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INLAND TRANSPORT COMMITTEE

Working Party on Rail Transport

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THE EUROPEAN RAIL TRAFFIC MANAGEMENT SYSTEM (ERTMS) PROJECT OF THE EUROPEAN RAILWAY AGENCY (ERA)

Note by the European Railway Agency (ERA)

ERTMS

the role of the European Railway Agency

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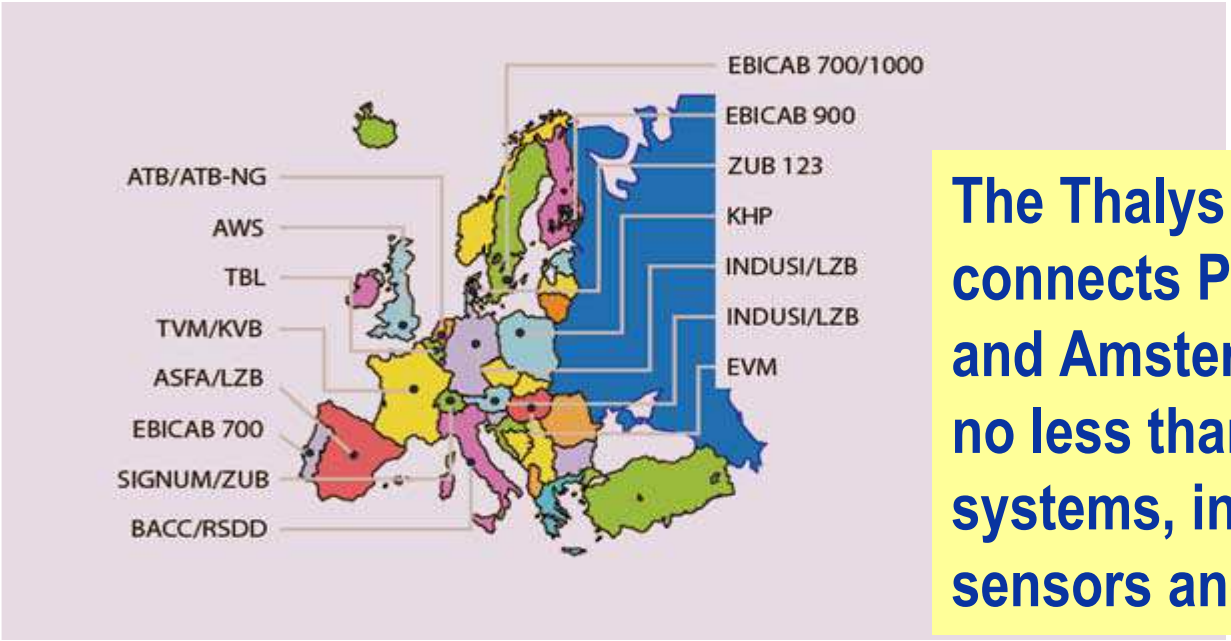
Incompatibility of signalling systems

Historically, the development of signalling and communication systems was driven at national level: today there are over 20 signalling and speed control systems operating in Europe today, incompatible with each other.



The Thalys high-speed train, which connects Paris, Brussels, Cologne and Amsterdam, is equipped with no less than seven different systems, including specific sensors and control panels.

What is ERTMS ?

ERTMS is a major European industrial project, started and supported by the European Commission to harmonise the control command and communication system for interoperable railways.

ERTMS (European Rail Traffic Management System) features two basic components:

GSM-R (GSM-for Railway): radio system based on standard GSM tecnology used to exchange information (voice and data) with trains

ETCS (European Train Control System): computer based safety system to control the speed of the trains

Modular flexible system

ERTMS can be used in different configurations based on infrastructure constraints and design.

ETCS is used on conventional railway lines and on very-high speed lines.

In the “level 2” configuration, ETCS does not require to install any trackside optical signals, reducing significantly installation and maintenance costs.

ETCS – today

There are currently more than 17,000 km of track and 3,500 vehicles already in service or contracted with ERTMS in Europe *

*) Source: UNIFE

Worldwide, there are more than 30,000 km of ERTMS lines in service or contracted *

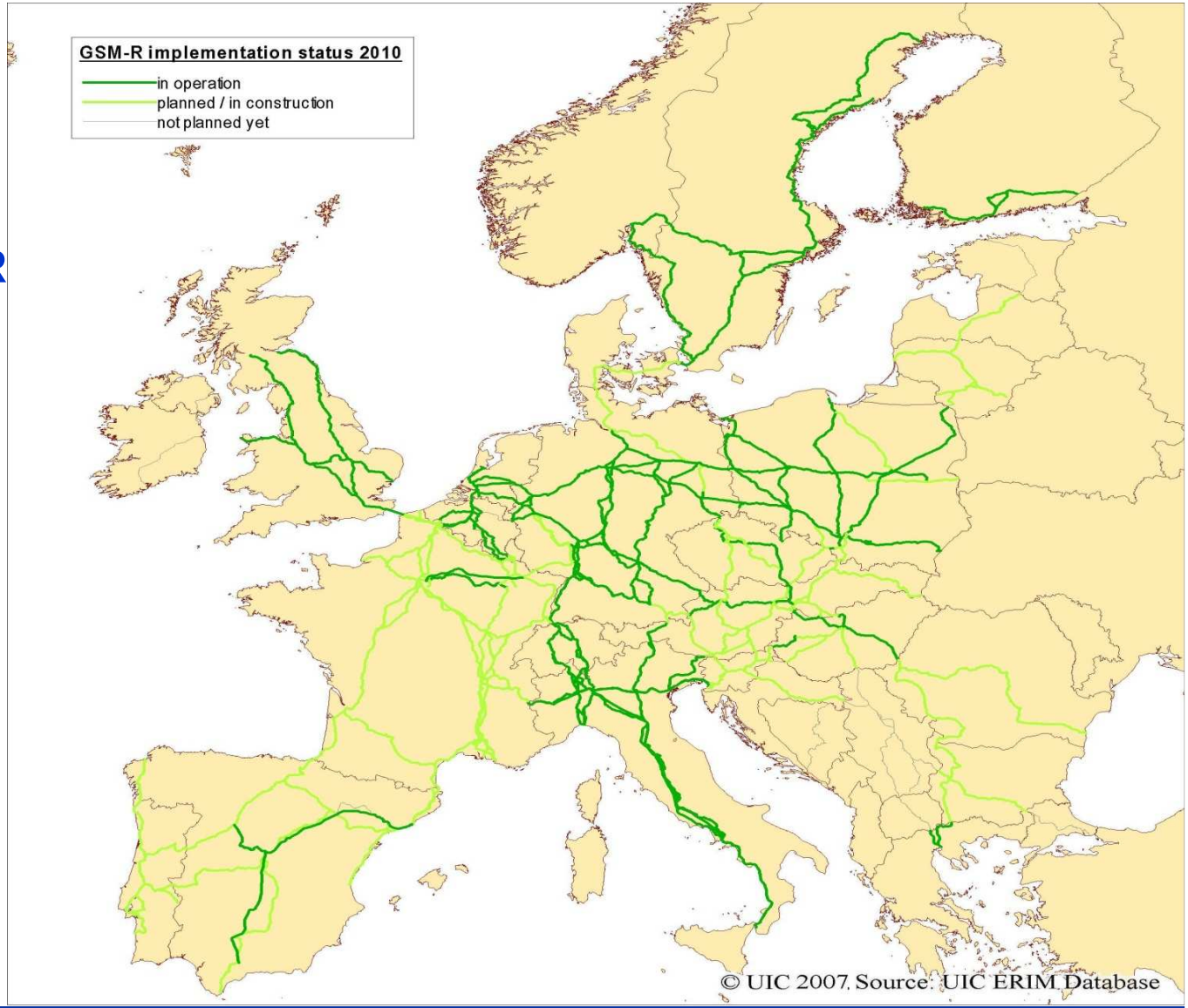
GSM-R in Europe

67 % of the European Railway network will be covered by GSM-R

Mobile Users:

Plan: 337 483
Today: 120 088

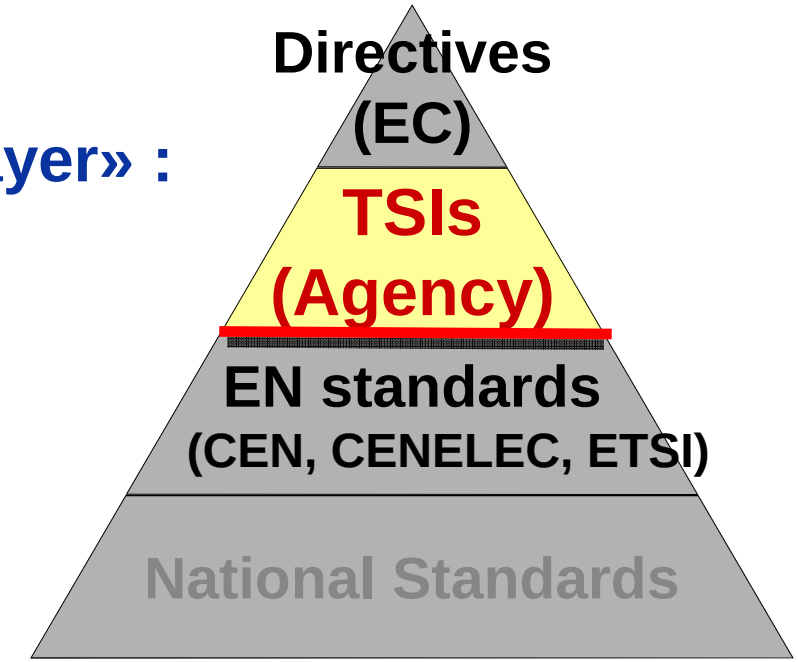
25 889 Cab radios



Railway Interoperability Directives are « new approach » directives

Interoperability Directives add a «layer» : Technical Specifications for Interoperability (TSIs)

ERTMS specifications (~100 documents) are referenced in Annex A of the TSI CCS



Change Control Management for the ETCS and the GSM-R by ERA:

- **to maintain the current version**
- **to develop the future releases**

ETCS –the next baseline

The current version of the ETCS specifications (known as "2.3.0d") is enforced by Commission Decision 2008/386 of 23/4/2008.

Additional functions for broader application scope have been defined for the next ETCS version "Baseline 3".

The ETCS Baseline 3 will ensure backward compatibility with infrastructure in service with current version.

ERTMS – Memorandum of Understanding

Signed 4th July by Commission and sector organisations to accelerate deployment of ERTMS in Europe

ERA not part of it, but requested to meet aggressive deadlines for development of ETCS Baseline 3 specifications

Final objective : ETCS Baseline 3 in 2012

Implementing MoU for ETCS Baseline 3

- ✓ September 08: publication of all new functions defined for the Baseline 3
- November: detailed project plan for Baseline 3 development: to be endorsed by sector in ERTMS MoU
- December: first draft SRS 3.0.0, to be presented to MS in Interoperability and Safety Committee
- 2009/10: consolidation, preparation of test environment
- 2011: validation and test; feedback from operation
- mid 2012 Recommendation for EC Decision

Maintenance of current baseline 7/15:

-critical review of Optional Functions

-Feedback from National Safety Authorities

-close coordination with Cross Acceptance activities (Notified National Technical Rules)

Development of System Version Management for the next baseline 8/16

Revision of the TSIs Control Command and Signal

Revision started in 2008

to ensure ERTMS system properly integrated in Control Command and Signalling

Review of the present Open Points for their resolution

Editorial review of the TSIs text

Chapter 7 of TSI CCS defines the EU Master Plan for the deployment of ERTMS:

- proposal of DG-TREN under discussion

Cooperation with National Safety Authorities

ERTMS success rests on:

- **technical and operational interoperability**
- **harmonised acceptance in the Member States**
- **common approach to test and acceptance**

National Safety Authorities play central role:

- **authorising the bringing into service of the structural subsystems**
- **supervising that the interoperability constituents comply with the essential requirements**