REPUBLIC OF ESTONIA
MINISTRY OF ECONOMIC AFFAIRS
AND COMMUNICATIONS

Mr. Keir Fitch
European Commission
DG Mobility and Transport
Directorate C - Land
B-1049, Brussels
Belgium

Our Ref: 31.01.18 No 7-12/2017/891

Subject: The National Implementation Plan – CCS TSI

Dear Mr Fitch,

With current letter, we will send to you the National Implementation Plan according to Commission Regulation (EU) 2016/919 of 27th May 2016 on the technical specifications for interoperability relating to the control-command and signalling subsystems of the rail system in the rail system in the European Union.

If you need additional clarifications or information on the subject, please do not hesitate to contact Technical Regulatory Authority (Sõle 23A, 10614 Tallinn, Estonia; Phone: +372 6672051, E-mail: info@tja.ee).

With best regards,

Merike Saks
Secretary General

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Enclosure: PRM TSI implementation plan

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NATIONAL IMPLETATION PLAN

Implementing the commission regulation (EU) 2016/919 of 27 May 2016 on the technical specification for interoperability relating to the control-command and signalling subsystems of the rail system in the rail system in the European Union.

This Document is a national plan for the implementation of the commission regulation (EU) 2016/919 of 27 May 2016 on the technical specification for interoperability relating to the control-command and signalling subsystems of the rail system in the rail system in the European Union, concerning the coherence of the entire rail system of the European Union taking into account the economic viability of the rail system.

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1. General and context description

According to the commission regulation (EU) 2016/919 of 27 May 2016 on the technical specification for interoperability relating to the control-command and signalling subsystems of the rail system in the rail system in the European Union (CCS TSI) the control-command and signalling subsystems include the following parts:

1. train protection;

2. radio communication;

3. train detection.

The Class A train protection system is ERTMS/ETCS whilst the Class A radio system is GSM-R.

Class B systems are a limited set of train protection legacy control-command and signalling systems that were in use before 20 April 2001. The list of Class B systems is established in the European Railway Agency technical document 'List of CCS Class B systems', ERA/TD/2011-11, version 3.0.

2. Legacy systems in Estonia

Length of railways in Estonia is 2 144 km, of which 1 508 km are declared public railways and there are 2 public infrastructure managers.

- AS Eesti Raudtee (Estonian Railways) owns and manages 1 287 km (120 km not TEN-T; 275 km TEN-T Core network, rest comprehensive network) of railways (including double-track railways and electrified lines).

- Edelaraudtee Infrastruktuuri AS is a private undertaking, which is the owner of 223 km of railways (80% TEN-T comprehensive network, rest not belonging to the TEN-T network).

In Estonia, a Class B system ALSN is used. ALSN system originates from 1960's and consists of both train protection and train detection system.

Main characteristics of ALSN system:
Data transmission to train:
50 Hz Carrier frequency;
Numerical code
Minimal coding current in rails for ALSN operation is 1,2 A
Four on-board signal aspects (three codes and code absence)
Information available on-board (outside the ALSN): actual speed, length of passed route.
Display to driver:
Aspect of on-board signal, corresponding to receive code,
Sound announcement in case of code change to more restrictive one.
Supervision:
Acknowledgement of a more restrictive by driver within 15 seconds,

Continuous speed supervision after passing the STOP field-side signal,
Acknowledgement of code absence each 40 to 90 second.

The emergency brake is called in the case of: passing the field-side signal with STOP aspect, over-speeding the value, allowed for actual signal aspect, warning (sound announcement) is not acknowledged by the driver.

CCS TSI requirements will be applied to all new, upgraded or renewed train detection systems.

The train radio communication systems that are used in Estonian railway: ESTER network system and Motorola MotoTRBO network system.
Both Estonian public infrastructure managers are using Radio communication systems that are in the beginning of the life cycle and the replacement in the near future is not reasonable

ETCS control and command and signalling trackside implementation costs are 2 times higher than renovating existing legacy system for safety reasons. Additionally all the passenger fleet's control-command and signaling on-board devices needs to be replaced (around 400 000 EUR per train) – total costs 15,2 MEUR. Another unknown cost factor is the cost of on-board devices for the 1520 mm freight trains. According to today's knowledge, there is a need for custom-made solutions and therefore no precise cost of that equipment is not known at the moment. Whereas over 90% of our freight traffic is with third countries (Russia), the freight trains would need to have double on-board systems, class B and ETCS.

ALSN is installed on major lines of Latvian and Lithuanian Railway as well, because of that the existing 1520 mm gauge rail network in the Baltic States territory has full interoperability between Estonia, Latvia and Lithuania.

3. ETCS deployment in Estonian railway system

Estonian 1520 mm rail network together with Lithuanian and Latvian rail networks are different from the European standard nominal track gauge (1435 mm).

To avoid creating additional obstacles to interoperability, Member States ensure that the functionality of the legacy Class B systems and their interfaces remain as currently specified, except where modifications are needed to mitigate safety-related flaws in these systems. Member States ensure that systems not included in the list of Class B systems do not constitute additional barriers to interoperability. The functionality, performance and interfaces of the Class B systems remain as currently specified, except where modifications are needed to mitigate safety-related flaws in those systems.

The full interoperability is ensured in the 1520 mm railway network in the Baltic States and locomotives of 1435 mm rail network cannot physically overcome because of the gauge difference. Therefore, the implementation of A-class system will not increase the overall level of operational compatibility, which within the 1520 mm railway network is completely ensured by the existing class B system.

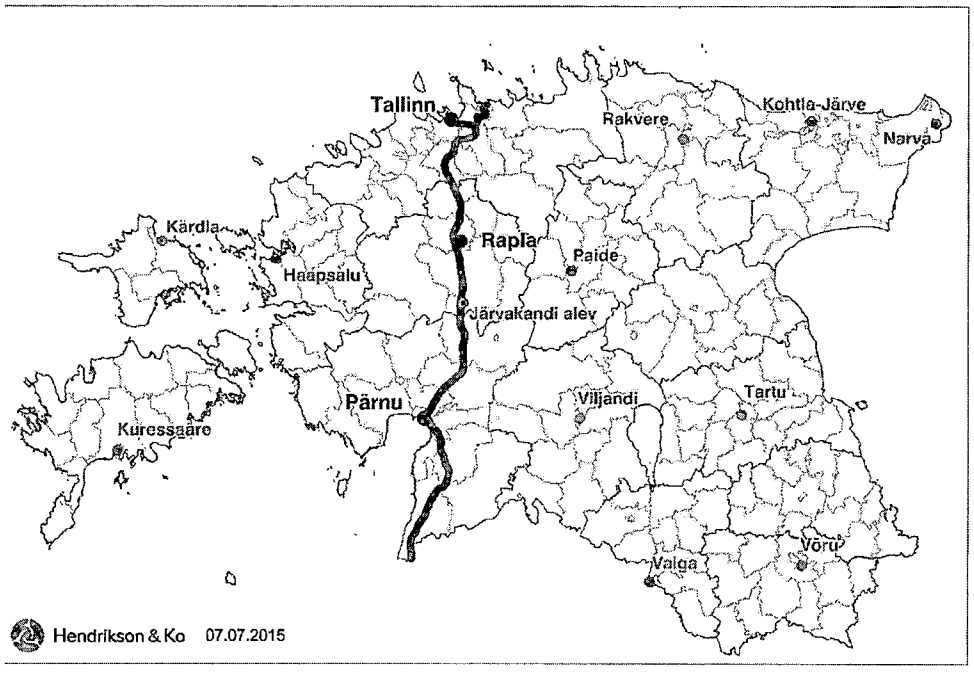
Locomotives and trains operated in the Baltic States are used on all the national railway networks and the introduction of the class A system will require upgrading of all fleet in order to avoid newly created interoperability barriers inside the Baltic States.

According to Articles 12 (2)(a) and 39 (2) (a) of the Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU and Directorate - General for Mobility and Transport of European Commission 17th February 2016 letter no MOV B.1/OO/VK/ac (2016)662282, Baltic States 1520 mm rail network falls under the scope of the "isolated networks" and there is allowed to make an exemption concerning the ETCS implementation.

CCS TSI will be applicable all the European standard nominal track gauge (1435 mm) projects in Estonia.

Rail Baltic

The railway is double-track and uses the European standard gauge 1435 mm
Planned for both passenger and freight transport
Total length of the route – 870 kilometres, including 213 kilometres in Estonia
The project is carried out in cooperation with Latvia and Lithuania
Time of completion: 2022-2026.



Rail Baltic

4. Surveillance

The Technical Regulatory Authority as the safety authority ensures continuous monitoring of the implementation of the CCS TSI on the railway network.

The Railway Department of the Technical Regulatory Authority provides explanations on this implementation plan:

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