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UTP GEN-A ESSENTIAL REQUIRMENTS

UTP GEN-B SUBSYSTEMS

Analysis of the differences between COTIF and EU provisions concerning fixed installations

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1. INTRODUCTION

At its 31st session in Rome WG TECH reviewed and discussed draft modifications to UTP GEN-A in order to bring it into line with the EU provisions after adoption of the fourth railway package. The modifications required for this purpose were adopted by the Committee of Technical Experts (CTE) in June 2017.

During the discussion in WG TECH questions were raised concerning the reason for the differences between the EU and COTIF provisions for fixed installations (infrastructure). It was decided not to submit these questions to CTE but to analyse them further on the basis of a note to be prepared by the Secretariat.

In addition, at the 10th session of the CTE a question was raised concerning the 2-column layout of point 2.1 of UTP GEN-B. The question was raised as to whether the description of the subsystem infrastructure should not also include 'bridges' in addition to tracks and points.

2. SCOPE AND AIM OF THE PROVISIONS

2.1. AIM OF COTIF

States which are party to the Convention share the aim of the Organisation as set out in Article 2 of the Convention; *to promote, improve and facilitate, in all respects, international traffic by rail [...]*. By the means provided by the different OTIF organs, states can therefore agree to regulate under the Convention all that is necessary to promote, improve and facilitate, in all respects, international traffic by rail. This will be of particular relevance to all matters that cannot be regulated unilaterally at national level. At the same time, states are presumed to organise and develop the international parts of their railway systems in a way which is compatible with the Convention.

It is obvious that without compatible infrastructure, international traffic would be very difficult. It is therefore definitely in the interest of the Organisation to harmonise the characteristics of infrastructure and fixed installations. However, two important elements must be taken into account:

1. Most rail infrastructure for international traffic is also used - and often mainly - for domestic traffic. It is therefore important for states to maintain control over the characteristics of their infrastructure.

2. Unlike vehicles, infrastructure does not "move" across borders and does not therefore have to be mutually accepted between states.

2.2. SCOPE OF APTU

All UTPs are adopted in accordance with APTU. The scope of APTU is laid down in Article 1 APTU: "*These Uniform Rules lay down, for railway material intended to be used in international traffic, the procedure for the validation of technical standards and the adoption of Uniform Technical Prescriptions (UTP).*"

Everything in the APTU or in the UTPs adopted in accordance with APTU should be understood within this scope. All UTPs therefore concern railway material to be used in international traffic.

In accordance with the definition in ATMF Article 2 v), railway material includes both railway vehicles and railway infrastructure. The UTPs may therefore cover not only vehicles, but also railway infrastructure.

APTU Article 3 clarifies that the aim of UTPs is to:

- *facilitate the free circulation of vehicles and the free use of other railway material in international traffic,*

- *contribute to ensuring the safety, efficiency and the availability for international traffic,*

- *take account of the protection of the environment and public health.*

From this it can be concluded that the provisions in UTPs are not strictly limited to the hardware of vehicles and infrastructure, but may support a broader aim of facilitating international traffic. This justifies provisions for e.g. noise reduction, accessibility and telematic applications and these are adopted in the form of UTPs.

This is confirmed by the explanatory report on APTU[1], which states:

> *The scope of application was defined fairly broadly, so as to include technical standards and uniform technical prescriptions not only for rail vehicles, their equipment and parts, but also for the infrastructure, the traffic safety and operational control systems and the railway material in general, insofar as these are intended to be used in international traffic (see the list of Technical Annexes in Article 8).*

2.3. SCOPE OF ATMF

ATMF lays down, *for railway vehicles [and other railway material[2]], the procedure for the admission to circulation or use in international traffic*. In order to be admitted to international traffic, vehicles must comply with the applicable UTPs (Article 7) and when these UTPs cover all essential requirements and there are no open points in them, compliance with the UTPs can be the basis[3] for the free circulation of a vehicle.

Article 3a ATMF allows for the mutual acceptance of EU authorisations and OTIF admissions only if the UTPs and TSIs are fully equivalent. Although it is good practice to align UTPs with the TSIs of the European Union, there is no strict requirement that the technical provisions of the UTPs must be equivalent to the TSIs. Nevertheless, Article 8 § 9 APTU requires that differences between a UTP and a TSI must be indicated in the UTP.

If UTPs and TSIs are not equivalent, the mutual recognition of assessments between EU and COTIF is not possible. Equivalence is therefore important and as a result it is good and undisputed practice that UTPs are developed to be and to remain fully equivalent with EU TSIs. Without such equivalence the useful application of ATMF would be (severely) impaired. However, this does not mean that UTPs must always cover all the provisions of all TSIs, as UTPs must be understood in the overall scope of APTU and ATMF, whereas the TSIs serve the scope and purposes of EU railway directives.

UTPs, like TSIs, contain specifications for subsystems and for interoperability constituents; the latter are also referred to in ATMF as elements of construction.

2.4. SCOPE OF EU RAILWAY DIRECTIVES

Without entering into the details of the EU railway directives, their scope concerns the railway system of the European Union, covering both domestic and international traffic. One of the purposes of the

[1] http://otif.org/en/?page_id=172

[2] The reference to 'other railway material' will be deleted in accordance with the decision of the 12th General Assembly. The amendment that was the subject of this decision has not yet entered into force.

[3] There are a number of other conditions set out in Article 6 § 3, such as the absence of derogations and of open points which concern compatibility with infrastructure, but complete UTPs with no remaining open points constitute the basis.

EU TSIs is to create a single European railway area, interoperability within the EU railway system and harmonisation of the requirements to be complied with for railway products to be sold on the EU market. Member States of the EU therefore strive, by means of EU law, for greater harmonisation and integration of their rail systems than the Member States of OTIF do by means of COTIF.

Notwithstanding, all EU Member States with a railway system are also members of OTIF and apply APTU and ATMF. EU and COTIF provisions must therefore be equivalent or complementary, but not contradictory.

2.5. SCOPE OF UTPs

From the above it follows that although UTPs are based on and copy many elements from TSIs, these two types of regulations do not serve identical purposes. All UTP provisions should relate to international traffic and it is appropriate that UTPs serve this purpose clearly, e.g. by not taking over TSI provisions that fall outside the scope APTU.

There are two groups of UTPs:

- A group starting with the letters “UTP GEN” contains general provisions for the consistent application of APTU and ATMF.

- Technical and functional UTPs covering subsystems or parts of subsystems, including their elements of construction (ICs).

Within the first group, UTP GEN-A defines the essential requirements to be met by subsystems and UTP GEN-B defines the subsystems. These two UTPs are important because the technical and functional UTPs relate to them in the sense that they provide a precise scope of the technical and functional UTPs. It is therefore important for the entire framework of UTPs that UTP GEN-A and UTP GEN-B are precise and correct.

3. ANALYSIS AND DISCUSSION

3.1. INFRASTRUCTURE AND FIXED INSTALLATIONS

It is clear from the above that EU railway law and COTIF have different aims and scopes and that these differences are echoed in the technical provisions concerning infrastructure.

In accordance with APTU, UTPs may cover more than vehicles only, e.g. infrastructure, fixed installations and operational prescriptions, as long as these are necessary or useful for international rail traffic. This should be understood in the context that infrastructure is not exclusively used for international traffic, but also (often mainly) for domestic traffic. For these reasons binding rules in UTPs concerning infrastructure should be strictly limited to the aim of facilitating international traffic and in particular to the interfaces with vehicles and trains running on it. Where mandatory provisions would be disproportionate, technical specifications could also take the form of recommendations or best-practice.

In this respect it would be justified to establish common mandatory or recommended provisions for infrastructure and fixed installations, so that states can apply them when developing their rail system. In any case the conformity assessment and approval of infrastructure will not fall under COTIF, as is clear from Article 8 § 2 ATMF, which states that *admission of infrastructure and supervision of its maintenance remain subject to the provisions in force in the Contracting State in which the infrastructure is located*.

3.2. UTP GEN-A – ESSENTIAL REQUIREMENTS

In UTP GEN-A there are several points with a 2-column layout, i.e. differences between the EU and the COTIF provisions. The difference is at least partially explained in point 2.1 of UTP GEN-A which

states on the left-hand (COTIF only) side: "*As COTIF concerns infrastructure only to the extent related to interfaces with the vehicles and other movable railway material, there are no essential requirements for infrastructure other than those indicated in the General Requirements indicated in Chapter 1 above.".* Then in the right-hand column, UTP GEN-A sets out (for information only) the EU provisions for the safety of and accessibility to infrastructure. Something similar to infrastructure is also applicable to the energy subsystem as stated in point 2.2: "*COTIF concerns the energy supply systems in relation to the vehicles and other movable railway materials; the fixed installations are only concerned in relation to their interfaces with the rolling stock."*

These EU provisions relate to matters of public health and safety and accessibility and not directly to international railway traffic. It would seem appropriate that such provisions are covered by the law applicable in each state rather than by COTIF, because it is not the purpose of the Organisation to harmonise these policy areas.

This can be illustrated by means of an example: the accessibility of stations for people in wheelchairs is not covered by COTIF, because improving accessibility to public buildings, while very important, is not one of Organisation's objectives. However, accessibility to rolling stock is covered because otherwise, each state could develop its own requirements for rolling stock accessibility, possibly resulting in conflicting and non-harmonised requirements which would jeopardise international traffic.

Similarly, the noise emission of rolling stock is covered by UTP GEN-A, because if noisy vehicles move across borders, this may lead to noise levels that are unacceptable to some states. At the same time the environmental nuisance of maintenance centres is not covered, as this nuisance is stationary and can be fully regulated by laws applicable in the state concerned.

Against this background, it does not currently appear necessary to "improve" UTP GEN-A.

3.3. UTP GEN-B - SUBSYSTEMS

At the 10th session of the CTE, it was suggested that UTP GEN-B be modified to include bridges, in addition to the track and points that have already been mentioned. The reasoning was that if interfaces between bridges and vehicles are not managed correctly this may lead to harmful vibrations.

The purpose of UTP GEN-B is to divide the rail system into structural and functional subsystems so that technical and functional requirements can be defined for each of these subsystems. In this sense UTP GEN-B defines the general scope of what structural and functional UTPs may cover. On the one hand vehicles, including the rolling stock subsystem, the on-board part of control-command and signalling and maintenance of rolling stock, are exhaustively covered. On the other hand, infrastructure, energy and track-side control-command and signalling are only covered to the extent related to interfaces with the vehicles.

The table below reproduces the provisions of point 2.1 of UTP GEN-B, which is the subject of the discussion in CTE, and the corresponding EU provisions:

COTIF includes infrastructure only to the extent related to interfaces with the vehicles. Therefore, the infrastructure subsystem only includes the track and points.	*The track, points, level crossings, engineering structures (bridges, tunnels, etc.), rail-related elements of stations (including entrances, platforms, zones of access, service venues, toilets and information systems, as well as their accessibility features for persons with disabilities and persons with reduced mobility), safety and protective equipment.*

The first sentence on the left-hand side establishes the principle that infrastructure is only in the scope of the UTP insofar as interfaces with vehicles are concerned. The second sentence makes this principle

clearer by stating that only track and points are concerned. When comparing it with the right-hand side setting out the EU provisions, it can be seen that level crossings and engineering structures (bridges, tunnels, etc.) are not covered in the UTP.

By analogy with the logic behind UTP GEN-A, it is also justified here not to take over those parts of EU law that concern subjects which have little or no link to the scope of COTIF. On this basis, stations and safety and protective equipment, as well as accessibility, can be regulated at national level without harming international traffic.

Before entering into the detail of this provision of UTP GEN-B it is worth recalling that UTP GEN-A contains a general essential requirement 1.4.5. which requires that "*Operation of the rail system must not give rise to an inadmissible level of ground vibrations for the activities and areas close to the infrastructure and in a normal state of maintenance"*. Even though this essential requirement specifically refers to 'operation', it is of a general nature and does not therefore concern operation only. It could be interpreted to mean that Contracting States must design and construct any structure used in international traffic in such a way that the essential requirements are complied with. This could be understood to include bridges as well.

If the outcome of the discussion were to lead to an amendment of UTP GEN-B to include bridges, the consequence would be that a possible future UTP for infrastructure would have to include parameters concerning bridges. Such a UTP would only be applicable to new bridges, not to existing ones. The admission, supervision and maintenance of infrastructure would remain subject to the provisions in force in the state where the infrastructure is located (Art. 8 § 2 ATMF).

Against this background it might be worth discussing whether points 2.1 and 2.2 of UTP GEN-B should be amended. Below are suggestions for such amendments:

2.1 COTIF includes infrastructure only to the extent related to interfaces with the vehicles. ~~Therefore, the infrastructure subsystem only includes the track and points.~~

2.2 COTIF includes the energy system only to the extent related to interfaces with the vehicles. ~~Therefore, the energy subsystem only includes the overhead lines (catenary) and the quality of the power supplied.~~

After such a modification, the Committee of Technical Experts would be competent to decide for each (future) UTP concerning infrastructure or energy system exactly which interfaces need to be covered.

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