





High-Speed Rail: Connecting People, Building Sustainable Prosperity



Pennsylvania Convention Center, Philadelphia, USA 10 - 13 July 2012

www.uic-highspeed2012.com

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Congress & Exhibition Secretariat



### UIC'S 8<sup>TH</sup> WORLD CONGRESS ON HIGH-SPEED RAIL



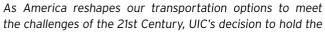
## FOREWORD BY MR. JEAN-PIERRE LOUBINOUX, UIC DIRECTOR-GENERAL (INTERNATIONAL UNION OF RAILWAYS)

"High-speed rail is developing at an impressive pace around the world. High-speed rail is often described as the "transport mode of the future"; it is good for mobility, sustainability, the environment and for people as it creates employment and business through infrastructure and new services. UIC and APTA - with the cooperation of UIC North American

members AMTRAK, the Association of American Railroads (AAR), the Federal Railroad Administration, and VIA Rail - are very happy to organise the 8th edition of our World Congress in Philadelphia, PA, 10-13 July 2012. I hope that all our experiences and those of our members may contribute to making swift progress in high-speed rail development in the USA, thereby enabling the USA to join the world's high-speed rail leaders."

## FOREWORD BY MR. MICHAEL P. MELANIPHY PRESIDENT & CEO OF APTA (AMERICAN PUBLIC TRANSPORTATION ASSOCIATION)

"The American Public Transportation Association (APTA) is excited to be hosting the UIC 8th World Congress on High-Speed Rail and we look forward to welcoming the world to Philadelphia and the United States - 10-13 July 2012.



World Congress here will go a long way in helping the United States gather the critical information and expertise to advance high-speed rail.

The United States is experiencing unprecedented population growth and demand for high-speed rail and high-performance rail is enormous. It will create quality jobs, spur economic development, and be a catalyst for a better quality of life.

By attending UIC HIGHSPEED 2012, all of us share a momentous opportunity to advance high-speed rail and its forward-reaching benefits in the United States and the world."

### Steering committee

Jean-Pierre LOUBINOUX, UIC Michael P. MELANIPHY, APTA

### Organising committee

*Co-chair* Ignacio BARRÓN DE ANGOITI, UIC KellyAnne GALLAGHER, APTA Hervé AUBERT, UIC Barbara MOUCHEL, UIC Paul VÉRON, UIC Naoto YANASE, UIC Jack GONZALEZ, APTA Lenay GORE, APTA Petra MOLLET, APTA Rose SHERIDAN, APTA Kathryn WATERS, APTA

### Scientific committee

Michel LEBOEUF, SNCF, chairman Peter GERTLER, HNTB/APTA, vice chairman Huawu HE, Chinese Ministry of Railways, vice chairman

#### Delegates:

Hervé AUBERT, UIC Ignacio BARRÓN DE ANGOITI, UIC Paul VÉRON, UIC

KellyAnne GALLAGHER, APTA <sup>US</sup>
Petra MOLLET, APTA <sup>US</sup>
Christine SUCHY, AMTRAK <sup>US</sup>
Kathryn WATERS, APTA <sup>US</sup>

Arja AALTO, FTA FI Ibrahim Halil CEVIK, TCDD ™ Chen CHIANG, THSRC ™ Ho Kwon CHO, UIC Adrian DRAGOMIRESCU, CFR RO Andrea GALLUZZI, FS SpA <sup>™</sup> Hong GAO, MOR CN Ottmar GREIN, DB AG DE Lingling HU, UIC Simon HUGHES, HS2 UK Baoshi HUO, MOR CN Carol JONARD, EUROSTAR FR Christophe KESELJEVIC, RFF FR Ted KROHN, DB AG DE Jean-Philippe LAVALLEE, THSRC ™ Gengquan LIU, CARS CN Evgeny MAKHLAY, FPC-RZD RU Federico MEDA, NTV SpA <sup>IT</sup> Ingrid NUELANT, THALYS BE Lars Erik NYBO, JBV NO Pär OLOFSSON, Trafikverket SE Victorino PÉREZ FERNÂNDEZ, RENFE ES Anthony PERL, VIA Rail Canada CA Bohumil POKORNY, CD cz Guilherme QUINTELLA, EDLP BR Jan RACZYNSKI, PKP Intercity S.A. PL Eduardo ROMO URROZ, Fundación Caminos de Hierro (Railways Research Foundation) ES Mohamed SMOUNI, ONCF MA Gerda VAN DEN HEEDE, SNCB BE Robert VANDERCLUTE, AAR us Jiayu WANG, MOR CN Naoto YANASE, JR East JP Michael ZHAO, CARS <sup>CN</sup> Clara ZAMORANO, ADIF ES Andrzej ZURKOWSKI, IK - Railway Institute PL

### HIGH-SPEED RAIL: CONNECTING PEOPLE, BUILDING SUSTAINABLE PROSPERITY

UIC HIGHSPEED 2012, the 8th world congress and trade exhibition on high-speed rail, is the most important event in the long distance passenger rail transportation and infrastructure business. All strategic issues linked to the development of high-speed rail systems will be addressed at this global event organised by UIC and APTA.

This 8th edition will bring together senior officials from international railway organisations and authorities, management of the global railway industry, rail experts and scientists, and project financiers from around the world.

### MONDAY, 9 JULY 2012



### **TECHNICAL TOURS**

### → Sunnvside Yard (Amtrak tour)

Located in Amtrak's Sunnyside Yard the high-speed rail maintenance facility was designed and built as a stand alone structure with 50,126 square feet of shop floor space and a second level with 7,565 square feet of administration offices, including the Yard Masters Suite. The facility is designed with two tracks to support daily service and inspection of high-speed trainsets. Turn around service during the day and periodic maintenance for trainsets, is also performed.

### → Wilmington (Amtrak tour)

Tour guests will travel on the Acela from Philadelphia 30th Street Station and break out into separate groups upon arrival in Wilmington. Groups will rotate through all Wilmington facilities then return back to the station at the end of the tours. Designed by Frank Furness in the Gothic Romanesque Revival style, Wilmington Station was built in 1907 by the Pennsylvania Railroad along with a 3-mile long viaduct to eliminate grade level crossings and to separate rail traffic from the bustling pedestrian traffic below.

### **TUESDAY, 10 JULY 2012**

### **TECHNICAL TOURS**

### → Sunnyside Yard (Amtrak tour)

See information about this tour on Monday 9 July.

### → Wilmington (Amtrak tour)

See information about this tour on Monday 9 July.

### → Operations Control Center (SEPTA tour)

SEPTA, Southeastern Pennsylvania Transportation Authority, offers all modes of public transportation including bus, subway, trolley, light rail, commuter rail and paratransit services. The tour will provide attendees an opportunity to visit SEPTA's state-of-the-art control center where the vehicles for each of these modes are dispatched and managed on a daily basis. The tour consists of 7 separate areas including bus operations and police dispatch.

18:00 - 20:00

OPENING RECEPTION 30<sup>th</sup> Street Station, Philadelphia



## WEDNESDAY, 11 JULY 2012

# SOCIAL, ENVIRONMENT, ECONOMY, FINANCES CORRIDORS INFRASTRUCTURE ROLLING STOCK

08:30 - 11:30	Opening session Mr. Yoshio ISHIDA, Chairman of UIC Mr. Jean-Pierre LOUBINOUX, Director-General of UIC Mr. Michael P. MELANIPHY, President and Chief Executive of APTA Mr. Ray LAHOOD, United States Secretary of Transportation Mr. Gary THOMAS, Chairman of APTA  Invited key speakers Mrs. Anna María PASTOR JULIÁN, Minister of Public Works and Transport of Spain Mr. Denis LEBEL, Minister of Transport of Canada Mr. Takeshi MAEDA, Minister of Transport of Poland Mr. Slawomir NOWAK, Minister of Transport of Poland Mr. Binali YILDIRIM, Minister of Transport of Turkey Mr. Marcel VERSLYPE, Executive Director of ERA - European Railway Agency Mr. Maro MORETTI, CEO of FS II, Vice Chairman UIC & Chairman of CER - Community of European Railway and Infrastructure Companies Mr. Vladimir YAKUNIN, President of JSC Russian Railways RZD Mr. Guillaume PEPY, President of French Railways SNCF Representative of Chinese Ministry of Railways Present status of High Speed Rail around the World by Ignacio BARRÓN DE ANGOITI, UIC						
11:30 - 12:00	General programme presentation by Michel LEBOEUF, French Railways SNCF						
12:00 - 12:30	Press conference Inauguration of the Trade E	xhihition					
12:30 - 13:30	Lunch - Exhibit hall						
13:30 - 15:30	Operation 1 Risk analysis UIC study	Network planning	Noise & Vibrations	Commercial	Infrastructure 1 Tunnels & Bridges		
	Yoshitaka MURONO, RTRI JP Xianchun DAI, CARS <sup>CN</sup> Ming-Wei PIAO, Dalian Jiaotong University <sup>CN</sup> Takeshi OMORI, JR East <sup>JP</sup> Hanwei YANG, THSRC <sup>CN</sup> Ivan SØRENSEN, EC DG Mobility Pierre Etienne GAUTIER, UIC	Giuliano MONTANARO, Alius Consulting & Engineering CH Jianping ZHANG, MOR CN Hiroyuki TAKESHITA, Institution for transport policy studies JP Frédéric DELABORDE, RFF FR Alain SAUVANT, RFF FR Sharon GREENE, Sharon Greene & Associates (SGA) & Sasha PAGE, Infrastructure Managment Group (IMG) US	Nick ANTONIO, ARUP US Tom MARSHALL, HS2 Ltd UK Xiaoan GU, CARS CN Franck POISSON, SNCF FR Patrick VANHONACKER, DS2 International BE YUSUKE WAKABAYASHI, JR East JP	Matt HARDISON, AMTRAK US Andrés LOPEZ PITA , Polytechnic University of Catalonia ES Stuart WALDRON, AMTRAK US Jiansheng ZHU, CARS CN MOCCI/COLOMBO, NTV IT Emmanuele CARANDO, Trenitalia S.p.A IT Marc DESCHEEMAECKER, SNCB BE	Per CORSHAMMAR, Ramboll Sverige AB SE Kiwamu TSUNO, RTRI JP Zaitian KE, CARS CN Gongyi XU, China Railway Major Bridge Reconnaissance & Design Institute co, Ltd CN Greg NAZAROW, Gannett Fleming Transit & Rail Systems US Simon GELEZ, SNCF FR Valentina MONACO, TUV SUD RAIL GmbH DE		
15:30 - 16:00	Break - Exhibit hall						
16:00 - 18:00	Project management UIC study	Operation 2 Signalling & Traffic Management	Infrastructure 2 Track	Rolling stock 1 Design & Manufacturing 1	North American High Speed Corridors		
	Simon HUGHES, HS2 Ltd UK Navin SAGAR, HDR Engineering Inc US Jugal MAKWANA, Bentley Systems IN Christophe KESELJEVIC, RFF FR Jack DOOMERNIK, Lloyd'S Register Rail Europe NL Luis BAZAN, UIC	Kazuhiro YAMADA, JR Central JP Gregory J.M GODFREY, AMTRAK US Jin Ho LEE, KORAIL KR Apolinar RODRIGUEZ DIAZ, RENFE ES François LACOTE, ALSTOM FR Klaus-Rudiger HASE, DB Netz AG DE	David STAPLIN, AMTRAK <sup>US</sup> Jose Manuel GALINDO, ADIF <sup>ES</sup> Emmanuel LAURANS, SNCF <sup>FR</sup> Makoto SEYA, JR East <sup>JP</sup> Yong Jiang XIE, CARS <sup>CN</sup> Senol ERDOGAN, Turkish State Railways <sup>TR</sup> Boris LAPIDUS, JSC VNIIZhT <sup>RU</sup>	Cesar A. VERGARA, Vergarastudio US George MEKOSH, BOMBARDIER US Ruichun LI, Changchun Rail Vehicles CO, LTD CN Todd SNELGROVE, SKF CA Sebastien LAURENT, SNCF FR Joung Yul LEE, Hyundai Rotem KR	California <sup>US</sup> Midwest <sup>US</sup> Northeast <sup>US</sup> Quebec - Windsor <sup>CA</sup>		

## THURSDAY, 12 JULY 2012

# COMMERCIAL OPERATIONS, SAFETY, SECURITY ENGINEERING AND PROJECT MANAGEMENT

08:00 - 10:00	Round Table I - How to deliver a HSR project in today's economic context?  Moderator: Mr. Jean-Pierre LOUBINOUX, Director-General of UIC							
	Mr. Henrique VERDEGUER, Chairman of ADIF ES Mr. Satoshi SEINO, Chairman of JR East JP Mr. Kent ROWEY, Americas Energy & Infrastructure, Freshfields Bruckhaus Deringer US Mr. Joseph BOARDMAN, President & CEO of Amtrak US Mr. Michele ELIA, CEO of RFI/FS IT Mr. Andrew Mc NAUGHTON, Chief Engineer of HS2 UK Mr. Andy KUNZ, President & CEO of USHSR US Mr. Marc JUHEL, Sector Manager Transport of World Bank Mr. Jianping ZHANG, Ministry of Railways CN							
10:00 - 10:30	Break - Exhibit hall							
10:30 - 12:00	Customer Expectations	Operation 3 Capacity	Economy & Finance 1	Rolling stock 2 Design & Manufacturing 2	High Speed Corridors around the World 1			
	David KUTROSKY, Capital Corridor Joint Power Authority US Lenetta Mc CAMPBELL, AMTRAK US Bruno SOL-ROLLAND & Giuseppe BONOLLO, NTV IT Thomas DREXLER, AMADEUS IT Group Rail ES Miroslav HALTUF, H-COMP Consulting CZ	Brennan CAUGHRON, University of Illinois <sup>US</sup> Bo-Lennart NELLDAL, KTH <sup>SE</sup> Yang Ping CUI, CARS <sup>CN</sup> He ZUAHG, MOR <sup>CN</sup> Keiya ORINAKA, JR West <sup>JP</sup>	Dieter GOEBEL, ANTT BR Lourdes PORTA, ADIF ES Julie DE BRUX, VINCI FR Christian MESSELYN, ALSTOM FR T.C KAO, University of Illinois US	Mario ORIOL PASTEGA, TALGO ES Hiroyuki SAKURAI, KAWASAKI Heavy Industies, Ltd JP Patrice HOUDU, ALSTOM FR Luca LENZI, Ansaldobreda IT Leif PAULUKUHN, SIEMENS AG DE				
12:00 - 13:30	Lunch - Exhibit hall							
13:30 - 15:30	Economy & Finance 2 UIC study	Environment	Station & Urban Development	Infrastructure 3 Power supply & Signalling	Rolling stock 3 Fleet management & Maintenance			
	Sanjay JAMUAR, Network Rail <sup>UK</sup> Olivier PICQ, SNCF <sup>FR</sup> John CONLOW, AMTRAK <sup>US</sup> Carlos VENTURA, ADIF <sup>ES</sup> Andrea GILARDONNI, FS <sup>IT</sup> Marian LEE, San Maeto County Transit District <sup>US</sup> Paolo FONSECA TEXEIRA, UIC	Takayoshi YAMASHITA, JR West JP Milan JANIC, Delft University of Technology NL Celia Ann PFLECKL, AMTRAK US Chantal CARNIEL, SNCF FR Ho-Hwan JANG, KRNA KR	Cecilia RIBALAYGUA, Universidad de Cantabria ES Andreas HEYM, AREP Ville FR Mark Mc CLAREN, HDR Engineering Inc US Bruno SARRET, SYSTRA SA FR Yasushi IMAHAYASHI, JR Kyushu JP Fernando MESA & Gonzalo BARRENECHEA, AECOM ES	Guido VAN KALSBEEK, SNCF FR Carlos RABANOS, ADIF ES Albrecht BRODKORB, SIEMENS AG DE Hiroshi KANEKO, JR East JP Keith HOLT, AMTRAK US Zhi Yang YU, CARS CN	Scott RILEY, AMTRAK US David BYRNE, AMTRAK US Paolo MASINI, Trenitalia S.p.A IT Pierre MARTY, AREVA NDE-SOLUTIONS DE Gianbattista LA ROCCA & Federico MEDA, NTV IT Xiong KANG, CARS CN			
15:30 - 16:00	Break - Exhibit hall							
16:00 - 18:00	System Optimisation UIC study	Standards, Interoperability & Human factors	Rolling stock 4 Technical Development	Advancing High Speed Rail in USA	High Speed Corridors around the World 2			
	Oscar FROIDH, KTH SE Jean-François PAIX, SNCF FR Masahito ADACHI, JR Central JP Mike GOGGIN, Steer Davies Gleave UK Fred WEIDERHOLD, Paladin Consulting Group Inc US Eduarudo ROMO, UIC	John COCKLE, Parsons Brinckerhoff US Baoshi HUO, MOR CN Philippe CITROEN, UNIFE BE Daniele BASSANO, D'Appolonia SpA IT Thomas JOINDOT, SNCF FR Hiroshi MATSUMOTO, JR Central JP Ignacio Jorge IGLESIAS, ADIF ES	Santiago GONZALEZ KAENDLER, Fundacion Caminos de Hierro ES Victorino PEREZ FERNANDEZ, RENFE ES Sebastian STICHEL, KTH SE Masaaki HARA, JR East JP Jianwei YAO, CARS CN Wenjing WANG, Beijing Jiaotong University CN DE SANTIS & RINALDI & BELFORTE, NTV IT	Brian CAIN, Lockheed Martin Corporation <sup>US</sup> Andrew WOOD, AMTRAK <sup>US</sup> Allison FULTZ, Kaplan, Kirsch & Rockwell, LLP <sup>US</sup> Vukan VUCHIC, University of Pennsylvania & Ross CAPON, National Association of Railroad Passengers <sup>US</sup> John MONSIF, Congressional Bicameral High-Speed & Intercity Passenger Rail Caucus <sup>US</sup> Petra TODOROVICH, Regional Plan Association <sup>US</sup>				

## FRIDAY, 13 JULY 2012

08:00 - 10:00	Round Table II - What part can HSR play in the future transport market?  Moderator: Mr. Michael MELANIPHY, President and Chief Executive of APTA  Mr. Joseph C. SZABO, Administrator of Federal Railroad Administration US Mrs. Barbara DALIBARD, CEO of SNCF Voyages FR Mr. Adrian CORRY, Senior consultant Public Transportation of BMW US Ms. Marilyn Jordan TAYLOR, Dean of School of Design at University of Pennsylvania US Mr. Chang-Young CHUNG, CEO & President of KORAIL KR Mr. Julio GOMEZ-POMAR, President of RENFE ES Mr. Neil PETERSON, Executive Adviser of CH2M Hill US Mr. Vincenzo SOPRANO, CEO of Trenitalia/FS IT
10:00 - 10:30	Break - Exhibit hall
10:30 - 12:00	Closing session Awards for students by Peter GERTLER, Ignacio BARRÓN DE ANGOITI and Michel LEBOEUF Final addresses by Jean-Pierre LOUBINOUX and Michael P. MELANIPHY
13:00 - 18:00	Technical tours  → Operations Control Center (SEPTA tour) See information about this tour onTuesday 10 July  → Wilmington (Amtrak tour) See information about this tour on Monday 9 July  → Manufacture of SEPTA's Silverliner V Regional Rail Cars (SEPTA tour) This tour will offer a look at the assembly of rail cars for the Southeastern Pennsylvania Transportation Authority from production carshell to finished rail car, which is taking place at Hyundai-Rotem's manufacturing facility in Philadelphia, PA. Manufacturing a commuter rail car is a complex and time consuming process. Tour participants will be afforded a tour of this rail car manufacturing facility and experience the opportunity to witness all that is involved in producing a state-of-the-art commuter rail car.

World Congress programme correct at time of printing. Programme is subject to minor adjustments.



# UIC'S 8<sup>TH</sup> WORLD CONGRESS ON HIGH-SPEED RAIL

### **THEMES**

The main themes of UIC HIGHSPEED 2012 are:

- → Social, environment, economy and finances
- Commercial
- → Infrastructure
- → Rolling stock
- Operations, safety and security
- → Engineering and project management
- → Corridors



### THE 8TH WORLD CONGRESS & TRADE **EXHIBITION WILL INCLUDE:**

- → a high-profile world congress on high-speed rail developments with an expected 1,500 participants from all continents
- → a top level international trade exhibition on high-speed rail developments including aspects of rolling stock and highspeed rail infrastructure, latest technology advancements, train operations and services with an expected 4,000 visitors
- > over 100 exhibitors of highspeed rail equipment, services and infrastructure
- technical tours to relevant rail sites
- networking activities

### CONGRESS FEES AND REGISTRATION

Register directly and join the discussions at the w	orld congress!
→ Full congress participant	\$1,595
(congress and networking)	
→ Congress only	\$1,295
→ Networking - a la carte	
☐ Opening reception (10 July)	\$100
☐ Gala dinner (12 July)	\$200
☐ Lunches (11-12 July)	\$100 (per day)
→ Government sector/full time academics	\$795
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→ Full time student	\$195
→ Guest/spouse	\$300

Visit www.uic-highspeed2012.com for more information on congress fees and online registration.

### **TECHNICAL TOURS**

Amtrak and the Southeastern Pennsylvania Transportation Authority (SEPTA) will organise several technical tours to relevant rail sites on 9, 10 and 13 July. The following tours will be organised:

- → Sunnyside Yard: high-speed rail maintenance facility (tour by Amtrak)
- → Operation centers of Wilmington (tour by Amtrak)
- → Operations control center (tour by SEPTA)
- → Manufacture of SEPTA's Silverliner V Rail Cars (tour by SEPTA)

Pre-registration is encouraged as space is limited. The fee is \$25 per tour. Visit www.uic-highspeed2012.com for more information about these tours and registration.

MEET CEOS FROM ALL MAJOR RAIL COMPANIES, CLIENTS, SUPPLIERS, **POLITICIANS AND BUSINESS LEADERS** FROM ALL OVER THE WORLD!



## WORLD TRADE EXHIBITION AND VISITOR REGISTRATION

The trade exhibition at UIC HIGHSPEED 2012 is the largest trade exhibition in the world dedicated to high-speed rail equipment, infrastructure products and services. It offers an excellent opportunity to promote your products and/or services as well as meet new business prospects.

Many exhibitors have already ensured their place at the trade exhibition, including country pavilions from China, Japan and Spain. This is an excellent opportunity to demonstrate your innovative products and services to the highest level decision makers. Be sure not to miss out and book your stand space!

Opening hours trade exhibition\*:

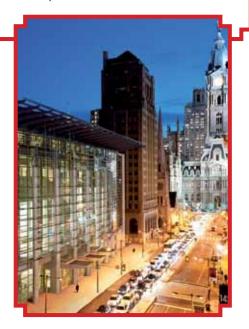
11 July 2012 - 10:00 - 17:00 12 July 2012 - 09:00 - 17:00 13 July 2012 - 09:00 - 14:00

\*Schedule subject to modification

Entrance tickets are available online.



UIC HIGHSPEED 2012 will take place at the Pennsylvania Convention Center in Philadelphia which incorporates the former Reading Railroad Terminal. Within ten blocks in each direction there are famed landmarks. From Philadelphia, reaching two of America's most dynamic cities is quick and easy. New York City and Washington, DC are within 1 hour and 45 minutes away by train. The Convention Center is easily accessible by car, train and several international airports with rail connections.





### HIGHLIGHTS OF PHILADELPHIA

As America's first capital city, Philadelphia has a rich history. Famous landmarks and tourist sites include: Independence Hall, National Constitution Center, the Liberty Bell and America's most historic square mile, in addition to world class museums, galleries and performing arts. Visit www.uic-highspeed2012.com for a complete list of attractions, restaurants and other local information.

#### **SPONSORING**

Follow the examples of LTK Engineering, HDR Engineering Inc., Plasser & Theurer, HNTB, Amtrak, The NorthEast Maglev, SKF, Arup and Moxa and become a sponsor! UIC HIGHSPEED 2012 offers you and your company a unique platform for networking with industry colleagues and meeting new domestic and international prospects. You will have the opportunity to enhance your corporate identification and goodwill to a highly targeted, decision-making audience. During UIC HIGHSPEED 2012 your corporate identity is omnipresent and visible to all participants. You will also profit from the elaborate publicity campaign that precedes the event. Please contact Ms. Sandra van Beek for more information or a custom made proposal: svanbeek@uic-highspeed2012.com

### **HOTEL ACCOMMODATIONS**

UIC HIGHSPEED 2012 has selected the Philadelphia Marriott Downtown Hotel as the official hotel, offering special attendee discount rates. A walkway directly connects the hotel with the venue of UIC HIGHSPEED 2012, the Pennsylvania Convention Center. Visit www.uic-highspeed2012.com for more information on the discounted room rates and hotel reservations.

#### Follow us on:





Rail events group

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### Congress & exhibition secretariat



Please contact us for more information: Europoint, Ms. Ilona Leuvenkamp (world congress), Ms. Sandra van Beek (trade exhibition). P.O. Box 822, 3700 AV Zeist, The Netherlands. T: +31 (0)30 6981 800, F: +31 (0)30 6917 394, E: ileuvenkamp@uic-highspeed2012.com, svanbeek@uic-highspeed2012.com, I: www.uic-highspeed2012.com