GENERAL PROVISIONS SUBSYSTEMS

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Annex 1-B to the UR APTU (Appendix F to COTIF 1999)

Technical Standards and Uniform Technical Prescriptions applicable to all vehicles and other railway material (General provisions) –

SUBSYSTEMS

Explanatory note:

The texts of this APTU Annex which appear without columns are identical with corresponding texts of the European Community regulations. Texts which appear in two columns differ; left-hand column contains the APTU Annex regulations, right-hand column shows the text in the corresponding EC regulations. The text in the right hand column is for information only and not part of the OTIF regulations.

OTIF APTU Annex

Corresponding text in EC regulations 1

EC ref.

0. INTRODUCTION

In order to structure the functional and technical requirements in relation to the different types of items to be technically admitted according to COTIF (Appendices F and G), the rail system is divided into subsystems, as shown below.

1. LIST OF SUBSYSTEMS

The rail system is

Annex II ↓

For the purposes of this Directive,

the system constituting the rail system may be

broken down into the following subsystems, either:

- (a) structural areas:
 - infrastructure,
 - energy,
 - control-command and signalling,
 - rolling stock;
 - other (movable) railway material
- (b) functional areas:
 - traffic operation and management,
 - maintenance,
 - telematics applications for passenger and freight services.

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Interoperability Directive 2008/57/EC, published in the EU Official Journal L191 on 18.07.2008.

² The future APTU Annexes: "Noise emitted from rolling stock", "Safety in railway tunnels" and "Persons with reduced mobility" are not subsystems, but APTU Annexes related to one or more subsystems.



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2. **DESCRIPTION OF THE SUBSYSTEMS**

For each subsystem or part of a subsystem, the list of constituents and aspects relating to interoperability is

included in the APTU Annex(es) relating to proposed by the Agency at the time of that subsystem

drawing up the relevant draft TSI.

Without prejudging the choice of aspects and constituents relating to interoperability or the order in which they will be made subject to

APTU Annexes.

TSIs.

the subsystems include, in particular:

2.1 Infrastructure (INF)

COTIF includes infrastructure only to the extent related to interfaces with the vehicles and other movable railway material, therefore, the infrastructure subsystem only includes the track and points.

The track, points, engineering structures (bridges, tunnels, etc.), associated station infrastructure (platforms, zones of access, including the needs of persons with reduced mobility, etc.), safety and protective equipment.

2.2 Energy (ENE)

COTIF includes the energy system only to the extent related to interfaces with the vehicles and other movable railway material, therefore, the energy subsystem only includes the overhead lines (catenary) and the quality of the power supplied.

The electrification system, including overhead lines and on-board parts of the electric consumptions measuring equipment.

2.3 Control-command and signalling (CCS)

All the equipment necessary to ensure safety and to command and control movements of trains authorised to travel on the network.

COTIF includes this only to the extent related to the vehicles and to the interfaces with the vehicles and other movable railway material.

2.4 Operation and traffic management

The procedures and related equipment enabling a coherent operation of the different structural subsystems, both during normal and degraded operation, including in particular training and train driving, traffic planning and management.

The professional qualifications which may be required for carrying out cross-border services.

2.5 Telematics applications

In accordance with Annex I (to the Directive),

This subsystem comprises two elements:

(a) applications for passenger services, including systems providing passengers with



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information before and during the journey, reservation and payment systems, luggage management and management of connections between trains and with other modes of transport;

(b) applications for freight services, including information systems (real-time monitoring of freight and trains), marshalling and allocation systems, reservation, payment and invoicing systems, management of connections with other modes of transport and production of electronic accompanying documents.

2.6 Rolling stock

Structure, command and control system for all train equipment, current-collection devices, traction and energy conversion units, braking, coupling and running gear (bogies, axles, etc.) and suspension, doors, man/machine interfaces (driver, on-board staff and passengers, including the needs of persons with reduced mobility), passive or active safety devices and requisites for the health of passengers and on-board staff.

The rolling stock subsystem is subdivided into

- 1) freight wagons and
- 2) other vehicles
 - Self-propelling thermal or electric trains;
 - Thermal or electric traction units;
 - Passenger carriages;
 - Mobile railway infrastructure construction and maintenance equipment.

2.7 Maintenance

The procedures, associated equipment, logistics centres for maintenance work and reserves allowing the mandatory corrective and preventive maintenance to ensure the interoperability of the rail system and guarantee the performance required.

2.8 Other (movable) railway material

Structure, fittings to carrying vehicles, doors, locks and confinement, passive or active safety devices, energy systems, electronic supervision and communication systems, requisites for the operation by staff, markings, and health of operating staff and passengers exposed to the item.

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