

IRS 90940 (SFERA) - GENERAL OVERVIEW



IRS 90940

Extended scope & new name!

**SFERA Protocol:
Train Operation Data Exchange
with On-Board Devices**

IRS 90940 Objective:

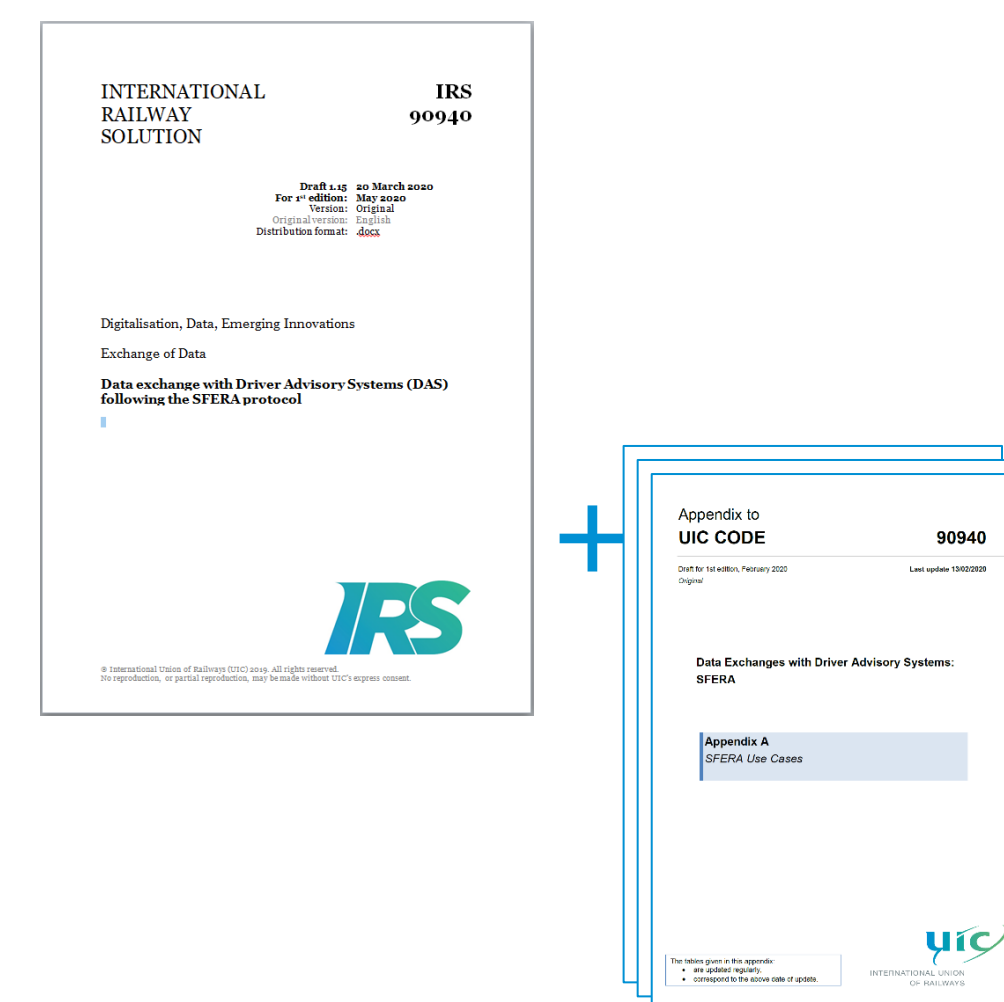
Harmonise

- Driver Advisory Systems (DAS)
- Digital instructions (DI)
- Free text communication (FTC)

data exchange between train and traffic management

This means:

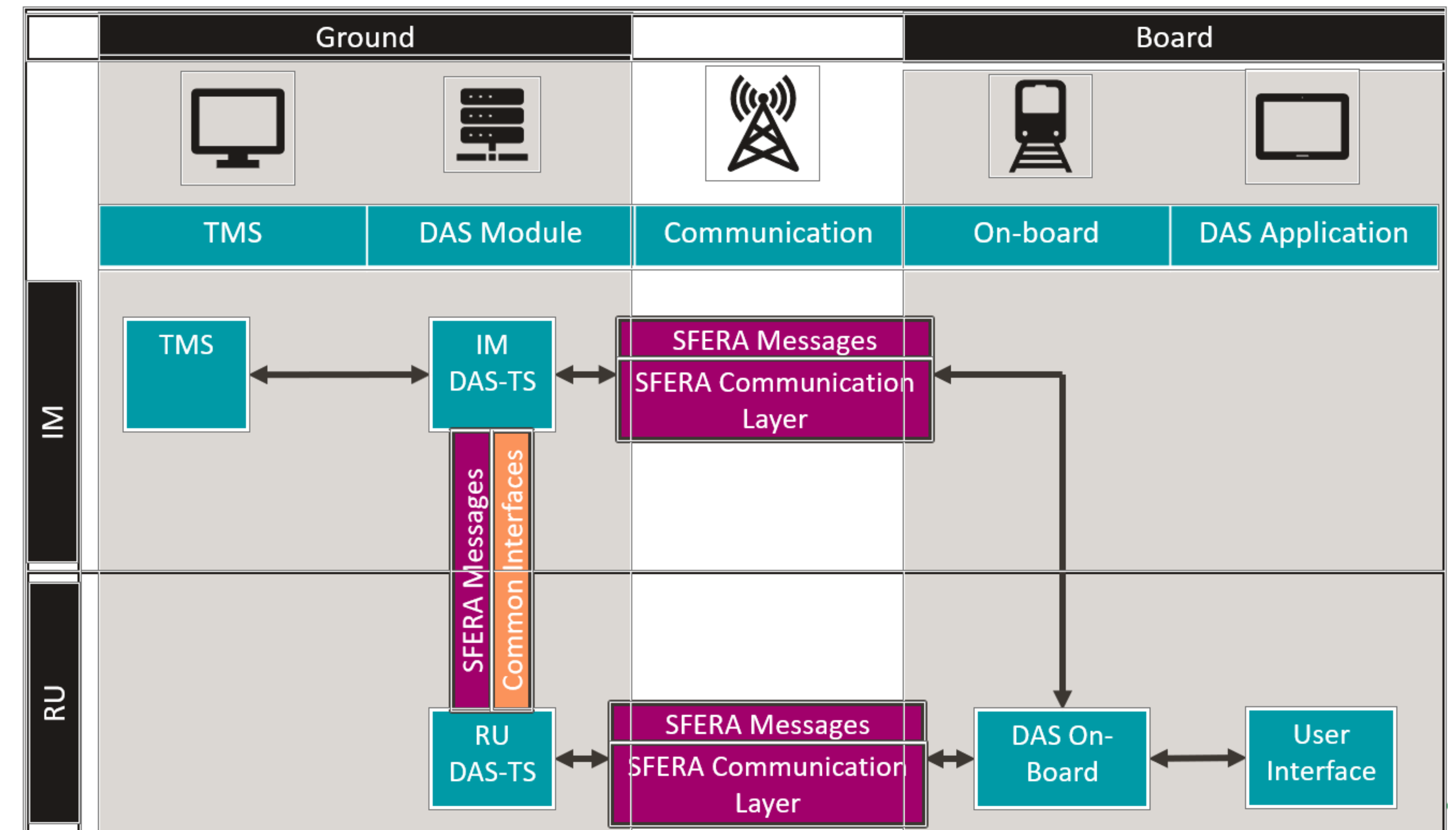
- ✓ In a multi-RU environment
- ✓ Cross IM boarder
- ✓ On ERTMS lines
- ✓ On Legacy Class B ATP lines



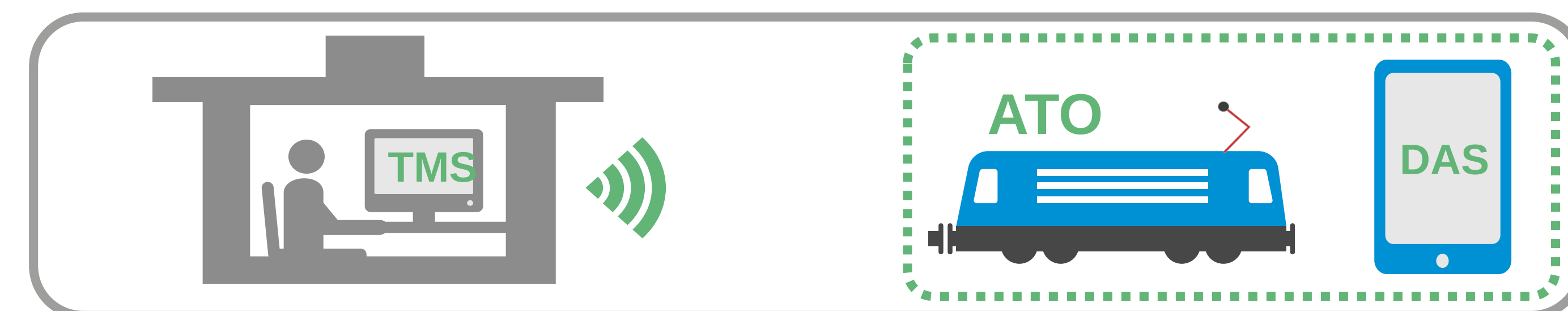
Core document
Basic principles

Appendices: (shorter update process)
Appendix A – SFERA Use Cases
Appendix B – SFERA Communication Protocol
Appendix C – SFERA Implementation Cases
Appendix D – SFERA XML Schema Definition (SFERA XSD)
Appendix E – SFERA Data Handbook
Appendix F – Sample SFERA XML Communications
Appendix G – Correspondence Table SUBSET-126/SFERA
Appendix H – Error codes in SFERA

The complete set is updated to add Digital Instructions (DI) and Free Text Communication (FTC)



For C-DAS, IM should deliver extra train, infra, timing and communication data



IRS 90940 ensures one single set of data to support ATO and DAS for all RUs



**SUSTAINABILITY
Action Week**