



International Organization of Legal Metrology

Organisation Internationale de Métrologie Légale

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Legal metrology and OIML activities

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Metrology infrastructure

- Scientific metrology
 - carries out research in metrology
 - establishes the SI
 - realises and disseminates definitions of units
- Legal metrology
 - sets up regulations for public order
 - organises and carries out regulatory control
 - assesses the implementation of regulations
- Accreditation
 - establishes traceability to the SI
 - establishes confidence in measurement results



Goals of legal metrology

- **Scope**
 - to identify the measurements and measuring equipment which should be subject to legal provisions
 - to draft and implement regulations on (and only on!) these measurements and measuring equipment
- **Objectives**
 - to specify the required accuracy and reliability of the measuring equipment and measurement results covered by these regulations
 - to provide confidence in the measurement results by specifying and exercising appropriate control



Scope of legal metrology

- Measurements may fall within the scope of legal metrology when:
 - measurement results affect parties with conflicting interests
 - these parties do not have the competence or the possibility to evaluate the reliability of the measurement results
 - the measurements are not carried out by an impartial body
 - legal evidence of the measurement's reliability is needed
 - health or safety require the reliability of the measurement



What is special about legal metrology?

1/2

- In scientific metrology:
 - measuring equipment and procedures are designed for each measurement
 - operators are very competent
 - there are no conflicting interests in the measurement results
- In accredited calibration:
 - measuring equipment and procedures are prescribed for a range of measurements and are periodically assessed
 - the measurement process is carried out under controlled environmental conditions
 - operators are qualified
 - conflicting interests dealt with by the calibration body



What is special about legal metrology?

2/2

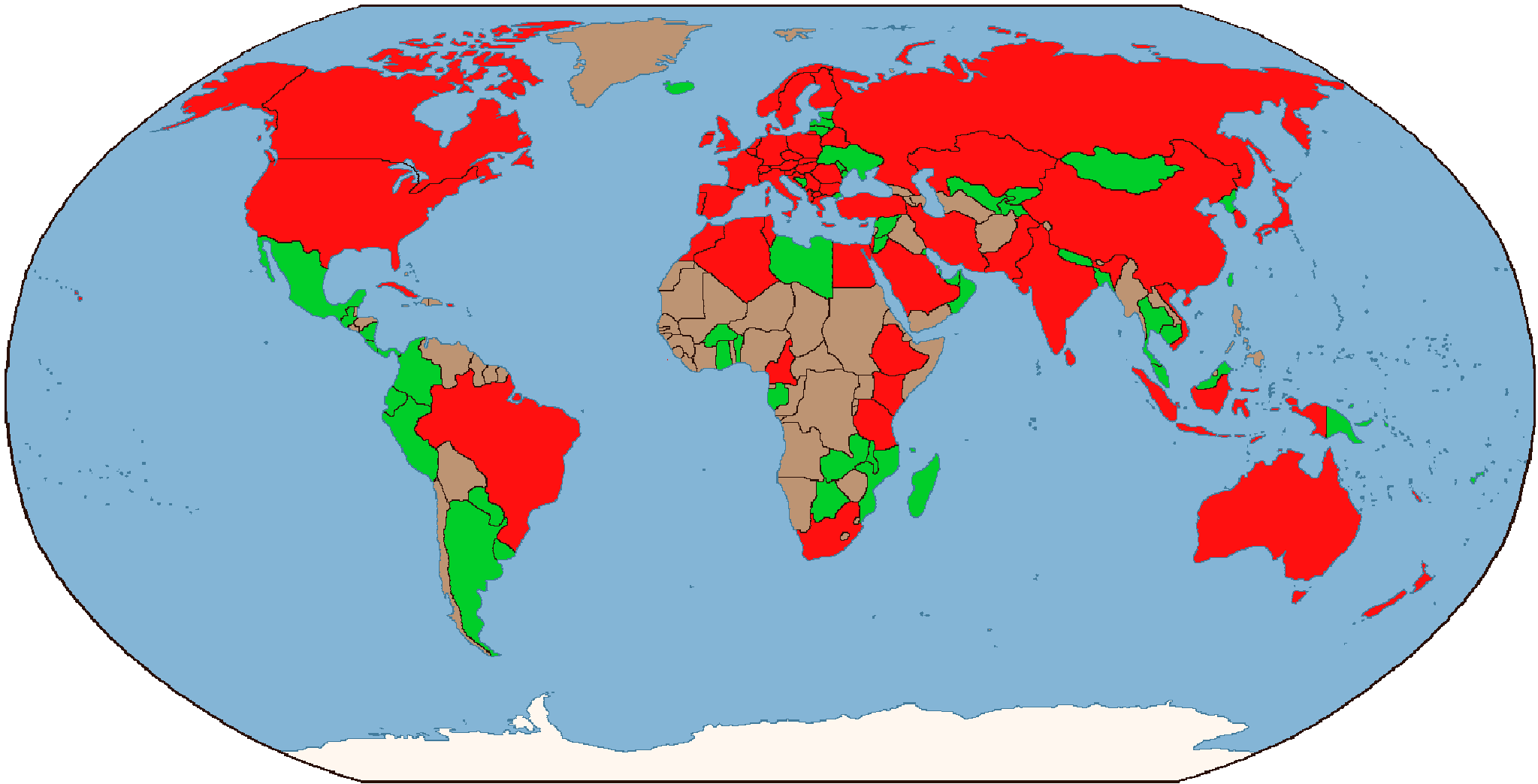
- In legal metrology:
 - the measuring instrument is designed for an operator who has no competence in measurement
 - measurement procedures are described in simple terms in the operating manual of the instrument
 - environmental conditions are not controlled, so the instrument must be designed for a range of environmental conditions and disturbances
 - impartiality of the operator cannot be assumed, so the instruments must be protected against fraud.
- Confidence in measurements is based on confidence in the instrument and on regulatory surveillance



- The OIML is a treaty Organisation set up in 1955
- OIML members are countries (Member States)
- One country = one vote
- Each country is represented
 - in the **OIML Conference**, by a government appointed delegation
 - in the **CIML**, by a government appointed CIML Member
- The CIML Member is normally the person responsible for national legal metrology



OIML Membership





The OIML's work covers: 1/4

- General principles of legal metrology
 - What is legal metrology?
 - What are the goals of legal metrology?
 - How does legal metrology interact with other fields?
 - What is the role of the state in legal metrology?



The OIML's work covers: 2/4

- Model draft laws and regulations
 - Elements for a law on metrology
 - Recommendations on technical fields to be regulated
 - Principles of legal metrology control
 - Detailed responsibilities and liability
 - Detailed conformity assessment procedures



The OIML's work covers: 3/4

- Characteristics and standards for measuring instruments
 - metrological and technical requirements
 - sufficient for national approval
 - to be recommended internationally



- Recognition/acceptance systems
 - scope - instruments
 - prepackages
 - measurement results (bulk measurements)
 - based on the characteristics mentioned in previous slide
 - harmonized evaluation procedures and report format
 - evaluation of conformity assessment bodies



OIML only works on a subject when:

- Several Member States have, or need national regulation on a subject
- The subject meets certain criteria
- There is no international standard (published or under development) that could be used



OIML Member States

- Member States may participate fully in any of the OIML's technical work
- Member States vote on OIML publications at technical committee level and at CIML level
- Vote ensures that opinions are taken into account
- Particularly important for developing countries to ensure relevance of OIML publications
 - OIML R 52 *Hexagonal weights* was not withdrawn due to comments from developing countries
 - ISO standard on hand water pumps was revised rather than being withdrawn due to request from India



Role of the CIML Member

- Represents his/her country in the CIML
- Represents the OIML in his/her country
- Asks appropriate national regulatory bodies to take part in OIML work
- Consults national stakeholders on OIML technical work (regulators, manufacturers, users, consumers)
- Formulates their national position on OIML technical work items

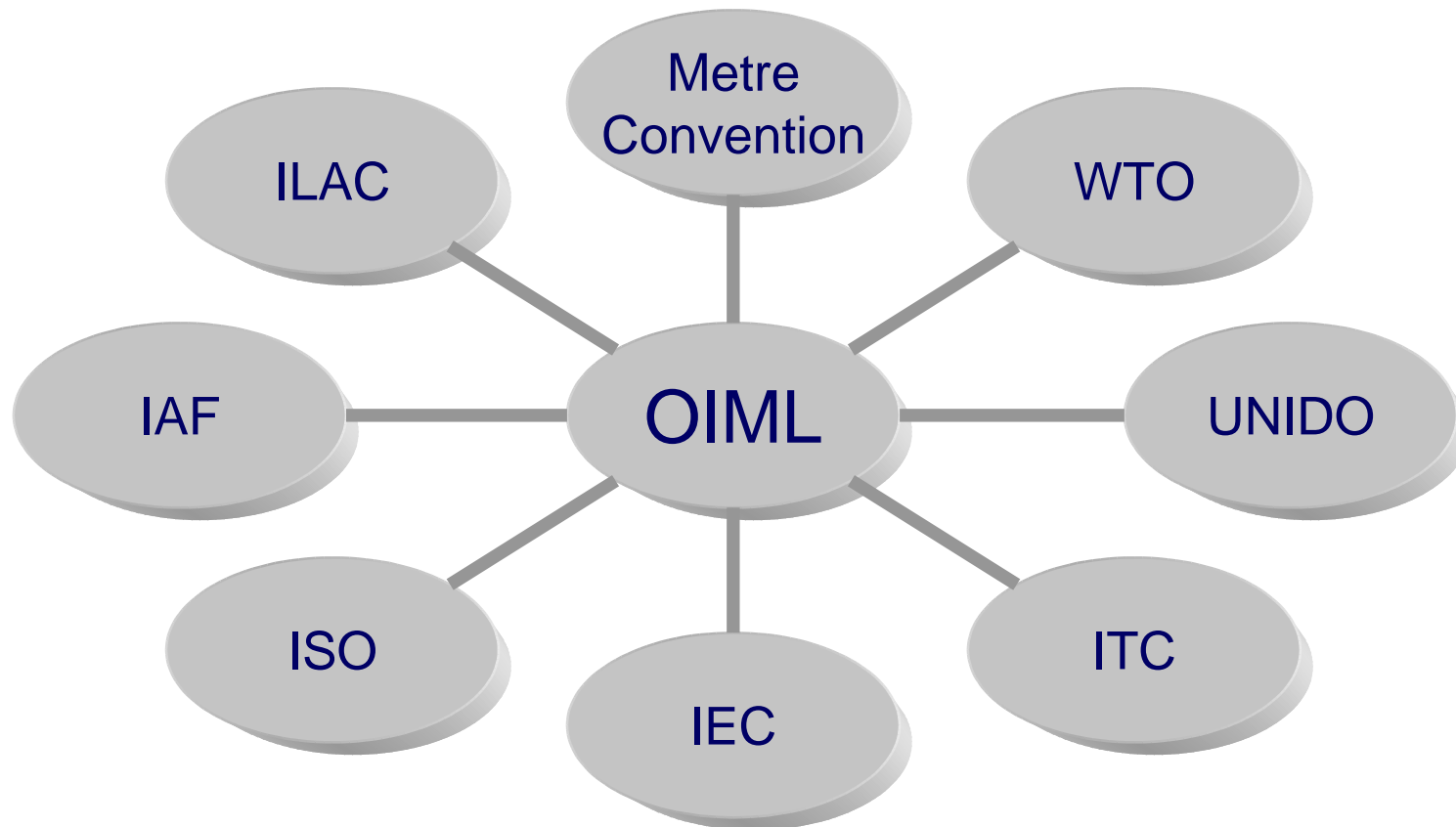


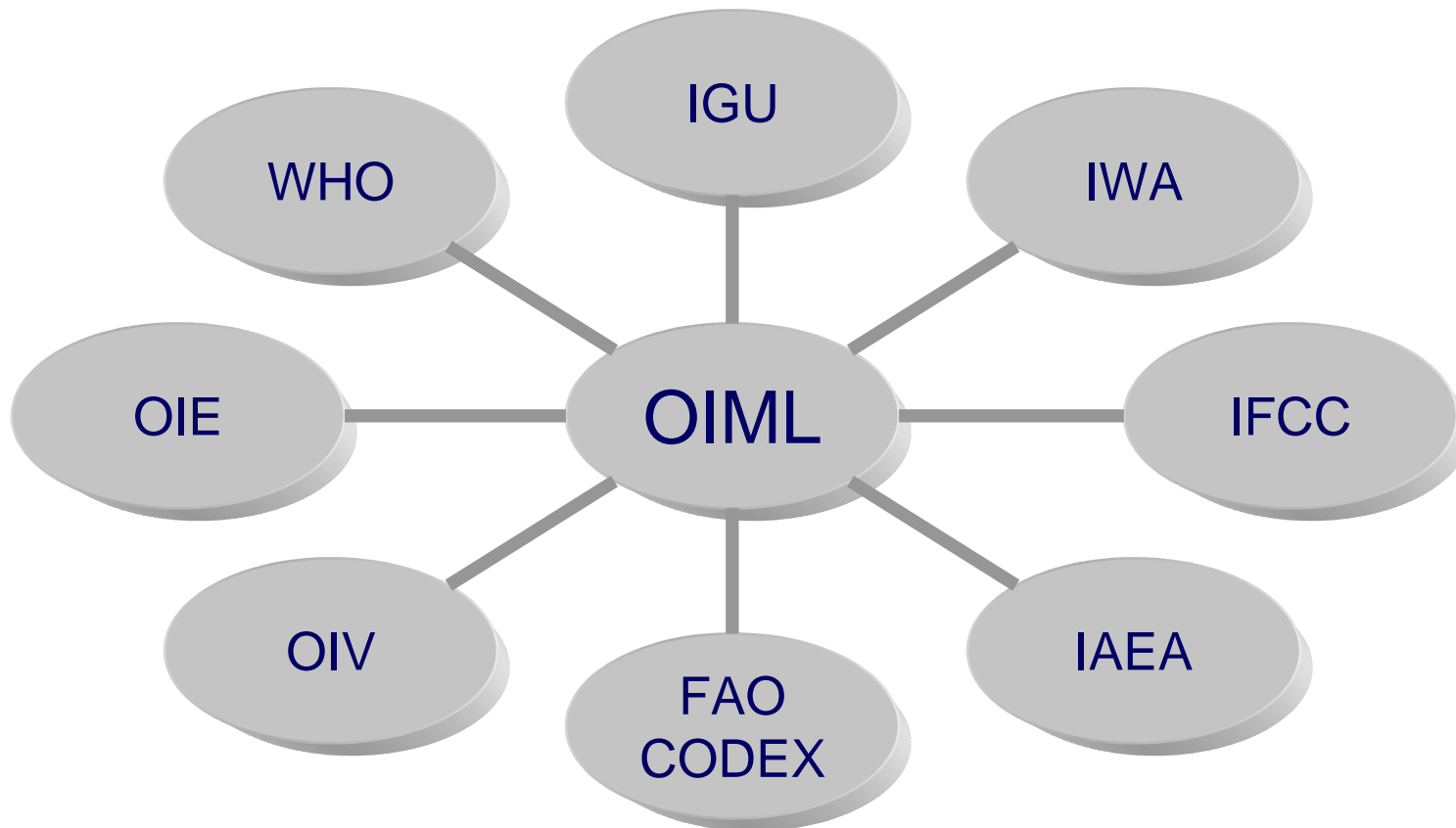
OIML Corresponding Members

- May participate in the technical work, but cannot:
 - hold a TC/SC Secretariat
 - vote on drafts at TC/SC or CIML levels



- The OIML has general liaisons with:
 - Other International Organisations in the fields of Metrology, Accreditation and Standardisation
 - Other International Organisations in technical fields
 - International Organisations for economic issues (trade, economic development)
 - International and Regional Organisations of manufacturers, users of instruments, and consumers
- Liaisons may participate in OIML technical work in the same way as Corresponding Members







MoU with Regional Legal Metrology Organisations

- Ensure that OIML publications meet the expectations of Regions
- Allow Regions to base their work on OIML publications
- Avoid Regions need to develop specific requirements differing from OIML requirements
- Harmonize implementation of OIML publications between Regions, and to exchange on best practices



MoU with Regional Legal Metrology Organisations

- Allow all Regions to comment on documents developed by other Regions, and to allow several Regions to develop jointly documents, or to ask the OIML to develop such documents
- Exchange information between Regions, on specific technical studies envisaged or being carried out, to allow countries or other Regions to participate in such studies, and to share the reports of these studies,
- Exchange information on regional training and to share training documentation



Principles of cooperation with RLMOs

- Legal metrology regulatory requirements should be in priority developed by the OIML to reduce barriers to trade
- RLMOs should only develop requirements which are justified by particular needs of the Region
- RLMOs may ask the OIML to develop or revise publications when a need appears in their Region which may be of interest for other regions
- OIML to provide RLMOs with facility for information exchange and collaborative work on the OIML web site
- RLMOs will take account in their work of comments sent by other RLMOs and will participate in work with other RLMOs



OIML *Basic* Certificate System

- Set up in 1991
- Voluntary system
- Over 2000 Certificates issued
- Over 500 recipients concerned
- 30 OIML Issuing Authorities designated
- 12 OIML Issuing Authorities have issued the majority of the Certificates



- Builds on OIML *Basic* Certificate System
- A service to industry
- Tool to facilitate certification of measuring instruments in global market
- Tool to assist countries which do not have their own test facilities
- Additional requirements to those of OIML
Recommendations may be taken into account in the recognition scheme



- Three categories of measuring instruments covered:
 - Water meters (OIML R 49)
 - Load cells (OIML R 60)
 - Nonautomatic weighing instruments (OIML R 76)
- Still a voluntary system, but participants sign a Declaration of Mutual Confidence
- Increase confidence in test results through evaluation of testing laboratories



Issuing participants

- OIML Issuing Authorities whose testing laboratories are evaluated on the basis of ISO/IEC 17025 and OIML D 30
- Competence may be demonstrated either by accreditation or by peer assessment
- Joint collaborative efforts: cooperation between ILAC and the OIML to guarantee equivalence of the two methods



Utilizing participants

- Mainly national legal metrology bodies
 - in OIML Member States
 - in OIML Corresponding Members (called Associates)
- Participants should still keep a critical eye on the test results and testing procedures
- Utilizing Participants may thus have a mainly administrative national type approval system, relying on the Issuing Participants' testing facilities



Thank you

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