CONTROL COMMAND AND SIGNALLING EXPERT GROUP

1. Characteristics and Objectives of the Expert Group Professional Focus

The expert cross-sectional group "Control Command and Signalling", hereinafter referred to as CCS according to the English name Control Command and Signalling, which works within the association "Interoperability of Railway Infrastructure".

The focus of the CCS group is on the field of interlocking technology on railways, especially from the point of view of the Interoperability of the European Railway Area.

2. Contents of Expert Group Activities

ERTMS / ETCS

Monitoring of CCS TSI, which are issued in the form of an EC Regulation describing CCS subsystems, including ERTMS. The ERTMS / ETCS specifications are evolving and are published in individual editions of the basic versions of these specifications, called Baselines. Versions of all valid documents containing the ETCS specifications are published by the EU Agency for Railways.

Further development of ETCS and modern traffic management systems

Participation in the further development of the ETCS system, its complementary components. These activities are both in the form of research and development and directly in the specification phase, when a description of standardized systems and their mutual interfaces is created.

Professional consultations and educational activities

Last but not least, there is awareness-raising activities on railway safety, trends and the future, but also lessons learned from the analysis of emergencies and their analysis.

Assessment and evaluation of products

Certification authorities for CCS products. The following Accredited Institutions operate within the technology platform: the Certification Authority for Products at the Faculty of Transportation Sciences of the Czech Technical University in Prague and the Certification Authority for the Railway Research Institute and the Certification Authority for Products (COV) EUROSIGNAL.

Notified body for the area of management and security of VUZ (Authorized / Notified body of the Railway Research Institute).

All the above-mentioned institutions are a very important part of the railway system, because each safety component must be assessed and approved before compliance with European standards (Certification Authorities) and European interoperability requirements (Notified Bodies).

The cooperation of European Notified Bodies takes place within the NB-Rail organization.

3. Composition of the Expert Group

	Name	*Company/Institution*	*Expertise*
Manager	Ing. Vladimír Kampík, MBA, MIRSE	AŽD Praha s.r.o.	Director for European Activities
Deputy of the Manager	Ing. Tomáš Konopáč	Správa železnic, s.o.	Manager for ERTMS/ ETCS implementation by the Czech Railway Infrastructure Administration
Members	Ing. Ladislav Polcar	AK signal Brno a.s.	
	Ing. Karel Beneš	VUZ, a.s.	
	Ing. Ondřej Kovář	Starmon s.r.o.	
	Ing. Michal Pavel	AŽD Praha s.r.o.	
	Ing. Ivan Tuháček, Ph.D.	AŽD Praha s.r.o.	
	Doc. Dr. Ing. Tomáš Brandejský	UPa DFJP	
Other Associates			

4. Specific Expert Group Collaboration with the other Members of TP IZI

Member of TP IŽI	*Content and Focus of Collaboration*
Expert Group IRRB	Providing information about the research program Shift2Rail

5. Overview of Implemented Projects (*in the period from 2018 to the end of 2020*)

Project Title/ Acronym	Shift2Rail
Project No	
Funded by	
Implementation Period	2016 - today
Total Budget	
Beneficiary/ Coordinator	
Consortium	
Project Goal/ Project Benefits	Main goals: • Energy and capacity efficient trains for passengers • Increasing the throughput of the main lines • Increasing the attractiveness of freight transport by rail • Safety of the railway system • Increasing the attractiveness and efficiency of urban transport • Increase railway capacity by 100%

	Increase reliability by 50% • Reduce Life Cycle Cost by 50% Main innovation programs: • IP1 - Energy and volume efficient technologies for high capacity green trains • IP2 - Advanced traffic management systems to increase the capacity and reliability of the urban and interurban network - CCS • IP3 - Cost-effective and high-capacity green infrastructure • IP4 - IT solutions for a seamless and attractive railway transport system • IP5 - Technologies for sustainable and attractive European freight transport

6. Overview of Implemented Expert Group Activities (in the period *from 2019 to the end of 2020*)

Lectures in professional conferences and seminars

- University of West Bohemia Pilsen - On current problems of interlocking technology in transport
- Czech Scientific and Technical Society of Communications - professional seminars of the branch of communication and security technology
- Czech Raildays Conference o Workshops with EU institutions (INEA)
- Lectures on ETCS strategy and development for universities (CTU, University of Pardubice - DFJP)
- Active membership in organizations: CER CCS SG
- UIC - development of radio systems for railways

7. Representation of the Expert Group in National and European Institutions

National or European Institution	*Name*	*Work Place*
UNIFE	Ing. Vladimír Kampík, MBA, MIRSE	AŽD Praha, s.r.o.