



ANNUAL ACTIVITY REPORT OF COORDINATOR

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ERTMS PROJECT

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This report only represents the opinion of the European coordinator
and does not prejudice the official position of the European Commission.

The content of this report is accurate as of 19 July 2007

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1. INTRODUCTION

If railways are ever to be competitive with other modes of transport, technological development has to be at the core. In other words, the utilisation of the most up-to-date technologies, including ERTMS, will lead to a reduction of costs, an improvement of reliability and punctuality, an increase in flexibility and much improved safety. Railways are an environmentally friendly and sustainable alternative to road, air and short-sea shipping, but if rail cannot offer its customers a cost-effective alternative service, it will never be able to make a real contribution to the expected increasing demands for European transport.

The overall strategic objective is described in the Mission Statement agreed with all the stakeholders and can be found from the 1st annual report of the Coordinator.

ERTMS is a tool to make an integrated and intelligent railway transport system a reality. There are today more than twenty different signalling systems in Europe which are incompatible and often obsolete. The deployment of one single European standard, ERTMS, is a very important factor in the EU strategy of making railways more competitive.

The role of the Coordinator has been two fold – firstly preparing the implementation of a technically stabilised ERTMS on the European railway network and secondly supporting an upgrading programme for six major freight corridors with a time horizon of 2012-2015. The six freight corridors are:

- A - Rotterdam-Genova
- B - Stockholm-Naples
- C - Antwerp-Basel-Lyon
- D - Valencia-Lyon-Ljubljana-Budapest
- E - Dresden-Prague-Budapest
- F - Duisburg-Berlin-Warsaw

The expected result of ERTMS deployment on these Corridors is a significant improvement in the competitiveness of rail freight on these Corridors, which represent only 6% of the TEN-T track length but carry some 20% of the total European freight.

Migration from the existing signalling systems to the ERTMS system is the most difficult part of the problem, which the infrastructure managers and the railway undertakings have to manage. The European Coordinator for ERTMS has been working towards making this process as efficient and effective as possible, on the one hand with the European Railway Associations and on the other hand with the transport ministries and infrastructure managers of the countries concerned by the Corridors.

2. DEVELOPMENTS IN THE 2ND YEAR OF ACTIVITY

During the first year, the Coordinator concentrated his efforts on the activities of the MoU ERTMS Steering Committee, in particular on the definition of the freight Corridors, including a methodology to make detailed performance studies. In the second year, the MoU ERTMS Steering Committee has made significant steps to set up the

freight Corridors and started to address the financing issues for the ERTMS project in general. The Coordinator has also actively supported the work done by the European Railway Agency to stabilise the technical standard for ETCS.

2.1. MoU ERTMS Steering Committee

The Commission signed in March 2005 a Memorandum of Understanding (MoU) with the European Railway Associations (CER, EIM, UIC, UNIFE), with the objective to migrate a significant proportion of the trans-European networks to ERTMS within a 10-12 year timeframe. The MoU included setting up an ERTMS Steering Committee and the Coordinator chairs it. We have held eight meetings since the 1st annual report and our discussions have covered important topics such as the development of the freight corridors, TEN-T financing for ERTMS projects, the ETCS technical standard etc.

2.2. Freight corridors

Project management

As indicated in the 1st annual report of activities, the deployment of ERTMS and the performance optimisation of the freight corridors require a proper project management structure and methodology. The MoU Steering Committee decided that the methodology to be followed for each Corridor is based on a Letter of Intent, signed by the Ministers of Transport of the Member States concerned, giving the broad objectives and the political commitments and defining the project management structures. The project management structure includes an Executive Committee, composed of transport ministry representatives and a Management Committee, composed of infrastructure managers, to deal with all aspects concerning the deployment of ERTMS both GSM-R and ETCS and with the coordination of studies and actions to improve Corridor performance. In order to involve railway undertakings in the decision-making process, a permanent working group within the Management Committee of each Corridor is planned.

- Corridors A (The Netherland, Germany, Switzerland and Italy) and C (Belgium, Luxembourg, France and Switzerland) had already at the time of the last report signed a Letter of Intent on 3 March 2006 and 9 June 2006 respectively. Since then both the Executive Committees and the Management Committees have started to work on both Corridors.
- Concerning the development of Corridor B, it has been decided to split the Corridor into three sections for the deployment of ERTMS, the northern section from Stockholm to Hamburg, involving Sweden, Denmark and Germany, the central section, inside Germany and the southern section from Munich to Naples, involving Germany, Austria and Italy. The Member States along the Corridor are preparing a Letter of Intent and work towards putting in place the structures needed to start work on the actual implementation of the ERTMS project.
- Corridor D (Spain, France, Italy and Slovenia) signed a Letter of Intent on December 12, 2006 and in April 2007 Hungary also joint the signatories of the Letter of Intent extending the Corridor to Budapest. Both the Executive and Management committees have been organised and have started their work.
- For Corridor E the Letter of Intent has been signed in May 2007 by Germany, Czech Republic, Austria, Slovak Republic and Hungary. Romania has recently made a request to join the Corridor and to extend it to Bucharest and Constanta.

- For Corridor E, involving Germany and Poland, the Letter of Intent is drafted and signing is expected any time soon.

In addition, the Coordinator has recommended that the management committees create a European Economic Interest Group (EEIG) by Corridor to facilitate and simplify the implementation and financing arrangements. Corridor C has already set up an EEIG to manage their ERTMS projects and to deal with the EU funding requests. For Corridor D, the EEIG is just about to be created. Corridor A is also preparing to set up an EEIG to manage the project at a technical level. Although the funding application will be coordinated, the EEIG will not be involved in the financial management of EU funding. For Corridor E an EEIG is also planned.

Progress of work

The preparatory work has continued on those Corridors, which have in place the necessary organisational structures. They have produced detailed business plans on how ERTMS and the other measures, including major infrastructure investments, will impact transport along the Corridor. In addition, all the Corridors have been preparing applications for TEN-T financial support.

As Coordinator, I would like to highlight two important events, which took place this June. These were the opening of the Lötschberg tunnel in Switzerland and the Betuwe line in the Netherlands. Both of these lines are already fitted with ERTMS and both form an integral part of Corridor A.

Furthermore, according to the work carried out on the Corridors, it is clear that the deployment of ERTMS in a coordinated manner along a Corridor and accompanied with a number of other important investments and operational measures can bring significant benefits.

- On Corridor A, the objective is to double the transported volume by 2020, to improve the reliability by 26% and to reduce the travel time by 20%. Concretely, these measures would allow 28 billion tonne/kilometres of freight to be transported by rail and not by road – this represents on any point of the 1300 km long Corridor – 1 lorry carrying 26 tonnes passing every 37 seconds, 24 hours a day, 7 days a week.
- On Corridor C, the objective is to increase the transported volume by 55 % by 2020 by reducing travel time by 15% and by dividing by 4 the number of delayed trains on the section Antwerp-Lyon and by 2 on the section Antwerp-Basel. These measures would allow, on this very congested transport axis, where rail could have a competitive advantage, to transfer some 7 billion tonne/kilometres from road to rail. The societal benefits of these measures, which make rail more competitive owing to less energy use and pollution, increased safety and lack of congestion, are estimated to total around € 140 million in savings per year

2.3. Financial issues

TEN-T

Financial support from the trans-European transport network (TEN-T) budget is of paramount importance to the implementation of the ERTMS. A rapid migration strategy for the implementation of ERTMS is vital in order to reach critical mass and to induce

more and more infrastructure managers and railway undertakings to equip tracks and locomotives with ERTMS.

In the Multi-Annual Programme 2007-2013, the total indicative amount reserved for the ERTMS investments is € 500 million, of which € 250 million is for on-board and € 250 million for track side investments. This amount of financial support is going to be allocated in two calls for proposals: first € 250 million in 2007 and second € 250 million in 2008/2009. The support rate for ERTMS investments is up to 50% of the eligible project cost. There are specific funding ceilings for both track side and on board investments. Depending on the outcome of the mid-term review of the EU budget in 2009 as regards TEN-T financing, it might be appropriate to take another look at the allocation of funds.

Under the TEN-T procedure, the financial support may take one of several forms which are defined in the financial regulation for the TENs¹. These are basically grants for studies or works, grants for works in the framework of availability payment schemes, interest rate rebates on loans, a financial contribution for guarantees to be issued by the EIB under the loan guarantee instrument, risk capital participation for investment funds or a financial contribution to the project-related activities of joint undertakings.

Structural and Cohesion Funds

Especially in the new Member States the funding possibilities for ERTMS from the Structural and Cohesion funds can be significant. In line with the Commission decision C(2006)964 of 28 March 2006, the fitting of ERTMS/ETCS is mandatory in the case of financial support from Structural and/or Cohesion Funds in excess of 30% of the total project costs.

The Coordinator considers this decision to be very important and insists on its undisputed application. It will significantly speed up the implementation of ERTMS especially in the new Member States, whose railway infrastructure in most cases needs urgent upgrading.

2.4. ETCS technical standard

The ERTMS system is composed of two main distinct features:

- GSM-R, based on GSM technology, but using radio frequencies specific to the railways, which address the need to exchange information (voice and data) between trackside and on-board and
- ETCS (European train control system), in which a train-based computer controls the speed of the train in relation to the operational characteristics of the track. Specifically, it manages the maximum allowed speed.

The ETCS technical specifications are stabilised and form a sound basis for launching projects. A lot of work has been done with the European Railway Agency (ERA) and the railway sector to stabilise the ETCS technical specifications and to eliminate the

¹ Regulation (EC) No 680/2007 of the European Parliament and of the Council of 20 June 2007

incompatibility factors in the 2.3.0 standard, which were mainly due to the requested Designer Choices and which have an impact on interoperability.

The Coordinator has actively supported a proper handling of errors and ambiguities in the technical specifications. An error or ambiguity detected on a given project must be swiftly reported to the ERA and discussed with all stakeholders, following a procedure defined by ERA. Although the situation is improving, there is still a tendency to solve the problem locally between on board and trackside manufacturers.

The work done in order to solve all possible points that may lead to incompatibility in 2.3.0 products was of course a prerequisite to the design of the future version of the specification, version 3.0.0, due to be ready by 2011.

Concerning the new version 3.0.0, the Coordinator underlines the following points and wishes to make some recommendations:

- each new functional request is a threat on the planning and on interoperability. Today, the ERA has already made a first selection, and the question is now to reduce further the number of these functional requests, so that the 2011 target becomes realistic.
- the new version of the specification shall be backward compatible: a train with version 3.0.0 shall be able to run on a line equipped with the version 2.3.0.
- many tenders will be launched within the coming months for the retrofitting of existing locomotives. These locomotives will be equipped in version 2.3.0, but many of them will have to run on lines equipped with version 3.0.0. The tenders should therefore request a maximum cost for the upgrade from 2.3.0 to 3.0.0.
- there is a need to build mutual trust between the different stakeholders (railway undertakings, infrastructure managers and equipment manufacturers). In particular, the timing and a strict control on costs for the implementation of ERTMS should be addressed.

2.5. Publicity

To improve communication and publicity of the ongoing project to deploy ERTMS, an ERTMS newsletter has been started. The first number was published in April 2007 and the next edition is expected in July. There will be some 4-6 newsletters in the course of 2007. Subscriptions to the newsletter can be made using the following internet link http://ec.europa.eu/transport/rail/ertms/index_en.htm.

The Coordinator has also participated in a number of important events and conferences with various stakeholders from the railway sector in order to keep the railway sector experts and the general public up to date on the progress of the ERTMS project.

3. PRIORITIES FOR THE 3RD YEAR OF ACTIVITY

In the 3rd year of activity, the Coordinator will concentrate his efforts on stabilisation and further development of the technical standards for ETCS, as a first priority, and furthermore, he will continue to support the performance optimisation programmes of the Corridors.

As the EU Member States are to submit their national ERTMS migrations plans in September 2007, these will then have to be integrated into an EU wide master plan.

3.1. Freight corridors

The TEN-T applications are due by 20 July 2007. After that the Commission will carry out an evaluation of the submitted proposals. The Coordinator will be involved in assessing the ERTMS project proposals in order to advise the Commission with a view to ensuring a coherent set of ERTMS projects covering the Corridors.

Support of the work of the different freight Corridors and their respective Executive and Management Committees is of paramount importance and has to be continued during the 3rd year of activity. The outstanding LoIs should be signed for the Corridors B and F and management structures put in place.

The Coordinator will analyse further different financing possibilities for the investments needed on the Corridors.

3.2. EU master plan on ERTMS migration

The EU Member States are to submit their national ERTMS migration plans to the Commission by the end of September. So far the Commission has received draft national migration plans from thirteen Member States. The Commission will then, in close cooperation with the Member States and with the help of its MoU partners (CER, UIC, UNIFE and EIM), consolidate these national migration plans into an EU wide master plan for ERTMS migration.

It will be very important to ensure that the programmes of the Corridors are fully included in the national plans and integrated into the EU master plan. By doing so, we shall create an efficient ERTMS network. It is clear that the benefits of ERTMS can only be generated when there is a significant number of railway tracks and locomotives fitted with ERTMS.

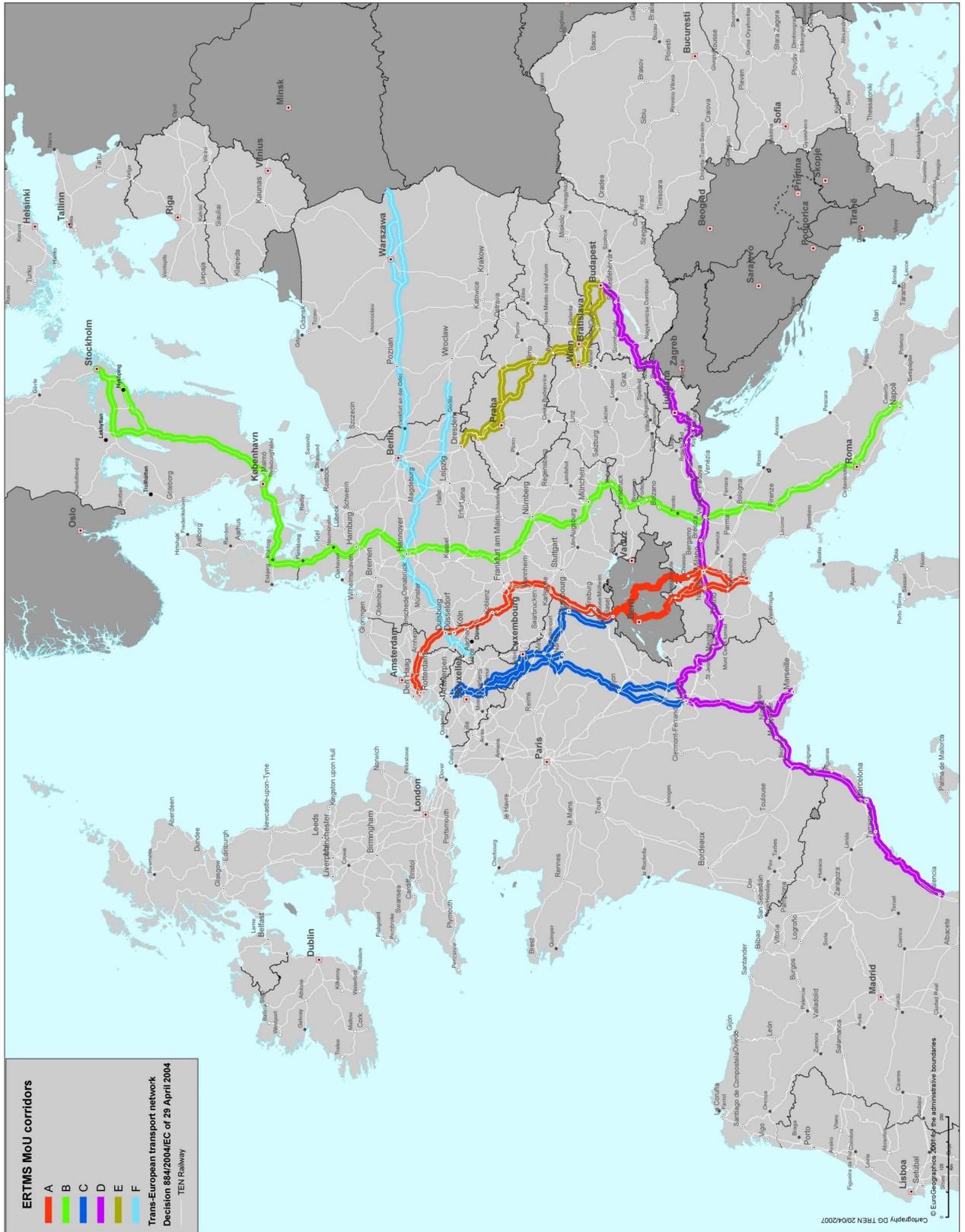
4. CONCLUSIONS

To reach concrete results on the freight Corridors in terms of capacity, reliability, time savings and reduction of costs, it has become evident that other measures need to be taken in addition to the ERTMS implementation. These include especially removing the bottlenecks on the infrastructure as well as harmonising the homologation procedures and simplifying the operational rules. ERTMS alone cannot guarantee anything but interoperability, the other measures are important to improve the overall functioning of freight transport flows along the six major Corridors.

The 3rd year of activity is an important year of action; concrete steps have to be taken to start the implementation of ERTMS and to improve the overall performance of the Corridors. On the technical side, further priority should be given to the stabilisation of the 2.3.0 standard and the development of the 3.0.0 standard. By combining those actions, we shall secure a fast migration towards ERTMS and a significant upgrading of freight transport by rail.

Annex 1:

Map of ERTMS Corridors



Annex 2:

Timetable for ETCS implementation on different Corridors

Corridor A: Rotterdam – Genoa	Rotterdam – Oberhausen: L2 – 2012 Oberhausen – Mannheim: L2 – 2015 Mannheim – Genova: L2/L1 – 2012
Corridor B: Stockholm – Naples	Stockholm – German Border: L1/L2 – 2015 Flensburg – Hannover: L2 after 2020 Hannover – München: L2 after 2020 München – Kufstein: under examination Wörgl – Innsbruck: L2 – 2012 Innsbruck – Verona – Napoli: L1/L2 – 2014
Corridor C: Antwerp – Basel – Lyon	Antwerpen – Bettembourg: L1 – 2012 Bettembourg – Basle: L1 – 2009/2010 Athus – Dijon: L1 – 2014 Dijon – Lyon: L1 – 2016/2017
Corridor D: Valencia – Lyon – Ljubljana – Budapest	Valencia – Tarragona – Port-Bou: L1 – 2011/2014 Barcelone-Perpignan: L1+L2 – 2009 Perpignan – Lyon: L1 – 2012/2016 Lyon – Modane – Torino: L1 – 2014 Torino – Milano: L1 – 2012 Milano – Ljubljana: L1 – 2013/2014 Ljubljana – Budapest: L2 – 2008-2013
Corridor E: Dresden – Prague – Budapest	Dresden – Děčín: L2 – 2020 Děčín – Praha – Břeclav: L2 – 2010-2011 Břeclav – Bratislava – Budapest: L1 – 2015
Corridor F: Duisburg – Berlin – Warsaw	German section: L2 – 2020 Polish sections to be confirmed

L1: ERTMS level 1 and L2: ERTMS level 2