

OTIF



**ORGANISATION INTERGOUVERNEMENTALE POUR
LES TRANSPORTS INTERNATIONAUX FERROVIAIRES**

**ZWISCHENSTAATLICHE ORGANISATION FÜR DEN
INTERNATIONALEN EISENBAHNVERKEHR**

**INTERGOVERNMENTAL ORGANISATION FOR INTER-
NATIONAL CARRIAGE BY RAIL**

Validated by WG TECH 21

Version 03

Reference: A 94-03/1.2013

Original: EN

Date: 4.12.2013

Strategy and road map for the development of the UTP LOC&PAS

1. Introduction

At its 6th session, the Committee of Technical Experts (CTE) approved a road map for the future development of UTPs. One of the primary objectives according to this road map is to develop harmonised rules for passenger coaches. Instead of a dedicated UTP PAS, the CTE mandated the Secretariat to transpose the EU LOC&PAS TSI into a UTP, thus covering not only passenger coaches but also locomotives and multiple units.

Within the EU, the LOC&PAS TSI is being revised. ERA has finished its drafting activities and RISC¹ gave its opinion on the document in autumn 2013. This LOC&PAS TSI will be the basis for the development of equivalent OTIF rules, provisionally entitled “UTP LOC&PAS”.

2. The challenge

Up to now, the only type of vehicles covered by OTIF technical regulations has been freight wagons. With the entry into force of the first UTP for freight wagons in December 2012, the RIV provisions for new wagons were discontinued. By analogy with the RIV for wagons, the technical requirements of RIC will be affected by the introduction of a UTP covering passenger coaches.

As the UTP LOC&PAS will take precedence over the technical provisions in RIC (in accordance with APTU Art.11 § 2a), it is important that coaches meeting certain defined conditions have the same ‘free circulation’² as RIC coaches have had for many decades (RIC has existed since 1922). In other words, the UTP LOC&PAS should not be a step back in terms of possibilities for the international approval of passenger coaches compared to the RIC.

In order to achieve this, two objectives have to be met:

1. Definition of all requirements necessary for a single admission valid in all Contracting States. All such requirements should be included in the UTP.
2. A harmonised definition of vehicle-vehicle interfaces. These definitions may either be included in the UTP as a voluntary appendix, or in a separate industry ‘standard’.

¹ The EU rail interoperability and safety committee.

² Free circulation in the meaning of ATMF Article 6 § 3

3. From TSI to UTP

COTIF is applicable to international traffic only. It is therefore important for OTIF to define a full set of uniform requirements which allow the free circulation of compliant vehicles in international traffic, by analogy with the example set by section 7.1.2 to the UTP/TSI for freight wagons.

In the EU, the TSIs apply to all vehicles, irrespective of whether they are used only in domestic traffic or internationally. The TSIs in the EU serve several objectives, including opening up the market. This is one of the reasons why TSIs define functional requirements and, as far as possible, avoid imposing technical solutions. At the same time, vehicles used primarily in international traffic, such as freight wagons, need a full set of specifications in order for them to be authorised and used efficiently. This is also recognised in the EU, as illustrated by the WAG TSIs.

The conditions relating to free circulation are set out in ATMF Article 6 § 3. This Article says that free circulation requires not only the absence of specific cases and derogations, but also that the vehicle should not be subject to open points relating to technical compatibility with the infrastructure.

After its revision, the LOC&PAS TSI is expected to contain only a few open points relating to compatibility with the infrastructure and most of these open points do not apply to passenger coaches.

For the above-mentioned reasons, OTIF would try to include in its UTP some voluntary technical solutions which, when applied, close the open points for passenger coaches, thus allowing them free circulation. Obviously such voluntary technical solutions should also be fully compliant with the TSI in order to achieve full equivalence within the meaning of ATMF Article 3a.

The best way to proceed may be to add two separate annexes to the future UTP LOC&PAS:

- One annex (by analogy with clause 7.1.2 of WAG UTP) relating to the authorisation/approval covering the closure of open points relating to compatibility with the infrastructure. A passenger coach with no open points relating to compatibility with the infrastructure (and without open points and derogations) should be permitted free circulation according to ATMF Article 6 § 3.
- Another annex relating to the harmonisation of interfaces between vehicles. This annex would describe the transmission of signals and the physical interfaces between passenger coaches. These voluntary specifications would be outside the authorisation/approval domain and would be intended purely to facilitate the (cross-border) exchange of passenger coaches.

4. Closing open points relating to network compatibility

The UTP LOC&PAS will contain the conditions for the approval of passenger coaches, locomotives and multiple units. For locomotives and multiple units the UTP will not cover all aspects for free circulation, mainly because of the non-harmonised requirements for compatibility with heritage signalling systems. There is no such limitation for passenger coaches, except regarding their characteristics for compatibility with train detection systems (which may be covered by a clause similar to 7.1.2 of UTP WAG), and for this particular type of vehicle it might be possible to define harmonised conditions which allow free circulation.

If these open points could be voluntarily closed by means of some voluntary technical solutions for passenger coaches, by analogy with section 7.1.2 of the UTP WAG, a single approval for passenger coaches would be possible.

In fact, as it appears now from the draft TSI, for certain types of rolling stock, i.e. passenger coaches (without a driving cab), no open points relating to technical compatibility with the network would remain if they:

- are designed only for the 1435mm gauge
- meet the conditions for train detection systems in line with 7.1.2 of the WAG TSI (for this the open point for metal mass will be closed, which is expected by 2014)
- are not fitted with an eddy current brake
- do not have a pantograph
- have a maximum operating speed which does not exceed 190 km/h
- have fixed fire barriers (for category B fire safety, for category A there is no open point).

Additional compatibility requirements between vehicle and network, such as gauge, maximum speed, etc. should be managed by the railway undertaking under its responsibility, as set out in ATMF Article 6 § 2.

5. Harmonised interfaces for exchange in international traffic

To facilitate the exchange of passenger coaches in international traffic, what would remain undefined in addition to the TSI/UTP requirements are the interfaces between passenger coaches. If such interfaces could be listed and defined for the exchange of passenger coaches under the RIC regime, it may be possible to include them as voluntary technical solutions in the UTP LOC&PAS by analogy with Appendix C of the WAG TSI. Such interfaces would be, e.g.:

- Buffers and draw gear (EN 15807, EN 14601, UIC 648, EN 16116-1)
- Brake functional interfaces (EN 14198) and brake performance allowing train composition
- Communication interfaces with the driver's cab, e.g. for PA system and passenger alarm (UIC 541-5)
- Interface with locomotive/driver's cab Train Control and Monitoring system.
- Passenger doors control system
- Electric supply interfaces (UIC cable)
- Gangway interfaces (UIC 561)

- Indication of interfaces on the vehicle by markings

6. Compliance with requirements in other TSIs relating to vehicle and operations

In the EU a full set of TSIs is in force, several of which contain vehicle and operation related parameters. Not all these TSIs have equivalents in OTIF UTPs. To adopt a UTP that is fully equivalent to the EU TSI, it may be necessary to include in the UTP, or adopt in other ways, regulations which are necessary for the successful implementation of the UTP. Such additional parameters would mainly be related to the safe and correct use of vehicles in international traffic. Furthermore, the subjects of ‘Accessibility to persons with reduced mobility’ and ‘Noise’ may need further analysis.

7. Equivalence between TSI and UTP

Voluntary technical solutions to close open points are not included in the TSI, which may call into question the full equivalence between the TSI and a UTP if it were to include such voluntary technical solutions. As these solutions are voluntary in their application and are fully in line with the technical requirements set out in the UTP/TSI, there should be no problem with declaring the UTP and TSI equivalent. A passenger coach complying with the UTP and with all voluntary technical solutions would also be TSI compliant. Similarly, a TSI compliant passenger coach would also comply with the mandatory parts of the UTP and would therefore be UTP compliant.

A passenger coach meeting all UTP conditions, including voluntary technical solutions to close open points by analogy with clause 7.1.2 of WAG UTP/TSI, would entitle the passenger coach to circulate freely within the meaning of ATMF Article 6 § 3.

8. Road map and planning

The development of the UTP depends on the schedule for the validation and adoption of the TSI in the EU. It is therefore not certain that the UTP can be developed for adoption in the 2014 CTE, but might have to be deferred to 2015.