THE USE OF COMPUTER TOOLS FOR CONFORMITY VERIFICATION

Scope
This RFU addresses conformity assessment in relation to Directives 96/48/EC, 2001/16/EC and 2004/50/EC, the TSIs in force and assessment modules B, SB, F, SF, SG, H2 and SH2. It sets criteria that notified bodies must consider to accept conformity verification evidence collected by the use of computer tools used by other testing bodies than Independent Test Laboratories, to be used to support notified body assessments without the need to repeat those tests.

This RFU is applicable to Subsystems and Interoperability Constituents. It covers both partial and complete tests.

Introduction
Notified bodies prefer testing to be carried out by Independent Test Laboratories. In practice, however, many tests can be carried out credibly only by the manufacturer during the course of the contract. While it is preferable for test bodies to be accredited to undertake appropriate testing, the criteria for such accreditations and the competence of the organisation that might undertake these accreditations are not specified within the TSIs. Similarly, many type and routine tests might be carried out by the manufacturer in its own works or on site. Indeed, type tests might be carried out by the supplier of a constituent.

The use of testing bodies other than notified bodies is covered by RFU-STR-022 where a set of minimum acceptance criteria is given which shall be fulfilled by a testing body before notified bodies can accept test results from these organisations to support their notified body assessment activities.

This set of minimum acceptance criteria covers accreditation, competence and acceptance of test results. The use of computer tools to provide these test results is, however, not covered. Computer tools being used by Independent (accredited) Test Laboratories can be assumed to be encompassed by the laboratory's accreditation. Computer tools to be used by other testing bodies must, however, fulfil a certain set of acceptance criteria of their own for their results/test reports to be accepted as evidence of conformity verification.
The CENELEC standard EN 50128 classifies the use of validated and/or proven in use translators (compilers) as “Highly Recommended” for SIL 1-4 systems. This could be adopted for computer tools to be used for conformity verification. However, the results produced by tools which are not certified nor proven in use can still be used provided these results are supported by manual investigation. Provided that the tool is suited for its verification task and its output can be trusted, tool verification will always be more effective, repeatable and accurate than manually going through heaps of test report printouts.

**RFU Proposal**

Test results/reports being provided by a computer tool can be accepted as evidence for conformity verification if the computer tool complies with either of the following criteria:

a. **Certification/validation**

The computer tool and its actual version & use has been certified or validated by an independent and accredited organisation.

b. **Proven in use**

The computer tool and its actual version & use has been verified successfully used in other similar verification projects, by Independent Test Laboratories or other testing bodies as specified by RFU-STR-022.

c. **Neither yet certified nor proven in use**

A computer tool which is neither yet certified nor proven in use can be used as evidence for conformity verification, provided that its test results are supported by a manual investigation of the tests results. The scope and extent of this manual investigation will depend on the tool's degree of validation and proven in use and is up to the notified body to decide.

**Date of Agreement at NB Rail Plenary Meeting**

15/10/2008