The newsletter of ERTMS

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the European Rail Traffic Management System

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Also included in this issue:

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It is shaping up to be an exciting year for ERTMS. The latest issue of *Signal* takes a look at ERTMS around the globe. While ERTMS is being installed across the EU, deployment around the world is accelerating as countries see the benefits and advantages of ERTMS. We also look at the expansion of ERTMS in Europe and its first high speed cross-border use, as well as new EU funding for ERTMS projects.

The Signal team

Setting a global standard: the growing use of ERTMS abroad

By Paolo de Cicco – UIC

Paolo de Cicco has been seconded to UIC (International Union of Railways – Paris) since 2003 from RFI – the Italian infrastructure manager. He is responsible for co-ordinating activities of the ERTMS Platform. He is also the project co-ordinator of the 'Integrated European Signalling System' research project – under the EU's 7th Framework Programme.

The UIC ERTMS World Conference held in Malaga in April 2009 showed that ERTMS, initially a major European project, now has become the global signalling standard and is being embraced by railways worldwide. According to UNIFE (Association of the European Rail Industry), nearly 50 % of total ERTMS trackside investments are made by non-European countries. ERTMS is a showcase for European technology excellence worldwide and railways outside Europe find ERTMS to be an advanced and price-competitive solution to their signalling needs.

More than 2 000 km of ERTMS are in commercial operation outside Europe and an additional 10 000 km are already under contract. Within Europe, at the end of 2009, about 2 700 km were in commercial operation and by 2020, under the European Deployment Plan for ERTMS, ERTMS will be in use on over 24 000 km.

ERTMS' global use

In Taiwan, the total railway network (1 200 km) is equipped with ETCS Level 1 (L1), which is in commercial operation since 2007.

In South Korea, since 2004, 240 km are in commercial operation on the Seoul-Deagu section with ETCS L1. An additional 400 km to be equipped with ETCS L1 have been contracted for the Honam (Daejon-Mokpo) and Daegu-Busan lines.

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China is implementing a major programme for new passenger railway lines. A 'Chinese Train Control System' (CTCS) has been developed in cooperation with European industry. CTCS level 2 is similar to ETCS L1 and CTCS level 3 is fully coherent with ETCS Level 2. CTCS implements specific Chinese functional requirements on standard ETCS sub-elements.

A first application of CTCS level 2 was completed just in time for the 2008 Olympic Games on the 116 km long Beijing-Tianjin line. The travelling time is less than 30 minutes. In August 2008, 1.7 million passengers were transported by about 150 trains per day and 98 % were on time. In addition, about 3 800 km of CTCS are contracted, which will form a network of nearly 4 000 km in commercial operation by 2012/2014.

Saudi-Arabia has 500 km of ETCS L1 on the Riyadh-Dammam section which was put into commercial operation in 2009, with maximum speeds of 200 km/h. In addition, about 450 km will be installed along the Makkah-Madinah rail link. It is expected that the rail link will significantly ease the traffic between the two holy cities. Almost 50 % of pilgrims are expected to use the high-speed train as it will provide a safe, fast, reliable and comfortable transport option.

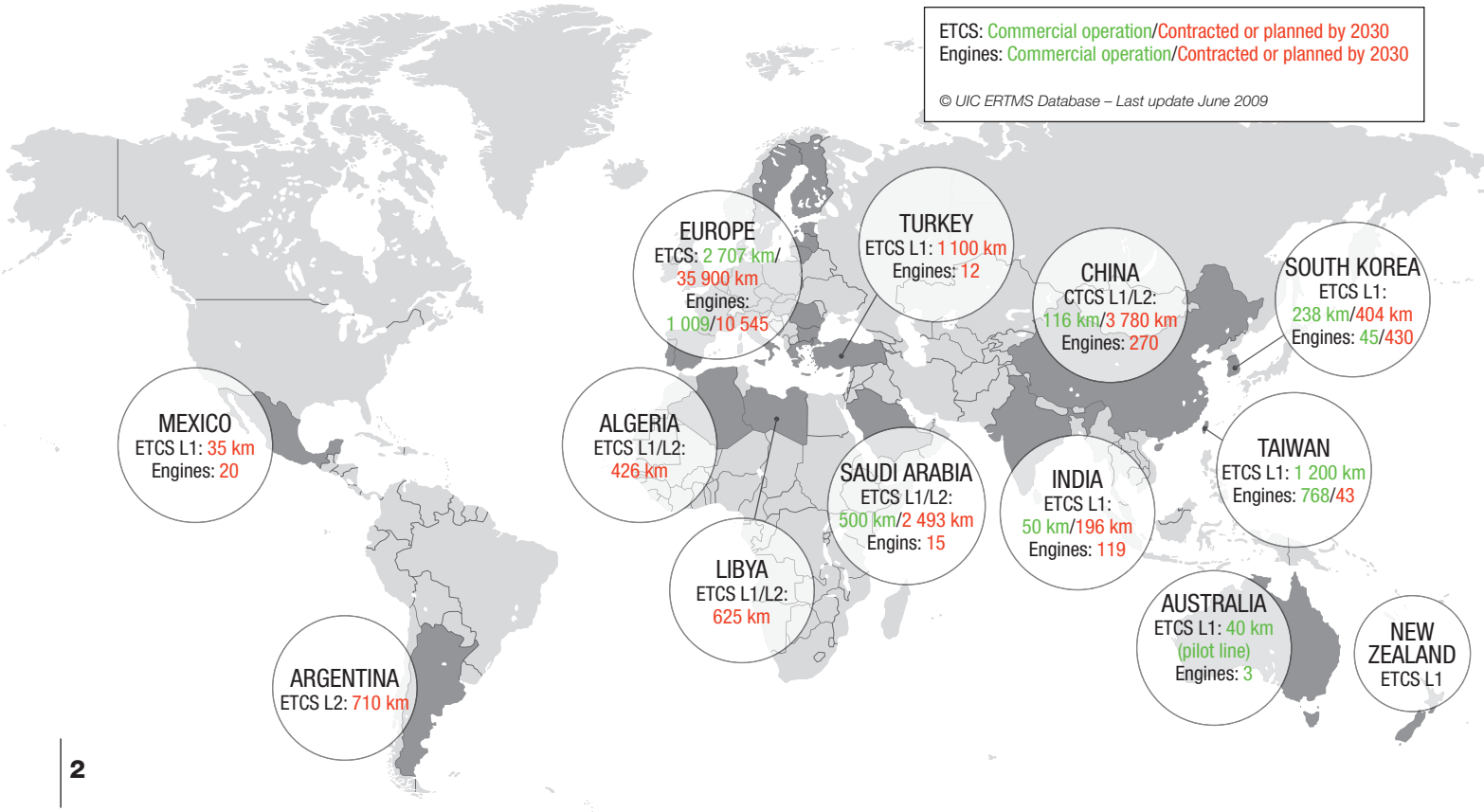
Turkey has already contracted projects for about 1 100 km of track with ETCS L1, to form a sub- network from Ankara to Istanbul and from Ankara to Konia and Sivas.

ETCS is also being deployed in India where two pilot lines have been selected for evaluation trials: in the north from New Delhi to Agra, one of the busiest trunk routes in India, and in the south from Chennai Beach to Gummidipundi, one of the busiest suburban routes in India.

In Australia, a number of serious accidents occurred which could have been prevented by a state-of–the-art train control system. After a worldwide evaluation of possible control command systems, RailCorp identified ETCS for being the most interesting system product.

Other countries using ERTMS include Algeria, Argentina, Libya, Mexico, Morocco and New Zealand.

Figures in this article are from the UIC ERTMS database which is built on official information given by UIC ERTMS Platform members with the objective of offering them an ongoing added-value service and to maintain the Platform's strategic position and understanding of the rail business.



Answering the call: new funding for ERTMS

EU Member States have recently backed a proposal by the Commission to contribute almost EUR 240 million to 26 ERTMS projects across the EU. The EU support concerns 2 500 km of lines and 550 locomotives due to be equipped with ERTMS before the end of 2013.

The TEN-T Financial Assistance Committee for the Trans-European Transport Network (TEN-T) met in December 2009 and gave a favourable opinion to the Commission's draft decision on the selection of projects under the TEN-T 2009 Multi-Annual Programme. The Commission will formally adopt its Decision which provides funding to 26 ERTMS projects at the expiry of a 3-month scrutiny deadline for the European Parliament.

Scrutiny by the Parliament is the final stage in the selection process which started with a call for proposals published on 31 March 2009 and launched under the Commission's 2009 Multi-Annual Programme for granting financial aid in the field of the Trans-European Transport Network. The call allowed for maximum of EUR 240 million to be allocated to ERTMS projects.

Proposals submitted in the field of ERTMS focused on three priorities:

- fitting or retrofitting of ETCS onboard equipment;
- installing ERTMS trackside equipment;
- promoting activities which ensure accelerated implementation of the ERTMS Memorandum of Understanding.

In addition, priority was to be given to projects along freight routes, along routes referred to in national or European ERTMS deployment plans and to jointly-submitted proposals.

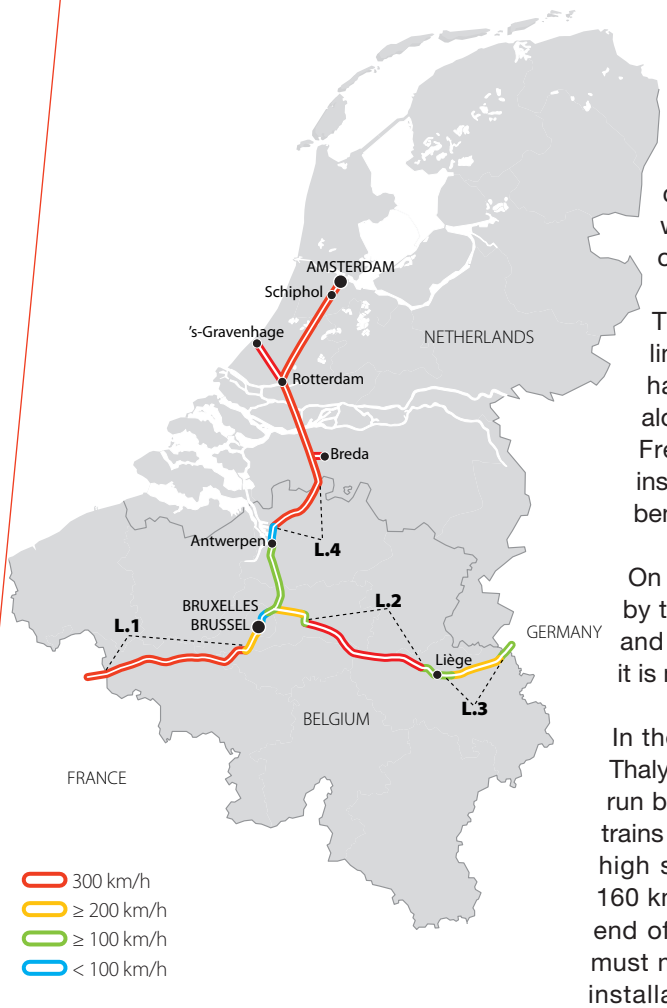
An enthusiastic response

54 proposals were received in response to the call and two were deemed ineligible. The 52 eligible proposals equalled funding requests of EUR 667 million, well over the available amount.

After an external evaluation, which took into account each project's relevance, maturity, impact and quality, an internal evaluation was held. It took into account the external evaluation as well as EU transport policy priorities and the objectives set out in the call. Following this two-phased evaluation process, the Commission presented a draft decision to the TEN-T Financial Assistance Committee, with a recommendation to fund 26 ERTMS projects, amounting to TEN-T funding of EUR 239.5 million – just under the maximum available budget.

More than 80 % of the proposed TEN-T funding would go to proposals involving trackside installation of ERTMS and two thirds of the proposed TEN-T funding would be located along ERTMS corridors. This funding will contribute to the installation of ERTMS on 2 500 km of lines and 550 trains and to the promotion of measures to ensure interoperability across projects.

Connecting the Netherlands and its neighbours



Source: Wikipedia/HSL ZUID

HSL Zuid is a 125 km-long high-speed rail line that runs between the Netherlands and the Belgian border. Together with the Belgian HSL 4 line, HSL Zuid connects Schiphol via Rotterdam to Brussels and Paris (part of the PBKAL – Paris-Brussels-Koln-Amsterdam-London – corridor). Operations between Rotterdam and Amsterdam with ETCS Level 1 started in September 2009. This section of the line will switch to ETCS Level 2 (L2) in mid-2010.

The line features ETCS L2 and will be the first high speed line to use ERTMS across national borders. Though there have been some delays, the implementation of ERTMS along the line is the result of strong collaboration between French, Belgian and Dutch partners. The infrastructure installation and on-board implementation of ETCS has also benefited from EU funding.

On 13 December 2009 the line was used for the first time by the Thalys service connecting Amsterdam to Brussels and Paris. Travel times have been reduced substantially; it is now only three hours between Amsterdam and Paris.

In the Netherlands, two types of trains use the HSL: the Thalys and the Dutch domestic high speed trains which are run by the High Speed Alliance (HSA) consortium. Thalys trains travel with a maximum speed of 300 km/hour. Dutch high speed trains currently have a maximum speed of 160 km/hour and this will increase to 250 km/hour at the end of 2010. To accommodate these speeds, the track must meet a number of requirements. In addition to the installation of ERTMS, the route must be free of level crossings and sharp curves, the track foundation must be extremely level and stable, overhead wires must have 25 000 Volts AC (instead of 1 500 Volts DC).

ERTMS diary

- 25 January 2010: Brussels
  ERTMS Corridor Group
- 8 February 2010: Brussels
  ERTMS MoU Steering Committee
- 24-25 February 2010: Brussels
  Committee on the Interoperability and Safety of the European Railway System

Please send us your dates!

For further information on ERTMS, see: **http://ec.europa.eu/transport/rail/interoperability/ertms/ertms_en.htm**

To view previous editions of *Signal,* click: **http://ec.europa.eu/transport/rail/interoperability/ertms/newsletter_en.htm**

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