

# Railtalk Magazine Xtra

Issue 80x | May 2013 | ISSN 1756 - 5030



# Railtalk Magazine *Xtra*

Welcome to the Railtalk Magazine Xtra, which compliments the main Railtalk Magazine and means that we can put even more pages together every month. As always in Xtra, we focus on life outside the UK, and once again we have some excellent shots from around the world. Our "From the UK" section this month visited the Foxfield Railway for its Spring Gala. If you have never visited the line and like industrial steam, then the line is a must, its steep gradient out of the colliery really has the engines working hard, and at the Caverswall Road depot there is plenty to see and do.

Well I visited the Embassy and Bolton Abbey railway this month and I'm afraid that all certainly did not go to plan. Firstly their interpretation of a timetable is not the same as most other lines, with a 40 mins delay after running just one passenger train, all due to some very poor shunting of stock and then when the platform staff blew the whistle, the guard went to get a cup of tea! Secondly if a timetable (given at the same time as purchasing my ticket) states that a service should stop at a station showing an arrival and departure time, then is it unreasonable to expect it to stop? When I asked why it didn't stop, I was told that the timetable must be wrong! Thanks!!

No such problems with my first visit to mainland Europe of the year, I must say that I had an excellent time travelling through Germany and onto the Czech Republic, far better than flying, but obviously it did take considerably longer. I really can't wait to go again now and I can certainly recommend the ICE services from Brussels through to Frankfurt and then onto Dresden. Upon arrival into Czech, I was amazed at how many Polish locos are now operating in the region.

As always thanks for reading the magazine and remember, if you are going on holiday, don't forget to pack the camera!

**David**

*Once again many thanks to the many people who have contributed, it really makes our task of putting this magazine together a joy when we see so many great photos. This issue wouldn't be possible without: Colin Gildersleve, Steve Madden, Brian Battersby, Paul Godding, Richard Hargreaves, Pavel Kopec, Tomáš Kubovec, Martin Grill, Martin Válek, Mark Pichowicz, Richard Weber, Filip Štajner, Pavel Šturm, Bea Želtvayová, Petr Holub, Pavel Martoch, Honza Štofaňak, BVT, Ivo Rušák, Zdeněk, Mirko, Libor Hyžák, Keith Hookham, Jaroslav Charvát, Matouš Vinš, Martin Hill, Steve Dennison, Ian Leech, Anton Kendall, Laurence Sly, Colin Hart, John Coleman, Steamsounds, David Mead, Piotr Kozlowski, Derek Neesham, Roger Williams, Mark Bearton, Andy Pratt, Gary Smith and John Hitchen.*

Front Cover: On March 5th, Rheinbraun No. 505 is seen passing Frechen, near Köln. [Mark Bearton](#)

This Page: With an air temperature of -11 deg C and a strong cross wind, DR No. 99.7237 nears the end of its climb up the Brocken with the last train of the day, March 25th. [Mark Pichowicz](#)

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## Submissions

Pictures, articles and news can be entered through the forum, or by email to us at:

**entries@railtalk.net**

Please include a detailed description and credits.

## Railtalk Magazine Xtra

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On April 12th, Hanzalik liveried  
and operated Class 749.262 and 749.263  
are seen stabled at Chomutov. [Class47](#)





On March 24th, DR No. 99.5906 stands at Hasselfelde in the glorious afternoon sunshine. [Mark Pichowicz](#)



On March 7th, GM No. 664-106 passes Mackovci with a mixed freight from Hodos Yard. This train was brought over the border by Hungarian electric loco No. 630-138. *Steve Madden*



PKP Cargo locos, Class ET41-188 and ET22-881 are seen stabled at Decin on April 12th. [Class47](#)



Trenitalia Class E655.514 passes Bibbiana  
with empty lime stone train No. 56623 from  
Rosignano to Sanvincenzo on April 16th. [Laurence Sly](#)



On March 23rd, DR No. 99.7243 rests on  
Wernigerode depot after a hard days work  
climbing the Brocken. [Mark Pichowicz](#)







EMU No. 611 006 waits to depart  
Dugo Selo station with a local service for Zagreb.  
All of these units are covered in Graffiti like this one, they only clean it  
off from the number on the front and side. [Steve Madden](#)



Wuppertal Schwebebahn Nos. 17 and 10  
pass at Volklinger Strasse on March 6th.



*Mark Bearton*





On March 4th at Zagreb Ranzimi Kol depot, electric loco Class 1141-306 stands alongside a rather wrecked Class 1061-007. [Steve Madden](#)



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HŽ VUČA VLAKOVA

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Top Right: CD Class 380.007 is seen working train No. R624 'Portas'  
from Vsetin - Prague on April 10th. *Ivo Rušák*



Bottom Right: CFL Class 628.506 working the CFL train No. RE5215  
from Kreuz-Konz to Trier, is seen passing through Igel on April 26th. *Ivo Rušák*



Below: Ceske Drahy Class 460.023 in the Najbert livery is seen working stopping train  
No. Os3226 from Vsetin to Jablunka on April 18th. *Ivo Rušák*



Top Right: CD Class 749.107 poses alongside 749.006 at Cercany on March 17th. Class 749.107 had just arrived with the 09:24 from Praha hl.n and was running round it's stock, while 749.006 was waiting to depart with train No. 9058, the 11:18 to Praha hl.n. [Andy Pratt](#)



Bottom Right: CD Regio Shark unit No. 844.002 waits to depart Plzen hl.n with train No. Os7408, the 08:09 to Domazlice, March 18th. [Andy Pratt](#)



Below: Sporting the new 'Najbert' blue livery of CD, dual voltage electric Class 362.046 departs Zdice with train No. R760, the 14:15 Praha hl.n - Cheb on March 15th. [Andy Pratt](#)



HZ Class 1141-217 is seen working a rather lengthy freight into Zagreb's Ranzimi Yard on March 4th.



*Steve Madden*



PKP Cargo loco Class EU45-846 is seen in Praha hl.n. on April 14th, having arrived with a Regiojet service, replacing a failed Class 162 electric loco. [Class47](#)



**REGIOJET**  
| STUDENT | AGENCY |

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PKP CARGO  
LOGISTICS

EU45-846

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Top Right: On February 24th, Class 661.219 pilots 661.236 with the ECS from train No. 663, the 12:18 from Kicevo as it departs Skopje station. 661.236 had earlier failed and 661.219 was taken from a freight train to assist. [Andy Pratt](#)



Bottom Right: FS Class E655.514 passes Vada whilst working SerFer train No. 56625 from Rosignano to San Vincenzo, April 15th. [Laurence Sly](#)



Below: Class E655.514 passes La California whilst working train No. 56316 from San Vincenzo - Rosignano on April 15th. [Laurence Sly](#)





On April 17th, OBB Class 1216-229 and matching Railjet set is seen departing Praha hl.n. with a Praha - Ostrava special run in conjunction with the announcement of the OBB/CD Railjet service from 2014. [Class47](#)



Slovenian Class 664-120 passes through the loop at Bratonci with a train of empty steel wagons bound for Kosice in Slovakia, March 7th. [Steve Madden](#)



Top Right: Trainkos loco No. 001 stands at Fushe Kosove shortly after arriving with the early morning train from Hani I Elezit on February 24th. [Andy Pratt](#)



Bottom Right: On February 3rd, electric loco No. 4-95-75-A2, which hauled coal to the power station in Plessa, South Brandenburg, Germany. is seen at Kraftwerk Plessa. The power station has been out of service since 1992. [Kai Pernau](#)



Below: Trenitalia Class E402.029 passes behind the airport, shortly after leaving Pisa Centrale whilst working train No. IC657, 08:10 Milano Centrale - Grosseto, April 16th. [Laurence Sly](#)



Top Right: On February 21st, Bar station pilot Class 644.024 stands alongside ZS Co-Co electric 461.156. The Serbian loco had recently arrived with train No. 433, the 20:10 overnight from Beograd, and would return with train No. 430, the 09:00 back to Beograd.

*Andy Pratt*



Bottom Right: Trainkos NoHab No. 007 waits at Fushe Kosove with the ECS to Prishtine for the afternoon train to Peje, February 23rd.

*Andy Pratt*



Below: On April 15th, Trenitalia Class E402.030 passes Vada whilst working Inter City train No. 657, 08:10 Milano Centrale - Grosseto.

*Laurence Sly*



On April 12th, CD Cargo's Class 130.030 is seen awaiting the signal to depart Usti nad Labem, heading for Most. [Class47](#)



Trenitalia Class D445.1037 approaches Poggibonsi whilst working regional train No. 11755, the 08:10 Firenze S.M.N - Siena on April 14th. [Laurence Sly](#)



Trenitalia Class E444.007 passes Castiglione  
whilst working IC505, 06:33 Ventimiglia - Roma,  
April 16th. [Laurence Sly](#)



Top Right: On February 20th, EMU Class 412.103 awaits departure from platform 1a at Beograd station with an unidentified working. There are plans to close and demolish this station and redevelop the area. [Andy Pratt](#)



Bottom Right: Class 661.162 and 661.248 are seen at the roundhouse at Kraljevo on February 22nd, whilst 661.162 is still a runner, 661.248 is being used as a Christmas tree to keep the rest of the fleet running. [Andy Pratt](#)



Below: Class 421.321 departs Stara Pazova at the head of the single coach 16:00 Beograd to Indija service on February 20th. [Andy Pratt](#)







Trenitalia Class E656.040 approaches San Vincenzo whilst working Inter City train No. 505, 06:33 Ventimiglia - Roma Termini on April 15th. Whilst E656s still work the odd Inter City train, they are normally kept on the Milano - Genova - Ventimiglia route where the timings can be maintained and as such this working is exceptional.

*Laurence Sly*

Top Right: Class 218. 304 is seen getting ready to depart with a ballast train at Buchloe.

*Andy Pratt*



Bottom Right: SVG owned Class 2143.18, a former öbb lok is occasionally hired in by Alex to work trains on the Oberstdorf branch, seen here waiting to depart Immenstadt.

Departing in the background can be seen the portion of the train to Lindau, services from München dividing and joining here at Immenstadt. *Andy Pratt*



Below: Now converted for departmental use, Class 218.392 is waiting to propel it's short train out of the sidings at Cottbus on a bitterly cold January 25th.

*Andy Pratt*



In the new Frecciabianca livery, train No. 9763  
the 06:52 Genova P.P. - Roma Termini passes  
Bilbbona on April 16th. [Laurence Sly](#)



Top Right: Privately owned Class 232.107 is seen in the works at Cottbus on January 25th. [Andy Pratt](#)



Bottom Right: PKP Cargo Class SU46-011 arrives at Forst (Lausitz) on the German/Polish border with train No. EC248, the 12:19 Wroclaw Glowny - Lüneburg on January 25th. The Polish engine will work the train through to Cottbus where a DB electric will take over. [Andy Pratt](#)



Below: The Zittauer Schmalspurbahn operates from Zittau to Bertsdorf and the branches to Kurort Oybin and Kurort Jonsdorf in Eastern Germany close to the Polish and Czech borders. Services are normally steam hauled with a few peak summer weekend services operated by railcar or diesel loco. 750mm gauge 2-10-2T No. 99.731 is seen after running around it's train at Kurort Oybin on January 26th. [Andy Pratt](#)



CD Class 742.110-0 stands alongside a row of withdrawn  
Class 751s at Ostrava hl.n. on April 16th.

*Class47*



Top Right: Renfe owned and heavily graffitied Class 251.016 is seen stabled at Irun on January 31st. [Andy Pratt](#)



Bottom Right: Eibsee station on the Zugspitzbahn with the Zugspitze summit just obscured by cloud in the background. The 19.0 km metre gauge Bayerische Zugspitzbahn runs from Garmisch, 705m above sea level, adjacent to the DB station at Garmisch-Partenkirchen to the Zugspits Plateau at 2588m above sea level. The first 7.5 km to Grainau (751m) is adhesion worked while the remaining 11.5km to the Plateau is a rack railway, the final 4.8km are in a tunnel, rising 948m in altitude. [Andy Pratt](#)




Below: CD "Goggle" Class 754.006 departs Trebon Lazne station on April 11th with train No. Os 8713, the 15:43 Veseli nad Luznici - Ceske Velenice. This would normally be formed by a pair of Class 814 RegioNova DMUs, however on this date engineering works between Ceske Budejovice and Ceske Velenice meant it was worked by loco and stock instead. [Andy Pratt](#)



DB Class 111.031 is seen at Garmisch-Partenkirchen with a train heading for Innsbruck. [Steamsounds](#)



DB Class 140.681-8 runs along the S-Bahn lines through Hannover Linden with a Peine -  Bremen steel working on December 18th 2012, whilst LOCON No. 208 (the former DB Class 212.357-8) rests on the main in connection with bridge replacement work. [Anton Kendall](#)



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Siemens built SNCB No.1834  
is seen ready to depart from  
Liège-Guillemins. [Steamsounds](#)



SBB Re4/4 No. 11207 is seen at Flüelen  
with a Locarno train. [Steamsounds](#)



DB Class 146.235 is pictured about to leave  
Donaueschingen on the rear of a Karlsruhe  
bound service. [Steamsounds](#)



Top Right: An unidentified CP owned 2 car DMU passes the harbour at Faro at the start of it's journey to Vila Real do Santo Antonio on February 2nd. [Andy Pratt](#)



Bottom Right: A long way from it's former UK home, ECR operated Class 66 246 is pictured stabled just over the French border in Spain at Irun on January 31st. [Andy Pratt](#)



Below: Zürich tram No. 2047 is seen Bürkliplatz with a service for Rehalp. [Stearnsounds](#)



Vattenfall loco No. 4-1277 propels its train out of the Tagebau Cottbus complex on December 15th 2012.



*Anton Kendall*



MRCE owned Taurus No. ES64 U2-018  
(182.518), on hire to DB Regio, works a  
Halle - Eisenach service through Grosskorbetha  
on December 13th 2012. *Anton Kendall*



Top Right: 1938 built 750mm gauge railcar No. 137.322 with trailer car wait to depart Zittau station with a private charter on January 26th. [Andy Pratt](#)



Bottom Right: A Vossloh G6 loco was being used on station pilot duties at Cottbus on January 25th. Here it has just shunted DB Class 101.035 and an additional coach onto the front of train No. EC248, the 12:19 Wroclaw Glowny - Lüneburg service. [Andy Pratt](#)



Below: Blue heritage liveried CP No. 1424 is seen on pilot duties at Lisboa Sta Apolonia station on February 2nd having just propelled in the Talgo stock for the combined overnight train to Madrid and Hendaye. The 1400s were based on the BR Class 20 design loco with the first 10 being built in the Vulcan Foundry at Newton le Willows and exported from the UK. The remainder were built abroad under licence. A few remain in service with CP although they no longer have any regular passenger work. Some have been exported however from Portugal to Argentina where they can still be found in service with various operators. [Andy Pratt](#)



Top Right: SNCF Fret loco Class 437.023 is seen a long way from home stabled on the Polish border at Frankfurt Oder on January 27th. [Andy Pratt](#)



Bottom Right: Former OBB loco Class 1142.579, now in use by northrail, is pictured stabled between duties at Frankfurt Oder on January 27th. [Andy Pratt](#)



Below: PKP Inter City loco Class 370.009 departs Frankfurt Oder on January 27th with train No. EC43, the 09:37 Berlin Hbf - Warszawa Wschodnia. [Andy Pratt](#)





On April 16th, PKP Cargo Class ET22-174 heads light engine through Ostrava hl.n. heading into the nearby yard to collect a rake of coal hoppers. [Class47](#)



Class 66, No. 92 80 1 266 062-9  
(owned by HGK) arrives at Grosskorbetha  
on a tank working on December 13th 2012, The  
small UK profile of the locomotive is apparent.

*Anton Kendall*



Prague tram No. 8471 heads through the streets of the city on April 13th working service 14 and heading towards Masarykovo Nadrazi.



*Class47*



Czech tram No. 8748 heads through the streets  
of the city on April 13th working service 9 to  
Sídliště Řepy. *Class47*



## Bombardier to Supply Further TWINDEXX Vario Double-deck Trains



Rail technology leader Bombardier Transportation will deliver 12 BOMBARDIER TWINDEXX Vario trains for commuter services to Deutsche Bahn AG (DB AG), which won a Europe-wide tender to operate passenger services in the Main-Spessart region. The order placed at the end of March 2013 is valued at approximately 113 million euro (\$145 million US) and is part of a framework agreement signed in December 2008. Under the agreement, DB AG has already ordered 290 variable double-deck coaches for long-distance and regional routes.

The 12 new TWINDEXX Vario double-deck trains each consist of two motor cars and two intermediate coaches. Their wide kinematic profile and lightweight steel construction provide a spacious interior and generous headroom along the upper deck windows. With a top speed of 160 km/h, the trains will operate between the towns of Bamberg, Würzburg, Aschaffenburg and Frankfurt. Delivery of the trains will begin in the second half of 2015.

The coaches provide low-floor entrances and multi-purpose areas on the lower deck with plenty of room to transport bicycles or luggage. Each train has an intermediate coach with a dedicated area for passengers with reduced mobility and a special needs toilet. The upper deck of this coach houses the first class section, with a comfortable 2+1 seating layout and numerous extras such as reading lamps and power outlets. The second class features comfortable seats, tables, adjustable armrests, power outlets and a children's corner. The motor cars and the other intermediate coaches are all equipped with a standard toilet. Low-floor entry allows passengers to board and disembark easily even on routes with different platform heights, serving platforms between 380 mm and 760 mm in height.

"Travelling in the new TWINDEXX Vario double-deck trains from Bombardier is particularly pleasant thanks to their spacious headroom, comfortable seating and large windows that fill the interior with light and offer passengers splendid views," said Dr. Roman Müller, Vice President Sales Germany, Bombardier Transportation. "Our variable trains enable operators to meet fully the needs of modern rail transportation by combining high passenger capacity with enhanced flexibility. Continuous development of proven solutions is the secret behind the success of these popular double-deck trains manufactured in Görlitz. The trains are always state-of-the-art and remain as reliable as ever."

A high proportion of multi-purpose areas distributed along the entire length of the train provide space for up to 48 bicycles. Greater space between seats offering more legroom, a large number of tables, power outlets even in second class, a toilet in each carriage, large windows and high-quality First class seating with real leather seats, carpet and reading lights ensure a comfortable journey. Light, friendly interiors, transparent glass partitions and video surveillance increase passengers' sense of security.

The motor cars are equipped with the reliable, energy efficient BOMBARDIER MITRAC 1000 drive and control system. With four drive motors per power car, a four-car TWINDEXX Vario train is driven via 50% of its axles, which among other things enables rapid acceleration, even in poor weather.

TWINDEXX Vario trainsets can be coupled together to double passenger capacity on busy routes. The trains' length can be adjusted easily by inserting or removing an intermediate coach, demonstrating a high level of flexibility and the advantages of the variable single-car concept.

Bombardier builds its double-deck trains at its Görlitz plant in Germany. Its site in Hennigsdorf, Germany, is involved in a wide range of research and development activities. The bogies are manufactured in Siegen, Germany, and the drive engines are manufactured in Västerås, Sweden. Bombardier has delivered almost 2,000 modern double-deck cars to Deutsche Bahn since 1992.



The main line between Bohumin and Český Těšín has recently been subject to mining subsidence. This is the view from the train, looking at one of the twisted tracks still to be repaired. *Class47*



## Stadler presents mock-up of Berlin underground train at UITP in Geneva



The first Stadler underground trains in Berlin will start service for Berliner Verkehrsbetriebe (BVG) in 2015. The UITP congress in Geneva at the end of May will be the first opportunity for international industry professionals to view the model of the new IK underground train in the form of a walk-in 1:1 mock-up. In the UITP's host city Geneva, visitors can travel on the Tango trams from Stadler. What sets this tram family apart is that it has already been built in a wide range of customer-specific variations.

Last July, Stadler Pankow GmbH, the German company of the Swiss Stadler Rail Group, won the tender for the IK series underground trains for BVG. The initial order was for 2 preliminary series vehicles with an option for another 34 underground trains. This underground order is the first of its kind for Stadler. The two preliminary series vehicles will be put into service on Berlin underground routes U1 to U4 in 2015.

Over the last few months, work has been ongoing at the Babelsberg film studios, under the watchful eyes of the designers (Designbüro Staubach), the Stadler project team and BVG, to produce a 1:1 model of a compartment, including driver's cab. This will be on show at the UITP in Geneva for the industry professionals to walk in and inspect.

### More space in the vehicle

The new narrow-profile underground has a few special features, which are already clearly visible at the mock-up stage. The underground trains are 10 centimetres wider, which was made possible with "ballooning" to create more space for the passengers. The seats and multi-purpose areas are arranged with comfort in mind. Extra space has been created for wheelchairs, pushchairs and bicycles – with consistent barrier-free access also a key consideration. The vehicle has modern passenger information systems and video cameras.

Increased comfort is also embodied in the quiet ride with special air suspension. Another key feature is the driver's workstation, which is designed so that the driver can work in either a standing or seated position – the seat can be converted in a few simple steps.

### Product portfolio at UITP

In addition to the BVG mock-up, Stadler will be providing further insights into its latest vehicle innovations. Various models will be on show, including a 1:22-scale model of the Variobahn in Potsdam. At the UITP, Stadler will be located at Stand 2B360.

Since the beginning of this year, Stadler has been operating a joint venture with a partner in Minsk. In future, Stadler Minsk will also produce and market trolleybuses, primarily for the CIS market. A trolleybus will be showcased at a separate stand. Stadler Minsk and the trolleybus exhibition can be found at Stand 4A350.

### Tango tram in Geneva

Visitors to the UITP in Geneva will also have the opportunity to view the latest generation of trams for themselves: the first 19 of 32 Tango trams ordered have been in service for the Geneva transport operator TPG since 2011. One of the things that sets them apart is their low operating costs. This is due in part to the low levels of wheel wear and low energy consumption. The TPG vehicles are bidirectional. The same type of vehicle is used by BLT (one of the two Basel tram operators) in Basel. Completely different versions of the Tango tram are also in service in other cities, such as Stuttgart.



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## Bombardier Congratulates the City of YongIn on the Opening of the YongIn EverLine LRT System in South Korea



Rail technology leader Bombardier Transportation has celebrated the start of passenger services on the YongIn EverLine LRT System in the City of YongIn, Republic of Korea. The mostly elevated, fully-automated INNOVIA transit system links the Seoul Metropolitan Subway, via YongIn City, with Everland, the region's recreational and entertainment capital. The Everland Resort, one of the largest amusement parks in the Asia Pacific region, attracts more than 6.5 million visitors each year and the new rapid transit system will provide fast and convenient connections for YongIn's citizens and tourists.

Serge Bisson, President of Bombardier Transportation Korea, said: "We congratulate our customer, the City of YongIn, on the opening of the impressive EverLine rapid transit system. Bombardier has worked tirelessly to realize YongIn City's vision of a world-class, environmentally sustainable, energy efficient rapid transit system that complements this beautiful historical city in its pristine natural environment." He added: "As a supplier, operator and maintainer for the system, we are confident that our INNOVIA technology, together with the service delivery support of our highly skilled operation and maintenance team, will provide exceptional service for passengers and meet the high service levels demanded by the city."



Bombardier Transportation is a member of the YongIn Rapid Transit Co. Ltd that won the concession contract in July 2004. The contract included five years of design/build and up to 30 years of operations and maintenance services. The project was a groundbreaking Public Private Partnership and the shareholders invested substantial resources and raised substantial debt and equity funding to finance the implementation of the rapid transit system. Bombardier's scope for the YongIn EverLine System included overall project management of the complete system and electrical and mechanical (E&M) systems of the 18 km driverless INNOVIA ART 200 advanced rapid transit system, including 30 vehicles with Bombardier's linear-induction-motor (LIM) propulsion technology, controlled by the BOMBARDIER CITYFLO 650 automatic train control (ATC) solution. CITYFLO 650 ATC, the world's first radio-based train control technology, offers exceptional operational flexibility and system performance. In addition, Bombardier is currently carrying out the operations and maintenance (O&M) for the system with the possibility of future renewals. Bombardier has recruited a workforce of 170 full-time operations staff in YongIn, creating high-value employment and enhancing local competence levels. The YongIn LRT Consortium comprises Bombardier Transportation and Korean civil works contractors Daelim Industrial Co. Ltd., Hanil Engineering and Construction Co. Ltd., and Korea Development Corporation., as well as Korean electrical and mechanical (E&M) system contractors Hanjin Heavy Industries Co. and Iljin Electric Co. Bombardier is a world leader in designing and supplying fully automated metro systems, monorails and people movers for urban and airport applications. Successfully deployed INNOVIA ART driverless metro systems include Vancouver SkyTrain, New York City's AirTrain JFK, Malaysia's Kelana Jaya LRT system as well as the airport-urban link at Beijing's International Airport in China, and from today, YongIn EverLine in South Korea. Bombardier recently launched the INNOVIA Metro 300 system – the next generation of medium capacity metro technology, which will open a new chapter of high performing and passenger-friendly transportation. Vancouver and Kuala Lumpur are the first customers to place orders for this new vehicle platform.

## Transdev and RATP Dev win contract to operate tramway network in Shenyang, China



As part of French President Hollande's visit to China, in which RATP Chairman and CEO Pierre Mongin, and Transdev Chairman and CEO Jean-Marc Janaillac participated, a contract was signed by the Transdev and RATP Dev joint venture to operate Shenyang's tramway, beginning July 1, 2013.

The contract was signed between the city of Shenyang (capital of the Chinese province of Liaoning with a population of 7.2 million) and an operating company, with an ownership structure typical to Chinese companies, 51% held by the city and 49 % held by the Transdev / RATP Dev joint venture.

The three-year contract covers the operation of four lines over 60 km of track. China's first modern tramway, featuring catenary-free sections, is part of an urban development project that will eventually transport 150,000 daily passengers. The joint venture will initially operate 30 trams and manage two garage depots and maintenance. This is the fifth system operated by the Transdev / RATP Dev joint venture, following the iconic Hong Kong tramways, the Nanjing urban network with nearly 2,000 buses, the bus network serving downtown Macau and line 9 of the Seoul subway.

The contract, valued at more than 330 million yuan (over 41 million euros) for the operation of the tramway network includes a technical assistance provision to ensure a July 1, 2013 operational launch in anticipation of the 12th "China National Games 2013" which will begin August 31.



## CAF signs a new contract to supply Rome Metro Units



CAF has signed a new contract with the Rome City Council – ROMA CAPITALE – for the supply of 15 ROME METRO Units, with 6 cars each, including the maintenance of the Units for a period of five years. The deal is worth €113 million.

These new units will run on the Metropolitan Line B of the Immortal City between Laurentina and Rebibbia, as well as on the Northern extension of this line, B1, the first section of which was opened this summer with three stations, with plans to eventually reach IONIO with the commissioning of the new units.

These units are added to the 53 units already supplied by CAF for the ROME METRO since the signing of the initial contract in 2002, which are already providing passenger services on lines A, B and Rome-Lido, with the highest reliability and availability standards in the market.

The new Rome Metro trains supplied by CAF will be made of aluminium, 6 car consists with 4 being motor cars and cabled cars on both ends. They will also feature an unobstructed corridor enabling passengers to walk all along the train.

These units have the most advanced technology and are designed for massive passenger transit under the most stringent quality and safety standards. This is a confirmation of the Company's determination to play a greater role in the Italian market, where, in addition to the various successive contracts executed for the Rome Metro in the last few years, the Company is also supplying 8 Civity EMUs for Trieste and the Sardinia DMUs, and signed a contract late last year for the supply of 250 bogies for the Milan Metro.

## Bombardier Partner CSR Puzhen to Supply Catenary-Free Trams to Nanjing



First catenary-free tram operation with new light and long-life  
BOMBARDIER PRIMOVE battery worldwide

Second success for CSR Puzhen covering 15 trams to be delivered  
to multi-million metropolis Nanjing

CSR Puzhen holds a 10-year-license to produce trams based on  
BOMBARDIER FLEXITY 2 technology

Bombardier partner CSR Nanjing Puzhen Rolling Stock Co. Ltd. (CSR Puzhen), a subsidiary of China South Locomotive and Rolling Stock Corporation Limited, has won an order for 15 catenary-free low-floor trams for the city of Nanjing. The trams for the capital of China's Jiangsu Province, home to over eight million people, will serve two lines in its downtown districts. The new order follows an order for 18 low-floor trams won by CSR Puzhen in January 2013 for the city of Suzhou.

CSR Puzhen will build the trams, based on Bombardier's FLEXITY 2 technology, at its site in Nanjing. Bombardier will supply the propulsion and controls equipment, the bogies and battery systems as well as support the project under a 10-year technology license agreement signed in 2012 for CSR Puzhen to sell and manufacture 100 per cent low-floor trams using Bombardier's technology in China (including Hong Kong and Macao).

The new trams for Nanjing will operate without overhead cables on 90 per cent of the lines based on Bombardier's new high-power PRIMOVE Li-Ion battery systems. They are due to enter revenue service in 2014 in Hexi New City, which is in the south-west of Nanjing, and in Qilin Science and Technology Innovation Park, which is in the east of Nanjing. The 8 km long Hexi line will receive eight vehicles to serve 13 stations, connecting two stops on metro lines 1 and 2 with the venues of the Youth Olympic Games. The 9 km long Qilin line, which features steep sections and a partly elevated route across highways, will receive seven vehicles. On this demanding route, the reliable and efficient catenary-free operation (CFO) based on PRIMOVE batteries will prove the suitability of these batteries for CFO tram systems for almost any line worldwide.

"Cities are looking for smarter and more environmentally friendly forms of transport like these modern trams to sustain economic growth while ensuring the health and quality of life of citizens," said André Navarri, President and Chief Operating Officer, Bombardier Transportation. "Together with our partner CSR Puzhen we will deliver the world's first trams for revenue service with our new light-weight PRIMOVE batteries to the booming metropolis Nanjing. After three contracts for PRIMOVE inductive charging and PRIMOVE batteries for electric buses, this is the next major milestone in bringing clean and unlimited wireless e-mobility to cities around the world."

Jianwei Zhang, President of Bombardier China, added: "There is a big potential market for low-floor trams in China. Through the successful partnership with CSR Puzhen, Bombardier has become one of the pioneers in this field in China."

Following China's first publicly tendered 100 per cent low-floor tram line in Suzhou city, for which Bombardier's partner CSR Puzhen supplies the vehicles, the Nanjing Hexi and Qilin projects are among the first steel-wheel tram lines adopting catenary-free power supply technology in China."

The contract also confirms Bombardier's two-tier CFO strategy for trams, which includes a standard PRIMOVE solution for partial CFO using high-power PRIMOVE batteries as well as a premium PRIMOVE solution for complete CFO systems using both PRIMOVE inductive charging and PRIMOVE batteries.

Each of the 32 m long and 2.65 m wide trams for Nanjing will be equipped with two PRIMOVE battery systems. The new modular traction batteries have been specifically designed for the integration on trams and electric buses. They have been optimized in energy and power density while featuring high-power recharging at the lowest weight and volume currently on the market. The batteries will be recharged via the pantograph during acceleration as well as during the normal dwell times at terminal stops and tram stations while passengers get on and off. In the last 10 months, Bombardier has already signed three contracts with the cities of Brunswick and Mannheim, Germany, and Bruges, Belgium, to integrate zero-emission electric buses using PRIMOVE inductive opportunity charging and PRIMOVE batteries.

The trams for Nanjing will be powered by BOMBARDIER MITRAC 500 propulsion and controls equipment, which is ideally suited to catenary-free solutions and battery assisted propulsion like PRIMOVE. MITRAC 500 is the most competitive and reliable propulsion portfolio combining the best power-to-weight ratio and highly efficient intelligent control system with low energy consumption. In addition, its modular and compact converter product portfolio and modern drive solutions enable great reliability, flexibility and low life cycle costs.

The vehicles will also be equipped with the leading edge BOMBARDIER FLEXX Urban 3000 bogies. Their design combines 100 per cent low-floor vehicle architecture with the robustness of standard axle bogie technology. The bogies ensure low noise and high comfort, reliability and high levels of safety. Thanks to their high technical reliability and significant life cycle cost reduction, FLEXX Urban 3000 bogies are the most environmentally friendly low-floor bogies available in the market.

Rail technology leader Bombardier Transportation has sold more than 1,200 FLEXITY 100 per cent low-floor trams worldwide. About 3,500 Bombardier trams and light rail vehicles are in revenue service or on order in approximately 100 cities across Europe, Australia and North America. Trams and light rail vehicles are the most energy efficient mode of transportation, consuming up to five times less energy per passenger than cars travelling with an average of between one and two people.

Bombardier is the main transportation solutions provider for major world events in China, including the Beijing Capital International Airport's Automated people Mover (APM) system and the Beijing Airport Express Link's BOMBARDIER INNOVIA ART 200 (Advanced Rapid Transit) vehicles for the 2008 Beijing Olympic Games, and the new INNOVIA APM 100 (Automated People Mover) for the 2010 Asian Games in Guangzhou.

## DB lends support to establishment of railway academy in Qatar



German expertise in demand • DB International, Qatar Rail, and Qatar  
University sign letter of intent

When it comes to education and science in the area of rail transport, Qatar puts its faith in German expertise. DB International, Qatar Railway Company, and Qatar University signed a letter of intent entitled the "Qatar Railway Education Alliance" in Berlin recently.

The signing took place during the "Business & Investment in Qatar" forum, which was jointly inaugurated by the German Chancellor, Dr. Angela Merkel, and Sheikh Hamad Bin Jassim Bin Jaber Al Thani, who is the Qatari Prime Minister and Minister of Foreign Affairs.

The letter of intent means the two countries' long-standing cooperation will now be expanded to include education. The three partners intend to establish a railway academy in Qatar to provide technical training and qualify individuals to operate and maintain the transport network being developed there. A chair of railway education is to be created at the academy for this purpose, to be filled by an expert from Germany. There will also be a regular student exchange program for highly qualified students.

"This is another important milestone in Qatar's major education drive and in establishing Qatar as a hub for research and training within the region," said Abdulla Abdulaziz Turki Al Subaie, Managing Director of Qatar Railway Company.

Niko Warbanoff, Chairman of the Board of Managing Directors of DB International, said, "Establishing a railway institute at Qatar University is the logical step following Qatar's decision to develop a rail-based transport network in the emirate. The trust that Qatar has chosen to place in Deutsche Bahn's expertise is a testament to what we have already achieved there." Professor Sheikhha Abdulla Al-Misnad, President of Qatar University, stated, "We are pleased to be part of this collaboration that brings us together with DB International and Qatar Rail on a project that advances Qatar's development and progress."

DB International is Deutsche Bahn's global engineering and consulting business. DB International experts have been working in Qatar since 2008, developing the concept for an integrated rail-based transport network comprising a metro system in Doha and long-distance routes. Since then, they have also worked on numerous planning orders, and have prepared comprehensive tender documents for Qatar's most important project.



## ÖBB says noise is a top priority



ÖBB is to reduce sound through technical innovation

Traffic forecasts show that traffic will continue to increase in the future. Therefore, the topic of noise is not just for people living near railway lines, but also increasingly important for ÖBB. To reduce the noise generated in rail transport, ÖBB must work on technical innovations in infrastructure and of rolling stock.

### Already constructed 850km of noise barriers

Infrastructural measures as measures in railway construction, erection of noise barriers and the possible levying of a “noise-related infrastructure use fee (IBE)”. ÖBB must perform ongoing noise protection measures not only on new and expansion projects, but also on existing routes. Approximately € 15 million will be invested annually on existing lines, meaning that some 13 to 16 kilometers of noise barriers can be erected. The costs are borne equally by the AG and ÖBB infrastructure. For about 70 percent of the affected population implementing agreements have already been completed and mostly already implemented.

Through the construction of noise barriers noise pollution in the neighbouring buildings can be halved. This corresponds to a noise reduction of about 10 decibels (dB). The best effect is immediate behind the noise barrier.

### Railway vehicle noise

Noise also affects railway vehicles, such as driving noise, rolling noise, aerodynamic noise, mechanical noise and brake noises. Since 2007, newly procured freight wagons by Rail Cargo Group, have a much quieter noise levels when fitted only with K-brake blocks. Currently, about 23 percent of the freight cars of Rail Cargo Group are already fitted with K-blocks, and this figure is growing. However, two-thirds of freight trains on the Austrian rail network are foreign or private owners and therefore ÖBB are not directly able to influence these. All passenger cars and railcars use disc brakes and all new vehicles meet the international requirements for the in-vehicle noise emission.

### The future of noise control

The international research project “Europe Train” recommends using a low-cost conversion of gray cast iron brake blocks for freight wagons, the LL ‘whisper’ block. This brake block has the potential to cut rail freight noise compared to gray cast iron brake blocks previously used. The ‘whisper’ is set to secure regulatory approval with cooperation of the European Railway and so bring a noticeable relief throughout Europe for train residents under the auspices of the UIC.



## Bombardier Signs Variation Order as Partner and Supplier of Siemens in the Major Deutsche Bahn Project ICx



Rail technology leader Bombardier Transportation has announced that it has signed a variation order to develop and supply important components for the next generation ICx high speed trains for Deutsche Bahn (DB AG) under a framework agreement with Siemens AG signed in May 2011. DB AG recently expanded its original order by an additional 170 coaches. The variation order of March 2013 is worth approximately 336 million euro (\$440 million US) to Bombardier in addition to the original order.

Bombardier will supply Siemens with, among other components, all the body shells as well as trailer bogies of the new ICx fleet. Furthermore, Bombardier will carry out the final assembly of all end coaches and of some intermediate coaches.

The steel carbodies for the new high speed trains are optimised in terms of aerodynamics and weight, enabling significant reductions in energy consumption. They are being developed in the Bombardier factory in Hennigsdorf and are being manufactured in Görlitz. Project management takes place at both sites. Hennigsdorf is responsible for the final assembly of all ICx end coaches. Bombardier will also carry out the final assembly of up to two intermediate coaches per train at this site.

The BOMBARDIER FLEXX Eco trailer bogies reduce vehicle weight, energy consumption and noise emission. They are being supplied from the Bombardier site in Siegen. The carbody production of the ICx will start in the summer of 2013, final assembly in spring 2014.

## Bombardier Technology Will Boost Transport Capacity in New Delhi



The BOMBARDIER CITYFLO 350 mass transit solution will be delivered on the upcoming extensions to Delhi Metro's Lines 5 and 6

The increased reach will further improve passenger transportation in one of the world's busiest cities

Rail Technology leader Bombardier Transportation has won a new order from Delhi Metro Rail Corporation (DMRC) to deliver the CITYFLO 350 mass transit solution for the upcoming extensions to Delhi Metro's Line 5 and Line 6. The extensions are part of Phase III of Delhi's metro expansion plan, which is changing the face of public transportation in India's capital. Increasing the reach of the two lines which are already operating with the Bombardier automatic train protection (ATP) technology, the new sections will further improve passenger transportation options in this important city. The contract is valued at approximately 2.5 billion INR (35 million euro, \$47 million US).

The extensions will add almost 35 km of double track and 23 stations to the existing 39 km in operation and are due to be completed in 2016. Bombardier's project scope includes the design, manufacture and commissioning of the integrated train control and signalling system, including control centres, trackside and onboard equipment. The new sections will extend Line 6 from Central Secretariat to Kashmere Gate in the north and from Badarpur to YMCA Chowk in the south, and Line 5 from Mundka to City Park. Bombardier's CITYFLO 350 technology has been operating on the two lines since operations started in 2010.

"Bombardier has a strong industrial presence in India, which is central to our company's growth strategy," said Peter Cedervall, President Rail Control Solutions, Bombardier Transportation. "Our rail control technology is playing a vital role in the development of Delhi's metro network, increasing capacity, safety and cost-effectiveness for the operator and enhancing transportation options for passengers. This new contract reflects Bombardier's strong relationship with DMRC and our successful implementation. With our global expertise and local presence, we deliver proven vehicle and rail systems that solve capacity challenges in India and worldwide."

CITYFLO 350 is a system with onboard automatic train protection (ATP) and automatic train operation (ATO), with both ATP information and ATO status displayed in the driver's cab. The track to train communication is achieved via audio frequency track circuits and the system is designed primarily for metro applications where only limited action is required from the train driver. CITYFLO 350 systems are already in operation around the world including in Korea, Peru, Romania, Spain and Turkey.

Bombardier's Rail Control Solutions portfolio covers the whole range of CITYFLO mass transit solutions, from manual to fully automatic systems as well as communication-based systems. It also provides BOMBARDIER INTERFLO mainline solutions, from conventional systems to European Rail Traffic Management System (ERTMS) level 2 systems. Bombardier solutions encompass a complete palette of wayside and onboard products.



## Railjet is presented to the public at a two-day trip to the Czech Republic.



### Regular services commence as of December 2014.

As of December 2014, ÖBB and the Czech Railways (ČD) will connect the cities of Graz, Vienna, Brno and Prague by railjet. This gives the largest cities in Austria and the Czech Republic a comfortable direct connection with shorter travel time. As a teaser, ÖBB and ČD recently presented Railjet in the Czech Republic. The Czech public had the opportunity to visit the future flagship of the ČD.

The railjet brings a whole new quality of travel in the Czech Republic. Railjet will act as strong competitors to the car and bus travel on congested highways and roads. Railjet provides better services not only for business people, but also for rail travellers altogether, such as parents with children, or passengers with bicycles, "said Petr Žaluda, CEO AG ČD.

The rapid Railjet from Graz via Vienna to Prague in December 2014 is an important next step in our quality initiative. Through the partnership with the Czech railways we offer huge improvements for our customers," said Christian Kern, CEO of ÖBB-Holding AG.

#### Railjet connection Graz - Vienna - Prague

From December 2014, ÖBB and ČD will connect the Graz - Vienna - Prague route in two-hour intervals with Railjets. There will be three ÖBB Railjets and seven ČD Railjets used. As a result, passengers will be able to travel directly and conveniently, without change, from Prague to Vienna or Graz by Railjet.

#### Best train for Czech cities

Also a whole new dimension in travel between the two largest cities of Brno and Prague. Here railjet offers an attractive alternative to the congested highway with suitable offers for each target group: the business class for business, first class for demanding passengers or children's cinema for families with children.

#### The same service in ČD railjets

Railjets purchased by ČD and produced by Siemens Railjets will have seven carriages with 442 seats. Of these, five are 2nd Class cars (384 seats), one is a Railjet restaurant and a driving carriage that has business class (seats 6) and First Class (42 seats).

ČD Railjets will offer the same comfort and all the services in Railjet which ÖBB customers are used to. All Railjets are equipped with on-board restaurants and wireless internet connections. Each carriage is equipped with a clear passenger information system using modern screens that inform about the current travel speed, the trains progress via digital maps, the current location and the distance to each destination.

An electronic book display makes it easy to find the seats.

#### Shorter operating time and greater comfort

Through the use of Railjets from Vienna to Prague the travel time will shorten by 30 minutes to 4h 10min and between Graz and Prague the time saving is about 50 minutes, to 6h 50min.



## Foxfield Railway

The Foxfield Light Railway is a preserved standard gauge line located south east of Stoke-on-Trent. The line was built in 1893 to serve the colliery at Dilhorne on the Cheadle Coalfield. The railway was built to provide a link to the North Staffordshire Railway for the Foxfield Colliery.

Visiting the line for the Spring Steam event on April 4th, are Port of Par locos 'Alfred' and 'Judy' with the pair seen here climbing the bank out of Foxfield Colliery. [Mark Pichowicz](#)



W. G. Bagnall 0-4-0ST No. 2842, which entered service in July 2010 following an extensive overhaul, is seen climbing the bank out of Foxfield Colliery, which can be seen in the background.

*Richard Hargreaves*



W. G. Bagnall 0-6-0ST No. 2221 'Lewisham', built in 1927 and stored awaiting overhaul after its boiler ticket expired in late 2007 is seen in the yard at Caverswall Road on April 4th. [Richard Hargreaves](#)



Seen assisting up the bank at Foxfield is Robert Stephenson & Hawthorns 8366/Bagnall 0-4-0DH No. 530003, 'Myfanwy', a tube gauge diesel loco. [Richard Hargreaves](#)





Sentinel Wagon Works 4w No. 9535, built in 1952 is seen on display in the yard at Caverswall Road. April 4th.

*Richard Hargreaves*



Shunting wagons at the colliery is W. G. Bagnall 0-6-0DM  
No. 3150, 'Wolstanton No. 3'. *Richard Hargreaves*



W. G. Bagnall 0-6-0ST No. 2 'Florence' and 'Wolstanton No. 3'  
depart the colliery with a rake of wagons heading for Dilhorne  
Park, April 4th. [Andy](#)



W. G. Bagnall 0-4-0DH No. 3207 'Bagnall' undergoes attention at the Caverswall Road depot, April 4th. [Andy](#)



W. G. Bagnall 0-6-0ST No. 2 'Florence' heads a rake of mineral wagons towards Dilhorne Park, April 4th. [Class47](#)



On display on a low loader was narrow gauge 'Isibutu', a Bagnall 4-4-0T (No. 2820 from 1945) built for Tongaat Sugar in Natal. [Richard Hargreaves](#)





On June 29th 2006,  
withdrawn CD Class 751.032-4  
is seen on Kralupy nad Vltavou depot. [Paul Godding](#)



On July 25th 1983, an OBB Class 5046 diesel unit and trailer waits at Puchberg with the 18:02 to Wien Neustadt. The unit dates from 1954 and was built as a small batch with hydraulic transmission by SGP. The class was basically intended for running on secondary routes in the eastern side of Austria. Note the open balconies – something which would be a no on the main lines with today's health and safety standards!

*David Mead*



DB Class 181.206 is seen arriving  
into Trier on August 30th 2007.

*Brian Battersby*

