



**Agenda item 10.1.2.1**

**Project proposal for the revision of D 31**  
*General requirements for software controlled measuring instruments*



## PROPOSAL FOR A NEW PROJECT

**Within:** TC 5 SC 2

**Date:** 19<sup>th</sup> June 2019

### Proposer(s):

Marko Esche, Germany, Secretary of OIML TC 5/SC 2

### Type of proposed publication:

Recommendation     Document     New     Revised     Vocabulary     Guide

### Title of proposed publication:

OIML D31 “General requirements for software-controlled measuring instruments”

### Terms of reference of the project:

To revise the existing OIML D31 to reflect the latest developments in software in legal metrology and to provide for alternative protection, securing and evaluation techniques.

### Why should the OIML develop this publication?

1. At the Dordrecht meeting of TC 5/SC 2/p 3 in April 2018, the project group discussed the question of finishing the current revision of D31 in 2019 to deal with the most pressing issues quickly. It was voiced by several participants that an immediate revision to address future challenges would also be needed.
2. During the voting on 2CD and the subsequent minor change procedure Australia, Brazil and the Netherlands indicated that another revision should be started immediately.
3. The following list of topics to be addressed in the next revision has been compiled from input by different member states:
  - a. Formal verification of software should be added as an alternative evaluation method.
  - b. The usage of terms related to “protection” and “securing” of software should be checked for consistency and appropriate definitions should be provided where necessary.
  - c. Impact of machine learning algorithms and statistical analysis tools on software in legal metrology should be considered.
  - d. New forms of data storage and processing (especially cloud-based systems) should be addressed more specifically in examples.
  - e. The requirements for indication of measurement results should be revised to account for new display technologies (such as smartphone apps).
  - f. It should be investigated if more than two different risk levels are needed for software

- examination and protection.
- g. Requirements for updates to operating system parts subject to legal control should be formulated.
  - h. Remote verification of updated measuring instruments should be discussed, requirements should be formulated if needed.
  - i. Requirement clauses that do not use normative language shall be revised and corrected where necessary.

**List of countries known to regulate or intend to regulate this category of interest:**

A great number of regulated instruments include software, so most OIML Member States already regulate instruments affected by this Document.

**Relevant associated OIML publications:**

Since D31 provides generic software requirements to be used when revising existing or drafting new OIML Recommendations, almost all Recommendations would eventually be affected by a revision.

**List of appropriate liaisons and their work related to this proposed project:**

IEC, ISO, CECIP, CECOD