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CCRCC Conference 2017

kapsch >>> ERTMS supply market situation in Europe

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16th November, 2017

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ELECTRONIC SYSTEMS



Ensuring an interoperable transition

Agenda

1. ROC IG - Update
2. ROC IG – Commitment for long term support of GSM-R
3. ROC IG - Support for GSM-R migration towards the FRMCS (Future Railway Mobile Communication System)

ROC IG Update

The Railway Operational Communications industry group has currently 10 members, dedicated to:

- The active global promotion of the GSM-R technology.
- Supply interoperable End to End systems.
- Minimize integration efforts and railway migration costs.
- The continued development of the EIRENE standards in line with railway requirements.
- The long term support of the GSM-R technology at least until 2030.
- The smooth evolution and migration to a Future Railway Mobile Radio System (FRMRS)

GSM-R – A Solid and Mature System

- GSM-R - Solid communication platform for Railways
 - Based on GSM
 - In Railway operation since 2000
 - Railway voice services
 - Data bearer for ETCS
 - EIRENE standards for railway specific functions and services
- GSM-R guarantees Interoperability
 - At main system interfaces.
 - Between suppliers (infrastructure/track side, mobile terminals, dispatcher systems)
 - GSM-R IOT campaigns since 2002 supported by EU
 - All the GSM-R IG members are committed to support and develop GSM-R at least until 2030.

ROC IG view about EIRENE FRS/SRS Status

Current EIRENE FRS/SRS versions 8/16 have reached a satisfying level of stability. Including ETCS over GPRS capability.

They are now part of the “GSM-R Baseline 1” and TSI 2016.

ROC IG does not expect major changes in the future:

- No new features
- No major CRs.

Our view is that EIRENE FRS/SRS evolution is now entering a ‘Maintenance Mode’.

Long term support of GSM-R

The ROC IG committed to support GSM-R at least until 2030 including:

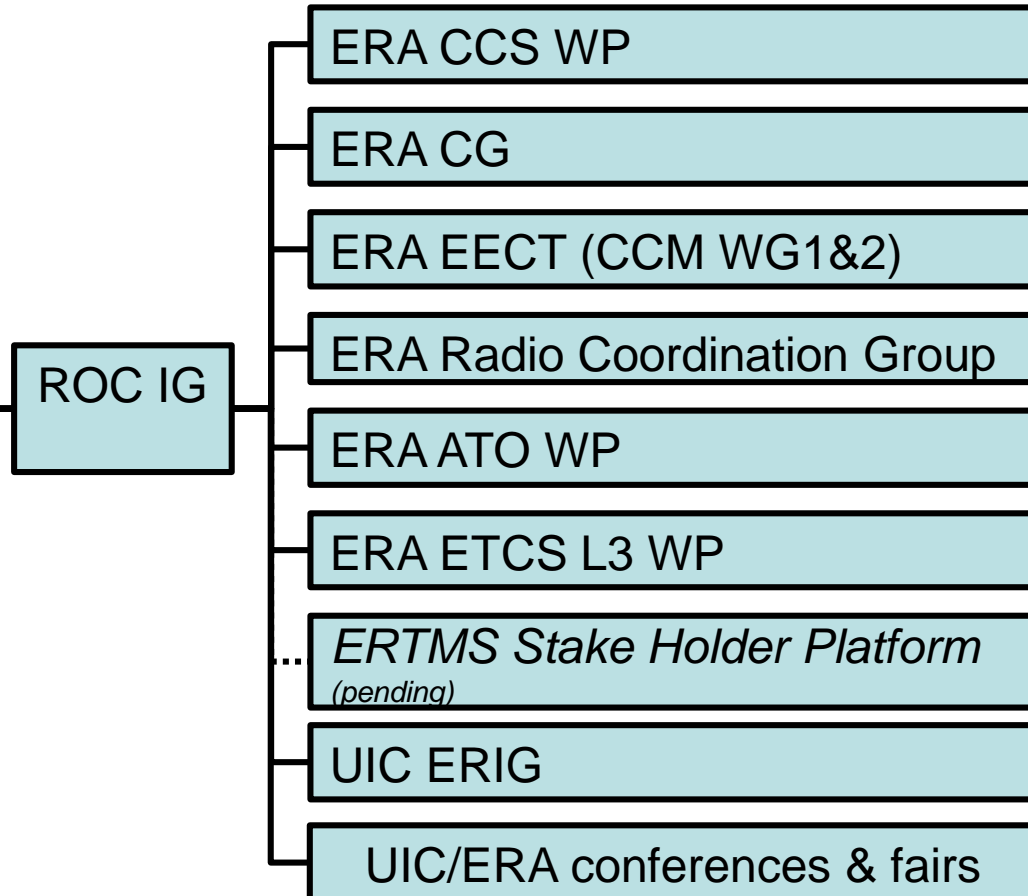
- Maintenance and modernisation of the GSM-R systems HW/ SW, e.g. implementing packet data functionality GPRS/ eGPRS or extending the frequency band with the addition of 3 MHz (ER-GSM band) for more capacity
- Continuous life cycle management
- Support of CCS TSI / EIRENE requirements
- Migration towards IP, as a mayor stepping stone towards the FRMCS/ Next Gen of Railway operational communication
- Mitigation of Interferences

ROC-IG representation in bodies & organizations

ROC-IG: indirect representation by individual members



ROC-IG direct representation



GSM-R lessons learned (Migration)

- GSM-R was a revolution
 - From analogue to digital
 - First common Railway voice communication system
 - First common data bearer for Signalling
- Next generation system should be an evolution
 - Upgrade of the network elements
 - Re-use of track-side civil works
 - Maintain functionality and user interfaces
 - Maintain interoperable system interfaces
 - Re-use on-Board Cab radio cabling and accessories
 - Re-use current spectrum GSM-R + 3 MHz extension

GSM-R towards the future

- Safeguard of the Railways investment is at the heart of the ROC Industry Group strategy.
- All the ROC-IG members are committed to support and develop GSM-R at least until 2030.
- ROC-IG is also committed to support Railways in identifying and selecting a new technology beyond GSM-R for a Future Railway Mobile Communication System (FRMCS)
- Migration to FRMCS with uninterrupted and undisturbed Railway operation and sufficient capacity is a key target to be worked out by Railways and ROC-IG using their combined expertise.

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Thank you



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