



International Organization of Legal Metrology

Organisation Internationale de Métrologie Légale

**Agenda Item 14:
Report by the
OIML Digitalisation Task Group (DTG)**

Dr. Sascha Eichstädt, Dr. Yang Ping

DTG Chairpersons



Organisation

- Dr. Sascha Eichstädt took over as Chairperson and Dr. Yang Ping as Deputy Chairperson for the OIML Digitalisation Task Group (DTG) on the basis of CIML Resolutions 2022/41 and 2022/42Text
- A new delegate from Korea, Kim Hyunki (KATS) has been welcomed to the DTG. In addition, the newly elect CEEMS AG Chairperson, Jako Marneweck, had been invited to participate as an observer



Sub-Committee „Smart OIML documents“

At the meeting in November 2022, a sub-committee on “SMART OIML documents” was founded. The scope of this sub-committee was defined to be:

- Information activity on "machine-readable standards“ in OIML
- Exchange with IEC Strategic Group (SG) 12 and inviting industry.
- Basic guidance and information, and a common understanding of the meaning and role of “smart” OIML publications
- Prepare recommendations to be submitted by the DTG to CIML



Sub-Committee „Smart OIML documents“

Delegates from NMIJ/AIST, Measurement Canada, BEV, INTI, NIST, CECIP and NIM China participate in this sub-committee.

In its first meeting, the sub-committee elected Katya Delak (NIST) as Convener and decided the following key work items:

- The SC decided to begin a single recommendation, test report and OIML Certificate to have a concrete starting point.
- The SC considers working with a specific OIML Project Group.
- The SC recognized the need to build a roadmap



Sub-Committee „Smart OIML documents“

Initial findings by the SC were:

- Developments need to consider that digital and human readable standards are expected to remain in parallel.
- Software tools are needed to read and output the digital version of OIML documents.
- OIML Recommendations need to be formatted according to a manner that can easily be digitalized. This includes better structured text that is human readable and unambiguous.
- A reasonable starting point is the definition of clear requirements for numbering and organization of sections, as well as harmonized use of vocabulary (e.g., explanation compared to definition) in headlines and titles.
- Consider PG to discuss development of a digitalized recommendation as pilot. Possible candidates are R46, R76, G22.
- Consider training for TC Chairs on formatting and structuring documents for machine-readability and for future wording/revisions.



DTG Collaboration within OIML

- Regular attendance of RLMO RT to report about the DTG and join discussions about digitalisation in LM
- Initial contact with OIML TC1 on the development of a potential machine-readable Guide 18 (Vocabulary)
- Prototype implementation of a web-based thesaurus with the existing Guide 18



DTG in international conferences and workshops



- DTG organized special session “Digital transformation in legal metrology”
- Three scientific presentations on legal metrology aspects
- Panel discussion with representatives from CEEMS, CECIP, OIML-CS, NMI-A and German market surveillance

221 attendees, 44 papers, 16 invited talks,
16 sessions, fully hybrid conference





DTG in international conferences and workshops

21st INTERNATIONAL METROLOGY CONGRESS

CIM 2023

- DTG Chairperson organised a round table discussion on the impact of metrology in the digital transformation
- Participants from BIPM, Endress+Hauser, PTB, NIST, Beamex, Trescal
- Discussion addressed topics such as machine-readable certificates, digital traceability, data quality, remote services, and digital reference standards



DTG in international conferences and workshops



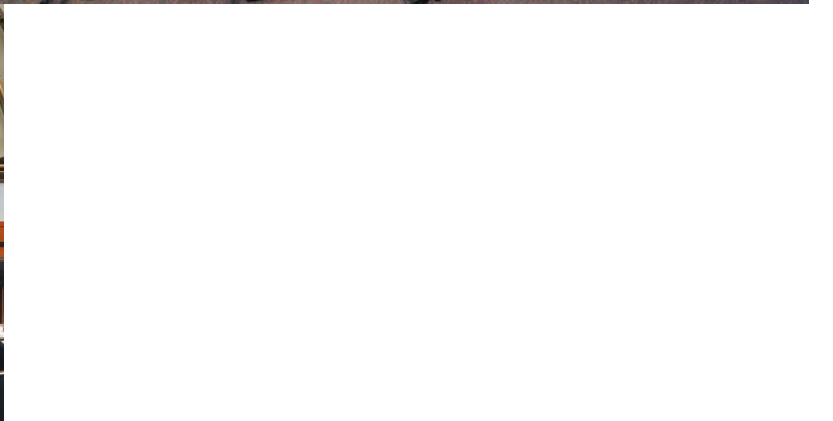
Opportunities, use cases and challenges in blockchain technologies in metrology

- **PTB, Germany:** From the European Metrology Cloud to an international QI Cloud
- **Random Red, Croatia:** Metroracle - Digital Traceability Pyramid and Measuring Device as Blockchain Oracle
- **EBSI, European Commission:** pan-European SSI/digital identity
- **NMI-A, Australia:** National blockchain development initiative for legal metrology
- **NPL, United Kingdom:** Blockchain applications in metrology and advanced manufacturing
- **EUROLAB, International:** Blockchain technologies for laboratories



DTG in international conferences and workshops

Several presentations and panel discussions related to digitalisation in legal metrology





Joint Statement of Intent (JSI)



CIE

INTERNATIONAL COMMISSION ON ILLUMINATION



CODATA

COMMITTEE ON DATA OF THE ISC



IEC

INTERNATIONAL ELECTROTECHNICAL COMMISSION



ILAC

INTERNATIONAL LABORATORY ACCREDITATION COOPERATION



IMEKO

INTERNATIONAL MEASUREMENT CONFEDERATION



ISC

INTERNATIONAL SCIENCE COUNCIL



ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION



NCSLI

NATIONAL CONFERENCE OF STANDARDS LABORATORIES INTERNATIONAL



OIML

INTERNATIONAL ORGANIZATION OF LEGAL METROLOGY

Joint statement of Intent

On the digital transformation in the international scientific and quality infrastructure

[...]

We the undersigned undertake to support in a way appropriate to each organisation the development, implementation, and promotion of the SI Digital Framework as part of a wider digital transformation of the international scientific and quality infrastructure.



Joint Statement of Intent (JSI)

- Two JSI Signatories meetings in 2023: June and September
- Collaboration between OIML DTG and CIPM TG to prepare proposals:
 - JSI Round Table to foster collaboration and knowledge exchange between the Signatories beyond the meetings of the CIPM Forum
 - Initiation of a JSI International Conference series bringing together experts from the Signatories and their organisations in liason

Both proposals were endorsed in the JSI November meeting

Kick-off meeting and 1st International Conference of the JSI will take place on 5-6 March 2024 at BIPM, France.



DTG recommendation toward CIML

The CIML is asked to approve the plan of the DTG to formulate a roadmap with concrete milestones and work items based on the outcomes of the OIML Seminar “OIML in the digital era” on 16 October 2023.

The DTG recommends establishing a Steering Committee to prepare this roadmap to be discussed in the upcoming meetings of the DTG.