

# Railtalk Magazine Xtra

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# 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 looks at the DMU gala recently held at the Llangollen Railway, an event that I attended which featured a variety of 1st generation DMU classes and was really enjoyable. Well done to all concerned with the hosting of the event.

After having an excellent trip to Hamburg, I must say that I was somewhat subdued upon my return to the UK, as a trip to Acton Bridge (on the West Coast main line) produced very little in the way of freight, and I have to ask why? Just about every decent working was cancelled and I thought that it was just a one-off, but then I had an email from a reader to say that they too had visited Acton Bridge and there was very little activity. Is the UK really that bad for freight on the railway? Still it does make visiting mainland Europe more enjoyable and judging by the number and variety of emails this month, many of you agree as the holiday season gets underway.

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 Kozłowski, Derek Neesham, Roger Williams, Mark Bearton, Andy Pratt, Gary Smith and Dave Felton.*

Front Cover: On June 7th, SBB Class 460.011 passes Chateâu de Chillon with train No. IR1715 heading to Brig. [Mark Pichowicz](#)  
This Page: Belarusian Railway’s Class 2M62-1193 catches the last rays of sunshine as it passes Jurni Mulza with loaded coal from Belarus, May 22nd. [Steve Madden](#)



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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

Railtalk Magazine Xtra is published monthly by Railtalk Group. © Railtalk 2013



A TX Logistik freight train heads south past  
Wolf with a Class E189 locomotive  
leading a Siemens built ES64 U2 loco on May 23rd. [Laurence Sly](#)





FS Class E405.018 passes Ossengo with  
a Bologna bound freight train on  
May 20th. [Laurence Sly](#)







Elderly DB Class 151.148-4 passes through Hamburg-Harburg on June 17th with a rake of empty coal hoppers. [Class47](#)





DSB liveried NOHAB No. 1138 passes through  
Hamburg- Harburg on June 18th, hauling  
Cargo Logistik liveried Class 228.321-6 and a lengthy  
rake of containers, heading for the nearby port. [Class47](#)





A double headed OBB freight train heads  
south past Matrei am Brenner, as Class  
1116.103 leads 1116.038 on May 23rd. [Laurence Sly](#)





Built in 1974 for the former Deutsche Reichsbahn, and carrying the now obsolete livery of Railion, Class 155.118-3 is now in use by DB Schenker is seen here passing through Hamburg-Harburg on June 17th. [Class47](#)





A pair of AKN diesel units are seen at Eidelstedt on June 17th. These elderly units are due to be replaced by Alston Coradia units in 2015. [Class47](#)





FS Class E656.052 waits to run round at Verona P.N.  
whilst working Inter City train No. 763, 21:30  
Bolzano - Roma Termini on March 18th. [Laurence Sly](#)





On June 17th, PKP Cargo Class 189-804  
is seen stabled in the sunshine  
at Wilhelmsberg. [Class47](#)





Top Right: Diminutive shunter No. MDD3-01 gets ready to propel it's short train of tanks into a local siding at Fushe Kosove on February 23rd. [Andy Pratt](#)



Bottom Right: An eastbound S Bahn train is seen departing Berlin Ostbahnhof on April 25th. [Steamsounds](#)



Below: A NIR 3000 series CAF unit No. 3002 coasts into Belfast Central with a service for Victoria Street, June 12th. [David Hollowood](#)





Top Right: A Northern Ireland Railway's 4000 series CAF unit, No. 4004 stands at Belfast Central on June 12th. [David Hollowood](#)



Bottom Right: Sri Lanka Railways Diesel Hydraulic Class W1 No. 658 approaches Nattandiya village with the 07:40 Maradana to Puttalam service (train No. 3411) on January 28th. [Dave Felton](#)



Below: On June 15th, CFL Series 3000 locomotive No. 3003 pauses at Luxembourg Gare with a service to Liège-Guillemins. [Steamsounds](#)





A pair of OBB Class 1016 locos, with Class 1016.023  
leading, head south past Wolf with a freight  
service on May 23rd. [Laurence Sly](#)





Slovenian GM Class 664-105 works an empty liner  
past Libanja on March 7th.

*Steve Madden*





Top Right: CD Class 151.007 is seen working service Ex126 'Fatra' from Zilina through to Prague as it passes between Vsetín and Jablunka whilst in the background, Class 380.013 can be seen marshalling its next working, June 8th. [Ivo Rušák](#)



Bottom Right: On April 17th, SRI Rail Invest GmbH Class 151.170 is seen waiting at Lancken. [Steamsounds](#)



Below: A Hamburg S Bahn unit working the S21 line is seen at Hamburg Bergedorf on April 19th. [Steamsounds](#)





Lokomotion's unique liveried Class E185.666 passes  
Gries am Brenner whilst working a southbound  
freight train on May 23rd. [Laurence Sly](#)





An OBB Class 1216 passes Dolce whilst working  
train No. EC88, the 09:04 Verona P.N - Munich  
on May 20th. [Laurence Sly](#)





Top Right: Trainkos Nohab No. 007 stands at Prishtine waiting to work the ECS formed of ex Swedish stock from a Peje service back to Fushe Kosove, The loco sports a dent in it's No. 2 end nose following a shunting accident. [Andy Pratt](#)



Bottom Right: Class 380.016 works train No. Ex521 'Vsacan' from Prague to Vsetin nearing its destination on June 15th. [Ivo Rušák](#)



Below: PKP Intercity Class 370.004 is seen working train No. EC43 to Warszawa Wschodnia as it arrives into Berlin Hbf on April 18th. [Steamsounds](#)





Top Right: DB EMU Class 425-596 passes Class 143.825 both working services to/from Köln Hbf, are seen crossing the Hohenzollernbrücke at Köln on April 22nd.

[Steamsounds](#)



Bottom Right: PKP Intercity loco EP07-1042 with a Gdynia Główna - Zielona Góra service is seen at Gdansk Główny on May 30th.

[Julian Churchill](#)



Below: Tallinn Tram & Trolleybus Company (TTTK), Tatra KT6 tram No. 123 is seen working route No. 2 at Tallinn on June 9th. [Michael Lynam](#)





Top Right: On June 17th, DB Class 296.028-4 is seen  
stabled in the huge yard at Maschen. [Class47](#)



Bottom Right: Sri Lanka Railways Class S8 diesel hydraulic multiple unit No. 832 stands in  
Kochchikade station with 09:10 service from Chilaw to Colombo Fort after the  
termination of the service following civil unrest due to a hike in petrol and diesel  
prices on February 13th. [Dave Felton](#)



Below: Skoda built Prague tram No. 9111 is seen at Újezd on April 23rd,  
working service No. 9 to Sidliste Repy. [Steamsounds](#)





On March 7th, SZ No. 664-108 passes Salovci shortly  
after departing Hodod Yard with a liner for Koper Docks.

*Steve Madden*





Iarnród Éireann GM River Class No. 206 waits  
for the signal to come off at Dublin Connolly  
on June 11th. [David Hollowood](#)





Top Right: On February 23rd, Trainkos No. 001 poses  
outside the depot at Fushe Kosove. [Andy Pratt](#)



Bottom Right: NIR loco No. 8111 has deposited its ballast train  
and is seen heading back to York TMD (Belfast) on June 12th.  
[David Hollowood](#)



Below: DB Class 218.314 and 218.376 are seen working train No. IC2310 to  
Westerland(Sylt) as they pause at Husum on April 21st. [Steamsounds](#)





Latvian Class TEM2-1202 is seen shunting  
inside the Daugavpils P/Way sidings  
on May 22nd. [Steve Madden](#)





PKP Intercity Class EP09-017 is seen arriving into Olomouc with a working from Poland on April 15th. [Class47](#)



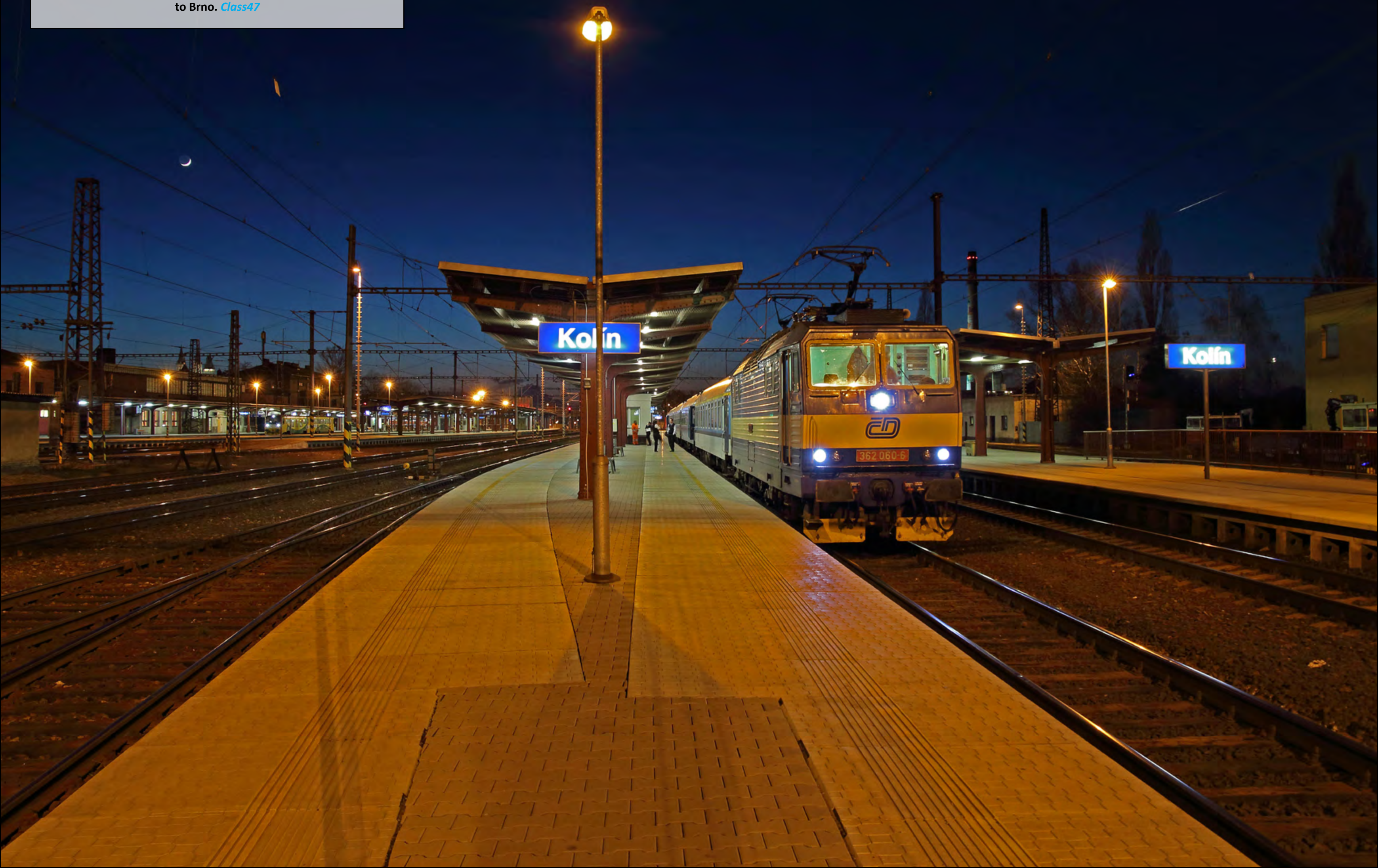


On March 7th, SZ Class 664-105 sits in the loop at Brattonci waiting for a local DMU to clear the single line. [Steve Madden](#)





On April 12th, CD Class 362.060-6 is seen at  
Kolin with a service from Prague  
to Brno. [Class47](#)





Ex East German Class V100, now in service  
with Locon, No. 203 is seen passing through  
Hamburg-Harburg on June 17th. [Class47](#)







On April 12th, CD Cargo's Class 123.016-8 heads through Most with a mixed freight working heading for Usti nad Labem. [Class47](#)





On May 16th, Bulgarian narrow  
gauge Class 75008 departs  
Kostandovo with a train from Dobrinishite  
to Septemvri. [Mark Bearton](#)





The PTG Railtour 'Rail Wonders of Lithuania'  
is seen powered by a class M62,  
No. M62K-1091 at Kuktiskes with the  
Utena to Svencioneliai leg of the tour on May 20th. [Steve Madden](#)





On May 16th, Bulgarian Railways  
Class 77002 departs Velingrad  
heading downhill towards Septemvri. [Mark Bearton](#)





Trenitalia FS Class E652.167 passes La California  
with a northbound train of tanks from  
Scarlino to Rho, April 15th. [Laurence Sly](#)





Siemens built Class DR20's, Nos. ER20-042  
and ER20-041 pass Sausiai, Lithuania  
working a mixed freight from Vaidotai Yard, May 19th. [Steve Madden](#)





PTG Railtour 'Rail Wonders of Lithuania' on  
the Marcinkonys to Vievis leg of the tour  
passes Sausiai with No. TEM2-2762 leading and No. CME3-6327  
on the rear, May 19th. [Steve Madden](#)





On April 15th, Trenitalia FS Class E655.502  
passes La California whilst working a north  
bound train of Alfa Romeo cars from Cassino to Alessandria.

*Laurence Sly*







DSB Class ME 1520 is seen working a service to  
Nykøbing at København H on April 20th.

[Steamsounds](#)





Top Right: On June 18th, Metrans Class 185.510-5 passes through Hamburg- Harburg with a container train heading for the port. [Class47](#)



Bottom Right: PKP Intercity Hussar No. EU44-010 'Municipal Stadium in Poznan' with the Berlin - Gdynia express is seen picking up passengers at Gdansk Glowny on May 29th. [Julian Churchill](#)



Below: A DB railways Class 143 is seen arriving into Warnemunde with a Regio service on June 6th. [Michael Lynam](#)





A pair of OBB Taurus locomotives pass Gries am Brenner with a southbound OBB freight train. The lead locomotive is OBB liveried Class 1116.056, whilst the second locomotive is in the Wien City Airport Train livery, May 23rd. [Laurence Sly](#)





Top Right: Iarnrod Eireann 071 class No. 072 reverses the Tara Mines zinc ore train into Dublin Port, the consist is for export to Finland. [David Hollowood](#)



Bottom Right: DB Class 218 474-5 is seen stabled for the weekend at Goslar, June 6th. [Derek Elston](#)



Below: PKP Regional Transport EMU No. EN 57-955 passes Skowarcz on a Gdynia - Tczew service, May 22nd. [Julian Churchill](#)





Trenitalia FS Class E655.264  
approaches San Vincenzo with a  
southbound freight train, April 15th. *Laurence Sly*





PKP Steam loco No. 0149-59 is seen  
at Poznan Główny with train No. KW77330 to  
Wolsztyn alongside Class EP07-1015, April 18th.

*Steamsounds*





Top Right: Several Luas trams from the Green Line of Dublin's light rail tram system are seen stabled at Sandyford depot on June 13th. [David Hollowood](#)



Bottom Right: With Helsinki Central station in the background, Tram No. 104, a Velmet MLNRV, passes by working on route No. 9, June 6th. [Michael Lynam](#)



Below: Rail Grinder/Engineering vehicle No. 2012 heads along the tramway in Helsinki city centre on June 6th. [Michael Lynam](#)





## Bombardier to Deliver New Commuter Trains to Deutsche Bahn AG for Service in Hamburg



Rail technology leader Bombardier Transportation has won an order from the S-Bahn GmbH, a subsidiary of DB Regio AG, to deliver 60 new single and dual-voltage commuter trains. The Hamburg Parliament has confirmed that from December 2018, the S-Bahn Hamburg GmbH will serve as the operator of the S-Bahn network in Hamburg for another 15 years. In a European tender procedure, the S-Bahn Hamburg GmbH awarded Bombardier the contract to supply the vehicles. The order value amounts to approximately 327 million euro (\$427 million US). The contract provides the option to order up to 86 further trains until the end of 2018.

This order strengthens the market position of Bombardier electric multiple units in Germany and is the first time that Bombardier has delivered trains to S-Bahn Hamburg GmbH without a partner. Bombardier is committed to providing innovative and sustainable transportation solutions that improve urban flow and help cities across the world to breathe again. Today's passengers expect convenient and flexible travel options that offer sustainability, easy access, comfort and reliability. Modern trains produced by Bombardier, including the new S-Bahn trains, combine comfort, speed and environmental performance and will encourage more people to switch from road to rail.

The three-car electric multiple units are characterized by their striking and dynamic exterior design. Each car has three double swivel-sliding doors per side, generous

entry areas and wide aisles which allow rapid passenger flow. The transparent and passenger friendly interior is designed with convenient seating and fixed stopping for standing passengers. A multi-purpose area features two places for wheelchair users, prams, bikes or large pieces of luggage at each end of the train. Information on connecting trains or changing operating schedules are displayed in real-time via a comprehensive passenger information system.

Valuable experience from the previous series has been incorporated in the development of the new S-Bahn trains. The result is a train with innovative technology combined with low energy consumption as well as low maintenance and servicing costs. The carbody's optimized design means that the trains do not require sliding steps for gap bridging. For the first time the trains for Hamburg will be equipped with a compact air conditioning system. The heating system operates with an energy saving heat pump which uses waste heat from the traction equipment system to heat the passenger compartments.

The single-voltage trains with a maximum speed of 100 km/h are used on the urban S-Bahn network with 1200 V DC. The dual-voltage trains operate at a maximum speed of up to 140 km/h on route extensions to the suburban regions at an alternating current of 15kV 16,7Hz. This allows the creation of direct routes to the city of Hamburg, without the need to change trains. The first eight vehicles will be handed over to the S-Bahn Hamburg GmbH by the end of 2016 for a 40-week testing period. Upon successful completion they will be finally transferred and the delivery of the remaining 52 trains can commence. The last train will be delivered in the fourth quarter of 2018.

Design, engineering and final assembly of the trains will take place at the Bombardier plant in Hennigsdorf, Germany. The bogies are manufactured at the Bombardier site in Siegen, Germany.





DB Class 101.025 is seen at Hamburg Altona during a Starlight Express promotion. [Class47](#)



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## Thameslink contract signed: Siemens to deliver trains worth circa 1.8 billion euros



Siemens has secured an order for the supply of 1,140 new commuter rail carriages in Great Britain for a total of around 1.6 billion pounds (approximately 1.8 billion euros). In addition, Siemens will be responsible for the long-term maintenance of the fleet and overseeing construction of two new train maintenance depots. This is the largest order that Siemens has ever won in Great Britain and one of the biggest orders for Siemens' global rolling stock business. Siemens partnered with Cross London trains (XLT) for this important contract. XLT is a consortium comprising Siemens Project Ventures GmbH, Innisfree Limited and 3i Infrastructure plc and will be responsible for financing the deal.



"This order is an impressive reminder of our leading position in the British rail market, where we enjoy an excellent reputation. Our commuter trains are seen as the most reliable in the country. Annually, more than 350 trains travel over 80 million kilometers in Great Britain," says Jochen Eickholt, CEO of Siemens Rail Systems. The Thameslink north-south commuter route runs through London, connecting Bedford, located to the north east of the capital, with Brighton, on the south coast. Introducing a high capacity, high frequency service of longer trains, extended platforms and new stations, the project is regarded as one of the largest rail infrastructure projects in the UK. Siemens was named preferred bidder in June 2011.

For the Thameslink project Siemens invested almost 50 million euros in the development of a new train platform. The new Desiro City for suburban, regional and main-line transport reduces overall energy consumption and track wear by up to 50% compared to predecessor models. Thanks to an improved interior layout, the new generation of trains also offers greater comfort and increased flexibility. The number of seats and the distances between them can also be varied according to passenger demand or the area of deployment, providing additional standing room or space for bicycles and wheelchairs where needed. The trains will be manufactured at the Siemens factory in Krefeld, Germany, and the first trains will enter service in 2016.

Backed by years of experience gained from the delivery of around 1,500 cars of its service-proven Desiro platform for Great Britain, Siemens developed the Desiro City – a new platform designed specifically for the British market. These trains are up to 25 percent lighter than the existing Desiro UK fleet, thanks mainly to car bodies of lightweight aluminum construction and to bogies that are approximately one-third lighter in weight. It has a recycling quota of about 95 percent. The Desiro City is based on the Single Car Concept, which integrates the entire traction equipment into one motor car. All of these motor cars are identically equipped and can be used both as end cars and as intermediate cars. This ensures a high degree of flexibility when it comes to adjusting the train configuration to cope with expected passenger volumes.

The Desiro City Thameslink can be coupled to form 8 and 12-car trains and operated in dual mode (750 V DC or 25 kV AC). They are built for a top speed of 160 km/h or around 100 mph. Siemens on-board units (OBU) that meet the requirements for the European Train Control System (ETCS) Level 2 safeguard the communication between the trains and trackside equipment. A heating, ventilation and air-conditioning (HVAC) system equipped with CO2 sensors automatically controls the flow of fresh air according to the number of passengers in each car. Siemens will also oversee the maintenance of the fleet and build two new rolling stock depots in Three Bridges and Hornsey. Siemens is the market leader for service and maintenance in the UK, ensuring that over 350 trains enter passenger service each day. Including this latest contract, Siemens has now supplied close to 3,000 rail vehicles to Great Britain.



## FLIRTING starts in Holland



### Abellio orders 20 FLIRT3 multiple-unit trains for the Lower Rhine Network from Stadler

A contract for the delivery of 20 electric multiple-unit trains for the Lower Rhine Network was signed between Stadler Pankow GmbH and Abellio Rail NRW GmbH on May 31st. The contract governs the delivery of 13 five-carriage single-system and 7 five-carriage multi-system multiple-unit FLIRT3 trains. The vehicle fleet will come into service with the new timetable in December 2016 on the Düsseldorf to Emmerich and Wesel to Mönchengladbach lines. There will also be non-stop, cross-border traffic on the route between Emmerich and Arnhem in the Netherlands.

In the upstream SPNV competition process for the Lower Rhine Network, the vehicle finance model provided by the Verkehrsverbund Rhein-Ruhr (VRR) was applied. In this model, the future operator procures the vehicles for service on the network and then sells them on to the special-purpose association VRR. VRR becomes the owner of the vehicles, takes over the finance and leases them to the future operator, in this case Abellio, for the term of the transport contract. The five-carriage single-system multiple-unit trains are approximately 91 metres long and have 259 seats, of which 32 are in 1st class. It also has two toilet units, with one a large barrier-free toilet. Because of the space required for the multi-system technology, the five-carriage multi-system multiple-unit trains for cross-border traffic have slightly reduced seating capacity of 251 seats, with 24 in 1st class, and the same interior design for the passenger compartment.



The multi-system technology in the FLIRT3 allows a transition between the different train control systems and different power supply voltages in Germany and the Netherlands. The FLIRT3 was designed with the needs of people with restricted mobility in mind. Generous entrance areas with gap bridging and sliding steps lead into an air-conditioned passenger compartment with low floors throughout. The vehicles have a maximum speed of 160 km/h.

“We are pleased with this renewed vote of confidence from Abellio and the opportunity to extend their existing vehicle fleet with latest-generation FLIRTs,” explains Michael Daum, Director of Stadler Pankow GmbH. “The cross-border traffic into the Netherlands will be a more comfortable experience for the passenger, with no changes required.” Stadler Rail Group, system supplier of customer-specific solutions for rail vehicle construction, has locations in Switzerland (Altenrhein, Bussnang and Winterthur), in Germany (Berlin-Pankow, Berlin-Hohenschönhausen, Berlin-Reinickendorf and Velten), in Poland (Siedlce), Hungary (Budapest, Pusztaszabolcs and Szolnok), the Czech Republic (Prague), Italy (Meran) and Algeria (Algiers). The Group has a workforce of around 5,000 people. The best-known vehicle series from Stadler Rail Group are the articulated multiple-unit train GTW (563 trains sold), the Regio-Shuttle RS1 (497 trains sold), the FLIRT (910 trains sold) and the double-decker multiple-unit train KISS (170 trains sold) in the railway segment, and the Variobahn (312 vehicles sold) and the newly developed Tango (120 vehicles sold) in the tram segment. The Metro is another addition for the commuter rail market (2 + 34 vehicles sold). Furthermore, Stadler Rail manufactures metre-gauge trains, passenger carriages and locomotives and is the world’s leading manufacturer of rack-and-pinion rail vehicles.

DB Class 99.2322-8 is seen working a Molli-bahn 900mm gauge train at Kuhlungsborn East. [Martin Hill](#)



## DB Schenker Rail to operate “Bosphorus Shuttle” starting in September



Germany and Turkey to be linked by up to five pairs of trains per week •  
European network will ensure highly reliable transports

Starting in September 2013, DB Schenker Rail will be offering a new service known as the “Bosphorus Shuttle” with three pairs of trains between Germany and Turkey each week. This number will later be increased to five pairs of trains. The new service will strengthen the existing offer between Western Europe and destinations in Turkey. DB Schenker Rail Bulgaria will transfer the trains directly to the Turkish State Railways.

“We are able to offer this service to our customers thanks to DB Schenker Rail’s powerful European network. The high reliability of the transports is guaranteed because we have control over production quality in the region with our companies and are able to offer end-to-end corridor management,” said Dr. Alexander Hedderich, CEO of DB Schenker Rail, on the occasion of the “transport logistic” trade fair in Munich on Wednesday.

The trains need a total of five days to cover the over 2,000-kilometer route which passes through Germany, Austria, Hungary, Romania and Bulgaria. The final destination is Halkali (Istanbul). Both containers and conventional carloads can be transported in the train system.

DB Schenker Rail has companies, affiliated companies and partnerships in 15 European countries.



## Alstom to provide an additional eight X'trapolis trainsets for Melbourne's Metropolitan Rail Network in Australia



Alstom has been awarded a contract by Public Transport Victoria, worth approximately €85 million, to supply eight X'trapolis trainsets for Melbourne's suburban train network. The additional trains will add to the existing fleet of 74 X'Trapolis trains (totalling 444 cars), previously supplied by Alstom to the State of Victoria between 2002 and 2013. The new trains, composed of six cars each, will allow the operator to provide additional services for the busy and growing network, while also increasing the reliability of the entire system. The first of the new trains are expected to be operating on the network in 2015.



"This order for additional trains by Public Transport Victoria is great news for the commuters of Melbourne, local jobs, regional manufacturing and highlights Alstom's trusted local capabilities and excellence in project delivery", said Bernard Joyce, Managing Director of Alstom Transport in Australia and New Zealand.

The X'Trapolis trains have an operating speed of up to 130 km/h with a passenger capacity of more than 1,400 passengers. Each car has three passenger doors per side, customised seating layout and is equipped with a digital passenger information system (PIS).

The X'Trapolis trains will be delivered from Alstom's manufacturing centre at Ballarat in Australia. The Ballarat site has recently delivered seven X'Trapolis trains, ordered by the Victorian Government in 2011, four months ahead of schedule.

Alstom is currently investing over €6 million to upgrade and expand the site, supporting the Government's commitment to the manufacturing sector with 65 new jobs and apprenticeships. This investment will also have a significant flow-on effect for Victorian component suppliers and service companies, supporting another 70 jobs along the supply chain.

Alstom is expanding its operations to deliver high technology engineering and manufacturing jobs, including project management and engineering across rolling stock, signalling, service engineering, optimised maintenance and full train overhaul to further support the growing transport needs of Australia.

## Alstom to modernise regional trains in Germany



Alstom has just been awarded a contract by Landesnahverkehrsgesellschaft Niedersachsen (LNVG) to modernise 24 Diesel Multiple Unit (DMU) Coradia Lint trains currently operating on Weser-Ems network.

The modernisation contract, worth about 27 million euros, will add about 15 years to the lifespan of the trains and improve the journey for the roughly 20,000 passengers who travel daily on the network. The modernisation and certification of the trains will be performed at the Braunschweig facility in Borsigstraße, a site specialised in services for passenger trainsets, and completion is scheduled for December 2015. "Alstom is pleased to be able to help LNVG renew its existing vehicles" says Klaus Hiller, director of the Transport Life Services business unit in Germany. "This is another milestone in the field of service for passenger trains, in which Alstom is one of the world leaders. This job is the ideal opportunity to demonstrate that refurbishing trains is a cost-effective option to extend the lifespan of existing rolling stock."

"The modernisation of the vehicles will guarantee a lifespan of 15 years for the trains which will be running until 2030. It's the passengers who will profit the most", adds Hans-Joachim Menn, Managing Director of LNVG. The modernisation includes, among other things, renewal of the doors and seats as well as of the exterior painting. In addition, Alstom will equip the trains with power sockets and screens for passenger information as well as cameras to increase passenger safety. A wheelchair spot with intercom will also be added. The trains were supplied by Alstom in 1997, and are part of the Coradia-Lint family.

Alstom is the only train builder in Germany offering maintenance, service and modernisation for all types of trains (even those not built by Alstom) as well as for transport information systems. Alstom is modernising, repairing and maintaining electrical and diesel-powered passenger and freight locomotives in the Braunschweig, Salzgitter, Stendal and Waibstadt facilities in Germany. In the coming months, the Braunschweig facility will have its capacities significantly extended.



## Bombardier Transportation Wins Large Order: Deutsche Bahn signs frame agreement for delivery of up to 450 locomotives



Bombardier Transportation and Deutsche Bahn AG (DB) have signed a frame contract for the delivery of electric locomotives. The total potential contract value is up to 1.5 billion euro (\$2 billion US) and includes options for the call-off of up to 450 locomotives by the year 2020. The first call-off of 110 locomotives for DB Schenker Rail and 20 for DB Regio was exercised on June 17, 2013. Based on the list price, the value of 130 locomotives would be 430 million euro (\$573 million US). The frame agreement allows for numerous variations and technical options.

DB's locomotive fleet already includes more than 700 TRAXX locomotives that have delivered freight and passenger transport successfully for more than 10 years. The locomotives in the frame contract represent a further development of the TRAXX locomotive platform already proven in operation. They fulfil the newest European norms and technical standards.

Thanks to its modular construction and equipment with various country packages, the TRAXX platform concept also enables flexible operation in neighbouring European countries. The locomotives are characterized by low life cycle costs and high energy efficiency.

The locomotives are designed for speeds of up to 160 km/h. On request, they can be equipped with "Last Mile" functionality that allows, for example, freight operation of an electric locomotive on non-electrified routes. This increases the efficiency of rail traffic and makes new logistic concepts possible.



## Tram cars from Škoda Transportation (15T ForCity) will operate in China



Škoda Transportation has signed a contract with the Chinese company CSR Qingdao Sifang Co. Ltd., to grant a technology license for the production of ForCity (15T) low-floor trams for China. In the contract Skoda Transportation provides 10-year license to produce up to 400 tram cars. The total contract value could reach up to 5 billion CZK. "China currently has a sophisticated plan for investment in the public transport sector. Therefore, the local market is very interesting for us. But it is also necessary to keep in mind that the market is highly competitive, where all multinational global companies take part. And that is why, I see the contract conclusion as confirmation that our company is able to offer top quality products which can succeed in competition among world manufacturers," says Tomáš Krsek, chairman of Škoda Transportation.

Tram ForCity is a modern, low-floor vehicle that meets the latest safety and technological standards. The unique pivoting bogie has fully individually driven wheels enabling a perfect ride on both straight track and curves. It has low maintenance costs. Currently the tram car For City operates in Prague, Czech Republic and in Riga, Latvia. "The Chinese market is very demanding. Company which can succeed there must be technologically highly developed. Our company is able to compete there with big global players only because we invested huge sums in our research and development every year. As an indication, just in the past three years the amount surpassed over 3 billion CZK," said Krsek.



In China there are more than 160 cities with over one million inhabitants. The rail vehicles should form the backbone of public transport system. "China is currently the most dynamically developing market where no foreign company can succeed without support of domestic company. The fact that we have closed the contract with a strong partner, the Chinese company CSR Sifang, may mean that other trade possibilities open up to us in this country as well," says Petr Vízdal, Director of Business Development at Škoda Transportation.

CSR Qingdao Sifang Co. Ltd. ("CSR Sifang"), a core subsidiary of CSR Corporation Limited, is China's industrialization base for high-speed trains, urban rail transit vehicles, metro vehicles and rail transit equipment. Company is supported by its 1 340 000 m2 modern, professional and massive manufacturing base with superior equipment and advanced processing technologies. CSR Sifang is taking leading role in the R&D of high-speed EMUs in the rail transit industry. New generation of high-speed EMU developed and manufactured by CSR Sifang has created a speed record..

"The contract with CSR Sifang is the result of a long-term focus of the company Škoda Transportation strategy on foreign markets. Recently, the Group Škoda Transportation closed a few significant export contracts in major growing markets, with great additional future for Skoda Transportation," said Zai Shahbaz, Sr.Vice President of Sales at Škoda Transportation.

## Freight trains are becoming quieter



Deployment of quieter freight trains has started in Germany: With the symbolic retrofit of the first of DB Schenker Rail's freight cars with the newly approved LL brake block, the Federal Ministry of Transport, Building and Urban Development (BMVBS), Deutsche Bahn and the International Union of Railways (UIC) gave the starting signal for the retrofit of DB freight cars recently in Berlin. The LL brake block (short for "low noise, low friction") ensures smooth wheel treads leading to a 10 decibel reduction in the noise caused by passing trains, which is perceived as a halving of the noise. "We -Deutsche Bahn and the Ministry of Transport - have set ourselves the goal of halving rail noise from 2000 to 2020. With the approval of the LL brake pad, the signal to successively retrofit DB freight cars with noise reducing brakes has now been given. We hope that other German and European wagon keepers and rail companies will follow suit to achieve an effective reduction of rail noise," said Dr. Rüdiger Grube, CEO and Chairman of the Management Board of Deutsche Bahn AG.

Federal Transport Minister Dr. Peter Ramsauer: "With this new brake technology, freight trains run significantly quieter. This technology has now finally been authorized for use throughout Europe. There is no excuse now for wagon keepers to delay equipping their fleets with these whisper brakes. We are providing public funding for the retrofitting of freight cars until 2020. As of 2021, loud trains will no longer be certified for operation on the German network. We will finally have a more acceptable situation for people living alongside busy railway lines." "Based on the results of tests undertaken with the "EuropeTrain" test train, which for some two years travelled over 200,000 kilometres right across Europe with the participation of various European rail companies and wagon keepers, the UIC committees have now granted the required authorizations. Effective immediately, companies can replace the cast-iron brake blocks with LL brake blocks in the course of routine maintenance work, with no special permission required," explained UIC Director General Jean-Pierre Loubinoux. Additional authorization by national authorities such as the Federal Railway Authority (EBA) is no longer necessary.

DB Schenker Rail, DB's rail freight operator, will retrofit 5,000 freight cars with LL brake blocks by the end of 2014 and, including the cars retrofitted as part of the "Quiet Rhine" project and the new quiet cars that are already in operation, will then have a fleet of over 14,000 quiet freight cars available. To ensure that rail noise is reduced quickly, the focus in 2014 and 2015 will be on car types suited to block train operations.

The costs of the actual retrofitting will be borne jointly by the Federal government using public funding and wagon keepers willing to retrofit. To reduce the burden on the competitiveness of rail transportation, the wagon keepers will receive funding from the Federal government. Any follow-on costs arising after retrofitting has been completed, such as those caused by more frequent inspections and increased wear on wheels, are to be borne in full by the wagon keepers themselves. Public funding in this area could significantly speed up the retrofitting of cars and maintain the competitiveness of rail freight transportation.

In addition to public funding, DB Netz AG introduced a noise-differentiated track access charge system effective as of June 1 of this year, which includes a surcharge for loud trains and a bonus for quiet trains. This will create an additional financial incentive for deploying quiet freight cars. As a result of the "noise surcharge", the sector will become involved in covering the retrofit costs. As early as 2001, DB Schenker Rail began to use the K brake block, which is also a composite brake block, for all newly purchased freight cars. Retrofitting cars in the existing fleet with the K brake block, however, requires extensive modifications to the vehicle's brake system, followed by recertification of the brake system for each type of car. Replacing the cast-iron brake blocks of freight cars of the existing fleet with the newly approved LL brake blocks, in contrast, is possible with no costly modifications required; only the brake blocks themselves are replaced. The costs for retrofitting with LL brake blocks will amount to around EUR 1,700 per car, which is approximately one third of the sum required to retrofit cars of the existing fleet with K brake blocks.

To ensure that the effectiveness of composite brake blocks can be exploited fully on tracks throughout Europe, a determined effort is required by everyone concerned to systematically retrofit freight cars of the existing fleets. In the opinion of the experts, audible success will only be achieved when at least 80 percent of all freight cars in a passing train are equipped with composite brake blocks. For rail freight transportation in Germany, this means that around 180,000 cars will have to be retrofitted, approximately 60,000 of which are operated by DB Schenker Rail. An additional 60,000 freight cars running on the German network are operated by private German wagon keepers, plus approximately 60,000 cars by foreign rail companies and foreign private wagon keepers, with considerable transport volumes.



# Škoda Transportation

## Close an Important Contract with DEUTSCHE BAHN.

By the end of 2016, railway vehicles, made by the Czech manufacturer Škoda Transportation, will be operating on Bavarian railway routes between the cities of Nuremberg – Ingolstadt – Munich. Škoda Transportation will deliver 6 high-capacity train sets including 6 locomotives (109 E) to the German operator DB Regio. This locomotive has been recently awarded as the second in the world the European TSI High Speed RST certificate for 200 km/hour. The total value of the order is exceeding EUR 100 million.

LOKOMOTIVA 109E The Bavarian Railway Company (Bayerische Eisenbahngesellschaft – BEG) put the operation of railway routes between Nuremberg – Ingolstadt – Munich out to tender in 2012. DB Regio (a subsidiary company of Deutsche Bahn, a national German transportation company) joined the tender. The tender held the condition that any party interested in operating the railway routes must be present, along with an offer of a design for the modern high-capacity railway vehicles which it will use. The DB Regio company therefore put out a tender on vehicles, the speed of 190 km/hour, and this tender was won by Škoda Transportation. DB Regio subsequently won the tender for operating the routes of the Bavarian Railway Company with these trains.

‘The fact that DB Regio decided to purchase our railway vehicles proves their high quality. Germany is one of the most demanding markets in the world, especially from the point of view of a strong domestic competition,’ says Tomáš Krsek, chairman of the board of Škoda Transportation.

Škoda Transportation will deliver 6 six-vehicle two-floor train sets - each of which will comprise of 1 driving trailer, 5 intermediate coaches and a locomotive 109 E - to DB Regio. These vehicles will be manufactured for the designed speed of 200 km/hour. The units will also have a pressure-tight bodyshell, which stabilizes the pressure inside the car when passing rail vehicles on high-speed lines, especially in tunnels and thus significantly increases the comfort of the passengers. The entire group of Škoda Transportation will take part in the development and manufacturing of these vehicles. The two-floor coaches will be manufactured in the subsidiary Škoda Vagonka in Ostrava. The complete electric equipment will be supplied by the subsidiary Škoda Electric in Plzeň.

‘It is worth emphasizing that the German customer is very precise and he knows exactly what he requires from the manufacturer. We offered two-floor coaches of a new generation which fully meets with western European standards to DB Regio. We consider it a key reference today that we will deliver railway vehicles for the extremely demanding German market. At the same time, this contract gives us a major opportunity to also

introduce other Czech vehicles onto the railway tracks in Germany and other western European states in the near future,’ says Zdeněk Majer, sales vice-president of Škoda Transportation.

From a technological point of view, it is to be a modern product with cutting-edge equipment. It is interesting that the vehicles are designed for the speed of 200 km/hour while the customer required only approval for a speed of 190 km/hour. The trains will also be fitted with barrier-free access to the height of 760 mm which was one of the most important requirements of the Bavarian Railway Company. The train will have 679 seats in second class and 26 seats in first class. 82 folding seats, 2 seats for passengers with reduced mobility and a multi-function area for up to 37 bicycles was also required. Each train will be equipped with an external and internal CCTV system.



In the last few years, the Škoda Transportation group has concluded several significant export contracts. Recently it signed a contract with the Chinese company, CSR Sifang Qingdao, to provide a licence for technology to produce low-floor trams of the ForCity (15T) type. Škoda Transportation will provide a 10-year licence for the production of up to 400 carriages in the framework of the contract. The total value of the order could reach up to 5 billion Czech crowns.

The delivery of 60 trams for the Turkish city of Konya to the total value of 2.6 billion Czech crowns represents another significant foreign contract. One could also mention the contract with the General Electric Company for the delivery of 660 pieces of complete electric drives for 110 locomotives of the Kazakh State Railways to the value of one billion Czech crowns. In 2012, Škoda Transportation closed a contract for 31 trams for the Hungarian city of Miskolc to the amount of 2 billion Czech crowns, or for example a contract for 23 underground units for the Chinese city of Suzhou to the amount of 500 million Czech crowns. The group will also deliver 9 underground units for the Russian city of Saint Petersburg.

## Emil Zátopek is Back on the Tracks

A new locomotive 109E from Czech manufacturer Škoda Transportation was ceremonially named on June 27th at the Prague Central Railway Station. Due to its high speed and efficiency, it was named after the most famous Czech runner of all time - Emil Zátopek. The locomotive also received type approval for operation in the Czech Republic from the Rail Authority (Drážní úřad). Dana Zátoková accepted the role of the godmother of the state-of-the-art Czech locomotive.

Emil Zátopek is one of the most important Czech sportsmen. More than sixty years ago he succeeded in winning Olympic medals in three long-distance running events (5 km, 10 km and marathon). This outstanding performance remains unsurpassed. ‘It is a great honour for us to be able to name our new locomotive after this Czech and international sporting legend. Emil Zátopek was frequently nicknamed “the Czech locomotive”, and we truly believe that our locomotive will spread international awareness of the Czech Republic just as he did,’ says Josef Bernard, the general manager of the Škoda Transportation company.



The locomotive Emil Zátopek is the latest three-system, high-speed machine intended for operation at speeds of up to 200 kilometres per hour. It is one of the most efficient locomotives in the world in the four-axle locomotive class. Maximum output is approximately 7,200 kW if electrical networks permit. Other qualities of the locomotive include reliability, low energy consumption and friendliness to the environment. The locomotive meets the latest requirements and regulations of the European Union - especially operational safety. ‘Not long after our locomotive received – as only the second in the world – the TSI High Speed RST certificate, it was also granted the type approval from the Czech Rail Authority which followed thorough testing of these machines in trial operations by Czech Railways. Emil Zátopek is, therefore, one of the first machines which meet the latest requirements and regulations of the European Union -, especially regarding operational safety. At the same time, the locomotive is able to operate smoothly across regions with different electrification systems,’ adds Josef Bernard.

The locomotive is intended for operation on the tracks of railway corridors in all neighbouring countries of the Czech Republic and in Hungary. The technological design of the locomotive meets specific requirements of tracks and electrification systems with alternating voltages of 25 kV/50 Hz or 15 kV/16.7 Hz and also with direct-current voltages of 3 kV. ‘We expect full approval of the locomotive in Austria and Poland by autumn 2013. Approval in Germany is expected by the end of this year,’ adds Josef Bernard.

The complete development and manufacture of the new locomotive took place at the Škoda Transportation company in Plzeň. Škoda has invested almost one billion Czech crowns into development. The complexity of the manufacturing process is demonstrated by the fact that the locomotive has more than ten thousand electrical joints and connections and is traversed by approximately thirty kilometres of cables. Škoda Transportation used state-of-the-art materials – e.g. fibre composites similar to those used in Formula 1 cars in its manufacture. Czech Railways have up to now ordered twenty of these locomotives and several locomotives have also been ordered by Slovak Railways. ‘Even abroad there is interest in our locomotive and the penetration of western European markets seems promising. Deliveries of about 40 locomotives for three different customers are being negotiated,’ says Josef Bernard. The locomotive Emil Zátopek continues a long tradition of manufacturing of electrical locomotives of which more than 5,500 have already been supplied by the Škoda company in Plzeň.



## Citadis Compact unique design unveiled to the Pays d'Aubagne et de l'Etoile

Magali Giovannangeli, Chairperson of the Pays d'Aubagne et de l'Etoile, together with artist Hervé Di Rosa and Alstom Transport Design&Styling Director Xavier Allard, recently unveiled the design and livery of Alstom's first Citadis Compact. The first tram - out of eight ordered in October 2011 - is currently being manufactured at the La Rochelle manufacturing site where it will be tested this summer.

The Aubagne Citadis Compact is a work of art which results from a collaboration between Hervé Di Rosa and Alstom Transport's Design&Styling department, not to forget the conurbation's children who were also involved in the creative work. Hervé Di Rosa's contribution has turned it into a one-of-a-kind tram featuring adornments that are warm, colourful and decidedly human. In addition, its rounded design expresses a feeling that is all lightness and softness. The residents of Aubagne will discover this design in real life in February 2014, when the first trainset is to be delivered.

The 22-metre-long Citadis Compact which can hold up to 130 passengers meets efficiently mobility requirements in intermediate-sized conurbations. It has inherited the benefits from the technological expertise and feedback garnered from the more than 1,650 Citadis tramways sold worldwide since the range was launched back in 1997. Its innovations continue facilitating and optimising its commercial operation: the permanent magnetic motors help to reduce power use, while the accessibility of key components like bogies or air-conditioning units facilitate maintenance and reduce tram downtime for more efficiency.

Moreover, it provides passengers with more space and comfort, as well as improved passenger flow thanks to the

double doors – the first time on trams of this length – and to the width of its central aisle. Therefore, accessibility and passenger exchanges are significantly enhanced.



Six out of the 10 Alstom facilities in France are working on the Aubagne Citadis tram: La Rochelle where the tram is designed and manufactured, Ormans (motors), Le Creusot (bogies), Tarbes (electrical and electronic equipment for the traction systems), Villeurbanne (on-board electronics and passenger information) and Saint-Ouen (design).



A Rügensch Bäderbahn (RBB) 750mm gauge Class 251 diesel is seen at Putbus. [Martin Hill](#) 



## Competition continues to increase on German rail network

"The positive trend towards more competition on rail in Germany is still continuing," announced Dr Rüdiger Grube, Chairman of the Management Board and CEO of Deutsche Bahn, at the presentation of the twelfth DB Competition Report. Last year, DB's competitors achieved a share of 25 per cent of the regional rail passenger market in terms of total performance in train kilometres. In the freight sector, the market share of non-DB rail operators in 2012 was even higher, at 28.6 per cent. "In view of this positive trend in Germany, we can see no reason at all why the EU Commission is so intent on breaking up the integrated rail systems in Europe," said Dr Grube, commenting on the proposals contained in the fourth railway package presented in Brussels. "On the contrary, the successful German model should serve as a role model for other countries to finally allow more competition on rail."

Unlike the other transport modes, the German passenger railway undertakings bucked the general decline in demand and actually succeeded in raising traffic performance by four per cent. They also set a new record for the number of passengers, which increased by 49 million year-on-year. Rail freight, however, was faced with a far more difficult market environment in 2012 and the operators lost a small proportion of their market shares to other transport modes. With a decline of around three per cent, however, German rail freight operators still achieved above-average results compared with Europe as a whole, where the average loss amounted to five per cent. The Competition Report shows that the competitiveness of the railways is faced with increasing pressure from various sides: there is no guaranteed funding for reliable rail infrastructure for the future, the time-consuming and complicated train licensing procedures lead to severe competitive disadvantages compared with the other transport modes and finally, no progress has been made in remedying the distortion of the inner-European competition conditions as regards liberalisation of the passenger transport market. "We have to prioritise the resolution of these issues in the current debate on transport policies," demanded Dr Grube. He simultaneously warned of the need to discuss these matters fairly and objectively, based on cost-benefit analyses rather than preconceived opinions, and with the focus on efficient and competitive structures. In this year's Competition Report, DB also provides interesting information about competition in the long-distance market, a fact check which gives a transparent picture of the financial relations within the DB Group, joins the discussion about the consequences of ownership unbundling in the energy sector and gives an overview of new comparative studies on the international railway markets.



Rügensch Bäderbahn (RBB) 750mm gauge railway Class 99.4011-5 is seen at Putbus station. [Martin Hill](#)



## Vossloh España will supply seven Tram-Trains to the United Kingdom

Vossloh España has been awarded a new international contract to supply 7 Tram-Trains to South Yorkshire Passenger Transport Executive, to operate between the centre of Sheffield through to Rotherham Parkgate. The units will enter service in 2015.

In order to prove the case for tram-train type operations in the UK and to improve the connectivity between Sheffield and Rotherham, Norman Baker, Parliamentary Under Secretary for Transport, has given the green light to a Tram-Train pilot project using an innovative Tram-Train vehicle developed by Vossloh España. The Tram-Trains that will enter service on this route will be built in the Spanish factory of Vossloh. The Vossloh built Tram-Train vehicles will be compatible for operation on the existing tramway network in the city of Sheffield as well as entering the heavy rail system at Meadowhall running through to Rotherham Parkgate operating on the existing conventional railway infrastructure.

The project has a total budget of approximately £60 million pounds (about 70 million €) and includes not only the seven Tram-Trains but also the electrification of a stretch of track between Rotherham Parkgate and Meadowhall in addition the construction of a 400 metre line that will link the existing tramway to the heavy rail infrastructure will be constructed, a first in the UK.

The vehicles of Vossloh España are equipped with pneumatic suspension which provides superior dynamic characteristics as well as a comfortable and smooth ride. The Tram-Trains are equipped with modern traction systems of Vossloh Kiepe and are specially adapted to the needs and requirements of the project, fulfilling all the customers actual requirements.

Vossloh España is an expert in vehicle construction. At the Technology Centre in Albuixech (Valencia) locomotives, passenger vehicles, metros and LRVs are designed, manufactured and commissioned ready for operational service.

## Alstom to supply 24 Citadis Compact to the Greater Avignon Metropolitan Area



On June 18th, Alstom was selected by officials of the Greater Avignon Metropolitan Area to supply 24 Citadis Compact trams. The contract is worth about €45 million. Scheduled for delivery in the spring of 2016, Citadis Compact trams will travel on both lines of the future 14.5-kilometre network. Entry into commercial service is planned for late 2016. Greater Avignon is the second metropolitan area in France, after Aubagne, to choose the higher-capacity version of Citadis Compact. The tram, which is 24 metres long, can carry from 133 and 146 passengers (up to 45,000 passengers per day), depending on the interior layout.

Alstom's new contract confirms the high performance of the Citadis range due to a proven industrial organisation, a continuous improvement approach and comprehensive feedback from equipment in use for more than 15 years. This in-depth understanding of how trains in service behave has enabled the Group to deliver optimum long-term maintenance, thus substantially reducing operating costs. Thanks to the modular design of Citadis, Alstom has succeeded in providing a customised styling with interior and exterior features that reflect the City of Avignon's architectural heritage. Large bay windows, air-conditioning and real-time information displays to ensure passengers enjoy a comfortable, safe and pleasant ride. The double doors at the front facilitate the flow of passengers and reduce the time spent on the station platform. In anticipation of changing travel patterns in Greater Avignon, the trams could be extended with two extra modules.

Citadis, which is up to 98% recyclable, plays its part in protecting the environment. The 1,400 Citadis trams circulating in the world today have already saved more than 4 million tonnes of CO2 emissions compared to that of automobile traffic and improves the quality of life in cities thanks to a noise level 4 times quieter (-5 dBA).

The Citadis Compact will be produced in France at Alstom's sites in La Rochelle (train design and assembly), Ornans (engine design and manufacture), Le Creusot (bogies), Tarbes (equipment and traction chain), Valenciennes (control system), Villeurbanne (embedded electronics) and Saint-Ouen (design activities). More than 1,650 Citadis have been ordered by 41 cities throughout the world.



A Class 650 DMU is seen at Putbus on the Island of Rügen, June 10th. [Martin Hill](#)



## Alstom signs an agreement for the production of trams in Ukraine



Alstom and its Russian joint-venture, TramRus, have concluded an agreement with City Transport Group, a filial of the LAZ Group and the main bus manufacturer in Ukraine, to produce modern high speed tramways for the Ukrainian market. The agreement was signed in presence of Ukrainian Prime-Minister, Nikolay Azarov. 80% of the trams currently in operation in Ukraine (2,500 15-metre long trams) are obsolete. The replacement of the fleet will enable urban rail transport efficiency and passenger comfort to be increased.

The objectives of this partnership are to organise manufacturing, operation and maintenance of modern tramways by City Transport Group in Ukraine under licence from TramRus. Based on Alstom's flagship model Citadis, this tramway was specially designed for the CIS market. Suited to the 1524 mm gauge of the region, the Citadis CIS is winterised[2] to withstand temperatures as low as -40°C. It is equipped with new innovative pivoting bogies to fit the existing rail networks, thus reducing implementation time and infrastructure related costs. This new tramway model features state-of-the-art engineering solutions such as composite materials reducing energy consumption by 10%. Modular sections ensure easier repair and lower maintenance costs. The lifetime of the Citadis CIS is 30 years, compared with 18 years for the present Ukrainian trams. Designed for maximum speed of 75 km/h, it can run at an average speed of 25 km/h depending on existing infrastructure and signalling systems, compared to 11 km/h for the existing fleet.

Ukraine's tramway is a full low-floor 25 to 35-metre long vehicle. It can transport up to 255 passengers and provide easy access to people with reduced mobility. It can be equipped with WiFi internet connections and its interior and exterior designs can be fully customised according to the needs of each city. With more than 1,650 Citadis trams sold in 41 cities worldwide around the world, Alstom is a leader in the manufacturing of tramways. To date, Citadis trams have covered 450 million kilometres across the globe and transported more than five billion passengers.

## Bombardier Wins Order to Supply New Generation MOVIA Metro Fleet for Stockholm



- Groundbreaking technology for high capacity and passenger comfort will boost Stockholm metro rail network

- Latest flagship order of BOMBARDIER MOVIA metros in Sweden strengthens position in the international metro market

- Order valued at approximately 5.1 billion SEK affirms Bombardier's strong position in the Swedish market and as a worldwide metro provider

Rail technology leader Bombardier Transportation has announced that it has won an order from SL, the Stockholm Public Transport Authority, to deliver the new generation C30 metro fleet for Stockholm, Sweden, with a contract to provide 96 MOVIA metro vehicles. The contract includes an option for up to 80 further vehicles. The firm order is valued at approximately 5.1 billion SEK (590 million euro, \$771 million US).

Based on the highly successful MOVIA metro platform, which Bombardier has delivered to major cities worldwide from New York to London to Singapore, the new high-technology MOVIA C30 metros have been customised to meet the specific requirements of SL for high availability, accessibility, reliability and passenger comfort. The new fleet will run on the Red Line connecting Stockholm's north-eastern and south-western suburbs directly with the city centre. The four-car vehicles, fitted with a driver's cab at each end, are also equipped with advanced driverless functionality.

The new air-conditioned MOVIA C30 metros offer improved access for passengers with restricted mobility. The vehicles feature advanced passenger information systems and fulfil the highest environmental standards regarding energy consumption and choice of almost entirely recyclable materials. Delivery is scheduled to start in November 2016 with the start of traffic scheduled in early 2017.

The order confirms Bombardier's leadership in providing innovative, sustainable metro solutions worldwide. Bombardier MOVIA metros are high-tech, high capacity trains that deliver rapid, reliable and cost-effective transport for more than seven billion passenger trips globally every year, including major cities like Montréal, Berlin, Shanghai and New Delhi, with new automated vehicles also entering service in Singapore. Bombardier has sold more than 4,000 MOVIA metro cars to date and they travel an average of about 120,000 km per year.

With the new MOVIA C30 metro, SL is once again proving its leadership as a modern operator. The vehicles' passenger comfort, extra capacity and design fit perfectly into a city that is a trend-setter for the entire world. They are equipped with a number of advanced technical features including the extremely energy efficient BOMBARDIER FLEXX Eco bogies that also reduce maintenance costs and the well-proven BOMBARDIER MITRAC propulsion system. These features contribute to maximum passenger capacity with minimal energy consumption and low noise.

The vehicles will travel around 150,000 km per year and will offer the system capacity to transport up to 60,000 passengers per hour. Bombardier will also provide its BOMBARDIER ORBIFLO intelligent train to wayside communication system, which is linked to the driverless feature and also provides real-time service information and passenger service updates.

Bombardier has supplied metro cars to Stockholm for over 60 years, including the C20 series that forms the backbone of the Stockholm metro fleet. The new generation C30 vehicles bring the latest metro technology to enhance the capacity and performance of the city's transport system.





## Bombardier Presents TRAXX AC Last Mile Locomotive at Transport Logistic 2013



Rail technology leader Bombardier Transportation presented its TRAXX AC locomotive with additional Diesel engine plus traction battery at this year's Transport Logistic trade fair from June 4 to June 7 in Munich, Germany. Under the theme "Extending your reach in rail", Bombardier demonstrates how its Last Mile function enables the locomotive to pull heavy freight trains without catenaries over short distances on European corridors.

The innovative TRAXX AC Last Mile locomotive is currently in the approval process. Operational tests have already proved its efficiency in hauling loads of more than 2,200 tonnes. The locomotive is able to run on both electric and

non-electric tracks without stopping for transition. In addition, a radio remote control for shunting is available to increase its operational efficiency.

Over short distances, the locomotive can run exclusively on its battery and thus completely emission-free. This means that railway companies are able to transport goods directly into ports, freight terminals or loading warehouses without the additional use of trucks and shunting locomotives. The new technology offers customers seamless logistics in an increasingly competitive global market.

Railpool and Akiem have already ordered a total of twelve TRAXX AC Last Mile locomotives. Railpool is leasing three of these locomotives to the Swiss railway company BLS Cargo. Initial test runs are currently taking place on the public network in Switzerland. Bombardier is also highlighting its new TRAXX Diesel multi-engine locomotive, which is low in fuel consumption and noise thanks to four Diesel engines. The four engines supply the complete locomotive in parallel and can be switched on and off according to the power requirement. The locomotive complies with the exhaust standard stage IIIB.

The theme "Extending your reach in rail" also applies to Bombardier's latest strategic initiatives to meet customers' needs in new markets more efficiently. At Transport Logistic, Bombardier also focuses on technical solutions such as the online service tool MyBTFleet and remote diagnostics that make maintenance and operation of Bombardier locomotives even easier for customers.

Locomotives are the backbone of most freight and many passenger services around the world. In Europe, TRAXX locomotives are the most widely used, with more than 1,600 of them sold in just over a decade. The TRAXX product family is designed for the transportation of goods and passengers on national and international routes on all networks. It is available in three electrical variants (for multi-system, AC and DC locomotives), as well as in a diesel-electric variant. AllTRAXX locomotives set themselves apart thanks to their modular construction and their highly efficient BOMBARDIER MITRAC propulsion and controls systems. Bombardier plays a pioneering role with regard to new technologies in locomotive construction, enabling the transportation of more passengers and, especially in relation to the TRAXX AC Last Mile, more goods in an economically and ecologically efficient way.



## Llangollen Railway's DMU Gala

The LLANGOLLEN RAILWAY is primarily a steam hauled Heritage Railway Line starting at Llangollen Station, located beside the Dee River Bridge, in Llangollen Town. The journey continues for 7 ½ miles upstream, following the River Dee to the village of Carrog.

The line, located within an Area of Outstanding Natural Beauty, remains close to the waters of the river for most of its length, on the north bank at Llangollen Station, the river is crossed on to the south bank via the Dee Bridge, approximately one mile upstream from Llangollen.

The line has an outstanding collection of Diesel Railcars and many of these together with a couple of specially brought in visiting units made this years DMU gala even more enjoyable.

Without a doubt the star this year was the visiting Ex Arriva Trains Wales, 'Bubble Car' Class 121 032, recently retired from service in the Cardiff area. [Class47](#)





Visiting from the Battlefield Line, Class 121 No. M55005, carrying BR Blue/Grey livery, is seen at Glyndyfrdwy with a working to Llangollen on June 22nd. [Richard Hargreaves](#)





On display at Llangollen station on June 22nd, Cravens Class 105 No. M56456 which is part way through restoration, is seen alongside BR Derby built Class 127/108 combo Nos. M51618 and M56223. [Class47](#)





A 9-car lash up for the commencement of services at the gala on June 22nd. This view shows the ensemble heading back to Llangollen as viewed from the rear unit passing Berwyn.

*Richard Hargreaves*





Great Western Pannier Tank No. 6430 is seen heading for Carrog with the auto-train during the lines DMU gala on June 22nd.

*Class47*





With the River Dee below, Wickham Class 109 Nos. E50416 and E56171 are seen departing Berwyn station with a service for Llangollen. [Class47](#)





Birmingham RC&W Class 104 Nos. M50454 and M50528  
are seen in Llangollen prior to working a service to  
Carrog on June 22nd. [Richard Hargreaves](#)







Another shot of the ex Arriva Trains Wales, 'Bubble Car'  
Class 121 032, recently retired from service in the Cardiff area,  
seen here at Carrog ready to work back to Llangollen. [Richard Hargreaves](#)



'Davy' is an English Electric shunter built for ICI. This loco was one of a small batch built by English Electric in the late 1950s specifically for industrial use, and was based at the ICI plant at Winnington (now Brunner Mond), Northwich in Cheshire. Although based around the Class 08 design, the loco has more in common with the former Class 11 shunting locos, as it has the slightly smaller driving wheels that class had, giving it better tractive effort than the 08's. The shunter is seen here in the yard at Llangollen on June 22nd. [Class47](#)





Seen awaiting restoration at Llangollen on June 22nd was  
Birmingham RC&W Class M50447, in very faded BR green  
livery. [Brian Battersby](#)





CD Class 751.232-0 is seen stabled at  
Kralupy nad Vltavou on June 29th 2006.

*Paul Godding*



# From the Archives





Belgium Railways (SNCB) Class 22 electric locomotive No. 2218 is seen stabled at Gent St. Pieters station on 1st November 1987. *Dave Felton*





On June 21st 2004 a DB service from  
Bad Reichenhall is seen upon arrival into  
Salzburg Hbf where it will terminate and retrace its journey  
back into Germany. *Class47*





SBB Re 6/6 No. 11676 heads a tank train through  
Pratteln on August 21st 2008.

*Brian Battersby*

