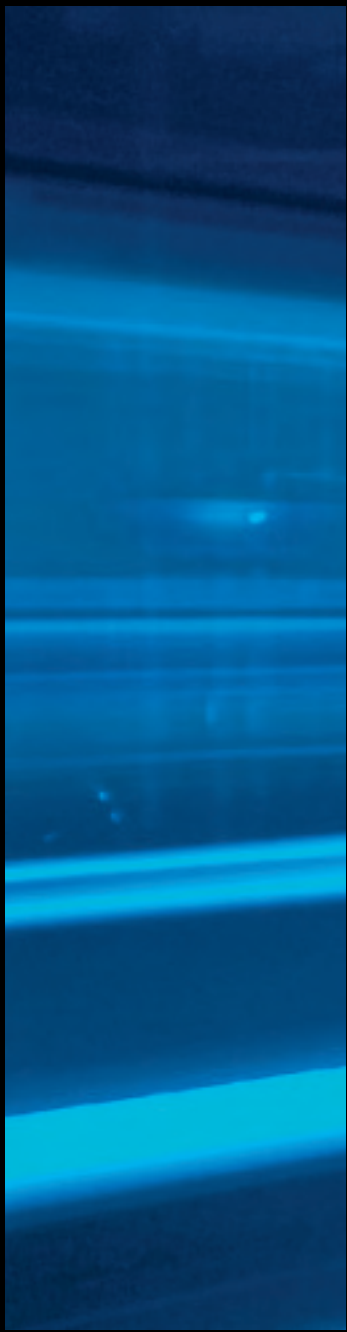


**DEVELOPMENT OF HIGH SPEED RAIL TRAFFIC IN ASIA AND EUROPE**  
*IN BILLIONS OF PASSENGER-KILOMETRES*



**DEVELOPMENT OF HIGH SPEED RAIL TRAFFIC IN EUROPE**  
*IN BILLIONS OF PASSENGER-KILOMETRES*





# UIC Membership - UIC's Mission



# The UIC members



## The UIC members

COUNTRY	ORGANISATION	CATEGORY	COUNTRY	ORGANISATION	CATEGORY
Albania	HSh	1	Former Yugoslav republic of Macedonia	CFARYM	1
Algeria	SNTF	1	Gabon	SETRAG	2
Argentina	ALAF	2	Georgia	GR	2
Armenia	ARM	2	Germany	DB	1
Australia	QR	2		AAE	2
	Rail CRC	3		BSB	3
Austria	ÖBB	1		GVG	2
	GKB	2		HUPAC	3
	RTS	2		IGE Bahntouristik	2
	Wiener Lokalbahnen	2		Optima Tours	3
Azerbaijan	AZ	2	Greece	OSE	1
Bangladesh	BR	2		Attica Group	2
Belarus	BC	1	Hungary	MAV	1
Belgium	SNCB/NMBS	1		MAV Cargo	1
	BCC	3		GySEV/ROeEE	1
Bosnia-Herzegovina	ZFBH	1		VPE	2
	ZRS	1	India	IR	1
Bulgaria	BDZ	1		CONCOR	3
	Bulmarket	2	Iraq	IRR	1
	BRC	2	Iran	RAI	1
	NRIC	1	Ireland	CIE	1
Burkina Faso	SOPAFER B	2		RPA	3
Cambodia	CFRC	2	Israel	IR	1
Cameroon	CAMRAIL	2	Italy	FS SpA	1
Canada	Via Rail	2		TAV SpA	2
Chile	EFE	2		RTC	2
China	CR	1		SERFER	2
Congo	CFCO	2		FNME	3
Congo (Democratic Republic of)	SNCC	2	Ivory Coast	SIPF	2
Crete	Minoan Lines	3		SITARAIL	2
Croatia	HZ	1	Japan	EJR	1
Czech Republic (the)	CD	1		CJRC	2
	SZDC	1		JFRC	2
	IRCG	3		KRC	2
Denmark	BDK	1		WJRC	2
	DSB	1		RTRI	3
Egypt	ENR	2	Jordan	ARC	2
Estonia	EVR	1	Kazakhstan	KTZ	1
Finland	RHK	1	Kenya	KR	2
	VR	1	Korea (Republic of)	Korail	1
France	SNCF	1		KNRA	1
	RFF	1		KNRC	3
	Veolia	1		KRRI	3
	RATP	3	Latvia	LDZ	1
	Compagnie des Wagons Lits	3	Libya	Dept. of Road Transp and Railways	1
			Lithuania	LG	1



## The UIC members

COUNTRY	ORGANISATION	CATEGORY	COUNTRY	ORGANISATION	CATEGORY
Luxembourg	CFL	1	Slovenia	SZ	1
Malaysia	KTM	2	Spain	RENFE	1
Malagasy	RNCFM	2		ADIF	1
Mali	RCFM	2		FEVE	2
Morocco	ONCFM	1		FGC	2
Moldavia	CFM	1		Euskotren	2
Monaco	Wasteels	3	Sudan	SRC	2
Montenegro	ZCG	1	Sri Lanka	SLR	2
Mozambique	CFM	2	Sweden	SJ AB	1
Netherlands (the)	NS	1		BV	1
	Pro Rail	1		Green Cargo AB	1
	StL Holland BV	3	Switzerland	SBB/CFF	1
New Zealand	ONTRACK	2		BLS	1
Nigeria	NRC	2		Cisalpino	2
Norway	JBV	1		Eurofima	3
	NSB BA	1		ICF	3
Pakistan	PR	1		UTP	3
Philippines (the)	PNR	2	Syria	CFS	1
Poland	PKP	1		SHR	2
	CNTK	3	Taiwan	TRA	2
	PTK i GK SA	2	Tanzanie	TRC	2
	DEC	3	Tanzania/Zambia	TZR*	2
Portugal	CP	1	Tunisia	SNCFT	1
	REFER	1	Turkmenistan	TRK	2
Romania	CFR CALATORI	1	Turkey	TCDD	1
	CFR MARFA	1		DTD	2
	CFR SA	1	Uganda	URC	2
	GFR SA	2	Ukraine	UZ	1
	CTF SA	2		KIT	3
	Servtrans Invest SA	2	United Kingdom (the)	ATOC	1
	SC Cargo Trans Wagon SA	2		Eurostar UK Ltd	1
	SC UNIFERTRANS SA	2		Eurotunnel	1
Slovakia	ZSSK	1		EWSI Ltd	1
	ZSSK Cargo	1		Network Rail Limited	1
	ZSR	1		NIR	2
Russia	RZD	1		AEA Technology	3
	NHT	3		Stena Line Limited	3
	VNIAS MPS	3	United States (the)	US Department of Transportation	2
	VNIIZhT	3		AAR	3
	VNIKTI	3	Vietnam	VTR	2
Saudi Arabia	SRO	1			
Senegal	SNCS	2			
Serbia	ZS	1			
South Africa	SPOORNET	1			
	SARCC	2			

\* Tanzania-Zambia Railway Authority - Tazara

Category : 1. active member, 2. associate member, 3. affiliate member

# UIC : the international professional organisation of the railway sector

## UIC including 175 members across all 5 continents

- ▶ 79 active members (including the railways from Europe, Russia, the Middle East, North Africa, South Africa, India, Pakistan, China, Japan, Korea, Kazakhstan, and companies operating worldwide such as Veolia Transport).
- ▶ 67 associate members (including railways from Asia, Africa, America and Australia).
- ▶ 29 affiliate members (related or ancillary rail transport businesses or services).

## UIC members may be

- ▶ integrated railway companies
- ▶ infrastructure managers
- ▶ railway or combined transport operators, rolling stock and traction leasing companies
- ▶ service providers (restaurant services, sleeping cars, public transport, maritime transport)

## UIC: continuous expansion in membership



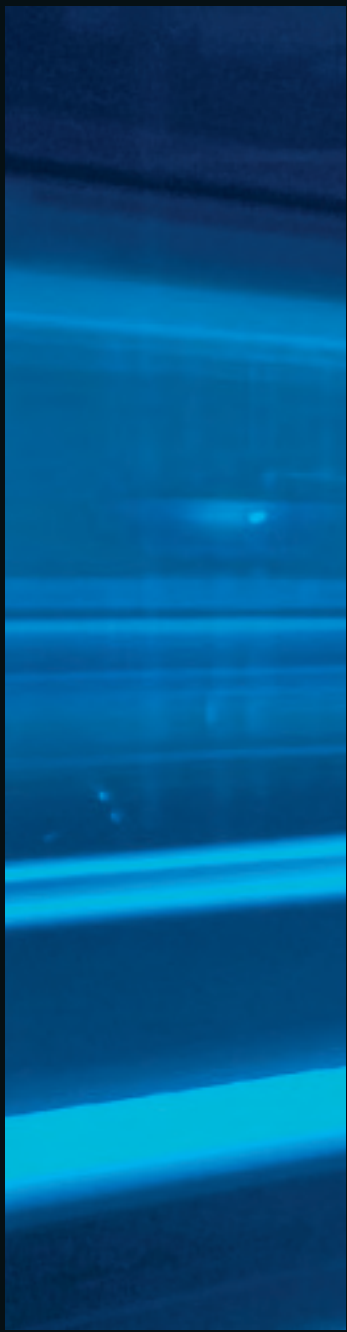
**Members**   ■ active   ■ associate   ■ affiliate

### MISSION:

At World level UIC shall promote rail transport .  
In order to meet challenges of Mobility and Sustainable development.



Chinese Railways



# The 'new' UIC: a Truly Global Organisation



# The 'new' UIC: a Truly Global Organisation

Without a doubt, the 2005/2006 period covered in this annual report constitutes a turning point in the long history – over 80 years – of UIC and international cooperation between railways.

The year 2005 was used to completely restructure UIC and its means of functioning. This transformation was carried out under the impetus of Benedikt

Weibel, UIC's Chairman, and with the full backing of all the members. Its purpose was to adapt UIC's functions to the new challenges of rail transport and to increase UIC's added value for its members. One of the major strategic orientations was to position UIC as the global organisation representing the interests of the professional railway sector.



East Japan Railways

## New Challenges in rail transport

The orientations agreed in the framework of the 'new UIC' must assist members (be they 'railway undertakings' or 'infrastructure managers') to reinforce their competitiveness and successfully develop their businesses. This must be done in a market which is more and more contentious, and whose political and institutional environment is undergoing great change.

### UIC must in particular:

- ▶ adapt the framework of its international cooperative activities to the changes in the marketplace – characterised by ever increasing competition with other transport modes, and sometimes even amongst rail transport providers – as well as to meet the challenges of liberalisation and the new legislation which seeks more competition (organically separating the functions of infrastructure managers and rail transport operators, bringing in 'new players', transferring part of standardisation authority to the European Railway Agency, from 2005),
- ▶ assist our members – by sharing best practices, through benchmarking, and with joint projects – to improve the quality of the competitiveness of the services they offer to their customers,
- ▶ carry out the interoperability that is essential to railway systems (interoperability of services and systems, interoperability of operational procedures, interoperability of information systems, interoperability of sales and marketing), so that railways can draw from all their advantages in international transport market,
- ▶ support our members in all their efforts that strive to improve profitability and lower costs,
- ▶ take the greatest possible advantage from the potential of the globalised economy and transport market. The benefits we seek for the railways are worldwide rail standards (a global market for railway equipment, economies of scale), standardisation and harmonisation of research programmes, taking advantage of new opportunities in the worldwide transport market (with intercontinental freight corridors, new partnerships, joint ventures, etc.).



## Globalisation acted on in the 'Delhi Declaration'



↑ The 'Delhi Declaration' adopted in October 2005 during the meeting of the UIC Executive Board in India.

It was in October, 2005, that railway leaders, brought together in Delhi for UIC's Executive Board and World Executive Council meetings, unanimously adopted a series of decisions to reposition UIC as a truly world level professional organisation.

The main decisions agreed in the 'Delhi Declaration' were:

- ▶ UIC must become a true global organisation. New governance must reflect this strategic objective,
- ▶ we must function as an umbrella organisation, coordinating the actions of regional groups of railways, in "Regional Assemblies" (regional assemblies for Asia, Europe, America, Africa, the Middle East, etc.),
- ▶ within the new worldwide governance, the UIC Executive Board – along with the General Assembly the

organisation's governing body – will have an expanded membership (from 2007) to ensure a balanced representation of railways from various regions throughout the world,

- ▶ the chairmanship of UIC will be provided by a Railway CEO from a European, or non-European, railway,
- ▶ the Headquarters of the worldwide organisation and its Executive Management will be kept in Paris.



## UIC's mission: increase its added value for the members

Governing bodies, working closely with the members, conducted a redefinition of UIC's missions. The clearly identified objective is to increase UIC's usefulness and added value for the members. And, more generally, to assist railways in their development strategies and in reinforcing their competitiveness.

UIC's overall mission was redefined as follows:

- ▶ as a world federation, a professional organisation, the heart of UIC's mission is to "promote the development of rail transport, on a worldwide level, to meet the challenges of mobility and sustainable development".

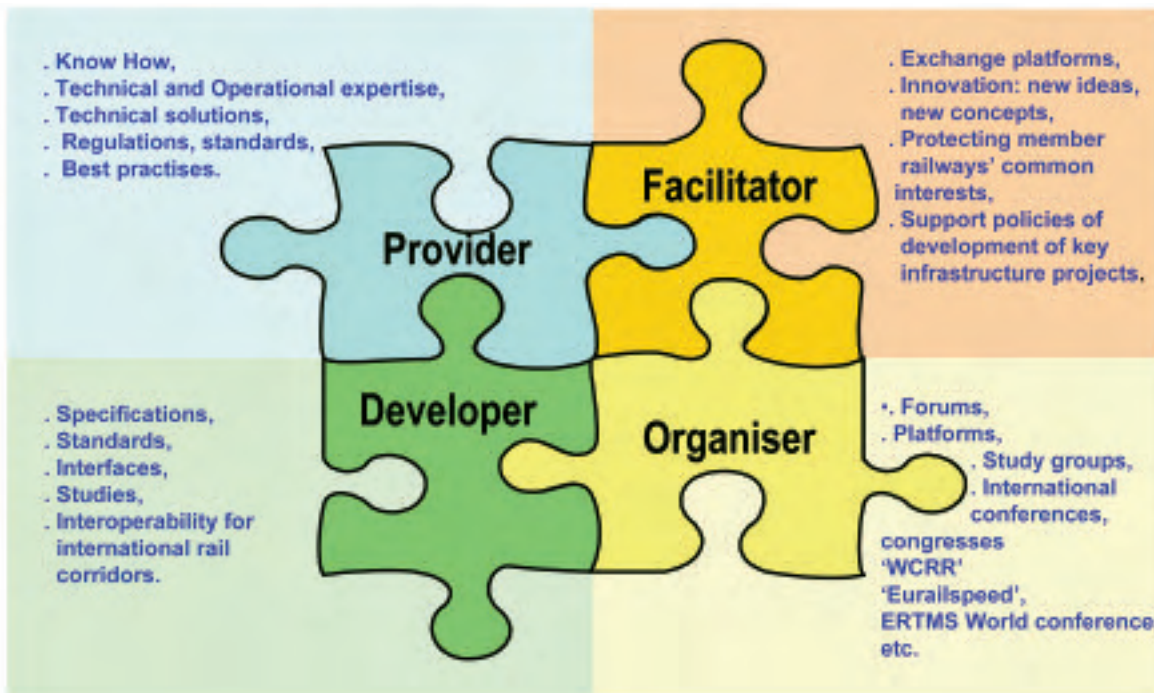
Within the framework of this mission four main roles were identified:

- ▶ UIC, the 'provider' of know-how, technical and

operational expertise, technical solutions, prescriptions, regulations, standards, best practices,

- ▶ UIC, the 'developer' of specifications, standards, interfaces, studies, solutions for interoperability along international corridors,
- ▶ UIC, the 'facilitator', with platforms for exchanging information and innovation, of new ideas and concepts, defending the common interests of its members, assisting the members with their infrastructure projects, finding funding, etc,
- ▶ UIC, the 'organiser' of forums, seminars, international congresses (EurailSpeed, the ERTMS Conferences, research congresses, etc.).

### UIC's four main roles









# .03

03. 16 TO 17

## Top level UIC management meetings in Montréal



## Top level UIC management meetings in Montréal

Thanks to the effective support of Canada's VIA Rail company, UIC was able to organise all its statutory meetings in Montréal, the 7 and 8 of June, 2006. These meetings followed the 7<sup>th</sup> World Congress on Railway Research (WCCR), where UIC was also one of the main organisers and which drew some 700 attendees to Québec's city from 4 to 7 June.

The meetings of UIC's governing bodies – the World Executive Council and General Assembly – were chaired by Benedikt Weibel, UIC Chairman. The World Executive Council was chaired by Jay Prakash Batra, Chairman of India Railways (IR), who is also the UIC Vice Chairman. Some 140 attendees took part in the Montréal General Assembly.



1



2



3



4



5

1 - The World Executive Council in Montréal.

2 - Vladimir Yakunin, Chairman of Russian Railways.

3 - Paul Côté, Chairman and CEO of Via Rail Canada, next to Benedikt Weibel.

4 - Benedikt Weibel, UIC's Chairman.

5 - The General Assembly chairmanship.

## World governance adopted

The members of UIC unanimously approved the new world governance structure. One of the striking orientations of this new governance was to base UIC's worldwide actions on two pillars:

- ▶ a 'global' UIC and Headquarters at the service of all its members,
- ▶ regional rail cooperation, decentralised and coordinated by UIC "Regional Assemblies", to make it possible to launch specific activities to meet the needs of members in each region of the world.

Five rail "regions" are about to or will come into effect: Asia, Africa, Europe, the Middle East and America. The first UIC region to be constituted is the "Middle East". The decision was taken at the meeting of the Managing Directors of Middle East railways, organised by TCDD in



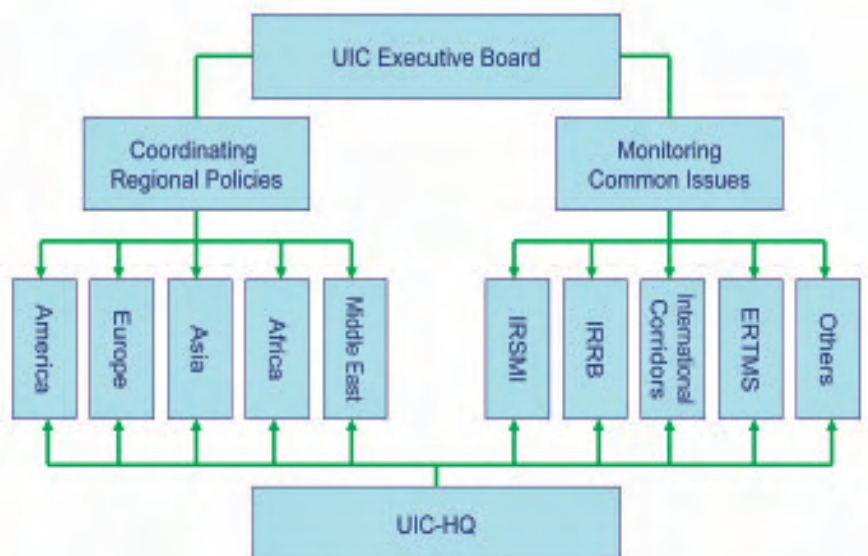
↑ The 1st Asian Railway Summit meeting marked an important step in reinforcing regional cooperative endeavours.



Istanbul, the 13 and 14 of June, 2006. The Chairman and Chief Executive of TCDD Turkish Railways, M. S. Karaman, will chair this regional general assembly, which will be set up as of 1 January, 2007, and have its headquarters located in Teheran.



### The world governance structure adopted in Montréal





## RUSSIAN RAILWAYS, ACTIVE MEMBER OF UIC

The General Assembly held in Montréal unanimously approved the accession of the Railways of the Russian Federation (RZD) as a new active member. With RZD joining UIC the 'international railway family' is nearly complete again. In fact, the Russian railways – at the time, the railways of the Soviet Union – were founding members of UIC, back in 1922, before loosening their ties with the organisation in the context of international tensions, in 1949.



The return of Russian Railways to worldwide rail cooperative structures is of great importance. Because of its location astride



Europe and Asia, the huge size of the territory they serve and numerous partnership agreements RZD have with other transport players, they will be called upon to play a key role in many UIC strategic projects, such as world freight corridors, etc.

As the President of Russian Railways, Vladimir Yakunin, underscored at the UIC General Assembly in Montréal, today, RZD are a major player on the international railway scene. They have over 85,000 kilometres of lines, a work force of



1.2 million people, a yearly total of 1.3 billion passengers and an annual freight volume of 1.665 billion tonne/kilometres. As Mr Yakunin stated, “the potential of the Russian Railways must be used to link Europe and Asia. The Russian Railways are a key element for an East/West rail system”.

For UIC Chairman Benedikt Weibel, “this is an historic moment for our international organisation. The return of Russian Railways to UIC is a prime example of the spirit of the October 2005 “Delhi Declaration” which set out to transform UIC into a real worldwide organisation, and to adapt its missions and operations accordingly”.

↓ V. Yakunin, B. Weibel and L. Aliadière taking part in the press conference in Saint Petersburg announcing RZD's accession UIC.



#### NEW UIC MEMBERS

Three new accessions – as active UIC members – were approved by the General Assembly held in Montréal, they were:

- ▶ JSC Russian Railways (RZD),
- ▶ MAV Cargo, Hungarian Railways (MAV) freight operator,
- ▶ SZDC, the Czech railway infrastructure manager.

UIC now has 175 members across the world.





## Two round tables on strategic topics: **safety** and **railways in the global logistic chain**

The numerous rail chief executives and freight managers present in Montréal were able to take part in two strategically important seminars.

One dealt with “Safety and the Role of Regulators”, with the participation, in particular, of Joseph Boardmann, Administrator at the United States Federal Railroads Administration, as well as representatives of the transport ministries of Japan, India and Canada, the European Railway Agency (ERA) and UIC.

The other round table on “Railways and the Global Logistic Chain” brought together high level representatives of worldwide companies from the sector, such as Mitsui (Japan) and Sinotrans Canada (China), who came to give their point of view on the role of rail mode transport. The presence of the European Commission, with Sanna Kuukka, was of great importance given the perspective of EU support for the development of rail links between Europe and Asia.



1 - Joseph Boardmann, FRA Administrator at the United States Department of Transportation.

2 - Luc Aliadière, chairing the Safety round table.

## The World Executive Council (WEC) and IRRB

UIC's World Executive Council (WEC) met on 8 June 2006, opened by the Chairman and Chief Executive of VIA Rail Canada, Paul Coté, and chaired by Jay Prakash Batra, Indian Railways. The Deputy Chairmen of the WEC, Robert Vanderclute (AAR, USA), Yoshio Ishida (EJR, Japan), the UIC Chairman, Benedikt Weibel, and the Chief Executive, Luc Aliadère, and the Deputy Chief Executive, Vipin Sharma, were also present.

The WEC meeting brought together some 50 attendees amongst whom were chief executives from North America (Canada and the US), South America (ALAF), the Middle East (CFS, ARC, RAI), Africa (Spoornet, UAC) and the Maghreb (SNCFT, ONCF, SNTF), Asia (EJR, Korail) and Europe (DB).

The setting up of the International Rail Research Board (IRRB) is one of the actions undertaken by UIC's World Executive Council to encourage sustainable synergies between the main players in world rail research. The second IRRB meeting was held in Montréal under the chairmanship of Yoshio Ishida (EJR), who is also the WEC's Vice Chairman.



One of its aims is to find new solutions, through research, to optimise costs in the rail sector. During the meeting, Philippe Renard (SNCF), Chairman of UIC's Technical and Research Platform was named one of the Vice Chairmen of the IRRB, along with Robert Vanderclute (AAR, USA) and Dudley Roach (CRC Australia).

↑ *The International Rail Research Board (IRRB) chaired by Yoshio Ishida, EJR Vice Chairman and Chairman of UIC's World Executive Council.*







## A SERIES OF PROMISING PROJECTS, WITH A WORLDWIDE DIMENSION

Under the impetus of the World Executive Council, UIC is carrying out a series of quite innovative projects. Their aim is to take even greater advantage of the potential stemming from the globalisation of the world's economy and transport for the rail mode.

Of particular note are the projects concerning:

- ▶ international freight corridors (in particular the major sea/rail corridor for container haulage between North America, northern Europe and the Far East,
- ▶ joint research projects associating the leading rail research centres and institutes (further to the programme dedicated to rail defect management, work on rail/track interaction),
- ▶ continuing and expanding training programmes for managers and high potential



The 'N.E.W.' sea/rail corridor linking North America and Europe with the Far East.

executives, already initiated with great success through the IRSMI (International Railway Strategic Management Institute).

As well as studies focusing on:



Chinese Railways



Indian Railways

- ▶ private/public partnership investment,
- ▶ the freight corridor linking China and India,
- ▶ a study on the corridor linking China and Europe.

One of the major actions for 2006/2007 will be to effectively set up the UIC Regional Assemblies and support units (see above), with permanent correspondents.

## Regional rail cooperation setting up

The first summit of Asia's railways was organised by UIC and Korail (Korean Railway) on 16 October 2006. This meeting represented an integral part of UIC's move towards the globalisation and regionalisation of its activities. Senior representatives of railways or government from 15 Asian countries took part, including, along with Korea, Armenia, Cambodia, China, India, Indonesia, Kazakhstan, Laos, Mongolia, Pakistan, Russia, Thailand, Uzbekistan and Vietnam, as well as UIC executives.

The aim of this summit was to make it possible for participants to share information about strategic railway development for this region for the first time and to establish the basis for enhanced cooperation between Asia's rail companies, with the support of UIC.

In his opening address, Korea's Minister of Construction and Transportation, stressed that given its advantages in terms of safety and sustainable development, railways represent the transport mode of the future in Asia,

as in the other regions of the world. Korail's President, Lee Chul, underlined the main challenges facing the region's railways:

- ▶ taking a larger share of the growth in world trade, in particular regarding intercontinental freight transport,
- ▶ improving the competitiveness of long distance haulage,
- ▶ developing high speed and future rail technologies,
- ▶ intensifying cooperation between Asian railways regarding standards and interoperability,
- ▶ developing cooperation in the fields of training and management.

The attendees fully backed the contents of "2025 Vision for the Railways of Asia", presented by UIC, as well as the strategic orientations set out in this document which is currently being finalised. Vision 2025 high-



← Attendees at the 1<sup>st</sup> Asian Railway Summit, organised by UIC and Korail, in October 2006, in Seoul.



B. Seggeral

↑ Korea's Minister of Construction and Transportation opening the 1st Asian Railway Summit.

lights the potential for growth and the challenges for the railways of this continent. Great emphasis is placed on the missing links of the trans-Asia network, freight corridors, investment strategies, free trade agreements and international cooperation in conjunction with UIC.

The most important result of this summit was the unanimous adoption by all participants of the "Seoul Declaration on Cooperation and the Development of Asian Railways", prepared by UIC and Korail. In this Declaration the rail leaders recognise the singleness of their vision for the development of railways in Asia, and reaffirm their solidarity to achieve the objectives described in the UIC document "2025 Vision and Strategy". The 'Seoul Declaration' emphasises the necessity of effectively supporting the railways of Asia regarding transport and investment policies. The actions of the professional sector – backed up UIC – should, in particular, be concentrated on the portions lacking in the trans-Asian network, integrating networks and carrying through interoperability.

The 2nd Asian Railway Summit will take place on 21 March, 2007, in Delhi, at the invitation of Indian Railways (IR), followed by the 1st UIC Global Rail Freight Conference, organised by UIC and IR on 22 and 23 March.

Another decision adopted during this summit was the principle of the creation of a Railway Training Centre for Asia.

## UIC Central and Eastern European Assembly: kick-off meeting



LdZ

East-West activities within UIC have been re-positioned to meet the challenges of a changing political, legislative and legal environment as well as those inherent to evolving economic and business relations. The former East-West Task Force has been replaced by the Central and Eastern European Assembly (CEEA), whose first meeting took place in Paris, 12 September 2006.

Railways from CEE countries are facing challenges and problems which are specific to their part of the world: they have to comply with European Union legislation, adapt to free European markets for transportation and function as a bridge between the European Union and countries further to the East, all at the same time.



The kick-off meeting gathered representatives from Belarus, Latvia, Lithuania, Estonia, Poland, the Czech Republic, Slovakia, Romania, Bulgaria, Serbia, Austria together with CER. UIC was represented by Luc Aliadière, Oliver Sellnick, Miroslaw Kanclerz (the new manager of CEE Railways) and Jozef Fazik.

During the meeting – which proceeded in a warm and creative atmosphere – participants discussed proposals concerning permanent activities and projects which could be jointly undertaken by the CEE railways. Broad attendance and active participation of UIC members show that there is a real need for this assembly. It will serve members as a platform for mutual cooperation and as a catalyst for new developments.



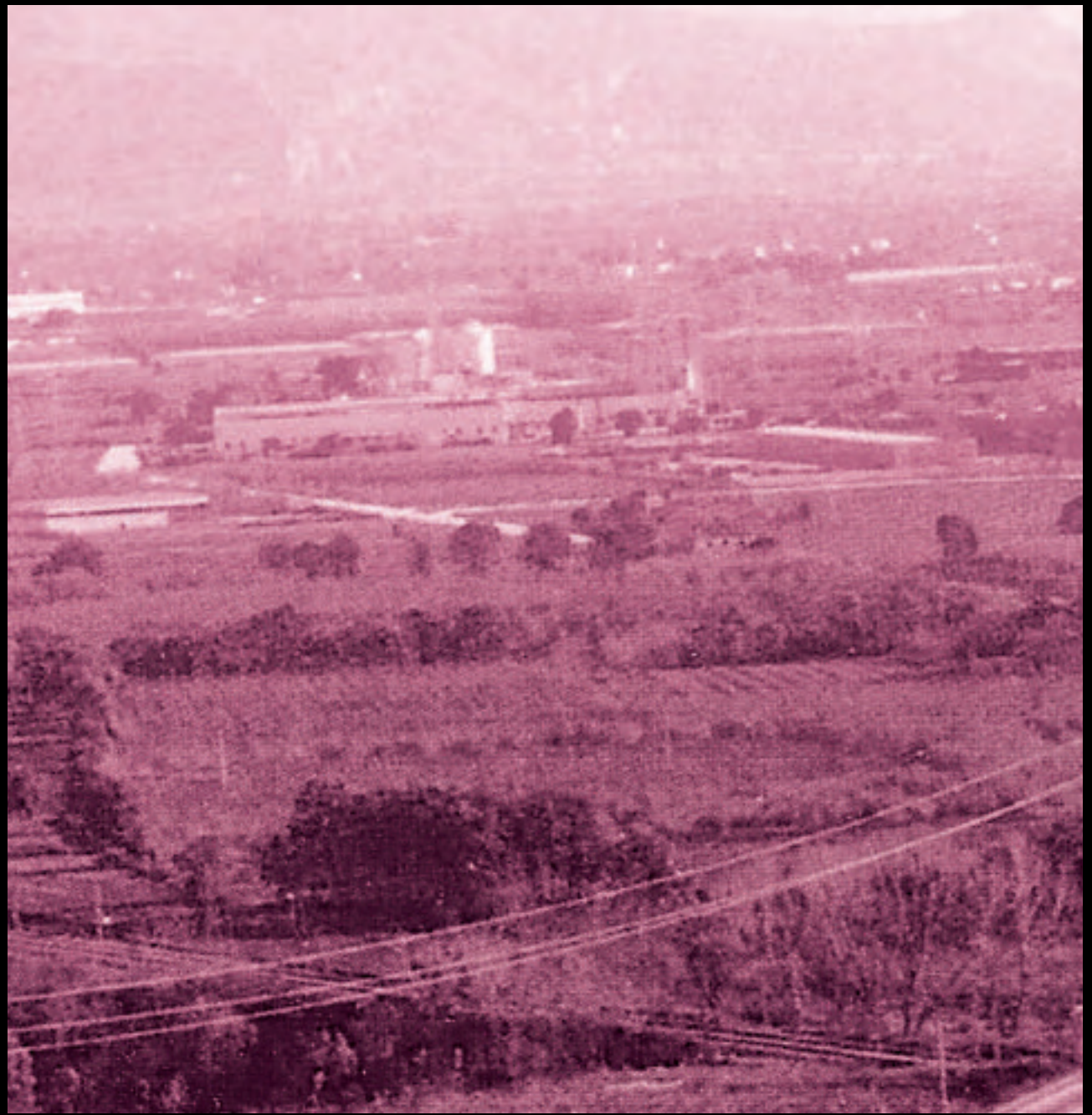
LS



CFR SA



CPM





.04

# Key Projects in International Railway Cooperation



## Key Projects in International Railway Cooperation

Within the framework of UIC's new governance, a series of projects of the greatest importance – the key projects – are being closely followed regarding their progress, directly by the Executive Board (the UIC decision taking body consisting of 12 members, chairmen or chief executives, at the highest level with the General Assembly).

All these projects are considered as having strategic importance and are at the core of the mission of harmonisation given to UIC. They have been called upon to contribute decisively to the improvement of railway quality and competitiveness, particularly as regards their international dimension.

Amongst these 'key projects', the following are worthy of particular mention:

- ▶ reducing railway noise (particularly that of wagons), and environmental performances of rail transport,
- ▶ establishing the European Railway Infrastructure Masterplan (ERIM) project, an endeavour that is directly linked to the development of trans-European networks, freight corridors, corridors for ERTMS, etc,



↑ Reducing wagon noises is one of the priority objectives in the environmental field.

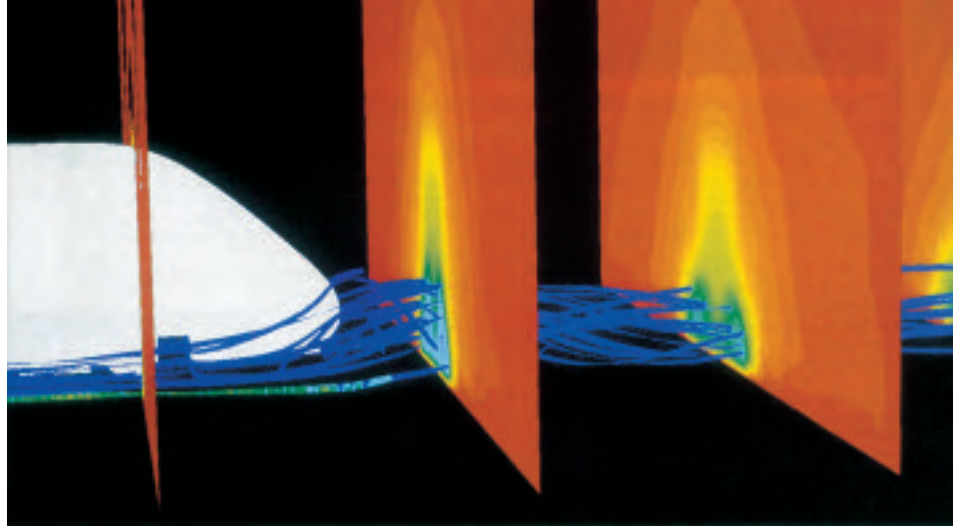


- ▶ facilitating the generalised installing of ETCS (train control-command) interoperable systems and GSM-R (radio communication system for railways), the two components of ERTMS. With both systems UIC is contributing to the emergence of truly international standards for rail operations,



→ A single train command/control system will represent significant progress in the operating of international trains.

- ▶ optimising railway safety, in all its dimensions (safety of the railway system, of rolling stock, infrastructure, equipment, human factors, and the increasingly important aspects of security). Work in these areas is being followed with great interest by members from all parts of the world,
- ▶ optimising the design, construction and management of infrastructure (in particular thanks to the Innotrack project – Innovative Track Systems – a venture with great promise, capitalising on considerable benefits in terms of safety and construction as well as maintenance costs),
- ▶ coordinating for the rail sector, whilst working closely with the supply industry, the European Framework Programme for Research and Development (EFPRD),
- ▶ assisting, with UIC's technical expertise, the European Railway Agency (ERA) in the fields of interoperability and safety. UIC also contributes, each time it is necessary, its technical support to the



activities of CER and EIM, and, more generally, works closely with all of the European associations from the sector (UNIFE, UITP, ERFA, UIP, UIRR,...),

- ▶ preparing TSIs (Technical Specifications for Interoperability) for freight and passenger information systems.









.05

05. 32 TO 33

# Infrastructure



## UIC's activities in the field of **infrastructure**

The activities of UIC's Infrastructure Department were developed considerably in 2005 and 2006. Firstly, they were given a dynamic impulsion with the setting up of a new Forum, chaired by Roland Heinisch (DB), then Mauro Moretti (RFI/FS) and finally by Andrew Mc Naughton. But they also underwent a strong shift as a result of the impact of European Union Directives, the establishment of the European Railway Agency (ERA), and the opening of infrastructure to European operators under the framework of liberalisation.

Infrastructure managers saw their role change considerably. From their initial function, in support of their companies' railway activities (usually integrated within the railway undertakings), their function has taken on larger responsibilities. This implies their having a vision of future infrastructure developments, in order to meet the needs that are now both national and international.

This evolution has led to infrastructure executives giving equal weight to 'market' considerations and technical aspects. They have developed the exchange of

information and benchmarking on an international scale and are also evaluating the impact of harmonisation and standardisation on their business.

Generally speaking, railway infrastructure executives are ready to transform their organisations and integrate new concepts. However, the often crucial question is the one of migration strategies, to ensure the best possible transition between various concepts, from both the technical and economic perspectives.

UIC's added value is that its activity encompasses the entire railway system. In a coherent manner, it embodies all the technical, operational and marketing aspects involved in infrastructure management.

Amongst the more strategic questions of the 2005/2006 period, mention must be given to ERTMS – the single system for the management of rail traffic, with its main components ETCS (signalling and train command/control), GSM-R (railway radio and telecommunications) and Europtirails traffic management.





RFF

The concept of creating a single system for railway signalling in Europe came about at the beginning of the 90s. UIC has been involved from the outset, right up to the present. We are currently assisting the Agency with its ERTMS activities and contributing to migration strategy.

Nonetheless, one has to be aware that this technological evolution will not stop here. And, even as we are taking part in the ERTMS standardisation process under the aegis of the ERA, we must work on the next steps. These steps include ETCS for regional (or low traffic volume) lines, the utilisation of internet protocols (IPs) for transmitting data between GSM-R and ETCS on board trains and the future uses of the Galileo navigation system.

In the same way, UIC has developed a certain number of applications to meet the needs of infrastructure managers in the fields of marketing and sales (prior-to-sale, actual selling, production, after sales...). In this context, particular mention must be made of the projects developed with UIC's support such as EICIS, Pathfinder and Europtirails. These concepts are now used commercially by Rail Network Europe (RNE), the sales and marketing structure for European infrastructure capacity. The UIC strategy, in Information Technology (IT), is to work closely with RNE and our members to ensure that all these applications are integrated into the single IT platform. This is in order to meet the main needs of infrastructure managers, on one hand, and to satisfy the

requirements of European Directives concerning telematics on the other.

Another element in this same strategy is to introduce a European system for performance measurement (EPR – the “European Performance Regime”). This project, which concerns international traffic, brings together infrastructure managers and railway undertakings. Work has now reached the pilot test stage, with the objective of instituting real commercial application on certain corridors by 2009.

All of these migration plans and strategies must be linked under a physical ‘masterplan’ for rail infrastructure. This is why UIC has invested considerable effort, over these last three years, in drafting ERIM, the European Railway Infrastructure Masterplan. This plan replaces all the elements of the national ones for developing railway infrastructure with an overall coherency and perspective. It has a particularly strong importance with regard to the network of European corridors.

ERIM integrates the plans of more than 30 European countries. Its data base, which is being expanded, will supply precious elements of information on the capacity of infrastructures, bottlenecks, technical and operational harmonisation, migration strategies and the optimisation of investments – all with the goal of better serving rail customers.



Chinese Railways



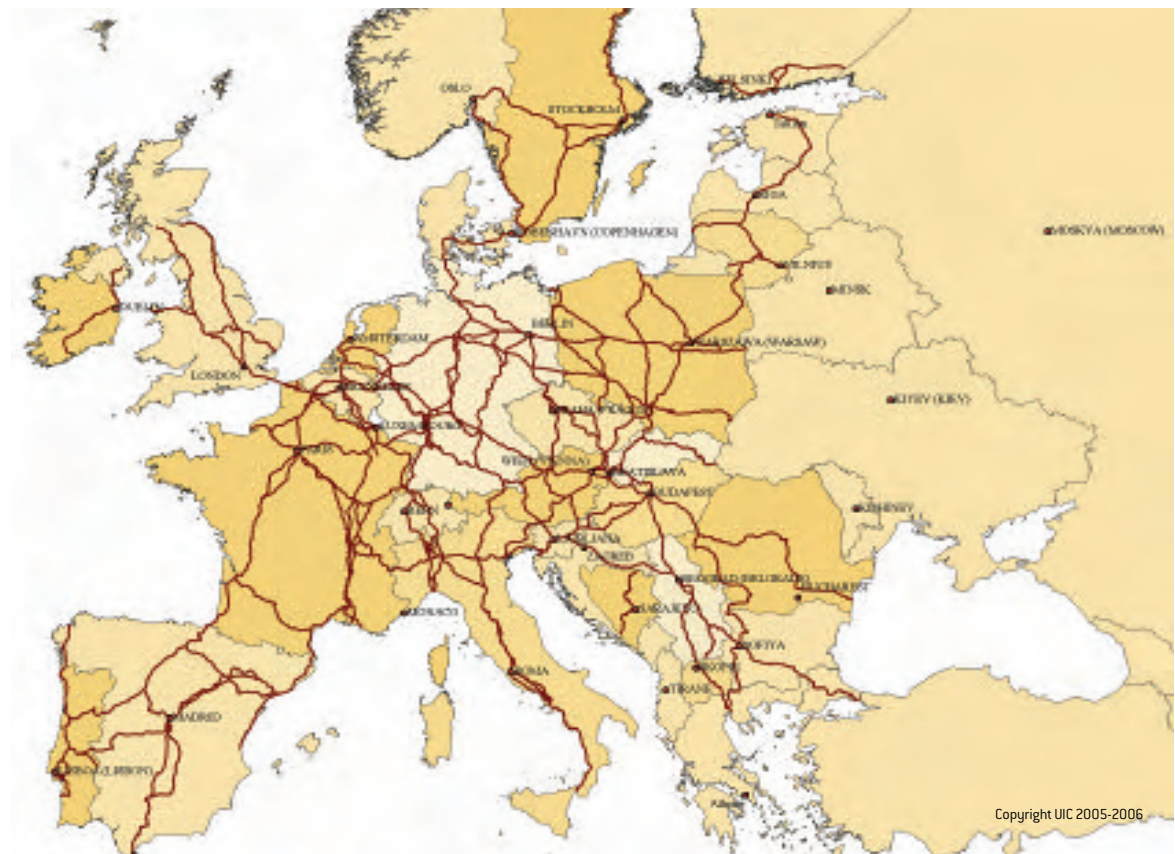
## ERIM - The European Railway Infrastructure Masterplan

The ultimate objective of rail players' strategies is to improve the quality of the product proposed to customers on the market. Although a high-performance infrastructure alone is not sufficient for success in the market place, it does constitute the necessary basis. In this context, the ERIM project represents an exemplary value. It constitutes the first integrated analysis of the European Railway Network from the viewpoint of the current and future infrastructure supply-side.

The ERIM network encompasses the main rail corridors within and between 32 European countries. It represents the routes which are most important on the basis of their potential to maintain and enhance the volume of international rail traffic, and in particular freight traffic. They account for only 20% of the total route network in the countries covered, but carry 50% of all passengers-kms and 55% of all tonnes-kms in international traffic.

The ERIM network does not cover all the priority routes of each individual country but seeks to provide each with a connection to the European network along a number of corridors.

Within the framework of this project, UIC has established the ERIM database containing technical and operational parameters for each line section as well as current and forecast future traffic loads along the various corridors of the network. The ERIM database comprises about 50,000km of route length, divided into 1100 line sections. The data is captured on a large number of interconnected segments of routes, which enables the corridors to be redefined to suit any particular configuration. This means that it is possible to use the ERIM database to extract any desired corridor or area and display it on a map with MapInfo software.





Based on this database ERIM has made it possible to:

- ▶ establish an integrated “Infrastructure Masterplan” which includes an inventory of current infrastructure, in 2006, and national upgrading or development plans along ERIM corridors with the vision towards 2020,
- ▶ highlight the routes which will be called upon to carry the highest levels of traffic flows by 2020,
- ▶ raise specific operational issues and quality improvements which should be put in place to ensure that current infrastructure is utilised to the optimum extent,

- ▶ identify the route sections where overall capacity is most likely to be constrained and where investment needs to be especially targeted.

In 2007, UIC will investigate in consultation with corresponding infrastructure managers and track experts, whether upgrading projections (proposed by ERIM or other studies) would be “technically “ feasible and what would be the rough estimations of upgrading costs.

## The cross-border project

The aim of the Infrastructure Forum’s cross-border project is to assist railway companies in proposing services for crossing borders that avoid losses or delays, and is so doing to ensure interoperable services.

Within this context, recommendations will also be made to infrastructure managers and UIC study organisations on these questions.

05. 36 TO 37



← Speeding up the crossing of borders is one of the priority actions to reinforce the competitiveness of international railway traffic.



## The UIC ERTMS Conference in Budapest: ETCS and GSM-R are rolling out

The ERTMS World Conference, held from 4 to 6 April in Budapest by UIC and the Hungarian Railways MAV, drew a large attendance from amongst all the major rail sector stakeholders involved in ERTMS, the European rail traffic management system. The ERTMS 2006 conference, whose central theme was "ERTMS – towards a Masterplan for Deployment", made it possible to review the progress made with the implementation of this interoperable system, which comprises the train control system ETCS and GSM-R, the digital radio system for railways.



↑ Karel Vinck, European Union ERTMS Coordinator at the opening of the conference



A total of some 700 attendees representing the European Union, governments, the rail sector and supply industry took part in the conference and a series of high-level meetings organised in conjunction with the main event. Practically all the European countries were represented alongside China, India, Japan, Korea, the United States, Australia and Israel – showing that ETCS and GSM-R are becoming the worldwide standards.



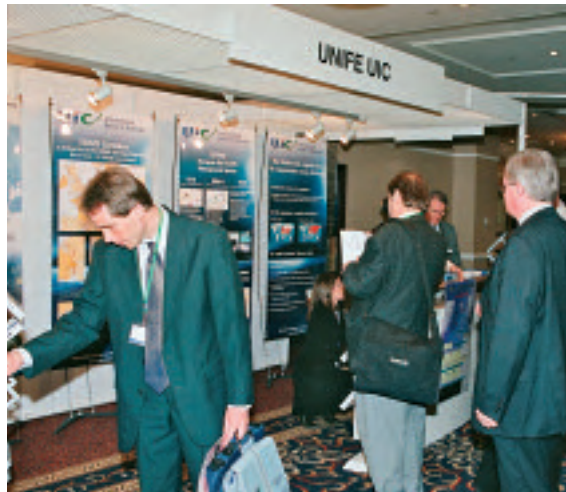
→ The UIC worldwide ERTMS conference brought together in Budapest all the players responsible for deploying ETCS and GSM-R.



The conference benefited from a strong European Union participation. In particular, Karel Vinck, European Union Coordinator for ERTMS, Marcel Verslype, Executive Director of the European Railway Agency (ERA) and Michael Cramer, Member of the European Parliament and rapporteur for ERTMS issues all took an active part in the work.

A number of very positive points were highlighted at the Budapest conference. The first was that after several years of validation and pilot tests, ERTMS and both its component parts – ETCS and GSM-R – are now very much entering commercial service (the most recent roll-outs being on the Italian high speed lines, or in Switzerland where the system is working well).

The system, based on technical and functional specifications that are consolidated and approved by the EU as part of work on the TSIs (Technical Specifications for Interoperability) is now ready to be rolled out across Europe, in line with the commitments already made by railway operators. A crucial concern, today, is to create the momentum that will ensure rapid and efficient



deployment of ETCS and GSM-R under optimal economic and operational conditions. The priority is being given to the six European corridors defined by the EU.

This deployment is being pushed by the European Union, with the support of UIC, CER, EIM and the supply industry, grouped together in UNIFE, an important stake is to see that European and national resources are allocated for the installation of ERTMS on the infrastructure, with priority given to the six corridors, and on rolling stock.







UIC

To ensure the future of ERTMS, it is important to guarantee optimal management during this – sensitive – period of migration from the present systems to ERTMS.

The conference also heard how, beyond Europe, the basic principles of the ETCS and GSM-R systems are set to be adapted to the needs of a string of other major railways of the world, in China, India and Korea. This is helping these

↓ ERTMS technical visits organised by Hungarian Railways (MAV) on the Budapest-Vienna line.



systems become world standards (with all the inherent advantages this implies in terms of economies of scale, opening markets and bringing costs down).

The UIC ERTMS conference in Budapest featured a programme of very informative technical visits (ERTMS demonstrations) organised by MAV on the line from Budapest to Vienna. A professional trade fair showcased all the major firms from the railway signalling and radio communications sector.



## The next **World ERTMS Conference** will be held in Berne in Switzerland from 11 to 13 September 2007

The UIC's 7th World ERTMS Conference will make it possible to have an overview of the new deployments of ETCS and GSM-R in Europe and in various regions throughout the world. The progress on the work being carried out (decisions, investment, infrastructure and rolling stock equipment) on the six, designated as priorities, European corridors will be highlighted and the experiments conducted by rail operators, working with the supply industry, presented.

This 7<sup>th</sup> UIC World ERTMS Conference will be held in Berne in Switzerland, at the invitation of Swiss Federal Railways, SBB / CFF and in cooperation with BLS. The theme chosen for this year's conference is "From independent rail networks to interoperability". Switzerland offers a notable example of how ERTMS has been successfully integrated into the national transport plans. Coupled with major railway civil engineering schemes, such as the Lötschberg and Gottard tunnels, the Swiss Administration is satisfied that ERTMS (ETCS and GSM-R) will provide them with the



CFF/SBB

capability to meet the strong domestic and international growth forecast for rail in the coming decades.

**Contact and information:**

Françoise ElAlaoui – [elalaoui@uic.asso.fr](mailto:elalaoui@uic.asso.fr)

05.

40 TO 41



### A UIC VIDEO ON THE ERTMS ROLL-OUT ON EUROPEAN CORRIDORS

The video, produced by UIC for the ERTMS conference in Budapest, shows the present state of deployment of ETCS and GSM-R on six European corridors.

The video (DVD) is available in English (the original), with dubbed versions in French and German.

A copy can be obtained on request at [communication@uic.asso.fr](mailto:communication@uic.asso.fr)

[www.ertms-conference.com](http://www.ertms-conference.com)



#### SITE ERTMS

80 docs

28 pages

≠ ± 800 visits / month



## The UIC ERTMS platform : supplying all the expertise necessary for deploying ETCS and GSM-R

During the high level ERTMS meeting held on 17 January 2006, at UIC headquarters, railway chief executives emphasised their determination to implement ERTMS (ETCS and GSM-R), further to the commitments they made. In addition, they also agreed a joint declaration asserting ERTMS as the system of the future. They insisted on the necessity of, jointly, developing a migration strategy.

This migration strategy must take into account all the problems operators and infrastructure managers have encountered. It must also optimise the financial resources invested by the various players.

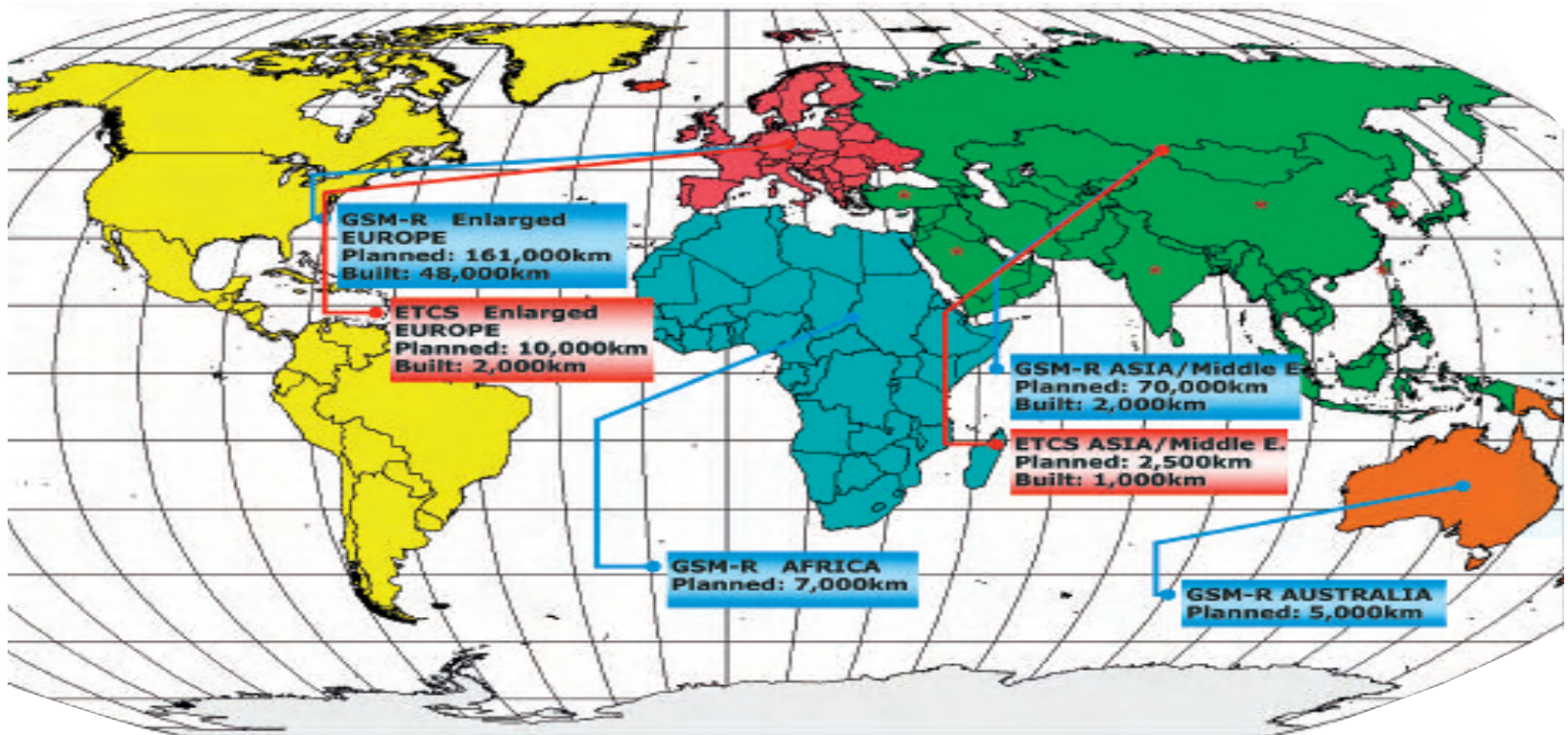
To back up this strategy for migrating the present signalling systems to ERTMS, authorisation was given to UIC's ERTMS Platform. It will take into consideration all the technical and operational questions that railway operators and infrastructure managers may have. This

'horizontal' platform will be chaired by Roland Heinisch (DB AG), who also chairs the Safety Platform, the Deputy Chairman being Michele Elia (Rete Ferroviaria Italiana, FS Group).

The Platform's first meeting was held 10 May 2006, at UIC headquarters, with 30 attendees taking part. They represented UIC members, CER, EIM, technical groups (GEIE, the ERTMS users' group, the CER Change Control Board, UIC's Euro-Interlocking and ERIG groups, the GSM-R Radio Implementers' Group, UNISIG, the group from the signalling industry, etc.).

Attendees shared information on numerous concrete aspects of implementing ETCS and GSM-R and the problems encountered with migration. The Platform gave the UIC member railways a unique forum for sharing their experiences with deploying ERTMS, which helped those who will be installing

↓ The deployment of ETCS (command/control) and GSM-R (radio communications) across the world.





The ERTMS Platform's main objectives are to:

- ▶ ensure overall coherency within the railway community,
- ▶ develop all the forms of cooperation around ERTMS that are necessary,
- ▶ dispatch, as best as possible, the efforts to be made by the various players,
- ▶ avoid new technical or operational incompatibilities as the programme unfolds in the future.

Roland Heinisch and Michele Elia also represent UIC at the European Commission's ERTMS Steering Committee, chaired by Karel Vinck.

The second ERTMS Platform meeting was held on 13 October, in Paris, and was chaired by Roland Heinisch. The meeting made it possible to give further information on the following fields of activities:

- ▶ the technical interoperability of corridors – technical migration,
- ▶ a report on supplier costs – economic migration,
- ▶ specifications and developments (including braking curves) – feasible migration (issues inherent with changing from the 2.3.0 to 3.0.0 specifications),
- ▶ interface questions – modularity,
- ▶ a capacity analysis – state of the art,
- ▶ GSM-R (width of band frequencies, GPRS) – perspectives, including the competition between 'signalling' and 'commercial' applications,
- ▶ future generations in command/control and signalling – perspectives,
- ▶ synergies between corridor plans and implementation data, using the ERIM data base architecture,
- ▶ communications plan (dissemination workshops for information on ERTMS, the extranet site, etc.).

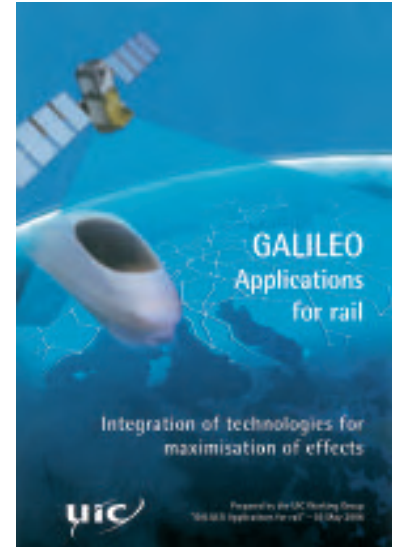
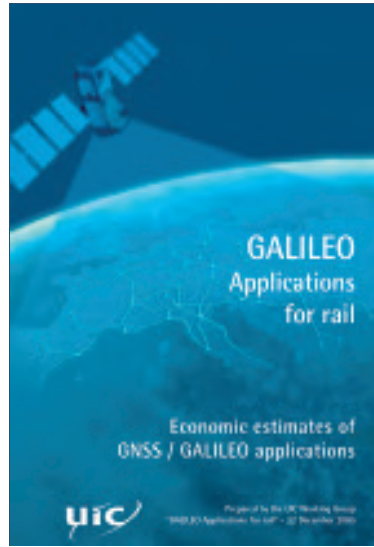


## UIC working on **Galileo applications** for the rail sector

The report follows the publication by UIC of two other documents:

- ▶ Galileo Applications for the Rail Sector – road map for implementation (October 2005), and
- ▶ Galileo Applications for the Rail Sector – economic evaluations of GNSS/GALILEO (December 2005).

The first document details the perspectives for efficient application of the satellite navigation system to rail transport needs. The second analyses the main factors and elements to be taken into account to evaluate the economics of using this technology for railway applications.



This third document studies the factors and elements that can maximise the effects of using the GALILEO system, thanks, in particular, to the integration of a series of technologies: radar, video, information systems, telecommunications, advanced sensors, servo-controlling, etc.

The study develops the principles of 'integration platforms' capable of inter-connecting modules and devices in scalable and flexible architectures.

It analyses the integrating factors and the typical high-level structure of integrating platforms at three levels:

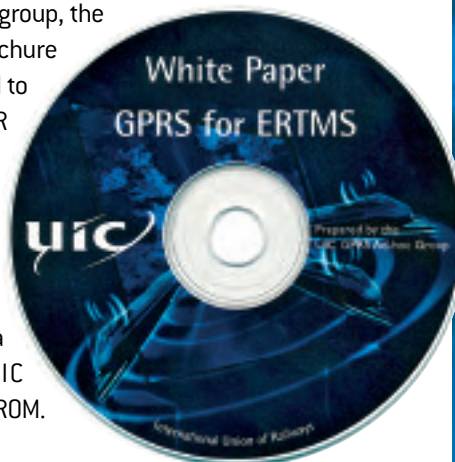
- ▶ at a multi-function incremental device level,
- ▶ at the railway vehicle level (locomotive, train-set, coach, wagon),
- ▶ at the area level (traffic control area, level crossing area...).

The 'integrating industry' should find this document of great interest. It should also make possible the setting up of 'pre-competitive competition', to foresee studies on rail technologies.

Site : <http://galileo.uic.asso.fr>

## Brochure "the **GRPS** for ERTMS White paper"

Prepared by the UIC ad hoc GRPS group, the "GRPS for ERTMS White Paper" brochure contains an evaluation of the need to reinforce the capacity of the GSM-R network and to re-examine the technologies available. The brochure also proposes steps which will make it possible to ascertain whether GPRS could be used in the future for the transmission of data a railway environment. This UIC brochure is also available on a CD-ROM.

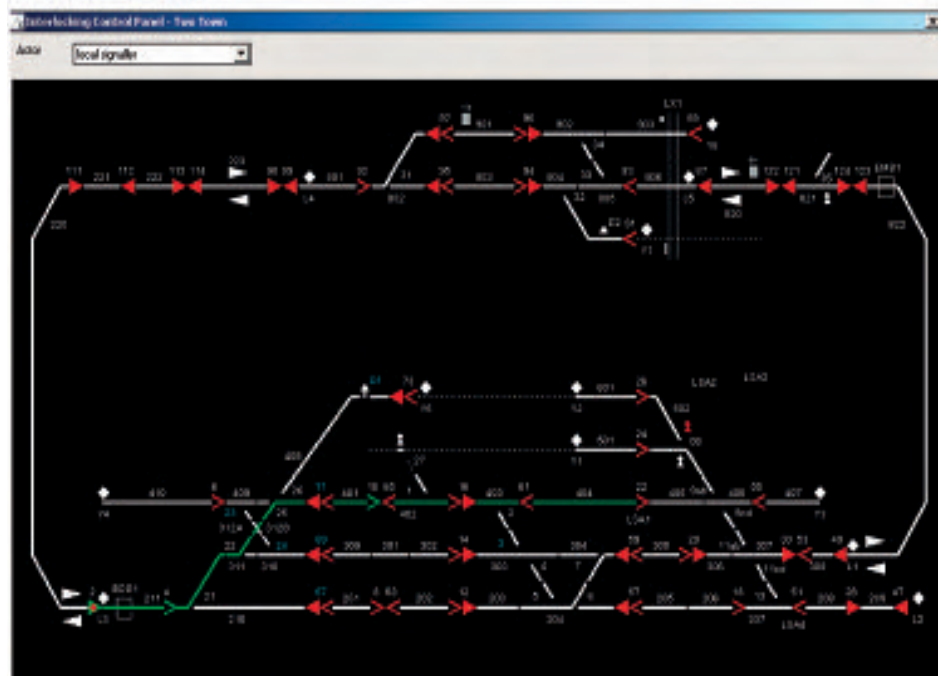


## 'Euro-Interlocking' PHASE 2

Following the "Memorandum of Understanding" between UIC and UNIFE on the joint continuation of the UIC Euro-Interlocking project, the first Workshop on interlocking systems was held in Frankfurt on the 30 and 31 of August 2006, at the invitation of DB Netz.

More than 30 experts from railway administrations and supply industries met together to lay down the basis for a common platform of generic principles and acceptance of new methods of testing, validation & verification and safety case cross-acceptance of interlocking systems. The final objective is to reduce life-cycle costs of future interlockings and associated outdoor equipment.

Nonetheless, this is linked with the implementation of ETCS (ETCS and GSM-R standards) in areas where installation is slated. There are other areas of the

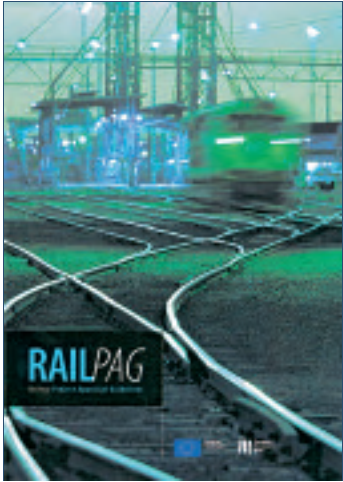


conventional European rail network, where interlockings will need to be replaced (particularly installations in old mechanical or electro-mechanical technology - often linked with corresponding obsolete outdoor equipment). If this cannot be carried out in an economically and technically efficient manner, the implementation of systems utilising centralised and automated route-setting of trains will be economically constrained.

A new task force, "UIC / UNIFE Task Force Euro-Interlocking 2", chaired by Network Rail, is committed to deliver tangible benefits to the railway community. A new workshop, scheduled for 10 November 2006, will make it possible to set out these deliverables. A project is also slated to be presented under the European Union's 7<sup>th</sup> Framework Research & Development Programme or TEN programme in order to apply for co-financing.



## UIC working with the **EIB** to prepare the **RAILPAG** guide



↑ *The RAILPAG guidelines set out by EIB with the European Commission and the support of railway organisations, including UIC.*

The RAILPAG initiative has been launched by the European Investment Bank in coordination with the European Commission in response to a growing demand for harmonised guidelines for the appraisal of investment projects in the railway sector. From the very beginning the major railway industry associations (CER, EIM, UIC, UNIFE) provided their backing to the EIB, which also benefited from the participation the World Bank and the EBRD.

The orientations contained in the RAILPAG guide are to particular use for rail project promoters, notably those without access to sophisticated appraisal techniques. It provides indications on appropriate methodologies and parameters for decision-making (but without establishing rigid criteria). RAILPAG also enables benchmarking

against which to judge the robustness and the quality of appraisals. Increasing the quality of project evaluation can speed up the approval of grant support from international financing institutions, though RAILPAG is not a compulsory requirement to obtain EU and EIB financing.

The RAILPAG guidelines makes it possible to carry out project evaluations in the very complex environment of European legislation and organisations. It incorporates the EU's objectives in terms of railway interoperability and the mutual recognition of equipment, 'network effects', and the need to take environmental considerations into account, while incorporating increasingly sophisticated financial tools.





## UIC TECHNICAL PROJECTS IN THE INFRASTRUCTURE AND CIVIL ENGINEERING SECTOR

- ▶ Masonry arch bridges
- ▶ Ballast-less track project
- ▶ MRO - Maintenance Renewal Optimisation
- ▶ Under sleeper pads and under ballast mats
- ▶ BridCap (Increased load capacity of existing bridges on corridors)
- ▶ Track machine guidance (TMG)
- ▶ INNOTRACK (European project coordinated by UIC, co-funded by EU and industry)

# Launching "INNOTRACK", the project for the development of cost-effective high performance track infrastructure

All the major stakeholders of the rail sector participated on 21 September in Berlin at the Deutsche Bahn (DB) Headquarters in the kick-off meeting of "INNOTRACK", a major European Union jointly funded research and development project. INNOTRACK ("Innovative Track System") has as its main objective to develop cost-effective high performance track infrastructure for mixed traffic rail systems.

The INNOTRACK project brings together from across Europe nearly all major stakeholders – manufacturing and contractor supply industry, infrastructure managers, railway undertakings, systems integrators – and is supported by European research excellence network (universities and research institutes). This three year European research project, with an overall total investment of €18.6 million (European Union contributes for €10 million), is scheduled to be completed by the end of August 2009.

INNOTRACK will carry out research on four key topics:

- ▶ track support structures,
- ▶ switches and crossings,
- ▶ rails,



- ▶ the field of logistics for track maintenance and renewal. The overall objective is to reduce the Life Cycle Costs (LCC), while improving the RAMS (Reliability, Availability, Maintainability and Safety) characteristics of a conventional line with mixed traffic.

The results of INNOTRACK are particularly needed to:

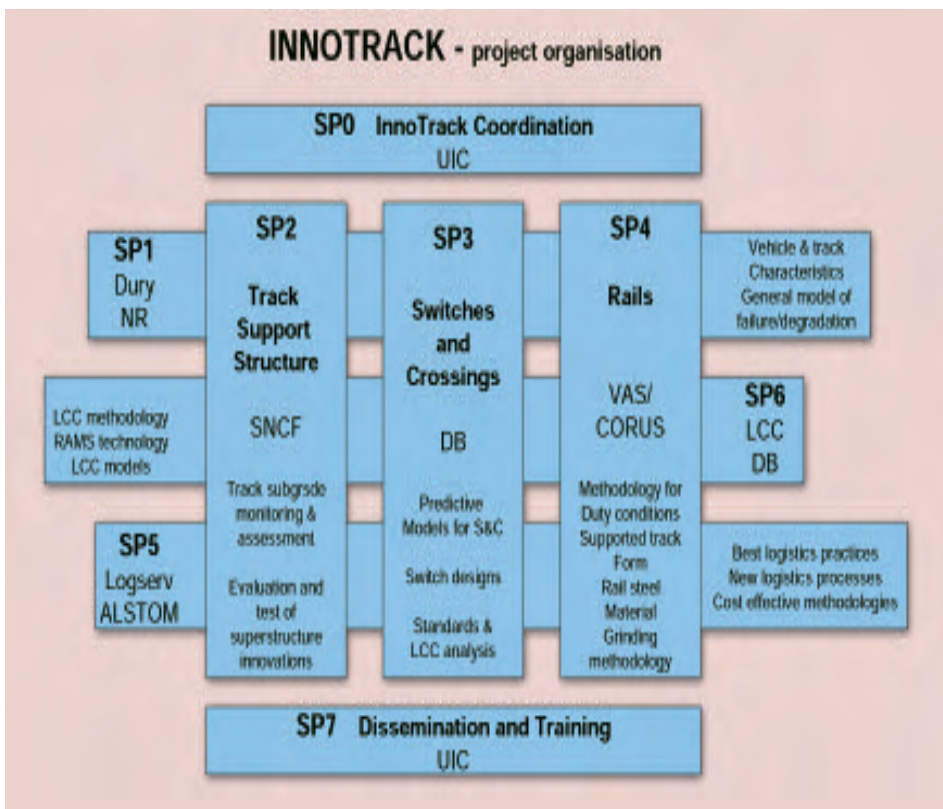
- ▶ develop the necessary leading edge track system technologies in the shortest possible timescales and ensure full acceptance by infrastructure managers,
- ▶ speed up the realisation of the highly efficient Trans-European network so as to accommodate the increased passenger and freight traffic (as estimated in the European Commission's White Paper for year 2020).

UIC has played an active role in the preparation and launching of the INNOTRACK project. The Technology and Research Department assured the coordination of all the preparations for the project (Coordinator: Imrich





### INNOTRACK - project organisation



Korpanec, Deputy Director of UIC's Technology and Research Department), working in conjunction with the Infrastructure Department. The T&R Department ensured the interfacing with the European Union, in particular, and coordinated the research activities on the railway side. The director of the INNOTRACK project at the UIC Infrastructure Department is Bjorn Paulsson, who was detached from the Swedish infrastructure manager, from Banverket (BV).

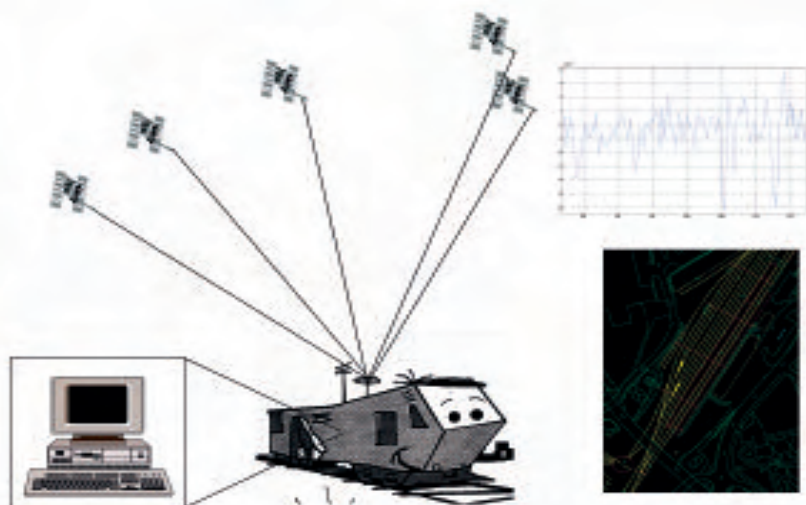
The stakeholders of the INNOTRACK project include; UIC (as project coordinator), UNIFE, EFTRTC, Carillion Construction, Voestalpine, BV, ADIF, Alstom Transport, Balfour Beatty, CD, Chalmers University of Technology, LCPC, Goldschmidt Thermit, Network Rail, ÖBB, RFF, VAE, Vossloh Cogifer, DB Netz, Speno, RSSB (the UK), Delft University of Technology, Pro Rail (NL), the University of Birmingham, the Czech Technical University in Prague, Corus, SNCF, Damill AB, Universitaet Karlsruhe (TH), Polyfelt University of Newcastle, Contraffice, ARTTIC, the University of Southampton, Manchester Metropolitan University, G-Impuls. Site: <http://www.innotrack.eu>

## Railway Geodesy: UIC seminar on **track machine guidance** according to absolute coordinates



Organised on the initiative of the UIC Track Expert Group, the seminar was held at the headquarters, in Paris, on 16 May. The theme was "the Advantages of Guiding Track Machines according to Absolute Coordinates". The meeting made it possible for the attendees – infrastructure managers and railway operators, track machine manufacturers, sub-contractors specialised in track side work, university and national geographical institute experts – to share their experiences and points of view on guiding track work machines.

The seminar took place in the perspective of drafting a new UIC Leaflet n° 728 on "The strict absolute basis as a support for track work – a rail geodesic approach". It



aims to facilitate the establishing of joint methods, shared between the various players, and to put in place the bases for future cooperation.

The first objective was to present the state of the art regarding various technologies and methods for positioning that are used by rail companies to maintain the geometry (alignment) of track and to guide machines. The geodesic experts from the geographical institutes clearly showed the increase in the importance of the harmonisation of national data on track and network characteristics, as well as their adherence to the ETRS89 system, based on absolute coordinates. This system is already used by several European railways to certify their non-movable installations. ETRS was chosen as the standard by the European Commission in 2003 and adopted by the International Geodesic Association (IGA).

The seminar concluded on the importance of introducing this reference system, based on absolute coordinates and recognised as the European standard, to maintain the quality of track geometry while respecting a series of constraints: comfort of passengers on high speed lines and tilting trains, reinforcing interoperability, lowering maintenance costs and improving the availability of track.

UIC Leaflet n° 728 will be presented before the end of the year to the Infrastructure Forum for approval. In addition, UIC will continue, with the interest of its members in mind, to follow the evolution of technologies very closely, from the point of view of positioning and in order to ensure all the necessary cooperation between the railway community, operators, infrastructure managers, manufacturers, sub-contractors, and the institutes and experts in the field of geodesics.



.06

06. 50 TO 51

# Safety

# Safety



↑ The UIC Safety Platform, chaired by Roland Heinisch (DB AG) with SNCF's Michel Etienne, the Vice Chairman.

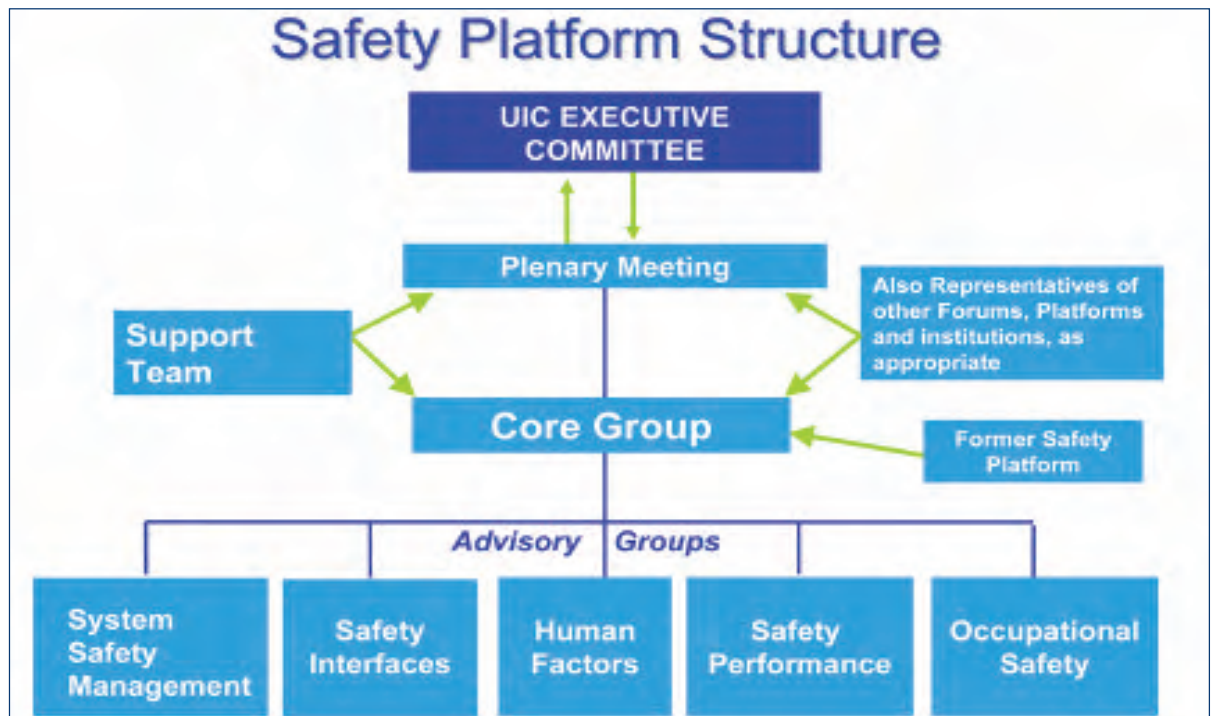
The railway cooperative and benchmarking activities in the field of safety are steered by the the Safety Platform, whose Chairman is Roland Heinisch of DG AG. The Deputy Chairman is Michel Etienne, of SNCF. The Executive (in particular the Technical and Research & Infrastructure Departments) assists the Platform, and several "chargés de missions" are responsible for the permanent activities (in charge of safety, following up on the Platform's activities, in charge of the safety data base, etc.).

During the year 2005, the Platform's structure was redefined to modify its status as an ad hoc group to the better defined one of a 'platform' within in UIC.

As concerns the content of the themes followed by the Platform, a package of new questions has been integrated. They relate to a range of subjects, from the management of safety to the principles of operational interfaces.

During this same time frame, two ad hoc Safety groups, based on occupational safety and human factors were integrated into the structure.

In 2006, the Platform approved the setting up of a group dedicated to 'performance' as it applies to safety equipment. Its objective is to look into the trends evidenced by UIC's Safety data base, to interpret them and to ensure that UIC members have sound statistical data base at their disposal. This in order to be able to proceed with critical analyses and, when necessary, to answer the hypotheses formulated by the European Commission or the European Railway Agency on performance in the field of railway safety.





Nederlandse Spoorwegen (NS)

In this context, it can be said that level crossings has become a main subject for measuring railways safety.

The UIC Platform:

- ▶ contributed key input to the 9th World Level Crossing Safety and Trespass Symposium, held in Montréal



SNCF

(the 10th Symposium will take place in Paris, in June 2008),

- ▶ is a major partner in the European Union funded SELCAT project on research into level crossing safety.

Right from the setting up of the European Railway Agency, in 2005, the Platform established contacts with the main players involved in safety and made comments – from the earliest aspects – on the Agency's work programmes that are related to safety. In 2006, the Platform's experts gave considerable support to



DB AG



OBB



DB AG



Chinese Railways

carrying out the ERA's work programme, in particular through the System Safety Management (SSMG) group.

Also in the field of safety, UIC has become a 50% partner in the SAMNET project, funded by the European Union. Its objectives were met and a final report published in 2005 (see the article on SAMNET).

Through its expertise UIC is more and more active in



← Simon Fletcher, presenting UIC's activities at the Beijing railway and metro Safety seminar.

## SAMNET : DEVELOPMENT OF SAFETY MANAGEMENT AT EUROPEAN LEVEL

SAMNET (the Safety Management and interoperability thematic NETWORK for railways) project was launched in 2003, with a project duration of three years. It is part of the European Union's objective of developing an open railway network in Europe, particularly in light of its liberalisation policy. SAMNET was designed to bring together the rail players to consider, together, the elements that need to be in place and acceptable to the rail community in respect to the European Railway Safety Directive (2004/49/EC) on safety on the railways in the EU. This activity also took into account the relationship between the technical aspects developed through the TSIs (Technical Standards for Interoperability).

The project is wholly funded by the EU and managed by INRETS (France), with the support of UIC members. In 2004, after 18 months and with a significant amount of output, the project moved from being entirely research-oriented to one of networking the issues – all relating to safety – and user testing.



UIC, with the strength of our 172 members, was seen as a very useful partner to work with INRETS to ensure the widest possible network of rail operators and railway undertakings was engaged in the project.

The method of communicating with the rail community was done through the SAMNET website (<http://www.samnet.info>). This was supported by a number of specific workshops looking at each of the key areas of Common Safety Indicators (CSI), Common Safety Targets (CST), Common Safety Methods (CSM) and the safety certification of railway undertakings and the safety authorisation of infrastructure managers. A series of seminars bringing together the user groups was also organised.

The findings of the SMARIAL and SAMNET projects were to be examined by the European Railway Agency (AFE/ERA) to determine how CSIs, CSTs, CSMs and cross acceptance of rolling stock, can be used as the basis for specifications and to see them put to application.

Site : <http://www.samnet.info>





safety issues, on a worldwide level. It has taken part in railway safety conferences in China and the United States in order to also contribute the Platform's experience in Europe.

In addition, guideline documents are being drafted, on track work, shunting and with respect to alcohol and drug use in the workplace.

Risks linked with SPADs (Signals Passed At Danger) have been given particular attention within UIC (in particular, by the Safety working group that is part of the Platform). Measures to avoid going through danger signals is a crucial interface issue. A seminar will be held at UIC on this subject 15 November with input from throughout Europe and the United States.



## UIC'S SAFETY DATA BASE

UIC Safety database is a tool to collect and manage information on accidents for statistics, benchmarking and trend analysis. It is a useful basis for launching international cooperative activities related to the most current and important subjects in railway safety. The development of the Data Base was actively pursued in 2006.

Around 6,000 significant accidents in 25 countries (19 of which are in Europe, along with Euro-tunnel) are detailed in the Safety Data Base. After ADIF (Spain) and ZSR (Slovakia) in 2005, LG (Lithuania) joined the Data Base in 2006.

UIC's Safety Data Base project manager, Franco Schiavi, took part in the ERA's 7.1 working group which is drafting a joint definition for the Safety Directive. Once this has been done, the Agency will publish its biannual Safety Reports;

A new module "Users Management and Control Users activities", added to the Safety Data Base in 2006, aims to improve the quality and regularity of accident reporting. It also seeks to follow the use of the Data Base by infrastructure managers which have been given unlimited access to the information it contains.

In 2007, the development of the Safety Data Base's application will be pursued, in conformity with the European Union's Safety Directive, in accordance with Eurostat regulations and the infrastructure managers' internal analysis criteria. After publication of definitions for joint indicators, by the Agency in 2006, a revision will be carried out within the Data Base's framework to ensure that the definitions and parameters are still coherent with those of the European Union.

## IMPROVING SAFETY OF LEVEL CROSSINGS KICK OFF MEETING OF SELCAT PROJECT

The kick off meeting of the SELCAT (Safer European Level Crossing Appraisal and Technology) project took place on 28 September 2006. Hosted by the Institute for Traffic Safety and Automation Engineering on the campus of the Technical University of Braunschweig, it was attended by a number of UIC members and UIC was represented by Simon Fletcher, Senior Operations and Safety Advisor and Laszlo Tordai, the UIC's SELCAT Coordinator.

Every year, more than 330 people are killed in more than 1,200 accidents at the road-rail interface (level crossings) in the European Union. In the case of rail transport, over 33% of the accidents in the UIC safety database involved level crossings,

this being the second highest category of all accidents recorded.

In order to help to minimise the current accident statistics and to bring the road/rail interface onto a more even plane, SELCAT intends to carry out the following coordination activities:

- ▶ analyse the results of safety-related projects from the EU FP5 and FP6 research programmes with regard to railway and road transport,
- ▶ provide an overview of existing and planned level crossing research in countries of the European Union as well as global partners including Japan, Russia, Morocco and India,
- ▶ analyse incident and accident data related to level crossings,
- ▶ propose a standard for reporting level crossing accidents in Europe,
- ▶ set up a common level crossing accident information-sharing system,
- ▶ examine the new technologies that can improve the safety and the performance of level crossing systems,
- ▶ investigate the applicability of available risk and cost-benefit analysis methods for the classification of various technological solutions for the safer interface of rail and road traffic at level crossings,
- ▶ disseminate the results of SELCAT through workshops, conferences, an internet site.

SELCAT is a project in response to the FP 6 (with the core objective of "Increasing road, rail and waterborne safety and avoiding traffic congestion"). Project coordination is handled by the Technical University of Braunschweig, in conjunction with core partners the UIC, INRETS (France) and RSSB (UK). Funding is 100% provided by the European Commission and the project is designed to last for 22 months.

Site : <http://www.levelcrossing.net>







.07

# Technology and Research



## UIC Technology and Research Platform: New Steering Body



The first meeting of the new Steering Body of the UIC Technology and Research Platform in its new composition and orientation took place on 24 October 2006 under the chairmanship of Philippe Renard, SNCF's Director of Innovation and Research.

Members of this steering body – who have a two years mandate – are high level representatives of integrated railway companies, railway undertakings and infrastructure managers from different geographical regions of Europe. Two of them are from outside Europe. CER and EIM have been invited to take part in the Platform's work.

New responsibilities of this Steering Body include:

- ▶ the governance of technological sectors related to rolling stock and railway system matters;
- ▶ the strategic coordination of the following transversal activities:
- ▶ supporting the "European Railway Agency" (ERA) for drafting TSIs,

- ▶ relating with the European standardisation bodies CEN/CENELEC,
- ▶ providing proactive coordination for research and innovation, focused on participation in European Union projects as well as worldwide research activities,
- ▶ interacting with the International Rail Research Board (IRRB),
- ▶ driving the relationship with UNIFE in common areas of standardisation and research.

In this first meeting the participants approved the new UIC Leaflet 612 "Functional and System Requirements allocated to harmonised Driver-Machine-Interfaces". This document is a important contribution by UIC members to European standardisation projects, such as MODTRAIN, MODBRAKE and EUDD+ (European driver's cab). Through more than 40 UIC workshops many railway experts have been integrated in all steps of elaboration and reviews. This UIC Leaflet is now available on the UIC web site in the three UIC languages (English,



French, and German). Another important topic of this meeting was the organisation of the future structure of the UIC official Technology and Research Platform Study Groups, so that they can back up ERA Expert Groups with UIC's expertise. The objective is to reorganise the PTR Study Groups so they can meet the ERA's needs, particularly as they relate to interoperability and safety, two fields that are at the very core of UIC's permanent activities.

The Steering Body of the Technology and Research Platform also updated developments concerning:

- ▶ UIC and its members' involvement in the 6<sup>th</sup> European Union Research and Development Framework Programme (FP 6) and the preparations for FP 7,
- ▶ interaction with the International Rail Research Board (IRRB),
- ▶ a progress report on the work of the Executive Committee for European Rail Research (ERRAC), in which UIC is one of the key members,
- ▶ preparations for the 8th World Congress on Rail Research – WCRR 2008 – which will be held in Seoul, from May 18 to 22, 2008 (the Chairman of the Platform, Philippe Renard, is the Vice-Chairman of the WCCR Organising Committee).

## “Rail 21” in ERRAC, including UIC, partner associations present their vision and targets for the railway system of the future

The railway associations taking an active part in the work of ERRAC (the European Rail Research Advisory Council), UIC, UNIFE, UITP, CER and EIM presented their vision and objectives for research relating to the future railway transport system at a meeting in Brussels, on 8 March, 2006.

This vision and the strategic objectives are summarised in a document, “Rail 21 : Sustainable rail systems for a connected Europe”, which was officially handed over to the European Research Commissioner, Janek Potocnik.





UIC played an active role in elaborating this vision and in the “Rail 21” strategy, in particular with the contributions of Philippe Renard, SNCF’s Director of Innovation and Research, who also chairs UIC’s Technology and Research Forum and is Vice President of ERRAC, as well as from those of Imrich Korpanec, Deputy Director of UIC’s Technical and Research Department.

“Rail 21” set out five main objectives for surface transport research: excellence in operations, attractive urban transport solutions, staff security and safety, environmental performance and the world-wide competitiveness of the rail industry.

## UIC Research Coordination group

Research Coordination Group (RCG) was set up by UIC Headquarters has as its objective to assure sustainable and efficient support for UIC members (railway undertakings) in their efforts to coordinate research activities. It must seek to avoid duplication of research work. Another purpose of the RCG is to strengthen the participation of UIC and our members in collaborative research programmes and thus increase the efficient use of research resources at hand, whether with researchers or the funding available.

All major European players – either infrastructure managers or railway undertakings – have actively contributed to setting up this group and have nominated their research programme coordinators or managers to the RCG.

Taking part in this group are: ADIF, ATOC, BV, CD, Veolia Transport (ex Connex), DB AG, Infrabel, NS, Network

Rail, ÖBB, , PKP SA, PKP Cargo, ProRail, RENFE, RFF, RFI, RSSB (the UK), SBB-Infra, SNCF, Trenitalia. CER and EIM representatives are also members of RCG. In agreement with the Chairman of UIC’s Technology and Research Platform, Philippe Renard, UIC headquarters was given a first mandate to chair this group (Imrich Korpanec, Deputy Director of UIC’s Technology and Research Department).

The effort of the RCG is focused on the coordination of UIC members research activities, in particular striving to:

- ▶ support ERRAC activities and formulation of a common operators position with regard to other stakeholders in ERRAC (member states, the supply industry, customer associations, etc.),
- ▶ ensure positioning with regard to the proposals of other



stakeholders for research programmes and projects,

- ▶ identify common research topics for project initiation and submission with partners to respond to EC calls for PCPD,
- ▶ exchange information on each company's research programmes as well as on the national ones,
- ▶ coordinate efforts on current European Union projects and defend common operator positions in strategic European Union projects resulting in technological harmonisation and standardisation,
- ▶ ensure the interfacing with worldwide UIC research, and actively support the International Railway Research Board (IRRB).

Since its formalisation late 2005, the RCG has delivered significant contributions in terms of proposals for "RAIL 21" vision, taking part in specific programmes of the EU's FP7 and successfully submitting proposals within the final calls of FP6. The table below illustrates this effort which has resulted in UIC's participation in 16 European Union projects with a total research budget portfolio of about €140 million, with strong support of European Commission funding for rail sector.

The details on these projects are accessible for members of UIC's RCG via the UIC extranet working space – Research Coordination Group.

## EU PROJECTS WITH UIC INVOLVEMENT

<b>MODTRAIN</b>	Innovative Modular Vehicle Concept for an Integrated European Railway System
<b>INNOTRACK</b>	Innovative Track Systems
<b>EURNEX</b>	European Rail Research Network of Excellence Rail Energy - Innovative Integrated Energy Efficiency Solutions for Railway Rolling Stock, Rail Infrastructure and Train Operation InteGRail - Intelligent Integration of Railway Systems
<b>GREEN</b>	GREen Heavy Duty ENgine
<b>EUROPAC</b>	Europaen Optimised Pantograph Catenary Interface
<b>RailCom</b>	Electromagnetic compatibility between rolling stock and rail- infrastructure encouraging European interoperability
<b>ModBrake</b>	Innovative modular brake concept for an Integrated European High Speed Railway System
<b>EU DD plus</b>	European Driver's desk Advanced Concept Implementation - Contribution to Foster Interoperability
<b>SELCAT</b>	Safer European Level Crossing Appraisal and Technology
<b>ERRAC SSA</b>	European Rail Research Advisory Council Specific Support Action
<b>TRIPS</b>	Transport Rail Infrastructure Protection Systems
<b>CREAM</b>	Customer driven Rail freight services on European mega corridor based on Advanced business and operating Models
<b>HYRAIL</b>	Hydrogen Railway Applications
<b>Global View</b>	Strengthening Rail Research Cooperation between Europe and Emerging International Markets for an Integrated International Research Area



# MODTRAIN: a world benchmarking for the design of future trains

The ERRAC (the European Rail Research Advisory Council) Strategic Rail Research Agency (SRRRA) identified business scenarios to meet an overall increase in transport demand in Europe. They imply significantly improving rail transport performance. In particular, reliable and attractive interoperable rolling stock must become the norm for use on European networks.

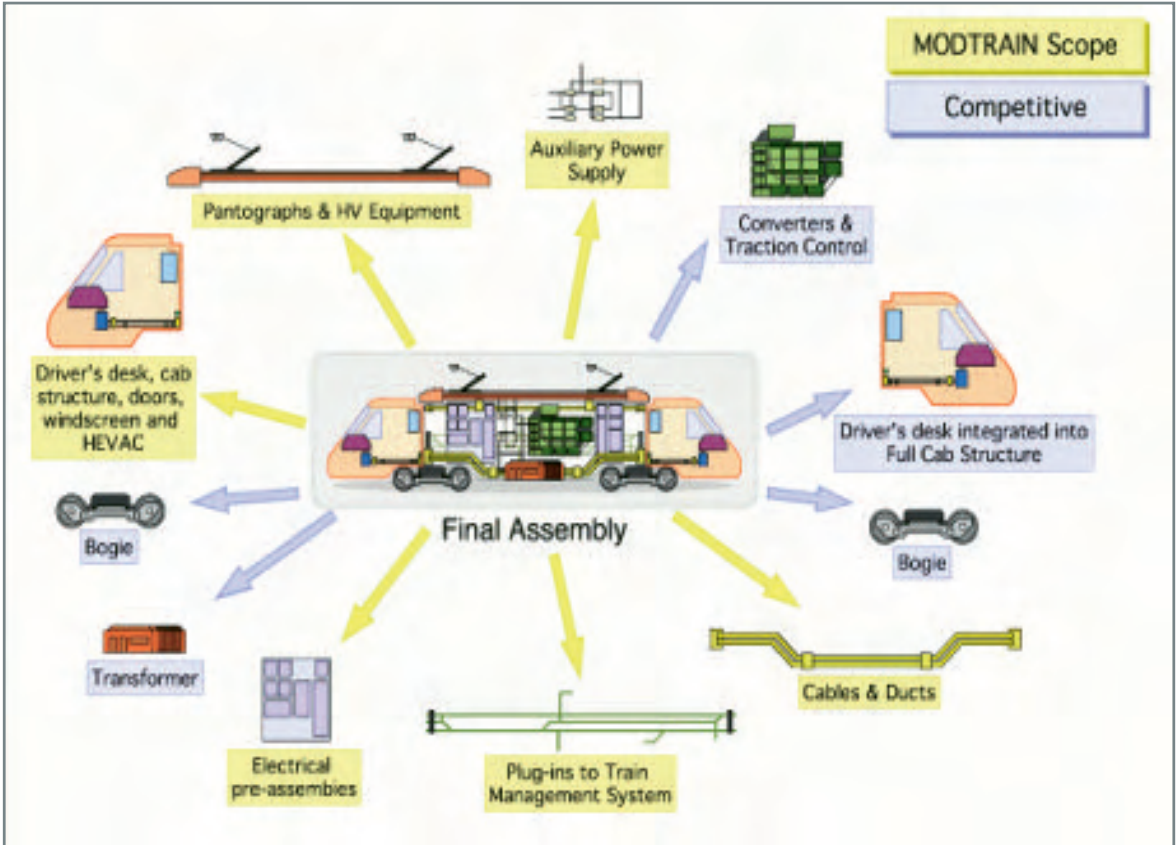
In this context, professional associations, such as UIC and UNIFE, as well as some national rail industry associations have decided to join their efforts with renowned research centres to work on the concept of a 'modular train'. The aim is to avoid the risk of each new train being the subject of independent interpretations of the requirements.

MODTRAIN stands for "Innovative Modular Vehicle Concepts for an Integrated European Railway system". The project, co-funded by the European Union's 6th Frame-

work Programme for Research and Technological Development, officially started on 1 February 2004, with a total project duration of four years.

The objective given to the MODTRAIN project is to establish the necessary functional, electrical and mechanical interfaces and validation procedures to deliver the range of interchangeable modules, which will form the basis for the next generation on intercity trains and universal locomotives.

This project, which is very promising for the future, had the advantage from the very beginning of exemplary synergy between rail operators (the railways) and industrial suppliers. The concept of 'modularity' is at the heart of their work. It will ensure, in addition to a high degree of interoperability, considerable economic benefits for both rail manufacturers and operators.





## EUCAB: presentation of the mock-up driver's cab as part of MODTRAIN

A full scale mock-up of the European driver's cab (EUCAB) was presented at the InnoTrans rail expo which was held in Berlin at the end of September, 2006. The cab foreshadows the standardisation of railway rolling stock throughout Europe and is one of the elements of the MODTRAIN project. The four year endeavour brings together 38 partners, including UIC, from 10 European countries, with a total budget of € 30 million, half of which is funded by the European Commission.

The EUCAB cab is the result of very effective cooperation – right from the start of the project – between rail operators and the supply industry. The project coordinator is FAV Berlin. Train drivers' positions were given full consideration, as Francis Delooz, who took part in the project for UIC, emphasised, "the overall impression is that particular attention was paid to the comfort of drivers". The next step will be in January, 2007, when the cab undergoes a series of tests on the SIMUFER train driving simulator, in Lille, France.



↑ The EUCAB European driver's cab heralds the progressive standardisation of railway rolling stock.





## EURNEX: the European Rail Research Network of Excellence

EURNEX is an on-going project (from January 2004 to December 2007), that is supported by the European Union. It involves the rail research excellencies in Europe (66 universities, UIC, UITP and UNIFE).



EURNEX Knowledge Management System (KMS) currently

The strategic objective is to create a customer-oriented, durable “network of excellence”, capable of providing coherent, integrated knowledge management and to



propose services in the field of innovation.

UIC has developed a “Knowledge Management System” (KMS) whose goal is to become the main knowledge exchange platform dedicated to rail research projects, in order to support the EURNEX network of excellence. The objectives of the EURNEX KMS are to communicate knowledge to UIC members and to provide the rail knowledge collected to the customers.

## Backing the European Railway Agency with UIC's expertise



The opening of the European Railway Agency (ERA) in 2005 in Valenciennes (northern France) brought about a new set of challenges and interfaces for the rail community. The Agency was created to bolster the position of rail transport in the European market. In addition, it aims to discharge member states of part of their responsibilities regarding railway standardisation, particularly as related to interoperability and safety questions.

UIC has been asked to establish a framework within which experts from European representative bodies (CER, EIM, ERFA and UNIFE) can debate emerging issues and from which an element of harmonisation

can emanate. Similarly to the ERA subdivision of works into two fields – interoperability and safety – within UIC Director of Technology and Research, Gabriel Maffei, is leading the interoperability elements and Simon Fletcher, the Senior UIC Safety and Operations Advisor, is in charge of the safety aspects.

Within the field of interoperability, the ERA's work is presently being concentrated on a series of TSIs (Technical Specifications for Interoperability) encompassing energy, infrastructure, telematic applications for passenger traffic, passenger vehicles and traction units as well as certification of maintenance workshops, registration of rolling stock, and the ‘change control’ for ERTMS.



## Synergies between **World** and **European** rail research

The development of IRRB (the International Railway Research Board) activities and the carrying out world-wide research projects launched under UIC's World Executive Council's aegis have put UIC in a particularly favourable position to encourage cooperation between the main rail research bodies throughout the world.



↑ The latest IRRB meeting was held in June 2006, in Montréal.

During a meeting in which UIC's Chief Executive, Luc Aliadière, the Deputy Chief Executive, Vipin Sharma, and the Deputy Director of the Technical Department, Imrich Korpanec, took part, it was decided that UIC should take advantage of its global dimension to develop synergies in



the field of research, while at the same time ensuring a close partnership with ERRAC relating to the EU's 7th Framework Programme for Research and Development.

The IRRB, chaired by Yoshio Ishida, Vice Chairman of East Japan Railways and Vice Chairman of UIC's World Executive Council, set out missions and established the work programme. Two priority topics for research were determined: improving safety at level crossings and reducing the costs of rolling stock maintenance.

07.

66 TO 67

## Interaction Seminar on Rolling Stock in Seoul

The programme of UIC User-Producer Interaction Seminars, organised under the auspices of UIC's World Executive Council, seeks to establish direct links between rail operators and their suppliers (manufacturers of railway rolling stock and equipment) on a global level for sharing information and facilitating cooperation. In order to respond to this demand, exchanging thoughts is particularly focused on defining customer expectations - both mid and long





→ The COEX congress centre in Seoul where the UIC interaction rolling stock seminar was held and where the 8th WCRR, World Congress on Railway Research, will be organised.

term - regarding innovations and relating to the supply industry's research and development programmes. One of the objectives of these conferences is also to encourage new international partnerships between manufacturers and operators.

After a series User-Producer Interaction Seminars dealing with rolling stock, traction and electrification, infrastructure, signalling and train command/control, and railway life cycle costs, the 9th Seminar was organised by UIC and Korail (Korean Railways) in Seoul. Held from 17 to 19 of October, 2006, this topic of this conference was "Rolling Stock Technologies".

200 attendees, representing every continent - and including chief executives from a good many of Asia's networks - took an active part in the seminar's work. The sessions made it possible to work on the following topics in particular:

- ▶ new concepts for trains of the future,
- ▶ trends in research and new developments in passenger rolling stock,
- ▶ trends in research and innovations in freight rolling stock,
- ▶ technology and strategies for rolling stock maintenance.

During the Seminar, emphasis was given to the ambitious development plans that Asian railways have and on future rolling stock needs (in terms of performance and interoperability) in this region of the world. The question of partnerships with the supply industry in the fields of research, development and maintenance was also at the heart of discussions.



→ Yoshio Ishida, Vice Chairman of UIC's World Executive Council.



## The 8th WCRR World Congress on Rail Research in Seoul, May 2008



← Part of the Korean KTX high speed train fleet.

Further to the successful WCRR in Montréal (see article), it is the Republic of Korea which will host the 8th World Congress on Rail Research – the WCRR 2008 – in Seoul (at the COEX Center) from 18 to 22 May, 2008. The theme of the next Congress will be “Towards a Global Railway” and it will highlight all the major trends in the field of railway innovation and research.

The WCRRs have become the worldwide reference for all the players involved in rail research and the development of railway systems throughout the world: rail operators – both infrastructure managers and undertakings – manufacturers representing various industrial sectors, international and European organisations, research institutes, standards bodies, consultants and universities.

The founding organisers of WCRR are UIC, AAR/TTCI (the US), RTRI/JR (Japan), DB, FS, SNCF and RSSB (the UK), who were joined by Korail in 2003. The Organising Committee for the WCRR 2008 is chaired by Gil-Hyun Kang, of Korail, and its vice-chairman is Philippe Renard, of SNCF, chairman of UIC’s Technology and Research

Forum. The Executive Committee, made up of research executives from the same companies and railway undertakings, also met in Korea to prepare the scientific content of this congress.



↓ The HSR 350 was developed for high speed in Korea.



# WCRR 2006: Montréal, capital of worldwide rail research

**2006**  
**WCRR**  
**Montréal**  
PROGRESSING TOGETHER  
Le progrès, ensemble

**7<sup>th</sup> World Congress on Railway Research**  
June 4 – 8, 2006  
Fairmont The Queen Elizabeth  
Montréal, Canada

**7<sup>e</sup> Congrès mondial la recherche ferroviaire**  
Du 4 au 8 juin 2006  
Fairmont Le Reine Elizabeth  
Montréal, Canada



**2006**  
**WCRR**  
**Montréal**  
PROGRESSING TOGETHER  
Le progrès, ensemble

**7<sup>th</sup> World Congress on Railway Research**  
June 4 – 8, 2006  
Fairmont The Queen Elizabeth  
Montréal, Canada











.08

# Environment : UIC, serving sustainable development



## The 9<sup>th</sup> UIC Environment Coordinators Conference in Marseille

More than 80 attendees took part in the work of the 9th International Conference of Environment Coordinators, organised by UIC and SNCF, in Marseille, from 12 to 14 October 2006.

One of the main topics the conference addressed was the fundamental shift in rail company thinking concerning the environment, as they move towards full fledged sustainable development strategies. Elisabeth Borne, Strategy Director, presented an example from SNCF and other speakers (from DB, RENFE, Japan Railways, and RRSB) presented their approaches to sustainability management.

The other main theme was climate change. Several high level speakers sounded the alarm, and concluded that it is high time to reverse current trends which are leading to catastrophe: a position which is increasingly accepted by the scientific community.

UIC's Chief Executive, Luc Aliadière, underscored UIC's commitments in this field, particularly by our cooperating with international organisations such as the UNEP or the International Energy Agency.

UIC members are also very active in making rail transport a real alternative to other transport modes, which produce more greenhouse gas pollution.



## UIC's Environment, Energy and Sustainable Development Platform

The 3rd meeting of the Platform was held in Marseille in conjunction with the 9th Environment Coordinators Conference. The Platform's new name reflects the spectrum of work to the new challenges that the railways are facing all over the world: more expensive and rare energy and natural resources, climate change, economic constraints, etc.

The four 'groups of experts' chairpersons (noise, energy, emissions and sustainable mobility) reported on the status of their projects and explained the Work Programme for 2007.

Many new activities will be started:

- ▶ the 'Biofuel' for railways study,
- ▶ the report on non-exhaust emissions,
- ▶ new communication tools for the environmental performance.

Others will be finalised:

- ▶ the 'Energy Billing' project

- ▶ UIC technical research on composite brakes.

The Platform's 4th meeting will be held on March 15th 2007.



## The 'GREEN' Project: a "near-zero emissions vehicle"

UIC is associated in the "Green" research project, jointly financed by the European Commission under the 6th Framework Research Program. UIC and UNIFE, for railway sector, are also cooperating with major automotive companies, like Volvo, Iveco, Ford, Daimler Chrysler, FIAT, and industrial manufacturers such as Bosh and MTU.

The main objective of the Green project is to carry out research for a heavy-duty engine that can achieve "near-zero" pollution emissions and significantly reduce CO<sub>2</sub> exhaust through a new concept. In particular the new engine will have:

- ▶ flexible components,
- ▶ a new combustion process,
- ▶ closed loop emissions control,
- ▶ high power density,
- ▶ suitability for renewable fuels,
- ▶ integrated exhaust after-treatment system.

For the rail sector, there is an interest to transfer these new technologies to traction, in particular for the programmes to diminish diesel locomotive emissions.

UIC and UNIFE will hold the next GREEN Railway workshop next 17 and 18 January at UIC headquarters.





## UIC Leaflet on **environmental specifications** in tendering for **new rolling stock**

UIC has engaged major resources to ensure that trains are the most environmentally sound, sustainable development friendly transport mode. It is with this in mind that a new UIC Leaflet “Environmental Specifications for new rolling stock” no. 345 was established.

The objective is to contribute to the harmonisation of environmental criteria in the specifications that are included in tendering for the procurement of new railway rolling stock. The content takes advantage of the work carried out in UIC PROSPER (“Procedures for Rolling Stock Procurement with Environmental Requirements”) project. It was approved by the representatives of the supply industry and rolling stock manufacturers; The content gives particular attention to:

- ▶ the legal framework of tendering,
- ▶ the environmental specifications in tendering (energy



efficiency, noise, diesel exhaust emissions, recycling equipment, etc.),

- ▶ quantifying various environmental criteria.

## A new **'Diesel emissions'** brochure published



The most recent brochure dealing with environmental issues “Railway Diesel Emissions: reality and challenges” was presented for the UIC’s Environment, Energy and Sustainable Development Platform’s meeting in Marseille, 12 October 2006.

This brochure, jointly disseminated by UIC and CER, is essentially based on the contents of the UIC/CER study on “diesel emissions”.

The objective of the work is to:

- ▶ support the technical revision of the European Commission’s Directive NRMN 2004/26/EC, which is to be finalised for the end of 2007,
- ▶ evaluate the present status, performances and needs for measures (both technical and operational) to bring down the emissions of the existing fleet by applying a cost/benefit analysis approach to evaluate feasibility.

## Optimising energy use: 'Energy Billing' and 'RailEnergy'

Multiplying the initiatives to optimise energy use in the rail sector is a major part of UIC's activity: both in the fields of technology and development, and in the area of sustainable development. The objective is to assist UIC members, railway operators, to effectively meet the challenges inherent in the purchasing and use of energy. The context of these challenges is characterised by the liberalisation of transport and energy markets. It is also typified by the continued increase in prices and a growing awareness of environmentally related issues (in particular, concerning pollution and climate change).

UIC's "Energy Billing" project began in 2005 with eight European railway operators (including DB, which launched the project along with UIC) and CER. Contacts were also made with infrastructure managers. The starting-off point of the project was the realisation that billing methods for the energy used by locomotives handling international traffic varied from one country to another. It was also apparent that this made forecasting costs very difficult, particularly given the importance of this expenditure in international operations.

Initially, the work consisted in studying the systems presently used to measure and bill the electric energy consumed in railway operations. The sharing of this knowledge contributed to installing meters for measuring energy consumption on board trains; meters that are now being used in several countries. This also made it possible to pave the way for agreement on a 'common protocol' for exchanging energy consumption data.

The objective is to be able to have a generally approved methodology, encompassed in European 'guidelines'. The process should lead to tangible benefits for rail companies, as expressed at the end of October, 2006, at the "Energy Billing" and "Energy Billing Railway Undertakings" steering groups meetings. In addition, spokespeople for rail companies have expressed their desire for greater cooperation with manufacturers regarding the subject of consumption measurement tools. They are also looking to set up a basis for cost/benefit analysis, with the economic and ecological advantages of billing systems in mind.





CFL

As for the “RailEnergy” project, it is directed at ‘integrated and innovative solutions to ensure energy efficiency in rolling stock, railway infrastructure and the operation of trains’. This project, financed by the European Union’s 6th Research and Development Framework Programme, is not limited to developing new technical or operational options to bring down energy consumption. It must also provide instru-

ments to make the calculation of costs and benefits possible.

The overall aim of the RailEnergy project is to obtain a 6% reduction in energy consumption by the year 2020, though, according to forecasts, traffic ought to double during the same period. The RailEnergy project got underway in September, 2006.

## UIC’s contribution to the **UNEP (UN)** ‘Class of 2006’ report

In its UNEP report, entitled “Class of 2006”, 45 major economic and industrial players presented their contribution to preserving the environment and their ‘social responsibility’ for the period 2002-2006. UIC contributed to this report on behalf of the railway community and as part of the “UNEP Railway Report Card”. This latter document was the result of close collaboration between UIC, CER, UNIFE, the United Nations and other associations from our sector.

The report’s dissemination coincided with the 14th Session of the UN Commission on Sustainable Development (CSD) held in New York. The meeting made it possible to follow the progress made since the Johannesburg World Summit on Sustainable Development in 2002. (UIC took part in this summit along with UITP and UNIFE.)



SNCF

## UIC present at the **UN Conference on Climate Change in Nairobi**



UIC, UITP and UNIFE organised together official side events at the next United Nations conference on climate change, which was held in Nairobi, from 7 to 17 November, 2006. These forums were part of the official UNFCCC programme. For rail sector associations, it is a matter of pursuing the campaign, developed and consolidated at previous conferences, to further the theme "Keep Kyoto on Track".



↑ 'Side event' at the Nairobi UN conference.



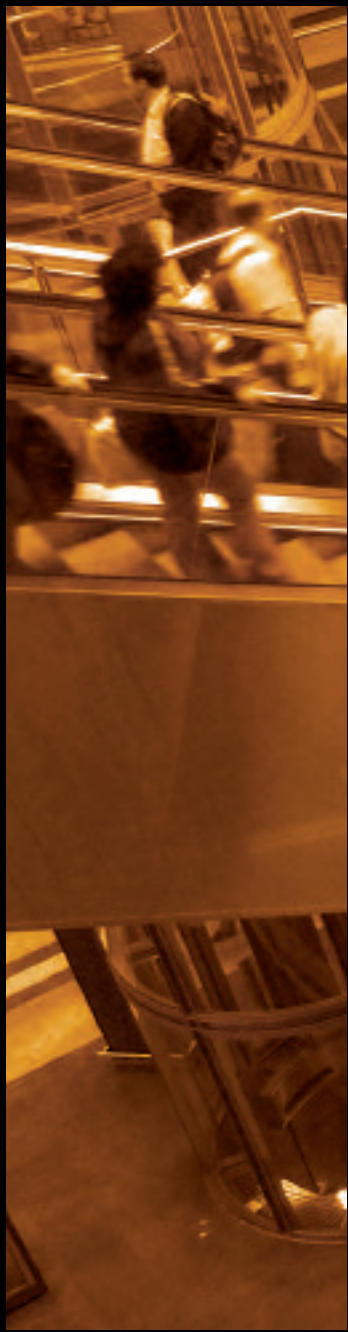
↑ Suzanne L'Ami (UNIFE), Heather Allen (UITP) and Margrethe Sagevik (UIC) at the UN/UNFCCC conference in Nairobi.

In the worldwide debate on climate change, whose political and media recognition has grown tremendously of late, the joint message of the rail community players relies on the strategies that are possible to reduce greenhouse gas emissions in the transport sector. In particular, they are striving, through real political encouragements, to get traffic moved off the roads and onto railways.

Site : [www.railway-mobility.org](http://www.railway-mobility.org)









.09

# Passenger Transport



## A new formula for **CER / UIC High level meetings of passenger CEOs**

21 and 22 September, 2006, the first annual meeting of high level CER/UIC passenger CEOs was held in Paris, and hosted by SNCF. This new, high level, meeting formula made it possible for the CEOs of this business sector to have open discussions – as in a workshop-like format – on all the decisive political, strategic and commercial aspects involved in transporting passengers.

During this joint meeting, the passenger CEOs dealt with the following questions, amongst others:

- ▶ the status of European legislation on 'Passenger Rights' and its implications for the rail sector as well as the actions to be taken,
- ▶ the evolution of the UIC MERITS / PRIFIS project that seeks to bring about a European information system for railway travel schedules and prices. Various options were presented for the future development of this project. It can be a very useful tool, particularly given the context of the requirements inherent to 'passenger rights' and with the perspective of drafting TSIs for passenger telematics,
- ▶ follow-up to be given to the study on the impact of infrastructure pricing on international passenger traffic [the cost of track access charges represents 25 to 50% of the revenue generated by high speed trains]. This distortion has an unfavourable influence on competition between high speed trains and air traffic, and so must be screened and analysed closely.



↑ From the left to the right: Luc Aliadière (UIC), Guillaume Pépy (SNCF), Colin Hall (CER).



→ Oliver Sellnick, Director of the UIC Railway Undertakings Department.

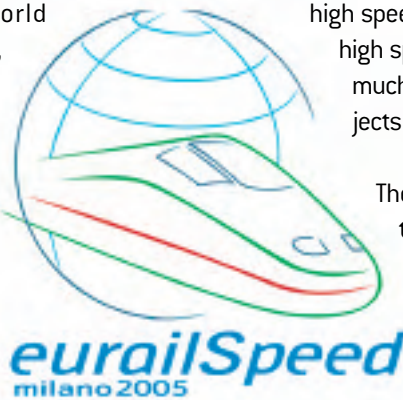
The second day, European Union representatives were invited to exchange views with the passenger CEOs on European policy, in particular on the coming liberalisation of national, and international, passenger services as well as on 'passenger rights'.

In addition, it was agreed that the CER / UIC Passenger Chief Executives' Group would exchange information with Japanese Railways (JR) on a series of important issues regarding passenger transport. The next high level meeting of the Group will be held on 7 and 8 June, 2007, at the invitation of Deutsche Bahn (DB) on the occasion of the launching of high speed Frankfurt-Paris and Stuttgart-Paris service.

## “Eurailspeed 2005” in Milan and “UIC HIGHSPEED 2008” in Amsterdam

### High speed rail: successful in the marketplace— strongly serving sustainable development

Eurailspeed, the 5th world congress on high speed rail, staged by UIC and the Ferrovie dello Stato (FS) in Milan from 7 to 9 November 2005, lived up to all expectations, attracting some 1 600 participants from a total of 50 countries including 180 speakers and 165 journalists from the international press taking part in the work and following the numerous round tables and sessions on the development of high speed rail.



high speed. On a global level, the network dedicated to high speed today totals 7 000 km, with growth very much the order of the day thanks to ambitious projects in China, India and elsewhere.

The strength of high speed rail systems lies in their ability to optimise all the parameters that are crucial to the quality of a transport service, including performance, safety, comfort, operational management and line capacity.

Eurailspeed 2005 gave a clear illustration of the dynamism of high speed passenger transport, with the spectacular successes recorded in particular in Europe and in Asia. In Japan, 4 billion passengers have been carried over 40 years of operation of the Shinkansen without any single fatal accident recorded. In Europe, annual passenger-km growth approached 10% over the past 10 years. In Korea, 40 million passengers have already been carried by the “KTX” since 2004.

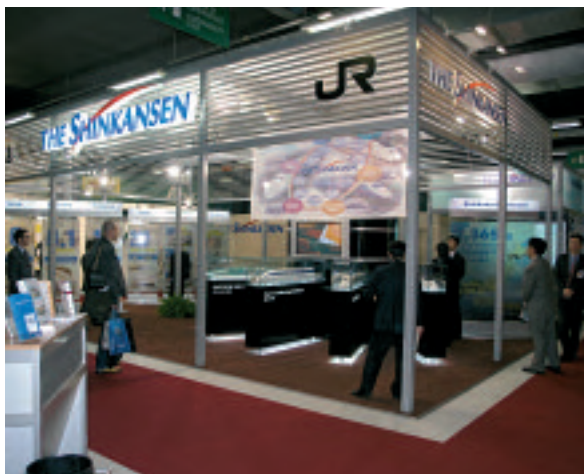
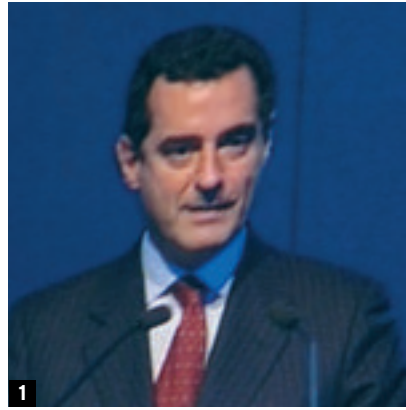
In Europe, high speed trains run over a network of some 20 000 km, 3 750 km of which were purpose-built for

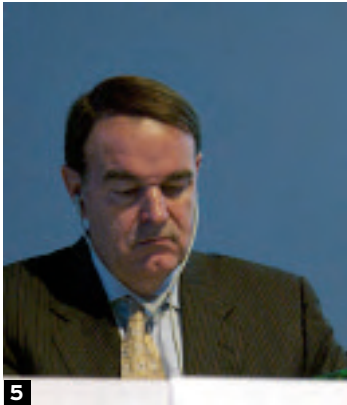
Interoperability of trains at international level – one of the UIC’s central tasks – will be instrumental in making rail services more attractive over international routes. A host of different systems (information systems, new on-board services and station facilities) and commercial innovations (low-cost services, etc.) are helping to bolster their success among customers. Today, the train already boasts a 71% share of the rail/air market between Paris and London, and 83% between Madrid and Seville.

09. 82 TO 83

**Amsterdam 2008**  
**UIC HIGHSPEED**  
6<sup>th</sup> World Congress on High Speed Rail







- 1 - Roberto Testore, Trenitalia Chief Executive,
- 2 - Loesewies van der Laan, Member of the Dutch Parliament and the moderator,
- 3 - André Navarri, UNIFE Chairman,
- 4 - Philippe de Fontaine Vive, EIB Vice Chairman,
- 5 - Aad Veenman, CER Chairman,
- 6 - Michel Boyon, RFF Chairman, representing EIM,
- 7 - Norman Y. Mineta, the United States Secretary of Transportation,
- 8 - Louis Gallois, SNCF Chairman,
- 9 - Mauro Moretti, RFI Chief Executive,
- 10 - Luca Cordero di Montezemolo, Chairman of Fiat and Ferrari, and Confindustria,
- 11 - Jacques Barrot, Vice President of the European Commission,
- 12 - Pietro Lunardi, Italy's Minister of Infrastructures and Transports,
- 13 - Elio Catania, FS Chairman and Chief Executive,
- 14 - Yoshio Ishida, Vice Chairman, East Japan Rail.



A series of high-ranking figures took the floor at the opening session (moderated by Louise van der Laan, member of the Dutch parliament) and subsequent round tables to advocate a speedy development of high speed rail links.

They included Jacques Barrot, Vice-President of the European Commission, in charge of transport (who emphasised the key role that high speed has to play in the priority projects of the EU and the European Commission's commitment to ERTMS), Pietro Lunardi, Italian Minister for

Infrastructure and Transport, Norman Y. Mineta, Secretary of Transportation (US Department of Transportation), Luca Cordero di Montezemolo, President of Fiat and Ferrari and Chairman of Confindustria (who emphasised high speed's contribution to economic growth, in particular through the development of infrastructure), Philippe de Fontaine Vive, Vice-President of the EIB (who spoke of the bank's significant efforts in favour of the development of railways through a battery of financial instruments, one of the EIB's central objectives being to promote sustainable transport systems) and Luisa Todini, Vice-President of FIEC.



Among the railway executives to take the floor were Elio Catania, Chairman and Managing Director of FS; UIC Chief Executive Luc Aliadière; the Chairmen of CER, Aad Veenman, and UNIFE, André Navarri; Michel Boyon, Chairman of RFF representing EIM, as well as the Chairmen and CEOs of SNCF, Louis Gallois, RFI, Mauro Moretti, Trenitalia, Roberto Testore, East Japan Railways, Ishio Ishida, Korea Railroad, Lee Chul, and the Chairmen or CEOs of the industry groups involved in the construction of high speed trains and systems.



The Eurailspeed 2005 trade fair featured 85 exhibitors, including manufacturers, infrastructure managers, operators, service companies and a string of railway organisations, and provided a well-frequented forum for exchange and contacts throughout the event. Eurailspeed also featured a display of high speed trains organised by FS, RFI and Trenitalia at Milan-Garibaldi station and a full programme of technical visits to sites linked to high speed rail.

The 6th World High-Speed Congress “UIC High-Speed 2008” (the new name for the congress underlines the worldwide dimension of the meeting and exhibition) will be held in Amsterdam, in the Netherlands, at the invitation of NS (Nederlandse Spoorwegen, Dutch Railways), from 17 to 19 March, 2008.

**Contact “UIC HIGHSPEED 2008”:**

**Béatrice Ségeral – [segeral@uic.asso.fr](mailto:segeral@uic.asso.fr)**

**[www.uic-highspeed2008.com](http://www.uic-highspeed2008.com)**

## High-speed rail: Study on infrastructure user charging

Infrastructure user-charging levels as currently applied to high-speed trains are not calculated on similar bases by the different infrastructure managers. The overall amount of the tolls charged results from the aggregation of different elements themselves determined from different criteria and globally reflecting the linear-progression costs relatively to distance covered.

Railways are clearly determined to ensure the cost-effectiveness of this form of transport, particularly in the battle for market-share with low-cost competing modes. Yet a mechanism of this type designed to cover a significant portion of total infrastructure costs would no longer appear to be the ideal solution for promoting high-speed rail travel.

This then forms the backdrop against which a study has been proposed by one of our members with a threefold objective in mind: calculate the level of user charges on a number of domestic and international

routes, review different scenarios and demonstrate that the existing infrastructure charging regime is not conducive to the development of high-speed rail at international level.

The criterion currently applicable in Europe when calculating tolls in international passenger traffic is akin to that previously used when setting train-fare levels. However this criterion today is no longer relevant given that market prices are now routinely used. This comparison is fully transposable to the context of infrastructure tolls and charges we are planning to study.

The study therefore starts from the premise that future solutions must necessarily be devised in order to develop a harmonised and rational charging mechanism that is compatible with European directives and can contribute to making high-speed rail travel even more cost-effective.

09. 86 TO 87

↓ *The UIC High-Speed Mission has produced a brochure which shows the characteristics of the study on tolls for high-speed.*







## UIC High-Speed Training Seminar

At the behest of its members, UIC organises a training seminar on the strategic, economic and technical aspects of high-speed rail at the Paris Headquarters every year. This training is tailor-made for senior railway executives from throughout the world and in particular to those CEOs from railway undertakings which already operate or are planning to launch high-speed links. It is coordinated by the Railway Undertakings/High-Speed Mission along with other UIC departments and divisions.

The participants in the June 2006 seminar came from Japan, Germany, Belgium, the United States, the United Kingdom, France, Spain, Portugal, Italy, Poland and Switzerland.

The presentations – from outside experts and UIC representatives – covered the progress of high-speed projects in Europe and throughout the world. It also encompassed all the technical, economic, industrial, environmental and marketing aspects that lead to the success of high-speed rail.

↓ In June 2006, DB celebrated the 15th anniversary of the Inter City Express (ICE).



↑ In September 2006, SNCF celebrated the 25th anniversary of TGV high speed rail.

In addition to these recurring activities of training and drafting reports, the UIC High Speed Mission, at the request of its members, maintains a permanent benchmark of the existing systems all over the world (infrastructures, rolling stock, commercial products, technologies) allowing its members to have a precise and current global world vision of the high speed.

The UIC website on high speed, recently updated, makes it possible to have an idea of the various high speed systems all over the world, in particular through a rich cartography.

Site : <http://www.uic.asso.fr/gv>

## Passenger Service Quality: UIC launches the “RailPassenger” site

Pursuing its objective of better information for passenger customers, UIC launched a new site “RailPassenger” in conjunction with CER and CIT. This trilingual site, whose address is <http://www.railpassenger.info>, is true portal for accessing information on international railway services.

For the first time, it is possible to find both general and specific information on international and domestic railway journeys in another country all on the same site.

The information sought can be made either available directly on the site or accessible via links to the pages corresponding to railway undertaking sites. Presently, customers can access information on journey planning, the purchase tickets and the validity of fares. The “Passenger’s Charter” drafted by UIC, CER and CIT, as well as information on passenger rights, services for travellers with limited mobility, transporting bicycles, the addresses of rail companies and a dictionary of railway terms are available on the site.

The “RailPassenger” portal offers an impressive number



09. 88 TO 89

of links to rail company sites. Very useful information for disabled travellers is on offer, as is information for people travelling with bicycles, services in stations, instructions for using automated ticketing, conditions of transport, etc.

A major job is keeping the information that can be accessed on the site up-to-date. This is carried out to make sure that consumers are always correctly informed, whatever the changes made by participating railway undertakings are.



← Website set up by UIC for information for passenger customers : [www.railpassenger.info](http://www.railpassenger.info)



## Benchmarking and cooperation on **the topic of stations**

In July, 2006, a kick-off meeting of railway station managers was held at UIC Headquarters under the auspices of SNCF and UIC. Prior to this gathering, executives in charge of stations had met in bilateral or international one-off conferences: such as the one, at the end 2004, on “Joint Business Opportunities”, organised by UIC and Japan Railways, or the international “Next Station” conference, in February, 2006, which took place in Rome, and where UIC was one of the main organisers. At the latter, all the questions related to the management of stations and capitalising on their commercial and heritage aspects were covered for the first time.

The July meeting, organised under UIC auspices, sought to meet the needs expressed by members – ADIF, CFF, DB, NS, SNCB and SNCF – to develop the exchanging of information and international benchmarking on the design and operation of railways stations. Amongst the topics covered were the optimisation of station design as interchange platforms for transport (often multimodal) and as locations for commercial use (concessions, services).

↓ *The new, recently inaugurated, Berlin Hauptbahnh of train station.*



↑ *The future Tunis railway station.*

It also covered aspects such as station access and passenger rights, as set out in national and European legislation, as well as dealing with other subjects.

Given the added value of the sharing of these exchanges, it was decided to open a new structure of work to a greater number of railway undertakings in Europe, and beyond, so as to extend its scope. In this way, a new “Stations” meeting was held on 26 October, 2006, in Berlin, at the kind invitation of DB AG.

One of the topics of this common work is the preparation of the 2nd international conference on the Stations which will be held in Paris from 6 to 7 December 2007 at the kind invitation of SNCF.

## Passenger rights

The Passenger Charter instituted in 2002 constituted the wilful expression of the commitment of European Railway Companies to improving the quality of services to their passengers. This document covered in particular information on train services and fares, intermodality, baggage and bikes, complaints and claims, refunds, punctuality and services offered in case of train delays, assistance to passengers with reduced mobility, passenger guidance in stations, safety and security, etc.

As is now common knowledge the European Union, whilst acknowledging this determination shown by the railway companies, nevertheless continued to press for more action which culminated in the draft regulation on passenger rights proposed in March 2004 and currently under discussion at the European Parliament. UIC is closely monitoring the ongoing legislative process and providing maximum support to the CER in its lobbying efforts to tone-down the negative impact of this regulation on railway profitability. In this regard, and referring more specifically to the compensation regime applicable when international trains experience delays (regime set in



place by the UIC « Passenger Charter » WP to coincide with the winter 2004 timetable changeover), it is worth noting that the lobbying efforts deployed have been instrumental in attenuating the mandatory compensation levels proposed in the current draft regulation (by comparison with its earlier version). There can be no better practical example of successful international cooperation within the rail sector.

The single most litigious bone of contention at the present time is the scope of application of the regulation itself. Whereas the Commission had argued for an international scope of application, rapporteur Sterckx in his recent report had broadened the scope of the regulation to embrace domestic services. Accordingly the rail sector is focusing its current efforts between now and mid-January 2007 (when Parliament will be voting on this issue) on ensuring that the regulation does not extend to domestic services.





## Passenger Forum: wholesale revision of the format of the 2 annual meetings

During this same period, the format of the "Passenger Forum" was rethought and a more interactive formula adopted, with the first session structured around information workshops for the benefit of members, followed on the second day by a more focused plenary session dedicated to key issues calling for collective decision-making.

In application of the new formula, the Autumn 2006 session provided some 50 Forum participants an opportunity to familiarise themselves with innovative products for railway customers, such as on-board internet access, a concept already well-tried-and-tested in North America, with Europe not exactly lagging that far behind as borne out by the high-output high-speed internet pilot scheme introduced on Thalys trains in 2005. Given the commercial and technical success of the scheme, one Thalys trainset will be fitted with this satellite-based system sometime in 2007.

Next, Deutsche Bahn AG presented its own scheme to equip station waiting-rooms and ICE sets with internet



facilities based on UMTS/GPRS ground technology. This pilot project, launched in 2005, should be accessible to 40% of the German rail operator's customers as from 2007.

European passengers, and more particularly business travellers, rare for new reliable on-board technologies. In fact, some two-thirds of European customers are known to be interested in internet accessibility during their rail journeys. The results of a recent survey show that 50% of Thalys customers, for example, travel with their PC.

Another workshop during the Autumn session briefed participants on the Deutsche Bahn AG AIRail service involving substitution of ICE trains for Lufthansa on domestic routes. Under this scheme, the rail operator becomes a sub-contractor to the national air carrier, so enabling the latter to retrieve «valuable» slots for more lucrative flights while offering a service package of matching quality to its customers, whose baggage for example is processed exactly like at airports (loading, placing-at-disposal, customs clearance, etc.) Their journey is covered by one single voucher showing the train number similarly to a Lufthansa flight number.

**Need assistance to connect?**

**WIRELESS INTERNET ACCESS**

VIA Rail offers you wireless Internet access. You need a wireless-enabled portable computer or handheld device to use the connection.

Should you need assistance to connect, call the help desk at 1 866 905-6714. Pay phones are available in Panoramas Lounges or at the rear of VIA cars.

PEOPLE MOVING PEOPLE  
VIA Rail Canada

→ VIA-Rail (Canada)  
Internet-on-board service  
(source : PARSONS)



This service eloquently demonstrates the unrivalled advantages offered by high-speed rail for domestic journeys of under 3 hours' duration, where it acts as a genuine customer "conveyor belt" for airports and airline companies alike.

During the same workshop participants were updated on e-ticketing work and studies currently deployed by UIC on behalf of its members. Latest progress in the field of dematerialised tickets as well as the technical solutions devised by UIC to securise home-printed tickets were also presented on this occasion.

The ensuing PASSENGER FORUM plenary session brought members up-to-date on recent developments in this business sector, with presentations focused primarily on the impact of European legislation pertaining to the IT TSI and passenger rights in particular. As things now stand, it would appear that the compensation payments offered by the rail sector to its customers are far more attractive than those conceded by rival modes.



← LH passenger baggage being loaded on board an ICE train at Cologne.



# MERITS PRIFIS Project

**MERITS** = Multiple European Integrated  
Timetable Storage

**PRIFIS** = PRice and Fare Information System

The MERITS PRIFIS project is one of the core examples of European cooperation, as it was agreed by all major European railways to participate in this project. The goals of this project are the availability of exhaustive timetable and price information for all European train journeys for sales staff and for (potential) passengers.

## Goals:

- ▶ Create an integrated European database containing price/tariff information and linked with MERITS timetable data (operational since 2002).
- ▶ Provide professional users (via intranet) and the

general public (via internet) with a single point of contact for timetable and price information.

- ▶ Provide the general public (via internet) with a non-discriminatory display of timetable and price information (3rd railway package)
- ▶ Eliminate the numerous, non standardized bilateral data interchanges between railway companies

To achieve this, the project has been split up in several phases. Phases 1 to 3, resulting in centralized timetable data exchange, TCV and Market price exchange as well as a web interface to get journey related information, has been achieved already in 2005. 2006 saw the incorporation and testing for phase 4a, which is the integration of special prices (including reduction cards) and bi- or multilateral offers. With the acceptance of this





phase it is possible to transmit the complex information of nearly all European offers.

2006 also saw a change in project leadership, which has been transferred to the new department director Oliver Sellnick. The latter asked for an external assessment to define the projects current situation and its future upset. The first assessment phase has been finished in autumn 2006 and showed that the system has perfectly been established according to the contracts but it showed also that important market requirements were not sufficiently taken into account in these contracts. The assessment therefore proposed to basic strategies:

1/ Keeping the databases for timetable and price information only (meaning that every member has to establish its own information system based on centrally available data)

2/ Enhancing the functionalities to follow the market requirements and establishing an information system including availability information.

The second assessment phase will now evaluate these options and will finally show the future scoop and upset of the project. The results are awaited in early 2007 and the transformation of the project according to these results will be a major task for 2007.

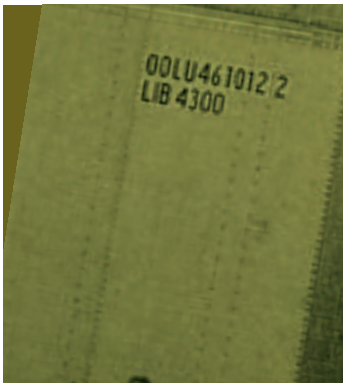






# .10

## Freight Transport



## A new formula for CER / UIC High level meetings of freight CEOs

More than 30 CEOs of European freight companies convened on 14 September, 2006, in Brussels at the invitation of CER) and UIC. Chaired by Ferdinand Schmidt, CEO of Rail-Cargo Austria, they discussed the means for reinforcing the efficiency and competitiveness of goods transport in Europe, in line with the objectives of sustainable mobility.

The freight managers conducted an in-depth overview of the possibilities for improving the quality and efficiency of goods transport in Europe through:

- ▶ jointly setting up telematic applications for freight,

- ▶ immediately implementing the joint ERTMS traffic management system (ETCS and GSM-R),
- ▶ instituting the European single wagon system,
- ▶ infrastructure development for rail freight corridors in Europe.

Concerning the perspective of developing freight corridors in Europe, the CEOs agreed to set out the requirements such a system would need to meet high growth transport needs. They also approved the principle of launching an in-depth study based on two pilot corridors: from Sweden to Italy and from Benelux to Italy.

The study, carried out by the consultancy McKinsey & Co., was submitted at the end of 2006 to the European Commission as a contribution to its planned communication on a Dedicated Freight Network.

This 'new formula' gained recognition as the place where freight sector senior management can share experiences and ideas on all strategic questions and move ahead all the major initiatives to promote the international transport of goods by rail.



→ From left to right, Karel Vinck, the EU's ERTMS Coordinator, Johannes Ludewig (CER), Ferdinand Schmidt (RCA-ÖBB), Chairman of the Freight Forum, Luc Aliadière and Oliver Sellnick (UIC).

## The UIC Freight Forum

Further to this first, joint, UIC / CER, high level meeting of freight managers in Brussels, UIC's Freight Forum met on 4 and 5 October, 2006. This was in accordance with the new organisation, successfully launched in the spring of 2006, under the impetus of the Director of the Railway Company Department, Oliver Sellnick. This formula consisted in proposing information workshops the day before the plenary session, itself limited to the topics requiring urgent decisions taken by the members.

On the first day of the meeting, three workshops enabled the freight managers to broaden their knowledge of subjects such as:

- ▶ the new CIM / SMGS consignment note (Henri Trolliet of CIT),



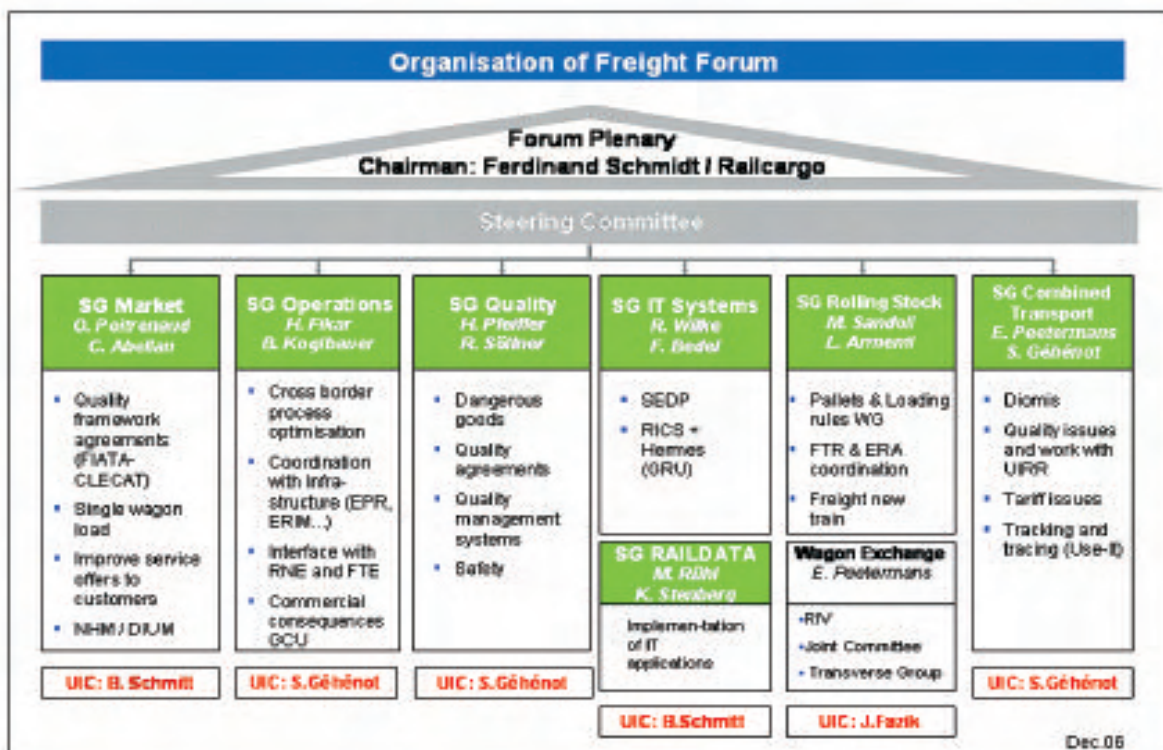


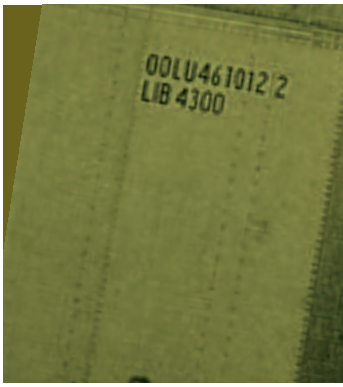
- ▶ the current freight issues at the European Commission (Jacques Dirand of CER),
- ▶ the DIOMIS project (Eric Peetermans of SNCB).

- ▶ the new status of wagon standards and the conditions of application of General Contract of Use (GCU),
- ▶ the pending implementation of the European directives on telematics (TAF TSI), safety, and future legislation concerning security.

The plenary session, chaired for the first time by Ferdinand Schmidt, Rail Cargo Austria (ÖBB group) and UIC's new Freight Forum Chairman, took place in a very positive and cooperative atmosphere. The work focused in particular on:

Attendees shared their experiences regarding freight activities that relate to European Commission affairs, in particular, involving the production and quality of inter-





national traffic as well as cooperative projects concerning international products, particularly as related to single wagon traffic.

UIC Senior Advisor for Environment, Raimondo Orsini,

presented the results of the Environment, Energy and Sustainable Development (EES) Platform to the Freight Forum. In addition, the study on reducing wagon noise put forth viable solutions to meet the demands of the European Commission, at minimal costs. In the area of energy management, work on energy billing, carried out jointly with infrastructure managers, should make it possible for rail freight operators to achieve substantial economies.

In two meetings, UIC's 'new look' Freight Forum gained recognition as the place where freight sector senior management can share experiences and ideas on all strategic questions and move ahead all the major initiatives to promote the international transport of goods by rail.

## The DIOMIS project: promoting the shift of freight traffic to the rail mode

Subdivided into 9 modules, the project aims to identify possible ways and means of contributing to the decongestion of the infrastructure network and of terminals, also of promoting a modal shift to rail. The question which DIOMIS seeks to answer centres on how best to achieve the expected growth in combined transport against a background marked by the heavy congestion of shared infrastructure.

Each module will be the object of a specific report. To date, 3 modules have been completed, as follows:

► **Development of domestic combined transport**, which analyses domestic combined-transport growth and its impact on the infrastructure.

For the record, the Capacity Reserves Study published in 2004 had focused exclusively on the development of international combined transport on the 2015 horizon, with domestic combined transport then viewed as a constant. In this particular DIOMIS module, the analysis of domestic combined transport was carried out for several countries, namely Austria, Belgium, France, Germany, Italy and Poland. The study findings show that by 2015 the congestion zones will not only be denser but also more numerous.

In Germany, for example, the most revealing corridor is Hamburg-Frankfurt, with congestion levels increasing from 41% to 68% by 2015.

In Italy too the Bologna-Florence corridor by 2015 will have reached record congestion levels following the anticipated growth in domestic combined transport.

Bearing in mind the conclusions reached by the Consultants in respect of this module, the DIOMIS Steering Committee has decided to organise a one-day briefing session on 2 February 2007 in order to heighten the awareness of all the players concerned.

► **How best to improve utilisation of existing capacity is the object of the second module completed to date.**

On the basis of discussions held with combined-transport operators, the Consultants have produced a report listing best practices in terms of the management of existing capacity. These best practices are analysed against 3 three criteria: How easy are they to implement? Are they transposable to other operators? What is their impact on existing capacities?

This module on 12 October last was the object of a well-

attended workshop which brought together the main RUs and leading European combined-transport operators.

► **Report on combined transport**

Between the AT Kearney Study and the Study on Capacity Reserves 2015, 15 years elapsed during which no study or report was published to highlight global combined-transport trends at European level in terms of volumes, of development of market structures, etc. Yet such information is crucial, particularly as support to policy statements or investment decision-making.

DIOMIS has therefore dedicated a module to this question and the report addresses the following aspects:

- growth forecasts for (domestic and international) combined transport
- market structure : players and customers
- market shares per segment
- Salient developments during the period reviewed (for information : it is planned to update this report every two years).

The module concerning best practices in combined-transport will be completed at the beginning of 2007. It too will be the object of a report in due course.

In 2007 the following aspects will be studied:

- combined-transport production systems
- international coordination over the localisation of combined-transport terminals and platforms

- the opportunity costs of non-accompanied/accompanied combined transport
- wagon technology

The various modules, and the project as a whole, are driven by a single leitmotiv: “How best to manage CT growth against the backdrop of a constrained infrastructure?”

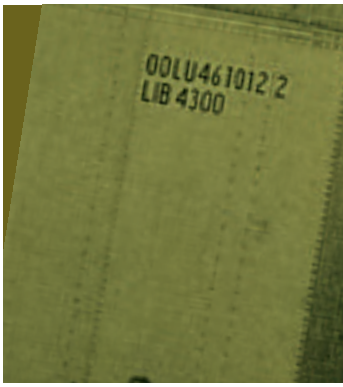
The lessons drawn from these different modules will provide the framework for a combined-transport master plan 2015. Work on producing this master plan, which will draw heavily on the module study findings, is scheduled to start in August 2007 and will be completed in December 2007.

This master plan is to be viewed as a strategic document incorporating the conclusions of the different modules. Its aim is to aid combined-transport policy-makers and players implement best practices in all fields pertaining to the combined-transport business.

For more information about the DIOMIS project, please contact the following address:

**<http://www.uic.asso.fr/diomis>**





## Brussels presentation of the **General Contract** of Use for Wagons (GCU) devised by UIC, UIP and ERFA

The process of rail-transport market liberalisation gathered considerable momentum during the year elapsed, with June 2006 marked by the long-awaited entry into force of the COTIF 99. In other words, the railway world must now adapt to all these developments in all business fields particularly where railway vehicles are concerned. To ensure conformity with the new Convention and European legislation alike, new criteria for wagon exchanges in international traffic were defined by UIC and its partner associations in 2006.

The General Contract of Use for Wagons as negotiated by UIC, UIP and ERFA – plus its annexes – is now available in its final form and came into force on 1 July 2006 jointly with the COTIF 99 (the GCU supplements Annexe D to the COTIF).

The GCU henceforth replaces the RIV, plus UIC Leaflets 433 (Standard General Conditions for the operation and maintenance of P Wagons) and 922 (Division among railway undertakings of compensation for damage or injuries caused by the use of privately-owned wagons).

As at 1 October 2006, 474 companies representing over 90% of the freight wagon fleet in Europe, had signed-up to the GCU.

The advantage of the GCU is that in many cases it obviates the need for contracting parties to negotiate bilateral agreements, and in so doing can extend its optimum impact as of the moment all railway undertakings and wagon keepers together adhere to the GCU, whose pertinence has since been recognised by most players operating in the transport market. This standard contract incorporates all the reciprocal main rights and obligations of railway undertakings and wagon keepers in terms of wagon usage, quite apart from striking the right balance between the respective interests of the contracting parties.

To flank the implementation of the GCU and ensure its constant adaptation to emerging needs, a Joint Committee has been set-up comprising representatives of the three main associations. The working of the GCU itself is handled through the Brussels-based GCU Office and overseen by an independent and neutral Agent. The correct application of the GCU from the legal and technical standpoint is monitored by a Standing Joint Group of GCU Experts drawn from the three founding associations plus UIRR. The migration from the former system towards the contractual regime in the course of 2006 can rightly be termed a success-story even though these changes have yet to be finalised in their entirety.

GCU Office Internet Site: [www.gcuoffice.org](http://www.gcuoffice.org)

In the meantime, the RIV technical provisions and those pertaining to the acceptance and registration of wagons will continue to apply until such time as the GCU provisions and the corresponding procedures are actually adopted by the States concerned.

Given this state of affairs, redeployment measures have been set in place at UIC, involving in particular transformation of the RIV/RIC Bureau into a "Railway Vehicle Exchange (EVF)" entity within the Railway Undertakings Department. The new entity handles all passenger and freight matters pertaining to coaches and wagons res-





pectively. The new landscape calls for even closer collaboration between UIC members if the challenge of sustainably developing rail transport together is to be accepted.

The different issues resulting from renouncement of the RIV regime had previously been addressed during the UIC Freight Forum held on 19 April 2006. To ensure greater wagon mobility during the migration phase, the Forum then decided to keep the RIV technical criteria in force until such time as the national authorities of the European states took over process-management responsibility. DG TREN during the workshop held last October presented the Migration Guide, which had previously been discussed with the different stakeholders and addresses all aspects not settled by the European States.

A workshop dedicated to the General Contract of Use for Wagons (GCU) and to the Interim Guide covering the period between the « former UIC/RIV regime » and the « new GCU/STI regime », was staged by the European Commission jointly with UIC, UIP (International Union of Associations of Owners of Privately-Owned Wagons) ERFA (European Rail Freight Association) in Brussels on 20 October 2006. This event brought together representatives from the three Associations (UIC, UIP and ERFA)

as co-authors of GCU with the Commission, the national safety authorities (NSA), ERA, Railway Undertakings as well as wagon-owners' representatives.

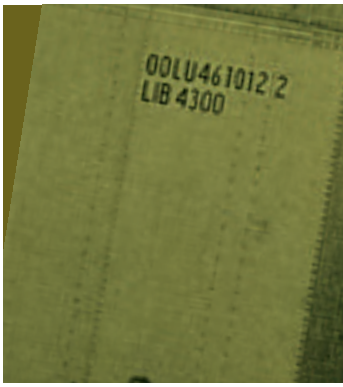
For railway undertakings and wagon keepers alike, the GCU provides a multilateral contractual framework underpinned by GCU Standard Rules for the usage of wagons owned by all keepers involved in international traffic. It encapsulates all the mutual rights and obligations of railway undertakings and wagon keepers in terms of the usage of these wagons while ensuring that proper balance is struck as between the interests of the different parties to the contract. The GCU in many instances dispenses with the need for the parties concerned to negotiate bilateral agreements, so contributing to the development of interoperability within a liberalised European rail-transport market.

UIC was represented in Brussels by Oliver Sellnick, Director of the Railway Undertakings Department and Eric Peetermans, SNCB Holding, Co-chairman of the GCU Joint Committee; ERFA was represented by Secretary-General Monika Heimig and Markus Vaerst (AAE), member of the GCU Standing Group of Experts, while UIP was represented by its Vice-Chairman Bruno Dambrine. The workshop, hosted by the European Commission, was opened by DG TREN Inland Transport Director Enrico Grillo Pasquarelli. The workshop moderator was Patrizio Grillo, from the DG TREN Rail Transport and Interoperability Division. Ny Tiana Tournier and Kurt Lentz, both from the European Railway Agency (ERA) also participated in the session.

More information on the EC website:  
[http://ec.europa.eu/transport/rail/ws/ws\\_transition\\_fr.htm](http://ec.europa.eu/transport/rail/ws/ws_transition_fr.htm)







## Setting up of the Strategic European Deployment Plan for the implementation of the Telematics Applications for Freight TSI: **SEDP**

In response to the future European legislation as regards technical specifications of interoperability, the European railways decided to work at the beginning of the year 2005 with the setting up of a strategic plan to face their legal obligations.

This plan must be delivered to the European Commission in January 2007. It envisages to give the inventory of each railway freight company in Europe like, if necessary, a programme of setting in conformity of the networks with the European directive.

The TAF TSI is a functional specification of various applications for freight transport supported by a messaging architecture for the exchange of the relevant information between the organisations in the Rail transport

chain (primarily Railway Undertakings and Infrastructure Managers).

The SEDP Project has been formed to create and document the deployment plan for the implementation of the requirements of the TAF TSI including the underlying systems and the supporting messaging infrastructure. The expected results are:

- ▶ Project plan: high level plan highlighting key activities, milestones and dependencies for the SEDP Project.
- ▶ Inventory of existing systems collated from railway undertakings (RUs) and infrastructure managers (IMs) as well as for central systems.
- ▶ Overview of the overall TAF TSI-system: comprehensive breakdown of the TAF TSI into common parts and individual RU/IM parts.
- ▶ Data Model: TAF TSI data model in Unified Modelling Language (UML)
- ▶ Framework Plan: to go to the individual RUs and IMs.
- ▶ Specifications for central and common developments: Specifications as a basis for tendering of the central and common parts of the TAF TSI functionality.
- ▶ Milestone plan for the implementation of each functionality developed interactively with the RUs and IMs.
- ▶ SEDP plan consolidating all of the plans from the individual RUs and IMs.
- ▶ Individual commitments to the SEDP regarding functionality and time schedule per RU and IM and other stakeholder.



## Real-Time Tracking and Tracing Project: USE-IT

The USE-IT project (Uniform System for European Intermodal Tracking and tracing) is designed to offer combined transport customers the possibility of tracking their trains in real-time over the Internet or by automatically supplying the information to their own tracking systems. It comes in response to a genuine and repeatedly voiced market demand.

USE-IT is made up of the following modules:

- ▶ interface with the systems of Railway Undertakings (suppliers of the information) for input into the central database;
- ▶ interface to allow Internet consultation;
- ▶ interface to supply the systems of customers and RUs from the central database.

USE-IT is therefore making use of the RUs' existing systems.

The application has been tested by the railways and will be offered to the customers on two corridors: Germany-Switzerland-Italy and Germany-Austria-Italy.

Further information is available at the following address:

<http://www.rail-useit.eu>



## Cross border processes

A recent study carried out by Rail Cargo Austria (RCA) and presented to the Freight Forum, highlighted a series of actions that can be implemented at border points in order to improve the running of freight trains at minimal cost.

The members of the Freight Forum therefore felt it important to share the findings of RCA's study and mandated the Operations Study Group to organise conferences and practical on site advice by experts at selected border points.

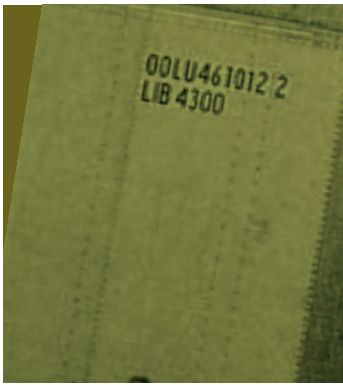
The initiative will run in 2007 and it is envisaged to organise at least two seminars in locations to be defined at which staff working at border points will be invited.

In addition to the seminars, it is proposed to ask experts

to train people on site at selected border points. These experts will perform an assessment of the situation on hand, recommend improvement measures and accompany local staff in implementing those measures.

The Cross Border initiative is expected to:

- ▶ highlight in what way activities currently performed at border points can be improved, shortened or even scrapped
- ▶ implement concrete improvement measures
- ▶ accompany local staff during the implementation process
- ▶ improve the running of international freight trains thus enabling smoother traffic
- ▶ in fine, this process will lead to savings for the railways involved.



## New European project for the traffic in Single Wagon Load: **EURO SIWAL**

The UIC Freight Forum and the joint CER/ UIC High Level Freight Meeting have selected the Single Wagon Load Project as one of their major activities. It is focused specifically on actions with immediate or short-term profit impact.

For most of our European members the single wagon load business is causing huge losses.

Market exit does not seem to be a viable strategy, since the share of single wagon load of the total business is around 50% and it is closely linked to the full train business and combined traffic on the production site.

International single wagon load does not exploit all its potential. Today, most railways have sought to improve their single wagon operations on a pure national basis. Creating a European single wagon network could achieve both, becoming more competitive against road competition and becoming more profitable given the longer distances of international traffic.

Large scale intra-modal competition among Railway Undertakings for international business appears to be unlikely, since the duplication of shunting facilities and last mile access outside the own home market constitute veritable investments and as such high barriers to market entry.


In conclusion, traffic by Single Wagon Load is a classical case for increased cooperation among incumbent Railway Undertakings at the international level: search for solutions to improve the results and to avoid the suppression of this activity, better exploitation of the potential in international offers avoiding the strategy, not very promising, of the “go-it alone”.

The Single Wagon Load Project EURO SIWAL is organised around following modules:

1. Creating a **European standard product** (an attractive and easy to understand European product)
2. Securing quality with a simple assurance system (linking national quality assurance systems)
3. Speeding up the **offer process to customers** (project has started already in 2006 and shows immediate effects for participating railways)
4. Optimising the **capacity utilisation** (project has started already in 2006 and shows immediate effects for participating railways)

The key for growth and improved profitability lies with international cooperation

### Strategic logic for international cooperation

1. **SIWAL - Loss making business segment**
2. **Production closely integrated with profitable block trains**
3. **Untapped international potential**
  - International market share 6% vs. 16% domestic
  - Structurally more profitable than domestic (longer distances)
4. **But today not competitive with road transport**
  - Long response-time to customer requests
  - Unpredictable and unreliable
  - Insufficient cross-border tracking
5. **High entry barriers – intramodal competition unrealistic**
  - Investment and critical size for production system
  - High costs for organizing last mile access

International Co-operation!

## The 1<sup>st</sup> Global Rail Freight Conference held in Delhi

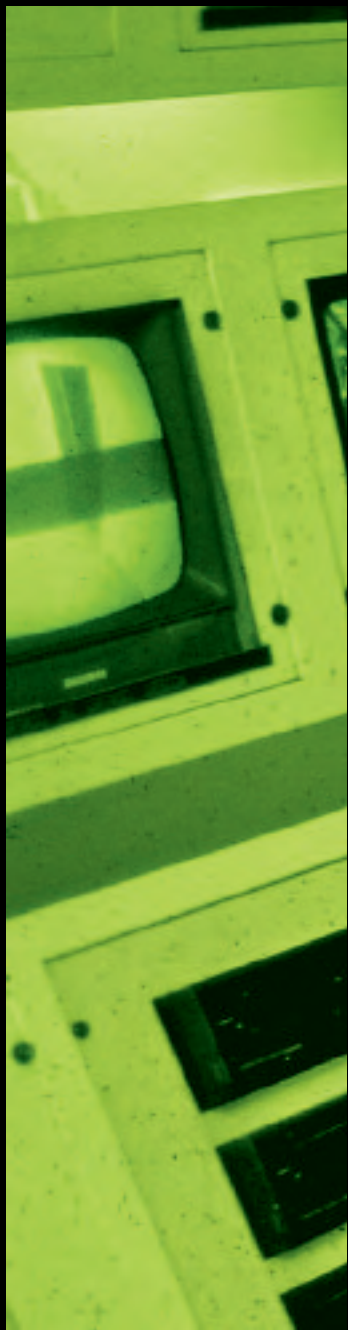
UIC and Indian Railways (IR) have organised the 1st Global Rail Freight Conference together. It was held on 22 and 23 March, 2007, in Delhi.

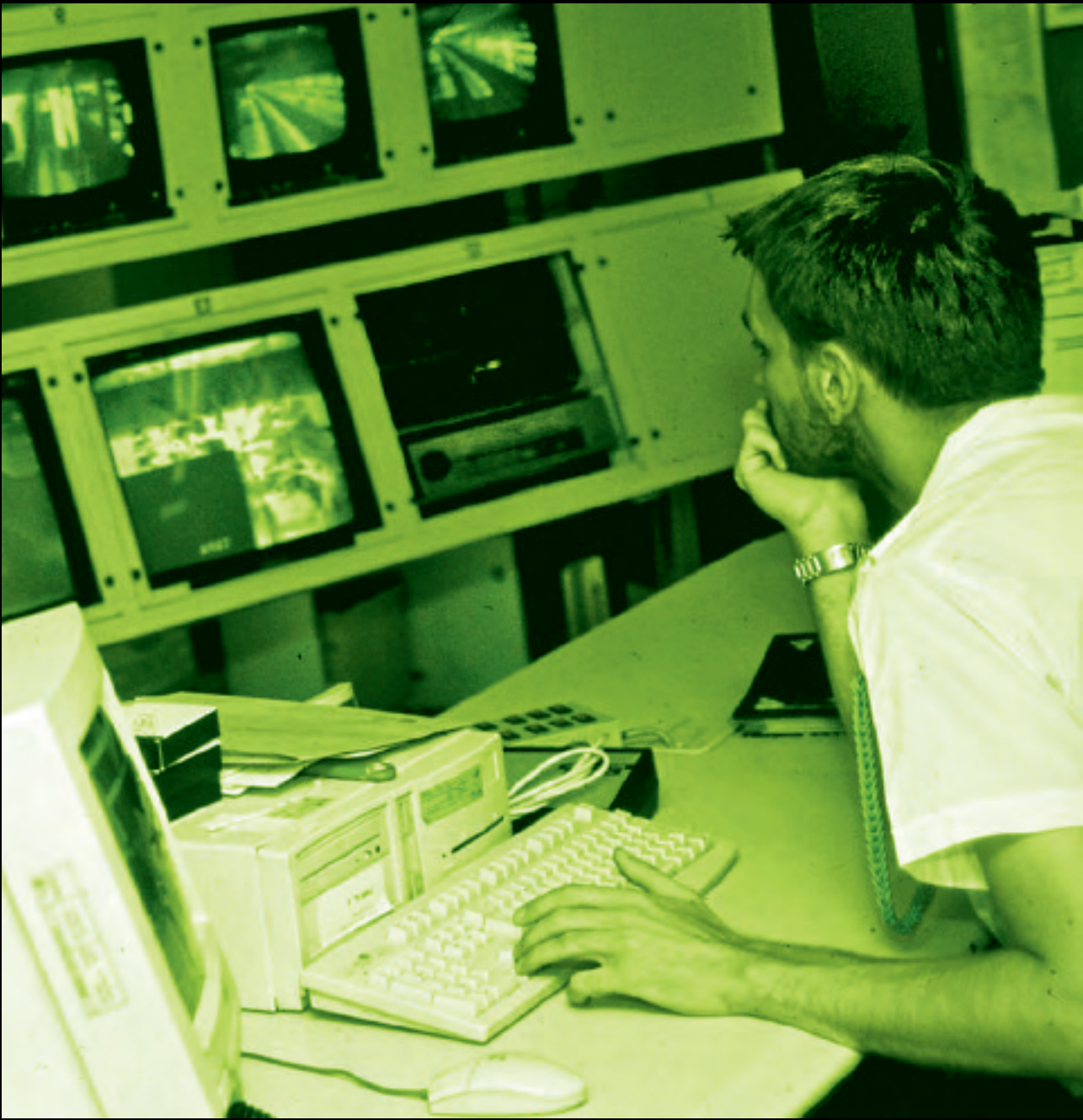
The objective was to increase the awareness, on the part of railway senior executives and all the worldwide freight players, of what the new opportunities, coming from the present growth of business and trade, represent for the rail transport mode. Railways must become an integral part of the global logistics chain. To accomplish this we have to develop efficient tools, in the fields of marketing, management and investment.

The Delhi world conference focused on the following aspects in particular:

- ▶ the 'lessons' learnt in the 20th century,
- ▶ the global, 21st century logistics chain,
- ▶ the main initiatives to expand rail freight globally,
- ▶ capital investment, and its legal and organisational aspects.

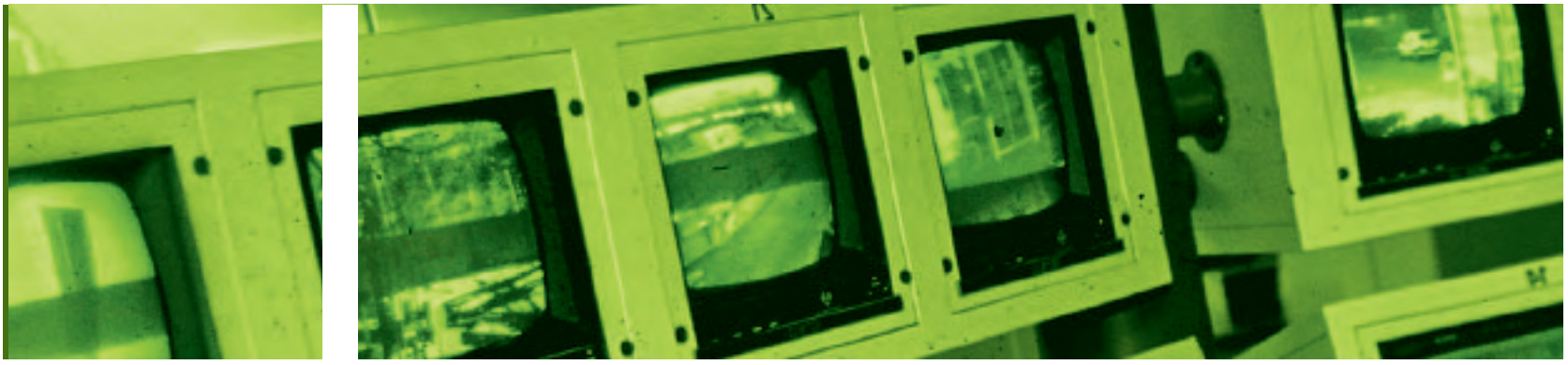






# .11

## Security



## A new security platform

The creation of the UIC Security Platform was approved by the Executive Board on 7 June, 2006, in Montréal. The objective is to give a concrete result to the work already carried out in the UIC Security and Colpofer (the international cooperative group that brings together rail security and police authorities responsible for railway security) groups. It seeks to reinforce coordination and serves passenger, freight and infrastructure activities.

The Security Platform held its first two steering committee meetings in June and December, 2006. Its work was organised in topics-based groups on the subjects requested by its members. The Protection of Critical Infrastructures and Stations, Terrorism, Illegal Immigration, and the "Schengen Acquis" working groups will meet before the end of 2006.

The "Schengenrail" project, launched at the beginning of 2004, was the object of an official presentation to the European Commission on 16 June, 2006, and brought

about a working seminar organised with PKP LK the 8 and 9 November, in Lublin. The European Agency on Border Management ("FRONTEX") took part in the meeting.

29 and 28 November, 2006, an international seminar will be held on terrorism. Organised by UIC with Indian Railways, it will take place in Delhi and make possible the in-depth exchange of experiences, between various rail cooperative bodies and international organisations



↑ Seminar on Schengen Acquis and SchengenRail Project held in Lublin (Poland).

(the European Commission, OSCE, G8, etc.). The Platform's working group on the topic of terrorism will meet in the days following the seminar to give a tangible form to its work programme in accordance with the priorities that set out at the Delhi meeting.



## The European Commission pays tribute to work achieved within UIC on the **Schengenrail project**

UIC's Executive Committee first gave thought to the Schengenrail project at the end of 2003 in order to be prepared for ten new members joining the European Union on the first of May 2004. The measures used for checking at the new railway border crossing points were studied by the railway undertakings involved. The synthesis of this work was presented to the European Commission on 16 June 2006.



seminar, insisted on the importance of immigration and security issues in the strategies developed by railways.

This meeting showed the interest of prior working together between European legislators and railway professionals. Given the quality of the work presented, the participants agreed on presenting it to the new European Agency in charge of external borders (FRONTEX) in Warsaw by the end of 2006.

Beyond this,

- ▶ railway companies will have to consider political and financial aspects with national authorities in the framework of available European programs,
- ▶ working groups of the new Security and Safety Platform, created by the Executive

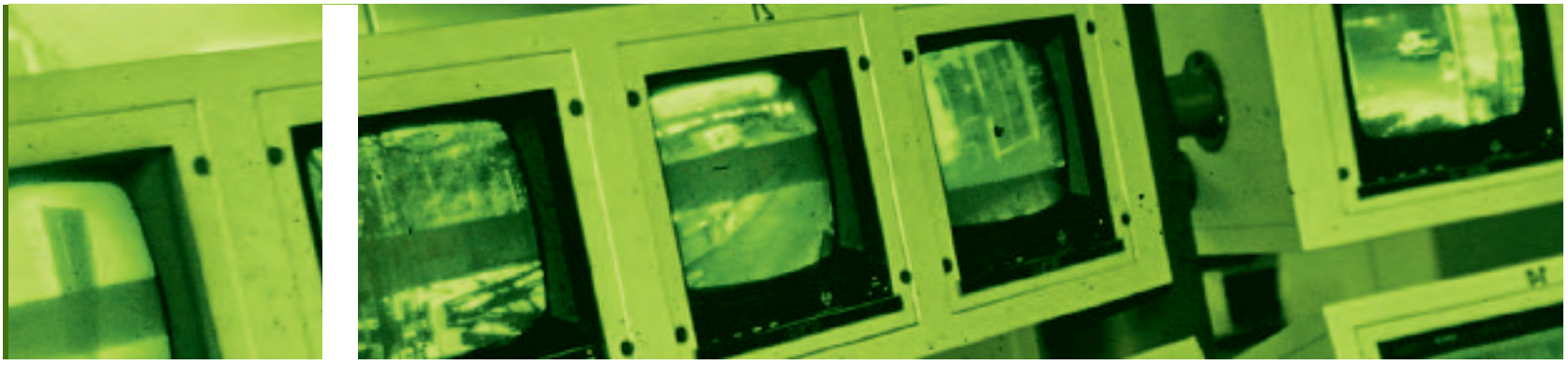
Committee in Montreal, on 17 June 2006, will continue their analyse and prescription work.

Jean-Louis De Brouwer, Director in charge of Immigration, Asylum and Borders and Durante Rapacciuolo, Policy Desk Officer, both representing the Directorate General Justice Freedom Security of the European Commission and Loris Rossi for DG TREN attended this meeting. For UIC, André Michel, the General Secretary, Jacques Colliard, Senior Advisor for Security in charge of the Schengenrail project and Jozef Fazik, Senior Advisor for East-West issues, all took part.

This seminar also hosted attendees in charge of the working groups which had studied the border points of Poland, Slovenia, Slovakia, respectively they were Tadeusz Kaczmarek (PKP), Mirjam Kastelic (SZ) and Jan Simco (ZSSK) as well as railway officials from member states (14 countries). Jannie Haeck, CEO of the SNCB, who opened the







## Green Paper on a **European programme for protecting critical infrastructure**: the response formulated by UIC, CER and EIM

In a document, dated 17 November 2005, the European Commission launched the debate to present tangible measures, for 2007, that would define critical infrastructure and its protection – this included transport infrastructure and its protection – this included transport infrastructure. The response for the rail mode was drafted within UIC, working closely with CER and EIM.

The questions of defining exactly what infrastructure is and determining what its stake for nations and the whole of Europe are were postulated, as was the issue of interdependence between sectors (for example, energy and transport). Other aspects queried were the harmonisation of conditions for protection in the various member states and companies, as well as between national and European authorities. In addition, questions of harmonisation between agencies of various states, infrastructure owners and managers were examined, as were those relating to the final users. And a last point, the financial stakes, must also be determined.

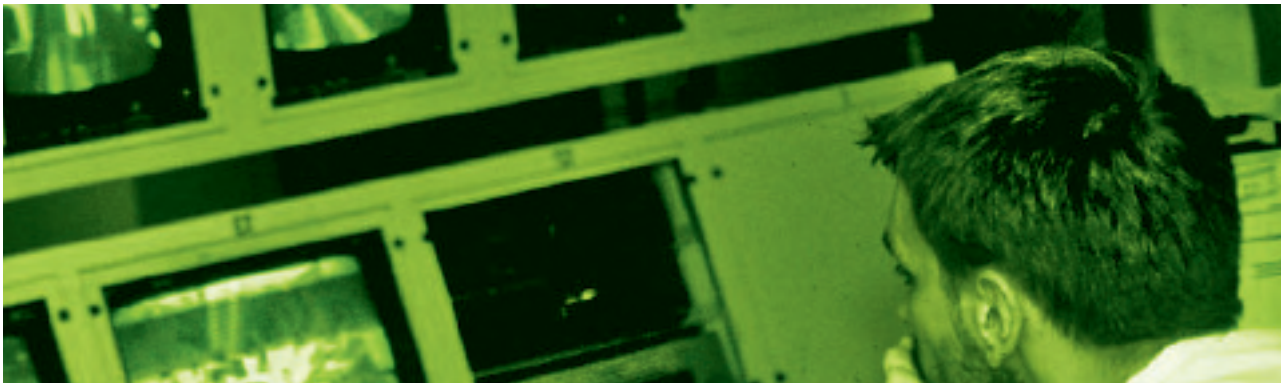
Organisations involved in internal mass transport which, together, examined the final 17 November 2005 Green Paper COM (2005) 576, showed their agreement with the programme's objective. They emphasised the interest of the endeavour launched by the Commission on this subject and expressed their desire to see certain terms or concepts in the document evolve. The expressly asked to be closely associated throughout the investigative process, as the tangible reality of the operators and infrastructure managers is to serve as a basis for studies and change projects.

Above all it is indispensable to (better) define what "critical" means. Is infrastructure 'critical' in light of its exposure to a threat? According to its economic role in Europe? As a function of the time lost when out of

service? Regarding collateral damage on its operations (for example, the stoppage of a nuclear power plant due to damage caused by an attack can have a limited, or even inconsequential, effect on production and transmission of electrical energy, but may cause life-threatening danger for thousands, or millions, of people from a radioactive cloud)? Is it possible to speak, absolutely, about 'critical' infrastructure without referring to the level of security compared with a degree or type of threat? (For ages, fortresses resisted, evolving in design and the materials they were built in, in function of the type of assailant. On the ground, though, armoured vehicles have changed how battles are fought). Or should we suppose that international terrorism, such as practiced by Al Qaeda, with unlimited means and the most sophisticated technologies at its disposal, is the absolute threat? Does responding effectively require total vigilance, using means of prevention and protection whose only limits are the economic costs and the level of acceptance politically and as societies?

Protection of critical transport infrastructure does not call into question only owners and operators, it also implicates users. It is not limited to infrastructure sites: an example (as noted at the UIC European working group seminar in Bratislava, 14 December 2005) is protecting the Channel Tunnel, which entails the protection and checking of passenger trains in London, Paris and Brussels. This also includes measures taken in all the stations where these trains stop or are temporarily stored. Mobile units (in this case, trains) go onto and into the transport infrastructure, and can become threats or even be used as weapons.

So, the reasoning must take the technical characteristics and operational conditions into account as well as associating the companies in charge of them.



← International Seminar on Safety and Security organised by UIC and ONCF held in Rabat (Morocco).



← International Symposium on railway Safety and Security organised by SNTF (Algerian Railways) in Algiers, in close cooperation with UIC.



# Controlling

# The Financial Controlling Unit: financial management support to project managers for greater reactivities

A Financial Controlling Unit was set up at UIC Headquarters in January 2006 with the objective of achieving greater transparency in project and activity management. Its goal is also to more generally ensure better governance and greater democracy in our organisation's functions. The role of this horizontal structure, supported primarily by the accounting activities of UIC, is to optimise budget monitoring, management control and project monitoring in their financial control aspects. In addition to its controlling role, the Unit will also ensure more efficient project monitoring in terms of content and timely completion.

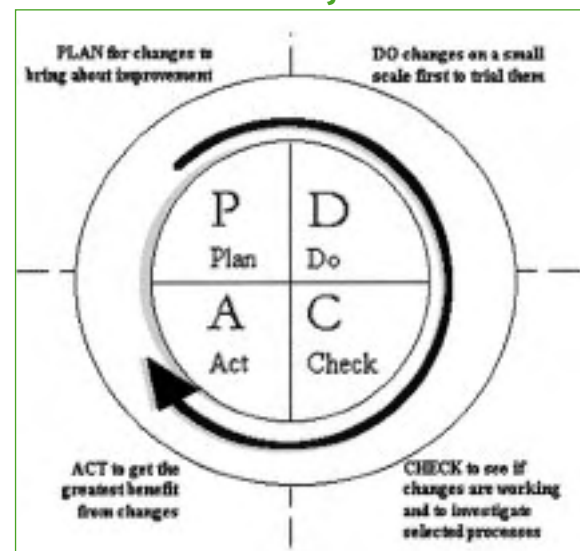
As a first step towards achieving this objective was to produce simplified and harmonised budgetary documents in permanent cooperation with project managers and departments. Indeed, the Financial Controlling Unit is striving to develop a closer relationship with the all players involved in order to gain a better understanding of the technical stakes inherent to projects so that financial parameters can be continually adjusted in line with the latest available information.

The Unit's work relates to three main areas: financial controlling, reporting and the promotion of more professional methods among the parties involved.

Financial controlling of projects and activities is designed to provide the UIC departments with all the elements they require to ensure that the objectives defined based on guidelines issued by forums or platforms are met. This involves:

- ▶ a more budget-orientated approach: what is to be spent, why and when?

## The Deming Wheel



- ▶ a cost-based approach: has the best option been selected to optimise expenditure?
- ▶ a technical perspective on difficulties encountered, supported by the financial perspective.

The reporting process is designed to lead to an improved understanding of the requirements expressed by the Board of Directors at UIC Headquarters in order ultimately to gain an improved understanding of the expectations of members. This encompasses:

- ▶ a statistical overview of the costs of internal and external experts,

- ▶ regular project statements providing an update on progress and difficulties for optimum management.

Finally, the promotion of more professional methods among the parties involved must be geared towards improving the two previously mentioned areas of activity. This entails:

- ▶ supporting the project managers in the preparation of budgets (developing the use of MS Project),
- ▶ improving the contractual basis of each activity,
- ▶ cross-checking completion of work and quality – against the provisional budget - prior to the payment of invoices.



# Information Systems





## Data References

The year 2006 made it possible to further the development and maintenance of joint data bases. The projects within this scope concern:

- ▶ European railway undertakings (the ENEE project): this application makes it possible to update and consult information on the internet, regarding all the European railway companies, the list of train stations and their features,

- ▶ the Harmonised Merchandise Nomenclature ????: based on the Harmonised System of the World Customs Organisation, this nomenclature is available on the UIC internet site (Freight Section) and can be consulted, or downloaded, in ten European languages.

## eBusiness: innovative solutions for the railway sector

2006 marked the 10th anniversary of the UIC eBusiness Conference. This year's conference was truly global in scope, attended by over 115 participants representing 47 railway companies drawn from 30 countries around the world.

What started out as the UIC Internet Club in 1997, has progressively evolved into the eBusiness Conference which showcases innovative solutions for the entire railway sector.

The move from our past focus on internet technology to eBusiness happened in 2002, after our member companies had succeeded in establishing a robust internet architecture. In light of the extremely quick growth in use of the internet, by both the general public and profes-

sionals, the railways adapted their information systems capacities to the new stakes. Now, in 2006, eBusiness resources are being used with integrate systems, enabling web services and providing effective data exchange systems for better customer service and enhanced rail service reliability.

“This year's conference was a good balance between strategic goals and practical solutions,” stated Mohamed Bhanji, eBusiness Conference Chairman and Director, Marketing Technologies, VIA Rail Canada. The conference provided concrete examples of IT and eBusiness applications that can be leveraged to meet the defined strategic goals of our members.

In addition, the new European Regulation to implement the Technical Specification for Interoperability in Telematics Freight (TSI-TAF) provided a strategic context for the conference. Antonio Colaço, of DG TREN, urged the “Coherent management of information across the commercial, logistic and operational chains of the railways” in order to ensure sustainable growth.

One of the underlying trends identified during the conference was that IT resources must be considered as strategic business assets, as they strive to develop business with their customers and to leverage existing applications by adapting them to the new regulatory and business environment.



## RICS: Railway Interchange Coding System

In 2001 it was decided to replace the existing railway coding system – which was running out of capacity – by a new one, the RICS (Railway Interchange Coding System). As a consequence, concerned leaflets and applications were to be adapted and an organisation for the allocation and management of RICS codes was created.

The adaptation of all the relevant Leaflets – around 40 covering all areas of railway activity – is to be finished by the end of 2006. For greater efficiency, these adaptations were often merged with updates for the Leaflets.

The migration of applications – dealing with domestic and international information systems – are still running. As far as domestic applications are concerned, railway undertakings prefer to include these updates into their regular change management schedules. Project surveys learned, however, that all the railway

undertakings are planning to have migrated by the end of this decennium. International applications have been migrated or have planned to do so in the coming year.

Today more than 300 RICS codes have been allocated to various types of companies. Due to new regulations and a changing market, there is an increasing demand for codes. The code allocation and management is executed by UIC in coordination with the OSJD. After a trial period, it is planned to improve any points that need be.

## HOSA Communications Platform

Since 2003 the data communication between railway undertakings was run over the Hermes-VPN (Virtual Private Network), provided by Hitrail and serviced by AT&T. The new Hermes-VPN proved to be much faster but also significantly cheaper than the former Hermes network based on the X25 procedure. In recent years the utilisation of Hermes has been reinforced, not only in volume but also in number of users. Amongst the important new users were ISR (International Service Reliability) with their server in Villepinte, France and Europtirails should be noted.

Several railway undertakings (RZD, PKP, OSE, CFR, etc.) have applied for or already have a Hermes connection. The annual turn-over of Hitrail reached €1.1 million.

With the objective of cutting costs and to improving the service level, Hitrail had invited service providers in mid-2005 to tender for a new VPN, resulting in the selection of BT (British Telecom) in spring 2006. By the end of 2006 the current VPN will be replaced by this new network offering more functionality (such as video conferencing, higher speed, etc.) at lower costs.

## UIC Online

One of objectives of the 'new' UIC is to improve access to information in order to achieve the goals of transparency and efficiency within the organisation. Modern information and communications technologies enable UIC to manage internal information or that which we receive from outside.

Tools and procedures have been put in place to:

- ▶ create and develop a pool for knowledge and references, related to the technical rail disciplines in particular,
- ▶ support the work of UIC bodies (forums, platforms, working and project groups) and contribute to the

efficiency of work,

- ▶ provide the information systems necessary for managing UIC, (extranet – <http://extranet.uic.asso.fr>)
- ▶ simplify the exchange of information and improve collaboration between the various players.

New internet technologies lie at the heart of this change in information systems, "UIC online". This evolution entails radical changes in the working culture. It is vital that at all levels everyone is committed to adopting the new tools and procedures.

## New Home Page for the UIC website

Since September 2006, a new home page has been up and online for the UIC website (<http://www.uic.asso.fr>). The UIC website is an international gateway to the world of transport with a specific focus on for players in the railway sector.

The site was designed to support the UIC's role as a technical platform through access to members and, more generally, for international railway community. Our challenge was to offer – from a single entry point – all the information relevant to the different fields of railway activity and contribute to the overall coherence of the rail system.

The UIC website features:

- ▶ smart, streamlined graphic design,
- ▶ user-friendly navigation,
- ▶ an extensive range of railway database search facilities,
- ▶ all the latest news from the field of railway cooperation,
- ▶ hyperlinks giving unlimited access to information in the rail and overall transport fields,
- ▶ on-line sale of UIC products.

### A few figures regarding the UIC website:

Pages available for consultation:	3,000
Documents for downloading:	5,000
Average number of hits per month:	25,000



## UIC project websites

Specific internet sites have been developed to meet the communications needs inherent to various projects. Their presentation and the means of navigating are consistent with UIC's overall image.

The goal of these sites is to circulate information on projects, their objectives, how the work is moving ahead, the results obtained or expected (the 'deliverables'). Generally speaking, they are available to the public, with restricted access to user groups for a private area of the site. Among the project internet sites several are worth particular note: ERTMS, TRIPS, INNOTRACK, Euro-Interlocking, DIOMIS, Use-It, Railpassenger, etc.



## Tools to be used in collaborative work

UIC has a 'communications and cooperation platform' (extranet – <http://extranet.uic.asso.fr>) at the disposal of the experts involved in all the UIC working groups. These experts and members of study organisations can have access to private work areas, consult documents, interact on the work agendas or address books. If they have user rights, they may access the work areas in real time and read, add to, delete or change the information contained in them.

Such a cooperative platform makes it possible to eliminate geographical borders and to work with very short deadlines: it also brings down costs.

In December, 2006, there were 3400 users and 6100 documents were accessible or could be downloaded from 290 companies (railway companies, industry, organisations).

12.

122 TO 123

## An effective Documentation Centre to serve members

In October, 2006, a project was launched to modernise the tools used by UIC's Documentation Centre. The goal was to improve the quality of the services offered to members and to the many people we correspond with.

Following tendering, an outside provider was chosen to equip the Documentation Centre with powerful professional documents management software. It made the electronic management of documents possible as well

as enabling us to have 'web interfacing' and use the multilingual Verity search engine. It also allowed us to ensure the permanent storage of the Centre's archives – over 15,000 references – and made it easier to effectively access them.

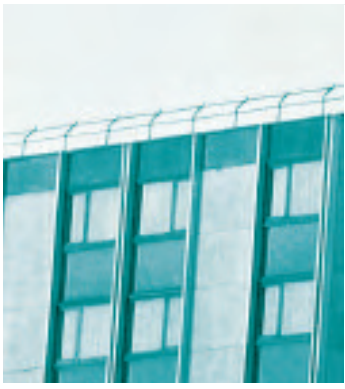
The information available on the data base is accessible to all UIC members as well as to the general public, via the UIC's internet site.





# .14

## UIC Subsidiaries - Products and Services



## The Railway **Technical Publications** subsidiary (ETF): production and publication of UIC Leaflets



Since January 2005, the ETF (Editions techniques ferroviaires) subsidiary has been in charge of the production, publishing and distribution of UIC Leaflets, technical reports and all other UIC publications.

In this framework, ETF has been disseminating, amongst other works, the UIC Terminology Dictionary (the paper version of the RailLexic CD-ROM, containing 16,000 terms, their field of application and grammatical indications) as well as statistical publications (International Statistics 2004 and Chronological Statistics 1970-2004).

In addition, between 2005 and 2006, ETF produced some 206 references to UIC Leaflets, all of which are available via internet, in this way constantly renewing the "UIC code", the catalogue of UIC Leaflets, to an ever greater extent.

The UIC Leaflets on CD-ROM, which came out at the beginning of 2006, is enhanced yearly with the references to the published Leaflets. This list of digitalised Leaflets now totals 574 references.

The "ETF info" distribution list regularly updates cus-

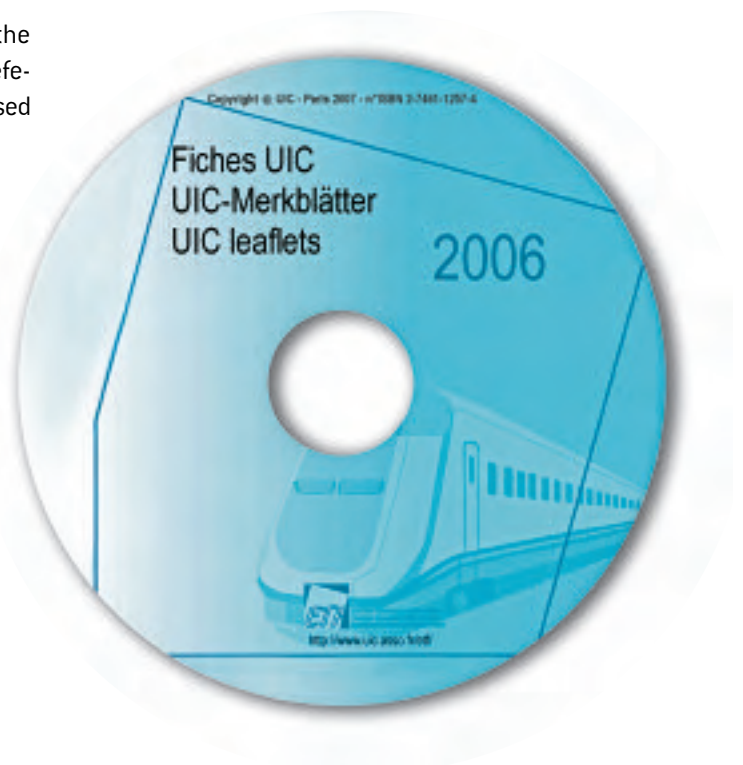
tomers and UIC members on new releases.

Subscription can be made at the following addresses:

- [Etfinfo\\_uicmembers-subscribe@sympa.uic.asso.fr](mailto:Etfinfo_uicmembers-subscribe@sympa.uic.asso.fr) (for UIC members)
- [etfinfo\\_customers-subscribe@sympa.uic.asso.fr](mailto:etfinfo_customers-subscribe@sympa.uic.asso.fr) (for customer requests)

All the ETF products can be accessed at <http://www.uic.asso.fr/etf/>

For any questions, please contact [ETFpubli@uic.asso.fr](mailto:ETFpubli@uic.asso.fr)



## Technical Language Services (L&T)

A team of translators and interpreters recognised across the international railway scene offering quality language services in English, French and German.

L&T is a newly-created subsidiary of UIC in place since 1 January 2005 offering quality language services in English, French and German.

A team of translators and interpreters specialised in a range of technical fields, recognised and appreciated across the international railway scene, providing interpreting services for international conferences and meetings and translations of any document in the field of railways, transport and a host of other areas.

The experience acquired by L&T teams from interpreting at meetings of experts often on highly technical subjects and translating highly specialised technical documents like the UIC leaflets is a guarantee for the quality of the service on offer.

To find out more about the services of L&T, please contact : [LT@uic.asso.fr](mailto:LT@uic.asso.fr)  
and visit <http://www.langues-techniques.fr>







## UIC-Patrimoine (UICP)



The governance of UIC-HQ congress facilities, with their built-in modular structures designed to host seminars and trade events, and capable of accommodating groups of between 10 and 290 persons, transferred to the UIC "Patrimoine" subsidiary on 1 January 2005. UICP, situated between "Quai de Seine" and "Champ de Mars", is well served transport-wise and boasts a most favoured position with an unbeatable view of the Eiffel Tower.

UICP also proposes a wide range of services managed by a professional team working in close synergy with the UIC Language & Technical Services subsidiary (LTS).

For meetings, conferences, colloquia or seminars the UICP team offers the full gamut of audiovisual and multimedia technical systems including:

- ▶ Visioconferencing
- ▶ Teleconferencing

- ▶ High-output Internet access
- ▶ Screen-display of customer's event
- ▶ Videoprojection (LCD 1400, 2100, 4000 and 7700 lumen projectors)
- ▶ DVD, VHS, U/MATIC, BETA SP sound-reproducing units
- ▶ 42" plasma screen for rostrum speakers
- ▶ 4x4m, 8x4m screens
- ▶ XGA Imager
- ▶ Slide projector
- ▶ CD or K7 recording
- ▶ Rostrum with micro-lighting
- ▶ Paperboard, etc.

The UIC HQ building, situated halfway between "Quai Branly" and "Avenue de Suffren", and houses the UICP offices, affords easy access to all commodities.

For further details on UICP and its services, please contact: [houarbi@uic.asso.fr](mailto:houarbi@uic.asso.fr) or [rodriguez@uic.asso.fr](mailto:rodriguez@uic.asso.fr) and also consult <http://www.uic-espaces-congres.fr>



INTERNATIONAL UNION  
OF RAILWAYS (UIC)

16, rue Jean Rey - F - 75015 PARIS

Tél. : +33 (0) 1 44 49 20 20

Fax + 33 (0) 1 44 49 20 29

[www.uic.asso.fr](http://www.uic.asso.fr)

