



International Organization of Legal Metrology

Organisation Internationale de Métrologie Légale

OIML Report Legal Metrology yesterday, today, tomorrow

*Stephen A PATORAY
BIML Director*

19 -20 May 2011

Sibenik, Croatia

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International Organization of Legal Metrology

Organisation Internationale de Métrologie Légale

Scientific or fundamental metrology

Applied or industrial metrology

Legal metrology

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Scientific or fundamental metrology concerns the establishment of quantity systems, unit systems, units of measurement, the development of new measurement methods, realization of measurement standards and the transfer of traceability from these standards to users in society.

Wikipedia

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Applied or industrial metrology concerns the application of measurement science to manufacturing and other processes and their use in society, ensuring the suitability of measurement instruments, their calibration and quality control of measurements.

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Legal metrology concerns regulatory requirements of measurements and measuring instruments for the protection of health, public safety, the environment, enabling taxation, protection of consumers and fair trade.

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Legal metrology comprises all activities for which legal requirements are prescribed on measurement, units of measurement, measuring instruments and methods of measurement, these activities being performed by or on behalf of governmental authorities, in order to ensure an appropriate level of credibility of measurement results in the national regulatory environment.

(Definition taken from OIML D 1 Elements for a Law on Metrology, 2004).

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<http://www.metrum.org/measures/metrics.htm>

<http://www.bipm.org/en/convention/wmd/2004/history.html>

http://www.agilent.com/metrology/fun_history.shtml

<http://scienceweek.com/2005/sc050107-1.htm>

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The system of measures was probably organized when agriculture was first developed in the area that goes from Syria to Iran around 6000 B.C.

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The earliest systems of weights and measures were based on human morphology.

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The earliest documents of Mesopotamia and Egypt indicate that the system of length was based on a foot of 300 mm. This unit is usually known as the Egyptian foot;

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**Units of weight were determined by filling
the cube of the foot or of the cubit with rain
water at ordinary temperature;**

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One of the first natural measures was the metre, which was defined in a decree of the French National Assembly (7 April 1795) as being equal to the ten millionth part of one quarter of the terrestrial meridian,

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Once the base unit of length had been decided upon, it was possible to establish the resulting units of measure: the square metre (for area) and the cubic metre (for volume).

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The kilogram was originally defined as the weight of a certain volume of water, a convenient and readily purified liquid.

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The Bureau International des Poids et Mesures (BIPM) was founded by the terms of the diplomatic treaty known as the Metre Convention on 20 May 1875. To celebrate the signing of the Metre Convention, the date of 20 May is known as World Metrology Day.

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The OIML was established in 1955 to promote the global harmonization of legal metrology requirements and procedures.

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OIML Membership

Member States (57)

- Have signed the OIML Treaty
- May vote in OIML structures
- May appoint an Issuing Authority
- May fully participate in the MAA and in the CPRs

Corresponding Members (56)

- Have not yet signed the OIML Treaty
- May attend CIML and OIML Conference Meetings as observers
- May participate in OIML Technical work
- May participate in the MAA as associates

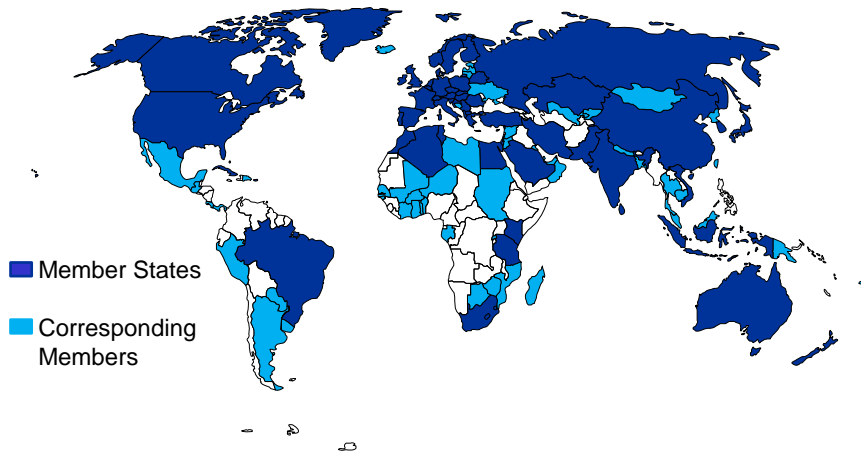
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OIML Membership



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OIML activities

Technical work

- **108 current work projects:**
- 76 projects revising, or adding test procedures or test reports to existing publications
- 32 projects developing completely new publications

Outcome

- **160 current OIML publications:**
- 101 Recommendations
- 27 Documents
- 12 Basic publications
- 2 Vocabularies
- 18 Guides

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OIML Certificate System

Voluntary system launched in 1990.

- CIML Members (Member States) may appoint Issuing Authorities that they consider competent and impartial
- Issuing Authorities issue **OIML Certificates of Conformity** to OIML Recommendations, accompanied by an **OIML Test and evaluation report**

These Certificates of Conformity are registered and published on the OIML web site.



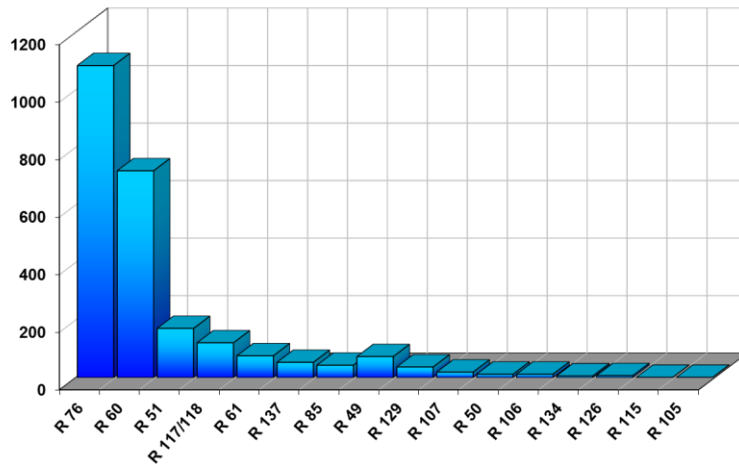
OIML Certificate System

As of 04 April 2011

- 2437 Certificates
- related to 17 categories
- issued by 23 Issuing Authorities out of 31
- for 513 applicants
- from 39 countries



OIML Certificate System



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OIML MAA

Optional addition to the OIML Certificate System

Voluntary system started in 2005

For identified categories, **Declarations of Mutual Confidence**

- Based on the **evaluation** of Issuing Authorities (ISO/IEC 17025)
- A group of participants declare that they will **accept and utilize evaluation and test results** issued by the evaluated Issuing Authorities (called Issuing Participants)

Certificates are recorded with mention they are covered by a DoMC



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OIML MAA

Evaluation of Issuing Participants

Based on ISO/IEC 17025

At the choice of the participant,

- either by **accreditation** by an ILAC full member,
- or by **peer assessment**



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OIML MAA



	Water meters R 49 (since 30/11/2007)	Load cells R 60 (since 29/9/2006)	NAWI R 76 (since 29/9/2006)
Total Participants	7	18	20
Issuing Participants	2	7	10
Number MAA Certificates (as of 01/04/2011)	6	92	51

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OIML MAA

R 60 load cells

2007	Total: 33	MAA: 2	6.1 %	
2008	Total: 45	MAA: 11	24.4 %	
2009	Total: 61	MAA: 25	41.0 %	
2010	Total: 71	MAA: 48	67.6 %	←
2011	Total: 06	MAA: 06	100.0 %	

R 76 NAWI

2007	Total: 82	MAA: 04	4.9 %	
2008	Total: 82	MAA: 02	2.4 %	
2009	Total: 76	MAA: 10	13.2 %	
2010	Total: 79	MAA: 32	40.5 %	←
2011	Total: 07	MAA: 03	42.9 %	



Current Work at the BIML

OIML Directives for Technical Work (B 6)

- Changes to this Basic Publication to improve work flow and voting procedures for the Technical Committees (Enquiry out)

OIML Elements for a Law on Metrology (D 1)

- Work underway to improve content of this Document (May 17)

OIML MAA

- addressing the acceptability of manufacturer's test results (Enquiry recently completed)

Prepackages

- Voluntary OIML system for the certification of the contents of prepackages (Meeting delayed until fall)



Current Work at the BIML

OIML CTT Seminar

- Meeting to further discuss and develop the requirements related to the Conformity to Type. (Meeting June 29 and 30)

BIML Infrastructure

- Project underway to improve IT system at the BIML
- Project underway to determine costs and schedule for some much needed infrastructure improvements to the BIML office at 11 rue turgot

OIML Financial Audit

- Completed before the end of March 2011
- Contained the accounting changes needed to include full accounting for pension system
- Completed review of the first three months of 2011

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BIML Staff

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Ian
DUNMILL
Assistant Director



Stephen
PATORAY
Director



Willem
KOOL
Assistant Director



Jacques
BOURGEOIS
Office Clerk



Jean-Christophe
ESMIOL
IT Systems



Philippe
LECLERCQ
Administrator



Florence
MARTINIE
Accountant



Luis
MUSCIO
Engineer



Chris
PULHAM
*Editor/
WebMaster*



Patricia
SAINT-GERMAIN
*Office
Manager*



Vacant
Engineer

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BIML Staff

Stephen A PATORAY: BIML Director

- Mechanical Engineer by education
- Masters in Business Administration
- Certified Association Executive
- Auditor for ISO 9001 and 17025
- Certified Six Sigma Green Belt

- Over 25 years in Industry
- Over 8 years NTEP Director
- Federal Agent for US Department of Agriculture



Organizational Change

President-elect:

[Mr. Peter Mason](#), CIML Member for the UK, Chief Executive of the NMO (UK) will become CIML President in Prague.

New Vice-President:

[Dr. Roman Schwartz](#), CIML Member for Germany, Head of the Division 'Mass' in PTB was elected in Orlando



Organizational Change

Presidency



Dr. G. Harvey
CIML First Vice-President



Mr. A. Johnston
CIML President



Dr. P. Schwartz
CIML Vice-President



Mr. R. Mason
CIML President-elect

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OIML Membership

The future of legal metrology:

- Depends very much on all of you.
- Depends on the value you place on accurate measurements,
- Depends on the value you place on fair trade for all
- However, it does not depend on complete global harmonization

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OIML Liaisons

The OIML has a number of liaisons

- BIPM
- ILAC/IAF
- ISO
- IEC
- CODEX Alimentarius
- UN-ECE
- UNIDO
- WTO-TBT Committee



MOUs

- Revised MoU between **ILAC, IAF and OIML** signed by the respective Presidents in Shanghai, 27th October 2010 (*Accreditation of conformity assessment in legal metrology*)
- Revision of the MoU between **OIML and IEC** (Conformity assessment and technical cooperation)
- Future MoU between **OIML and UNEC** (*Regulatory cooperation*)



Further developments

World Metrology Day

20 May 2011

<http://www.metrologyinfo.org/worldmetrologyday/>



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Regional Organizations

We at BIML greatly appreciate all of the work which is completed by our Members and the Regional Organizations

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Thank you

www.oiml.org

www.metrologyinfo.org