Technical checklist for
Technical Specifications for Interoperability

Issue One

Approved by the
Industry Standards Coordination Committee

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## Issue record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>July 2010</td>
<td>Original document</td>
</tr>
</tbody>
</table>
## Contents

1. Purpose ............................................................................................................... 4  
2. The technical checklist ................................................................................... 4  
3. Have the origins of the values selected for parameters in the TSI been identified? ................................................................. 5  
4. Were there any assumptions made when setting parameters, either explicitly or implicitly? ......................................................... 5  
5. Have any calculations been checked? ............................................................... 5  
6. Have the values for parameters in interfacing sub-systems been reviewed? ..................................................................................... 5  
7. Are there any ‘missing’ parameters? ............................................................... 6  
8. Have parameters been proposed for inclusion within a TSI that should not be included? ................................................................. 6  
9. Have the selected parameters in the TSI been compared with the requirements in the relevant RGSs? .................................................. 6
1 Purpose

1.1 This technical checklist for Technical Specifications for Interoperability (TSIs) is issued by the Industry Standards Coordination Committee (ISCC) to assist when reviewing a TSI for technical correctness.

1.2 It complements the ‘Guide for persons involved in the development of TSIs’ (Issue Three), which was published by ISCC on 18 June 2010.

1.3 This document will be subject to amendment if necessary, as experience with technical review of TSIs develops.

1.4 The technical checklist is for TSIs covering structural sub-systems only (Infrastructure, Energy, Rolling Stock, Control-command and Signalling).

1.5 The checklist is intended to ensure, as far as possible, that the technical review of TSIs and specific cases is thorough.

2 The technical checklist

2.1 The technical checklist takes the form of a series of questions, with some associated points to consider. These are set out in sections 3 to 9 below. The questions are:

- Have the origin of the values selected for parameters in the TSI been identified?
- Were there any assumptions made when setting parameters, either explicitly or implicitly?
- Have any calculations been checked?
- Have the values for parameters in interfacing sub-systems been reviewed?
- Are there any ‘missing’ parameters?
- Have parameters been proposed for inclusion within a TSI that should not be included?
- Have the selected parameters in the TSI been compared with the requirements in the relevant Railway Group Standards (RGSs)?

2.2 In the case of parameters in the main body of TSIs (Chapters 4 and 5) the onus should be on the ERA to undertake the checks set out in sections 3 to 8. Members of ERA Working Groups and Sector Organisation Support Groups should seek assurances that these checks have been undertaken. GB mirror groups should undertake the check set out in section 9.

2.3 In the case of specific cases for the GB network proposed for inclusion in Chapter 7 of TSIs, GB mirror groups should undertake all checks on the parameters proposed for the specific cases.
3 Have the origins of the values selected for parameters in the TSI been identified?

3.1 The value selected for a parameter in the TSI could originate from a number of data sources. The most obvious ones are UIC fiches, Euronorms, a Member State domestic standard or good practice in one or more Member States.

3.2 The origin of the values selected should be indentified and recorded so that they can be challenged by reviewers and checked to ascertain that they represent the best technical and economic solution.

4 Were there any assumptions made when setting parameters, either explicitly or implicitly?

4.1 Assumptions, particularly those made in calculations for parameters that are derived from other parameters, need to be stated and reviewed to ascertain that they are robust, sensible and appropriate.

4.2 There may be 'unstated' assumptions. These may be obvious to the TSI drafter, but need to be stated for the TSI user.

4.3 Assumptions will also include limits of validity and reference points for parameters, which need to be clearly stated.

5 Have any calculations been checked?

5.1 Many TSIs contain values for parameters that are derived by calculation from other parameters or data sources. These calculations need to be checked to ascertain that they are correct.

6 Have the values for parameters in interfacing sub-systems been reviewed?

6.1 The values selected for parameters in the TSI should be reviewed against the values selected for parameters in the TSIs for interfacing sub-systems, to ascertain that the parameters 'match' and represent the best technical and economic solution.

6.2 The review will include those parameters that are derived from the measurement of other parameters, where there is a need for an 'indirect' compatibility.

6.3 Although the Traffic Operation and Management sub-system is a functional, rather than a structural sub-system, TSIs for structural sub-systems should also be checked against the Traffic Operation and Management TSIs.
7 Are there any ‘missing’ parameters?

7.1 TSIs are written as standards for particular sub-systems, rather than as coherent interface standards. Drafting of standards relating to different sub-systems may not be undertaken to the same timescales. As result, it is possible that the parameters selected for inclusion in a TSI do not adequately define the interfaces between sub-systems, and particularly the interface between rolling stock and infrastructure sub-systems (meaning ‘infrastructure’ in its broad sense).

7.2 Some consideration therefore needs to be given to the completeness of the parameters selected for inclusion in a TSI. The check on values for parameters in interfacing sub-systems set out in section 6 above may assist in making this check, as may a consideration of the essential requirements set out in Annex III of Directive 2008/57/EC.

8 Have parameters been proposed for inclusion within a TSI that should not be included?

8.1 The ‘Guide for persons involved in the development of TSIs’ contains, in section 14, guidance on the types of parameters that should and should not be included in TSIs.

8.2 If there is any doubt about the appropriateness of including a parameter within a TSI it should be checked against the points set out in section 14 of the Guide.

9 Have the selected parameters in the TSI been compared with the requirements in the relevant RGSs?

9.1 The value selected for a parameter in the TSI needs to be checked against the equivalent requirement in the relevant RGS.

9.2 If the TSI is setting a different parameter at a particular interface, or sets a different value for a parameter, this should be reviewed to ensure that the parameter in the TSI represents the best technical and economic solution.

9.3 It is possible that changes to the relevant RGS will be required if the parameter in the TSI represents a better technical or economic solution for the GB mainline railway.

9.4 Where there is a good reason to retain a different parameter in a RGS, the reasons for doing so should be recorded, and a proposal developed for managing the implications of the difference (for example, proposing a GB specific case).

9.5 It would also be useful to check the values selected for parameters in the TSI against other GB mainline railway standards where these are available – for example, the standards for High Speed 1.
9.6 In the case where a parameter is an 'open point' in an existing TSI subject to revision, or it is proposed to declare it as an 'open point' in a new TSI, the opportunity should be taken to see if the RGS or other mainline railway standards notified as national technical rules contain values or a methodology that could be proposed to close the open point.