Signal

The newsletter of ERTMS

the European Rail Traffic Management System

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Bringing you up to speed

ERTMS is moving up a gear. Successes like the high-speed Rome-Naples and Madrid-Zaragoza lines showed that this major project to unify signalling and speed control on European railways was technologically mature.

But numerous policy developments over the last 24 months have now really seen the initiative pick up speed. After the rail sector signed an agreement in March 2005 on the rapid deployment of the system, the European Commission outlined a strategy to accelerate its implementation. It also named a European coordinator for **ERTMS**, Karel Vinck - who talks to *Signal* overleaf.

The Commission's proposals for financing **ERTMS** during the European Union's financial period 2007-2013 received the green light from the European Parliament in June 2006. It looks likely that EU member states will also back significant EU financial support for ERTMS.

Meanwhile, the European Railway Agency in Valenciennes/Lille, France, became the system authority for **ERTMS** technical specifications, putting in place a clear and transparent process for managing requests for system changes. Member states have helped consolidate the technical specifications, notably by voting unanimously in their interoperability committee for a harmonisation based on version 2.3.0 - the reference both for high-speed and conventional rail.

Now that attention is focusing increasingly on the actual deployment of **ERTMS** across the whole European rail network, developments are likely to come thick and fast – so watch this space.

Welcome to the very first issue of Signal, the newsletter of the European Rail Traffic Management System. Signal will be keeping you up to date on a regular basis with key ERTMS events and developments, and what better way to start than with an issue featuring, among other things, an interview with ERTMS coordinator Karel Vinck? We hope that you will find this and future issues useful and informative at this exciting time for the ERTMS project.

The Signal team

Directorate-General
for Energy and Transport

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Karel Vinck interview
Karel Vinck is the European coordinator for ERTMS.
He tells Signal about the project's aims and ambitions.

Signal: Why ERTMS?

KV: The short answer is to keep Europe moving - to ensure sustainable mobility for our continent. It is also about increasing the competitiveness of the rail sector, to offer a service that is outstanding in terms of safety, punctuality and reliability. This should be supported by an ambitious programme of investment in infrastructure and rolling stock based on the coordinated deployment of ERTMS, along with an investment plan shared in a well-balanced way between infrastructure managers, railway undertakings, the EU member states and the EU.

ERTMS is a tool to make an integrated, intelligent railway transport system a reality. Today there are more than 20 different signalling systems in Europe, which are incompatible and often obsolete. Locomotives must be equipped with multiple systems to cross borders. And it has been standard procedure to change locomotives and conductors at borders. This is expensive and handicaps international rail traffic, especially freight.

The deployment of a single European standard called ERTMS/ETCS (European Train Control System) will make rail more competitive. It will help reduce transport costs, preserve the environment, improve safety, reduce congestion and contribute to maintaining employment in the sector.

Signal: What are the objectives?

KV: For the horizon 2012–2015, the main objective is to upgrade a network of six major freight corridors by deploying the ERTMS/ETCS systems. Six corridors representing 6% of the TEN (Trans-European Network) track length but 20% of European freight traffic have been studied. And for each of those corridors, more precise objectives have been defined in terms of regularity, reliability, quality of service and corridor capacity. The studies show that the deployment of ERTMS/ETCS must very often be accompanied by the modernisation of the existing infrastructure and the harmonisation of operating rules. Dedicated teams will manage these projects.

Signal: What were the alternatives to ERTMS?

KV: For technical and economic reasons, none of the European systems that existed before the development of ERTMS/ETCS could be retained as the European standard. Without intervention at EU level there was a real risk that each member state would have implemented its own "new generation" system meaning still more systems than today and a less competitive rail sector.

Signal: What are the different 'migration' scenarios?

KV: Migration from the existing system to the ERTMS/ETCS system is the most difficult problem which infrastructure managers and railway operators have to manage. The key is to recognise that the starting point is different from member state to member state.

The railway managers may decide to keep the existing systems and only change them when the technical standards are not acceptable any more or when European directives impose the implementation of new standards. They may limit the implementation of ERTMS/ETCS to new lines or to the renewal of signalling on existing lines. They may also decide right away to equip existing lines with ERTMS/ETCS and to keep - in parallel or not - the old systems.

The main criteria for such decisions should be the increased competitiveness of the rail transport mode. At this stage, the rail sector is generally inclined to implement ERTMS/ETCS together with keeping the existing systems functioning.

Signal: What about costs and benefits?

KV: ERTMS aims to make the railway system more competitive. There is no doubt that the advantages will be significant. Indeed, it is the only way forward to improve the performance and reduce the cost base of European railways. The shorter is the migration period, the better for competitiveness. If the rail sector is not prepared to introduce ERTMS during 2007-2013, it may never get back on a competitive track. This would be unacceptable from an economic, environmental and social point of view.

ERTMS: a cost or an opportunity for the rail sector?

It is for each rail company to decide if it wants to equip certain or all of its trains with ERTMS to benefit from ERTMS-equipped lines. How this works in practice is illustrated by the graphic below. The rail company of network Y (in yellow) may equip some of its trains with ERTMS (yellow-blue trains). These trains can run on the international corridor (in blue) as well as on the home network Y. The company's other trains (yellow) can still only run on the Y network.

Companies will make the decision on the basis of their own commercial strategies, but they should be aware that EU funds will be available in the period 2007-2013 to support the transition to ERTMS.

Moreover, the continuing co-existence of the old national and the new ERTMS/ETCS systems will represent a cost for infrastructure managers. Yet the old national systems will be gradually withdrawn over the medium- to long-term, while increasingly only ERTMS will be installed on new lines.

This suggests that rail companies would be best advised to start preparing now for migration. Indeed, it would look like a strategic error to buy new locomotives without installing ERTMS - even for locomotives initially foreseen only for regional traffic - given the marginal extra cost of installing ERTMS immediately, and given that retro-fitting would be much more expensive.

Country Y   Country R   Country G
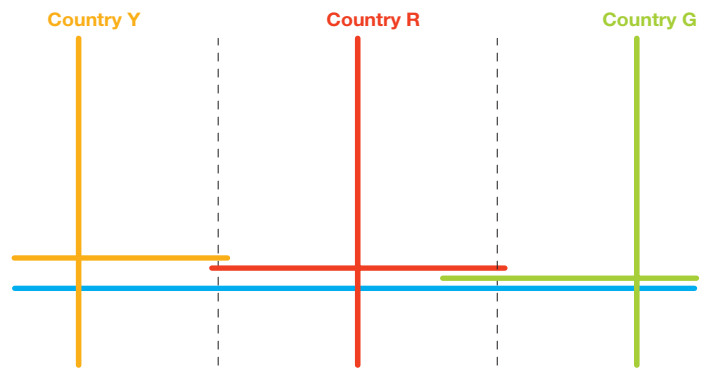
Train can run only in country Y (yellow line)

Train can run only in country R (red line)

Train can run only in country G (green line)

Train can run in its own country Y, R or G as well as on ERTMS lines (blue line)

ERTMS diary

➔ **10-11 May, 2007:** **Brussels - Trans-European Transport Networks (TEN-T) Days**
«TEN-T Days» is a unique opportunity to update your knowledge of the results, prospects and new opportunities under the Trans-European Transport Network (TEN-T) Programme, as the new 2007-2013 scheme is launched.
For further information, see: http://ec.europa.eu/ten/transport/events/2007_05_10_tent_days_en.htm

➔ **10 June, 2007:** **France - commercial inauguration of the East European TGV, equipped with ETCS level 2 and French national systems. For further information, see:** http://www.rff.fr/pages/projets/fiche_projet.asp?code=173&lg=fr
http://www.rff.fr/pages/projets/fiche_projet.asp?lg=en&code=451&codeRegion

➔ **14 June, 2007:** **Switzerland - authorisation of the entry into service of the Lötschberg tunnel, equipped with ETCS level 2**

➔ **16 June, 2007:** **The Netherlands - commercial inauguration of the Betuwe line, equipped solely with ETCS level 2**