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Editorial



Gerard Faber
CIML President

Looking towards 2003

As we enter the New Year, we can stand back and better assess not only the progress we have achieved in 2002 but also the challenging issues that the OIML will be facing in the coming years.

Our Organization is in good shape: Member States consistently show a high degree of interest in our work, overall Membership continues to increase and our financial situation is healthy.

The OIML is developing its audience among other international bodies: relations with the TBT Committee of the World Trade Organization (in which we are Observers) are increasingly constructive, and awareness of metrology is progressing in most international organizations. Legal metrology is still proving to be a major issue in the globalization of economies and in social development.

We have been able to start a very interesting thought process on the future of legal metrology in general and on the future of the OIML in particular. The Seminar “*What Will Legal Metrology be in the Year 2020?*” gave the opportunity to colleagues and lecturers from a wide range of countries to share their views on key evolutions and on the challenges that all of us will have to face. This Seminar demonstrated that there is in fact a remarkable degree of coherence in the views presented, and its output will be of major interest for deciding the direction that OIML actions will take in the forthcoming years. The fact that such an event took place will certainly help legal metrology authorities worldwide to develop their national policies.

The BIML has started to modernize its methods of work and to offer new communication tools to Members, thereby increasing the efficiency of mutual information and the effectiveness of the Organization’s work. In 2002 the Bureau recruited two new staff members to fill vacant positions, and the whole team continues to work to provide support to Members and to react to the new challenges.

2003 will be a strategic year for the Organization, and the 38th CIML Meeting will have many crucial decisions to make:

- a number of policy papers, a revised *Action Plan*, revised *Directives for Technical Work* and a preliminary budget for 2005–2008 will be submitted to the Committee;
- the *Mutual Acceptance Arrangement* will be one of the most important issues and my wish is that it could be adopted in Kyoto and implemented as soon as possible;
- the acceleration of technical work will still be a major issue in order to maintain OIML Recommendations updated, and the participation of Member States in this work must be increased;
- and of course the Committee will have to elect a new President, which is a key decision for the future of the Organization.

In looking forward to the next twelve months, may I take this opportunity to offer you my very best wishes for this New Year - may it be a fruitful year both for your professional ambitions and for your personal life. ■



General introduction to the Seminar

GERARD FABER, CIML President

The first question that springs to mind at the outset of this Seminar is “Why choose the year 2020?” Well, one of the advantages of choosing such a date is that it is absolutely impossible to extrapolate from what we are doing now. It is really a matter of using our sense of logic based on past experience, and then develop this logic by using our *feeling* to identify the trends we notice in the evolution of society.

At the outset of this event I would like to say “For those of you who will be contributing to the Seminar as speakers or when you take part in discussions, please don’t simply voice your “official” opinion, but rather we would encourage you to listen to and express your *feeling*”. In the year 2020 we will doubtless have new governments, new policies, perhaps other kinds of organizations, nobody knows. But we all have a kind of *feeling* about the trends we observe in our daily lives. So that is why I hope that everybody will express his or her own *feeling* and not the official positions of countries or organizations.

I believe that what we are going to be discussing is a kind of mix between what is going to happen in 2020 and what we *hope* will happen. It is very difficult to distinguish between these two aspects and it is also true that most developments are not influenced by us. We have to be very realistic. Let me give you an example: when you look at the trends in, for instance, deregulation or privatization, very often the reason for entering into this kind of discussion is not a reason with a metrological background. It is very often part of a general policy discussion in a country; governments speak about the possibility of privatization and then say to metrologists “please take part in the discussion”. So very often, trends cannot be influenced by us; they just “happen” and we have to react.

However, sometimes we are able to influence the outcome. I feel that in the future, all of us involved in metrology should be active not only in listening to our colleagues and attending seminars like this one, but also in trying to influence what is happening in our

governments and our ministries. But it is not only a question of *waiting* for trends, we can also try to be “trend-setters” just as the OIML is trying - and will continue to try in the future - to be a “trend-setting” organization.

Let me now offer you some remarks to start off the think process during these two days.

What will the importance of legal metrology be in 2020? My own feeling is that the importance of legal metrology is growing and that, for international trade in a global society and for reasons of public health, safety and the environment, the need will be much stronger than it is today for well organized and well documented legal metrology policies.

I believe that the role of the state in legal metrology will, in 2020, be different from what we see in general today. In my view, the state will have four responsibilities in legal metrology and metrology: (i) creating and maintaining a national metrology system; (ii) drafting legislation and ensuring that it is implemented; (iii) defining a general policy for metrology and accreditation; and (iv) global and regional cooperation.

I mentioned the words “national metrology system”. In my view this is an official description of a coherent system of laws, regulations, organisms, structures, etc. with one mission: to improve and maintain credibility in measurements. I think that the trend in the future will be to speak less about measuring instruments and more in terms of *credibility* in measurement. Credibility in measurement is helpful for international trade, for protection of the environment, etc. and is therefore a key word for the future.

Concerning the responsibilities of states, let me add that in my view, in the future the state will increasingly act as the monitoring organism for a national metrology system, rather than actually itself carrying out all the technical work that has to be done. I strongly believe that in the future, within the state “machinery” there will be a small unit for metrology comprised of highly trained legal and technical specialists, with people also coming from industry and universities, to form a kind of think-tank for metrology and to monitor the national measurement system. Much practical work will be done by independent organizations, including industry itself. I also believe that this development is not a bad one. It is absolutely not necessary that verification, testing for type approval, and even maintaining national standards should by definition be done by people from government. The government and the state should monitor the system and ensure that everything is organized in the right way. My view is that in the future, type approval will be completely in the hands of independent laboratories and industry and that initial verification, as we know it today, will disappear.

This makes it necessary that in the coming years, we allocate much more attention to what we call “market

surveillance". Some time ago, we started discussions about this subject but we did not pursue these. However, in my opinion when we speak about credibility in measurement, the main thing to do in the future is to make sure that by organizing a good system of market surveillance, this credibility is there permanently and consistently.

I also hope to see that in the year 2020 we have one global organization for metrology and accreditation. You know that we already enjoy cooperation, we speak with each other from time to time, but this is only at an early stage, and we are not making much progress. My feeling is that the development of further cooperation culminating in the creation of a *world center for metrology and accreditation* under which each organization can do its own job is a logical goal and I feel that we should not be afraid of that.

I have made some remarks about the national metrology system; I feel that the job of the OIML is to further work on a global measurement system together, in my view, with our colleagues from the BIPM. At the regional level, people should work on regional measurement systems so that, in the end, there would be national measurement systems, regional measurement systems and a global measurement system, all fitting together.

So those were my remarks to set the scene for this Seminar. I will end my introduction here but I would like to note that over the last years - and I have tried to encourage this - the OIML has been changing gradually from an organization producing harmonization documents (called International Recommendations, which is still our core business of course) to one that is speaking more in terms of strategy and policy. I feel that this Seminar is exactly fitting in the context of this development. We are increasingly able to produce very good documents and papers which can be used. We already have the *Birkeland Study*: my recommendation is for us all to read it again, as it is still very topical.

We are currently working on a study about the *Social and economic impact of legal metrology*, conducted by John Birch, which will be finished by the end of this year or perhaps early next year; it will also be a very helpful document. And in addition of course, we will work on the conclusions that arise out of this Seminar. I hope that it will be a challenging one, not only for our organization in order to define a modern metrology policy, but also for every individual country.

Thank you for listening to these opening remarks and may I wish you a very good Seminar. ■





Trends in legal metrology towards a global measurement system

MANFRED KOCHSIEK, Vice-President of PTB and CIML First Vice-President

The key nations of the past such as the Greeks, Romans, Incas, Chinese and others had all recognized the importance of a uniform metrology system and had consequently implemented it in their empires. The decisive step towards a worldwide uniform system of units was however accomplished in 1875 with the signing of the Meter Convention in Paris by seventeen countries. Its aim was to secure international agreement on and improve the Metric System; this agreement was finally reached in 1960 with the introduction of the International System of Units, the SI. Unfortunately, although most countries have since joined the Meter Convention, the SI is still not yet fully implemented some 125 years after it was instigated.

The second important step towards a global measurement system - which was far from a uniform system of units - came from the WTO which called upon the governments of its member countries to remove non tariff barriers to trade (TBT Agreement, Technical Barriers to Trade). This indirectly entails the requirement that national technical regulations in the field of metrology should be transparent and comprehensible and that they should not discriminate against any side so that they apply in the same manner to all those directly or indirectly involved in commercial transactions. This can be achieved only if the trade agreements are based on harmonized or, if possible, even on the same standards. These can be applied by the certifying bodies - usually test laboratories - to issue conformity certificates recognized, if possible, by all those having adopted the system. At this stage, it has of course to be mentioned that for nearly fifty years, the OIML has significantly contributed to the worldwide harmonization of requirements and test procedures in the special field of legal metrology. It is now reasonable to consider some definitions and basic elements of what a global measurement system and what legal metrology are.

A global measurement system is a kind of network in which a metrological task is solved according to the

same criteria worldwide, i.e. the same physical units, internationally accepted standards and procedures and the same calculation of the measurement uncertainties. Legal metrology according to the *International vocabulary of terms in legal metrology* (VIML) is defined as "the part of metrology relating to activities which result from statutory requirements and concern measurements, units of measurement, measuring instruments and methods of measurement and which are performed by competent bodies".

Now, what are the steps towards a global measurement system?

Not only the Comité International des Poids et Mesures (CIPM) and the OIML but also ILAC/IAF have made great efforts to set up a globally operating metrology and testing system. In detail four elements have to be considered, which constitute a global measurement system:

- A uniform system of harmonized national regulations in the field of legal metrology;
- A uniform system of harmonized standards in the field of non-regulated metrology;
- Worldwide recognition of the traceability of measurement results on the basis of the SI; and
- Worldwide harmonization of the requirements concerning the competence of test laboratories and certification bodies.

The various international organizations make the following contributions to these four elements within the global measurement system (see Fig. 1):

- The WTO and the OIML are responsible for harmonized legal regulations;
- ISO and IEC for harmonized standards;
- The CIPM for traceability to the SI; and
- ILAC and IAF for the competence of test laboratories and certification bodies.

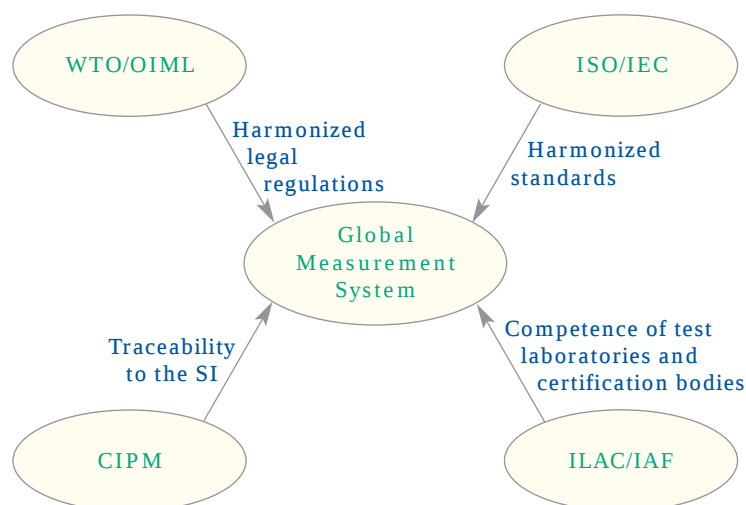


Fig. 1 Global measurement system consisting of four elements

In the field of legal metrology, an important contribution to the removal of technical barriers to trade is the development of the *OIML Certificate System* which helps to better respond to the needs of manufacturers for type approval and to develop procedures for acceptance or equivalence agreements in the years to come. As of today, 36 categories of measuring instruments are applicable within the *System* and nearly 1 000 certificates of conformity for 13 categories of instruments have been issued to a total of 260 applicants. Millions of measuring instruments are manufactured following these certificates. Mutual cooperation, mutual confidence and mutual recognition are three steps towards achieving international harmonization in legal metrology.

Mutual confidence in the testing and metrological competence of those involved, which is an absolute prerequisite for the system to function, can be created in different ways. Some bodies are satisfied when they know that the partner institution has been notified for its task by officially authorized bodies or that it operates a recognized quality system complying with international standards. Other bodies require that the laboratory should have been accredited by internationally recognized bodies or they consider both measures to be necessary prerequisites for the mutual recognition of test certificates, and they often even add the requirement that the laboratory should be a signatory to a regional or international *Mutual Recognition Agreement*. In the last analysis, these measures are, however, in a certain sense only subsidiary systems (subsidiary criteria), for the proof of technical competence actually desired is furnished by participation in metrological intercomparisons allowing for traceability and assessment of the uncertainty of measurement.

For society and the manufacturers of measuring instruments in particular the mutual recognition of certificates has the advantage that in international trade, further tests and conformity assessments can be dispensed within the importing country (see Fig. 2).

The ideal situation for a manufacturer would be to achieve worldwide acceptance of a certificate by one-stop testing of his product in just one laboratory of his choice.

On the global scale, different trends of a politico-economical nature are observed in legal metrology:

- While in the leading industrialized countries legal metrology was further developed and supported until the early nineties, a fundamental change took place in the last years. Due to political requirements in some European countries, legal metrology was gradually entrusted to private bodies and the exclusive supervision by the state was gradually cut back. Examples of this are The Netherlands and France. Other countries - among them Germany - may certainly follow;
- The development in the former Socialist countries is characterized by the adoption of the principles of market economics. This entails the development of a metrology system exclusively regulated by the state into a system making a distinction between areas under legal control and areas which are not subject to legal control; and
- Another trend is the regionalization of the economy. As a result of this development, the realization of the Single European Market since 1992 has set new general conditions. As a result, access to the market is also dependent on new politico-economical decisions which also affect legal metrology.

In addition, technical trends also exert an influence on development.

Fast innovation cycles and short times of adjustment make new forms of conformity demonstration necessary. Traditional type approvals have lost some of their importance. In the field of economics, a strong trend towards globalization can be observed also as regards the methods of production and distribution, especially where large batch sizes are concerned. Establishing virtual fabrication (design, manufacture and distribution with alternating subcontractors) is only a matter of time.

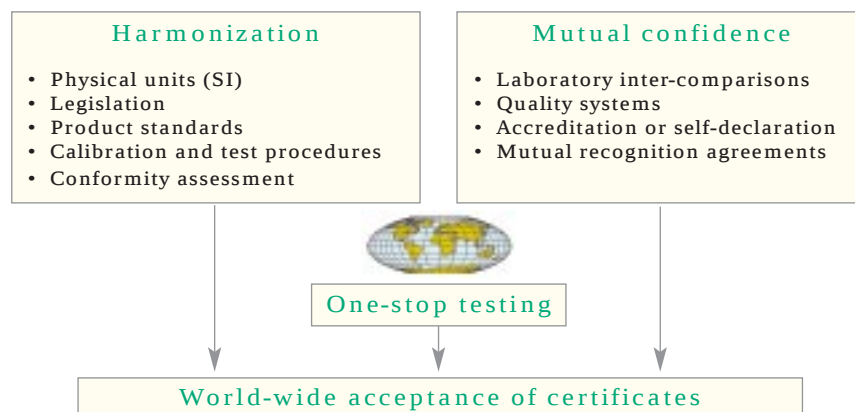


Fig. 2 Steps towards a global measurement system

The developments and trends in legal metrology can be summarized as follows:

- Removal of barriers to trade by the adaptation of national regulations and standards to regional or even International Recommendations (of the OIML) and Standards (of ISO and the IEC);
- Replacement of detailed technical product requirements by more general and flexible essential requirements ("new approach" of the European Union);
- Mutual recognition of test results, test reports or even test certificates, the prerequisites being comparable technical equipment, know-how, experience, regular exchanges of information and test data;
- More responsibility on manufacturers, including participation in different conformity assessment procedures depending on the quality management system, the background being decreasing innovation time for developing new products and the need for quick access of new products to the global market; and
- Transfer of formerly governmental tasks to private institutes, for example type approval of measuring instruments.

So for the future I expect two possible scenarios. On the one hand one can observe a strong current trend that is characterized by the slogans "deregulation, liberalization, less governmental influence, more privatization". This trend, which is due to the increasing metrological competence of partners in industry and trade, leads to a decreasing importance of former proofs of recognition which can already be seen for instance for large groups of companies. International cooperation between National Metrology Institutes (NMIs), verification authorities and private conformity assessors has already started and is being examined. The responsible bodies increasingly see that regional - in addition to national - market supervision must be ensured. A global policy for consumers and environmental protection is needed and is under discussion. With this scenario, legal metrology might be integrated completely into a general global measurement system. If today's trend (i.e. political restraint) continues, then there will be a further decrease in governmental influence on legal metrology, a further increase in manufacturers' responsibilities and a further increase in the number of private or semi-private test laboratories and certification bodies. That means that in the year 2020 governmental influence will have been reduced to an absolute minimum and restricted to specific areas.

On the other hand, there are also indications (especially during the last two or three years) that legal metrology will remain independent, with a focus on intensified market surveillance. There are some

remarkable examples of scandals that make a second scenario possible due to a general loss of trust in a liberalized system. The second possible scenario is therefore that today's trends will reverse due to an increase in scandals such as BSE or frauds such as the contamination of foodstuffs by nitrate compounds. That means that in the year 2020 legal metrology will have practically kept a kind of special status, even under the conditions of a global market.

So what is my conclusion? The global measurement system and the worldwide acceptance of certificates is still a vision. From today's point of view and if all countries further follow the globalization strategy of the WTO, legal metrology will experience a strong development and be integrated by 2020. In the other scenario, legal metrology could remain independent with a focus on intensified market surveillance. What will legal metrology be in the year 2020 and which role will it play within a global measurement system? Some important aspects are summarized as follows.

Today, it cannot be predicted whether the first or the second scenario will occur because there are too many unknown parameters and unpredictable political influences.

I should also mention here that some years ago we considered a merger between the Meter Convention and the OIML but the time was not right.

Certainly one important factor will determine whether legal metrology still exists in the year 2020: the influence of new technologies such as the worldwide use of the Internet for all kinds of network, software control, remotely operated and remotely controlled measuring systems.

If governmental control and legal metrology are still necessary in the year 2020, it will be quite a challenge to maintain an effective surveillance system in a global market. New technologies are very demanding as regards both the drawing up of sufficiently flexible harmonized regulations and the competent checking of compliance by well educated, well trained and highly motivated civil servants. ■





Issues and trends in legal metrology from a U.S. perspective

CHARLES EHRLICH, CIML Member
HENRY OPPERMANN

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and Technology (NIST), USA

Introduction

In forming our views, we have consulted with various parties in the United States, including both regulatory officials and instrument manufacturers. From the title of this presentation, it is probably clear that we are not going to make many bold predictions concerning the future of legal metrology, but will rather discuss only issues and trends that we feel are likely to lead us in new directions.

Legal metrology historically covers a large range of topics and activities. The challenge posed by this Seminar is certainly daunting as we try only to correctly identify areas in which significant changes are likely to occur over the next 20 years, and not specifically what those changes might be.

If we begin by asking whether the overall functions of legal metrology will be different in 20 years the answer to us seems to be “no”. Documentary standards and regulations will still need to be developed and harmonized globally. There will still be the need for type evaluation and approval and verification of measuring instruments, as well as net quantity and labeling requirements for prepackaged products. Responsibility for enforcing compliance with standards will remain the province of the legal metrology official. What will change is how these processes are carried out, and possibly how requirements are established. The following discussion addresses issues and trends that we see in each of these areas.

Standardization and harmonization

Beginning with the standards development process itself, there is little question that the global marketplace is demanding that legal metrology standards become more harmonized internationally to reduce the number of different requirements that must be met around the world. Mergers and acquisitions have consolidated business into a smaller number of multinational companies that desire a single worldwide standard for a particular type or category of measuring instrument or prepackaged product. In the United States, the National Conference on Weights and Measures (NCWM) was created in 1905 to bring about harmonization of standards among the States. Now that such harmonization is somewhat routinely achieved, the situation has evolved to where there is growing interest on the part of the NCWM to better align the U.S. national standards with international standards, and to play a greater role in international standards development. It should be recognized, however, that there will always be cultural, developmental and market differences among countries making it unrealistic to expect complete worldwide agreement on individual standards.

In the United States in areas of legal metrology other than weights and measures, such as health, safety and protection of the environment, there has generally not been an equivalent unified approach to harmonizing standards used in government regulation with those that have been developed on a voluntary consensus basis in the private sector. This has led to market inefficiencies in some sectors, where manufacturers have had to develop products to meet non-uniform requirements for different federal, state and local government agencies. As most of you are aware, part of the problem is that responsibilities pertaining to legal metrology in the United States exist across different levels of government depending on the subject area, so that central coordination is difficult. What can be said with some certainty is that this decentralized system of authority will not change, since it has strengths that frequently outweigh the weaknesses. However, to address the problem of various requirements in assorted federal regulations, the National Technology Transfer and Advancement Act was enacted by the U.S. Congress in 1996 to require federal regulatory agencies to incorporate private sector standards, if they are available and appropriate, into their regulations. The Act also encourages state and local agencies to do the same, so that there is now at least a motivation and growing trend towards harmonization of regulatory and other requirements in the United States.

The speed with which standards are developed and harmonized, both domestically and internationally, is also recognized as an important issue. Here we see

technology playing an increasingly important role. As electronic means of communication become more routinely available in all regions of the world, the time required to develop a standard should be reduced. E-mail, the internet, and telephone/video-conferencing are currently being used for this purpose, as documents can be distributed much more quickly than through conventional mail, and virtual meetings can be held where the participants may be at different locations around the globe. We see this trend increasing.

Another current trend concerning standardization that will likely shape the face of legal metrology in the relatively near future is the establishment of formal international and regional agreements and arrangements among nations to recognize each other's capabilities in calibration, testing and certification. This is seen in the United States, as elsewhere, as creating the potential for tremendous market efficiencies and for better facilitation of trade. As an example, the Mutual Recognition Agreement (MRA) of the International Bureau of Weights and Measures (BIPM) has facilitated the creation of the key comparison database that will, one hopes, be used by regulators as a strong basis for recognizing traceability of measurement results across international boundaries. This recognition should allow manufacturers and testing laboratories to successfully achieve and claim traceability of their measurement results directly to National Metrology Institutes (NMIs) in the countries in which they wish to do business, eliminating the requirement for duplicative calibrations. Similarly, the OIML Mutual Acceptance Arrangement on OIML Type Evaluation (MAA) should serve to facilitate marketplace efficiency through reducing the need for duplicative type evaluations and approvals for measuring instruments under legal metrological control. The MRA among the members of the International Laboratory Accreditation Cooperation (ILAC) could likewise help reduce duplicative accreditation audits of the competence of legal metrology testing laboratories. These agreements have the added benefit of making the regulatory bodies in the various countries think more routinely on an international basis. This is surely happening in the United States with the NCWM. All such agreements should serve to increase competence, confidence and efficiency at reduced costs for both industry and regulators worldwide.

Two important international documents are used in some countries as standards for both metrology and legal metrology purposes; these are the *Guide to the Expression of Uncertainty in Measurement (GUM)* and the *International Vocabulary of Basic and General Terms in Metrology (VIM)*. These documents were developed under the auspices of the Joint Committee for Guides on Metrology (JCGM), led by the BIPM and comprised of seven other sponsoring organizations, including the OIML. Current work related to developing supplements

to the GUM is likely to lead to a universal methodology for incorporating measurement uncertainty into conformity assessment decisions, such as those concerning maximum permissible error (MPE) requirements in legal metrology. The future will likely see the increased development and greater application of software packages that aid not only in the calculation of measurement uncertainties, but also aid regulators in establishing MPEs that best suit the need based on estimated likely levels of uncertainty and acceptable risk. Better means of testing individual instruments on a statistical basis covering simultaneous changes in several influence quantities is also likely to be developed. The work related to both the VIM and the GUM should lead to more comprehensive terminology, resulting in a better understanding of the measurement process at all levels, from the national metrology institute to the testing laboratory to the field verification site. There is certainly a global trend towards more organizations using and relying on these documents, and we expect that to continue.

Type evaluation

There is a clear global desire for market efficiency in type evaluation. From the manufacturer's perspective, this means only a single type evaluation test per type of measuring instrument, preferably performed locally according to a universally agreed upon standard, the results of which would be accepted in all countries. The *OIML Certificate System* was certainly established with this objective in mind. However, experience shows that the *Certificate System* does not always achieve this goal. Reasons may be because there is a lack of confidence in the data obtained by the pertinent testing laboratories, or because some countries have requirements not interpreted to be compatible with the applicable OIML Recommendations. The OIML MAA will address these issues, and we anticipate that it will make great progress in establishing confidence among the participants. However, the establishment of bilateral and multilateral agreements between and among countries to address these same issues is also expected to continue, at least until the MAA matures. We may always need both of these different approaches, however, since it has become clear in the development of the MAA that there are different views concerning the level of cost and effort necessary to establish and maintain confidence in the competence among participants. We certainly hope that a single type approval will eventually result in worldwide acceptance.

There is also the question of whether it is practical from a global perspective to have type evaluation

capability in every country for a given type of instrument. We expect that expertise for performing type evaluation and issuing certificates of conformance will be concentrated in the future among a relatively small number of countries that may have to ascertain compliance to a broader range of requirements. This trend may reduce the differences in national requirements; however, the differences are not likely to disappear by 2020.

Ensuring production compliance

Another key issue that is receiving considerable attention in the United States is how to ensure that production-meets-type: that is, how can the regulator efficiently establish that the instrument in service has the same metrological characteristics and performance as the instrument for which a type approval certificate has been issued? Similarly, have any performance problems developed over the life of the instrument? Confidence is currently obtained primarily through the initial and subsequent verification processes during field inspection, but it is anticipated that future databases will contain such information collected on a national - or possibly an international - level to detect widespread problems. The nature of the local legal metrology infrastructure and service structure will be expected to play an important role in how such information will be collected.

Increasing efficiency in regulatory activities applies to prepackaged consumer products as well. Since the marketplace is increasingly global, it is desirable that importers and the regulatory authorities in the destination countries are assured that imported products comply with local product and quantity standards, rather than requiring testing when the product arrives in a country or after it has entered the market. The most logical solution to these problems is to accept products based upon the quality system of the manufacturer, or based on sampling and testing by a third-party product certification body. The acceptance or rejection of prepackages then would be based on the credibility of the manufacturer's quality control system, sampling plans, and frequency of testing. Distribution factors, such as local environment or length of time in storage, can also affect the net contents of prepackages. This issue remains to be resolved, but with reduced resources, the pressure to increase efficiency, and the interest on the part of importers to be assured that their imported products will comply with the applicable requirements, we can expect this to become a global priority.

Enforcement activities

We expect that effective and efficient enforcement programs will remain essential for ensuring compliance with legal metrology regulations. However, the testing that is carried out for enforcement can be very time consuming, so new methods must be developed. Transportation time alone in getting to field sites can be costly. We see technology and automation playing an important role here. We are likely to see more use of electronics to perform verification and surveillance activities, especially remotely, similar to the digital photography and video examinations that are currently being used in the medical field. A scale industry representative [1] reports that remote reading of instruments and components, such as load cells, already permits efficient monitoring of performance to determine if a device remains within tolerance, without the regulator having to be on site. Railroad companies use the internet to obtain information from scales that are weighing railroad cars. This trend is expected to extend to virtually all electronic measuring instruments in the future.

Diminishing resources in the United States continue to pressure regulators to find better and more efficient methods to test instruments and devices for compliance to requirements. The efficiency of testing retail motor fuel dispensers has increased greatly as a result of mounting volume standards on trucks with storage tanks to reduce the time needed to return the product to the storage tanks. Perhaps in the future the retail motor fuel dispenser will have a built-in calibration capability, or a new type of field standard will be developed to allow the dispenser to be tested while product is delivered into the motor vehicle.

Increased competition forces companies to control the variables that affect the quantity and quality of the products that they produce. Manufacturers are incorporating accurate weighing and measuring devices into manufacturing processes to reduce waste and promote desirable characteristics in the raw materials that they purchase. For example, grain moisture and protein measurements allow grain processors to pay a premium for grain that has the desired moisture and protein levels most beneficial for use in the final product and pay less for grains that do not have the desired characteristics. Similarly, the meat processing industry is using high technology instruments to measure the percentage of fat on animal carcasses, then paying a premium or reduced price based on these measurements. The trend to pay prices for raw materials based upon their quality is expected to increase. The consequences for regulatory officials are that performance standards, test methods, and reference standards will be needed to test these

instruments. The field of legal metrology will continue to expand into quality measurements, even though regulatory resources decrease.

From a regulatory perspective, the use of surveys or questionnaires to assess the levels of compliance of commodities and measuring instruments across a marketplace will be an essential tool for legal metrology officials to exercise a high level of supervision over a marketplace that is expanding in size, diversity and operation every day. Targeted national surveys, such as the models jointly conducted in the United States by State and Federal agencies on retail prices of products and the net quantity of dairy products, conducted in the 1990s, proved the capabilities these surveys had in allowing their participants to achieve maximum leverage of their resources. The State of California is an experienced leader in conducting marketplace surveys similar to those just mentioned and their efforts and results will likely serve as a model for other States considering developing survey programs in the future.

These coordinated surveys were especially useful in: 1) collecting a large amount of data from a broad range of packagers of similar products, using uniform test procedures for testing the prepackages; 2) facilitating data analysis that both identified problem areas and allowed officials to define what constitutes “current good manufacturing practice”; 3) integrating training with practical application which prompted industry to implement proactive changes in its packaging and pricing practices; and 4) bringing national and stakeholder attention to the importance of legal metrology activities and reconfirming the need to have this type of metrological supervision to provide consumer protection and ensure value comparison and fair competition in the marketplace.

In the future, surveys of specific types of products, marketing practices, and weighing and measuring instruments will allow officials to measure compliance levels across a broad segment of an industry so that regional variations in practices and environmental effects that impact test results can be identified. These survey results can then be used as a baseline to measure the effectiveness of future information gathering, educational activities, and enforcement efforts that may be implemented in response to the survey results. But the primary goal of surveys should be for developing and implementing information gathering and educational efforts, enforcement procedures and frequency-of-inspection policies so that resources can be focused on reducing noncompliance rather than repeatedly confirming high levels of compliance. One of the absolute truths of law enforcement is that a visible presence of regulatory officials in the marketplace on a routine basis ensures the highest levels of voluntary compliance. Testing and retesting products that have high compliance levels will likely, in this new era of

declining resources and increased availability of data collection and analysis tools, be considered wasteful and counterproductive. In the future, as it is today, administrators will be evaluated on their effectiveness of resource utilization and on how high a return in equity and value they can deliver on their investment of tax dollars. Regulators will have to share test results and information so that inspection efforts can be focused on testing devices or products with a history of problems, rather than on testing devices that have traditionally demonstrated good performance. Testing only a sample of devices rather than all of them may be a more efficient use of resources. Another approach may be to educate the management of companies on the importance of the proper use and maintenance of measuring and testing equipment instead of the companies expecting regulatory inspection to fulfill such “service” needs. More effective targeting of inspection resources on problem areas may result in higher rejection rates for equipment tested for enforcement purposes, which will actually reflect more effective and efficient approaches to enforcement.

Resource availability

As suggested several times, the need to do more with less in all areas of operation is probably the biggest issue facing weights and measures officials today in the United States. The legal metrology infrastructure is typically being taken increasingly for granted, as reflected in dwindling funding to maintain programs. As products and measuring instruments become more sophisticated, it is necessary to have more highly trained staff for testing and inspection, yet budget cuts in most States are moving things in the opposite direction. Thus it is becoming increasingly necessary to develop strategies to perform as many tasks as possible more efficiently or in an automated fashion, and this is seen in the United States as an inevitable direction for legal metrology.

Since the weights and measures regulatory responsibility in the United States is at the State level, it is difficult to initiate a national campaign to bring attention to the dire financial situation being experienced by most States. However, a coordinated effort is needed to educate consumers, industry stakeholders and especially elected officials about the need for and benefits of legal metrology. An alternative to doing more with less is, of course, just doing less. However, this would be a viable alternative only if the consequences were still acceptable. Of course, effectively demonstrating that the consequences would be unacceptable, such as by showing adverse economic

impact or an increase in unfair trade practices, may be the way to obtain additional resources. The use of national surveys is again seen as an important tool for collecting such information, and efforts are currently under way.

Conclusion

In conclusion, we have provided our perspective on those issues and trends in legal metrology that are considered most likely to lead to significant changes in the future. We have noted that the rapid growth of electronics and computerization will have the largest, and hardest to predict, influence on the state of legal metrology over the next twenty years, as it has during the last thirty years. Means for developing and harmonizing standards more quickly will result.

International agreements for calibration and testing are also anticipated to improve worldwide efficiency for type approval and surveillance. New means of ensuring that production meets type will be developed. From a regulatory perspective the use of marketplace surveys to assess the compliance of commodities and measuring instruments will be useful in developing sound enforcement procedures and policies, and hopefully in providing information that can be used to persuade elected officials to reverse the current trend of declining operating resources in the United States. ■

Reference

- [1] Mr. David W. Quinn, President, Weighing Consultants, Inc.



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OIML Seminar

What Will Legal Metrology Be In The Year 2020

Thursday 26 – Friday 27 September 2002

*Espace OLANO
Saint-Jean-de-Luz
France*

Conclusions and Report

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- 2 Globalization of economies***
- 3 International geopolitical background***
- 4 Political evolutions***
- 5 Technologies***
- 6 Consequences for legal metrology***
- 7 Between now and 2020***
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1 Background

The idea of organizing a Seminar on *Legal Metrology in 2020* was put forward in 2001 by Jean-François Magaña, BIML Director. The main objectives were:

- To consolidate and broaden views concerning the foreseeable developments of metrology and legal metrology together with an analysis of their social and economic role, as already expressed in particular during the International Symposium held in Braunschweig in 1998 *The Role of Metrology in Economic and Social Development* and in the Birkeland Report *Legal Metrology at the Dawn of the 21st Century*; and
- To open the floor to OIML Member States and Corresponding Members, to Regional Legal Metrology Organizations and to manufacturers and users of measuring instruments with a view to sharing experience about the most predictable developments of legal metrology during the next two decades.

The Seminar, held in Saint-Jean-de-Luz (France) on 26–27 September 2002, reviewed the evolutions that legal metrology is facing, and the long term perspectives in which the goals of legal metrology will have to be attained.

The most clear-cut developments that can be observed relate to the fundamental economical, political and technical background of metrology and legal metrology.

2 Globalization of economies

The first point that appears clear to all observers is the tendency towards the globalization of economies. The shift from local to national economies started centuries ago, but the worldwide development of this trend has shown such an acceleration over the last twenty years that no activity in any country can be isolated from the influence and competition of the rest of the world.

The development of international trade has allowed commodities and industrial products to circulate throughout the world and although tariff and technical barriers to trade still remain, worldwide competition has become a reality. No industry in any part of the world can ignore what competitors from other countries, even far away, are developing and providing. Barriers to trade are a fallacious protection for industry, because they are a burden for clients who demand the best possible products and services.

The globalization of financial markets and their interconnection using new information technologies

results in the development of multinational industrial groups that are able to better develop new products and new technologies, and that are able to allocate their production resources worldwide in the most strategic way. The trend is now that manufacturers of measuring instruments are merging (or have already merged) into large multinational companies. Small manufacturers may still exist when small segments of markets remain, but they mainly adapt components or modules developed and produced by these multinational manufacturers.

In the not too distant future, it is likely that all technical progress and all new technologies in measuring instruments will emanate from a limited number of multinational manufacturers and be used worldwide, and very often at a lower cost than traditional technologies. National manufacturers will probably limit their activity to adapting these international products to specific local needs.

3 International geopolitical background

It became increasingly apparent that individual countries could not handle the problems raised by this globalization on a stand-alone basis. International organizations were set up to address issues that states could not manage independently and as a result economic and social issues have been addressed (UNDP, UNICEF, UNESCO, FAO, WHO, etc.).

The environment is now a growing issue for international cooperation. International trade has been facilitated, organized and developed by setting up the GATT then the WTO, and the OIML was formed in 1955 to facilitate international trade and to help developing countries to set up national systems.

In the second half of the twentieth century, two trends were observed:

- The founding of small independent states, brought about by peoples' increasing right to determine their own future; and
- The constitution of regional structures grouping countries together to better deal with globalization issues, aid development and form politically organized zones.

The international landscape is made up of a larger number of small countries and also of regional groups of countries which have no formal political existence, but which do have a growing economical influence.

The gap between industrialized countries and developing countries still remains, although some former developing countries have significantly expanded their development. This question of development has

increasingly been taken into consideration, and support offered to developing countries is now quite an important issue in each international summit and within all international organizations.

4 Political evolutions

Most developed countries have adopted a liberal economic approach whereby the state avoids any unnecessary constraints on the economy and withdraws as few resources as possible from it. The state is then limited to fundamental tasks.

This results in progressively reducing the resources allocated by the state to activities which are deemed to be transferable to the private sector or ones that could conceivably be financed by industry.

Metrology is often considered as a necessity for industry that should be financed by the private sector; and legal metrology as an old fashioned regulatory task that could be replaced by standardization and promotion of quality, both voluntary. In nearly all industrialized countries, the resources allocated by the state to metrology and to legal metrology are constantly diminishing. Most political decision-makers are primarily economists or lawyers and they have a relatively low level of metrological awareness.

The schemes generally recommended by international funding agencies are the following: develop education, facilitate private activity and free trade, limit the role of the public administration to fundamental tasks, and develop basic infrastructures.

Metrology has to date rarely been considered as a major issue for developing countries. However, some international organizations (essentially the WTO and UNIDO) have understood that an adequate metrological infrastructure is necessary for development. In the G8 summit in Genoa, the development of metrological infrastructures was identified as a key issue for the development of African countries.

The situation in 2020 will doubtless be that efforts made by the state in the field of metrology in each industrialized country will be significantly less than today, while some potential in metrology will probably exist in what are today developing countries, so long as the development programs are efficient enough.

5 Technologies

New technologies have transformed all aspects of the economy and day-to-day life in a major way, and of

course they have deeply affected measuring instruments and legal metrology. Industrial products are no longer limited to material artifacts but their value is now largely composed of “intelligence”, thus allowing them to analyze their environment and their interfaces, and to adapt their behavior to these interactions.

Peoples’ consumption of information has considerably increased, and will continue to do so. We are entering a post-industrial civilization in which most of the human production and economic value will come from information delivery and management. Metrology is the fundamental tool for societies in this new context.

As far as legal metrology is concerned, the context in 2020 will be quite different from the context we have witnessed over the last years:

- “Plain” instruments will give way to systems that are integrated in networks, perform complex functions, associate different kinds of measurements and manage numerous measurement results. The elements of these systems will not be complete instruments but sensors, modules of instruments and data processing systems, all of which will interact with each other;
- Instruments and systems will be able to carry out tasks that are presently reserved only for metrology or other specialized bodies: self-verification, self-calibration, maintenance assistance and adaptation of their behavior to environmental conditions or to measuring conditions. Future instruments and systems may even be able to develop relatively intelligent fraudulent behavior and to prevent such behavior from being detected by legal metrology officials;
- The scope of these measuring systems will be considerably enlarged. They will cover a wide variety of measurements and quantities in nearly all fields of human activity. The integration of measuring devices in global networks, often using the internet, will require legal metrology to address the entirety of these networks.

6 Consequences for legal metrology

All these changes will have major consequences for legal metrology at both national and international levels.

At national level, legal metrology authorities will have to face up to the new, considerably higher stakes of metrology. They will have to carry out their tasks with limited or partial resources, and still address a wider scope of measurements and advanced technologies. They will need new skills to deal with these new fields and technologies, probably with fewer staff. They will have to demonstrate the utility of legal metrology to

political decision makers whose awareness of technical issues will be very low.

Legal metrology authorities will have to develop new ways of ensuring confidence in measuring systems and in measurements, and to replace the traditional conformity assessment procedures by new ones. Type approval and initial verification will often be obsolete concepts. Confidence in measuring systems and in measurements will have to result from a global approach to the whole life cycle of instruments and measurements, from design to maintenance and use. Establishing this confidence will also need a global approach on the part of all the bodies and users involved.

The reduction in national public resources for legal metrology in industrialized countries and the limitation of public resources available in developing countries will require that some technical activities be delegated to private bodies. This approach has been adopted by some countries. In others, this will result in a major transformation of the tasks and necessary skills of the public bodies in charge of legal metrology implementation.

Legal metrology authorities will not be able to fulfill their mission using only their own national resources; sharing facilities and resources with neighboring countries will be necessary. Cooperation and coordination at regional and international levels will be the only way for national legal metrology bodies to fulfill their mission. National legal metrology bodies will have to specialize in specific and complementary technical fields and rely on other countries' bodies for the other fields. Conformity of instruments to type, and more generally market surveillance, will have to be organized in cooperation with other countries.

International harmonization, mutual confidence and mutual recognition among legal metrology bodies and authorities are not only a necessity for trade facilitation, but also for fulfilling the missions of legal metrology at national level. Legal metrology work will have to be globalized, or it will be ineffective.

Sharing resources will be generalized in regional legal metrology organizations:

- This will be developed in industrialized regions in order to respond to the demand to decrease the cost of legal metrology infrastructures while addressing all the new fields of legal metrology. Regional networks will then constitute virtual legal metrology institutes;
- This will also be necessary in order to build a shared metrological infrastructure for developing countries, so as to set up a network that is able to answer the needs of these countries at a reasonable cost.

In regions in which such a network has not been developed, countries will not be able to answer the needs for legal metrology correctly and will face difficulties in their economic and social development.

These regional networks will have to base their activities on mutual international and inter-regional exchange of information, mutual confidence and international harmonization. The role of the OIML will be to provide harmonization of the technical and metrological requirements, but also to federate all these cooperations into a global legal metrology system and to move towards a global international conformity assessment scheme based on mutual confidence among its members.

The acceleration in the rate of technical progress will also have to be answered by a considerable acceleration of OIML technical work. This is a challenge for our Organization as it is an outstanding challenge for all the standardization bodies. The new information technologies will be widely used by the OIML and new methods of work in the OIML will have to be used.

7 Between now and 2020

The metrology community should study these trends and be prepared for these evolutions.

To face the questions raised by the evolutions in technology, the OIML must considerably accelerate its technical work, since the typical period for the evolution of measuring instrument types does not exceed just a few years. The requirements laid down in OIML Recommendations must be as functional as possible so that they do not depend on changing technologies, and when necessary these requirements must be revised very quickly.

The OIML must also urgently begin to study the general structure of the conformity assessment procedures in order to adapt them to the new technologies, to the new structure of measuring systems and to that of production and maintenance. An OIML Document should be produced to give guidance on the new skills required in enforcement authorities and in conformity assessment bodies. Such skills are required for legal metrology authorities, enforcement officers and conformity assessment officers, due to the evolution in technologies.

Member States must seriously consider the present redundancy of legal metrology institutes at international level and should engage in a thorough reflection on the need to reorganize and coordinate them so as to be more effective. Some redundancy is necessary for exchanging experience and information and to maintain mutual confidence. But too much redundancy is a waste of resources and does not allow all the necessary fields of concern for legal metrology to be covered. The current mentality is not yet ready to envisage such reorganizations at regional and international levels.

The OIML has not developed a guidance document concerning the fundamental tasks of governments and public administrations in legal metrology. This policy issue is close to being a political issue and is rather difficult to elaborate on. However the revision of OIML D 1 *Law on Metrology* should succeed in starting such a discussion.

Increasing awareness of metrology and legal metrology is an urgent need, and the OIML must work actively on this issue. It is necessary to raise the awareness of political decision makers in all countries, as well as the awareness of development agencies so that they seriously take metrology into account in their programs. It is also necessary to raise the awareness of the public as to the role of metrology and legal metrology.

Developing mutual confidence and mutual recognitions is also a priority for the OIML. The draft Mutual Acceptance Arrangement which is in progress is only a first step towards an international conformity assessment system. This step must be achieved urgently in order to proceed to the next steps. The final goal is that in 2020, Member States will be able to rely on and participate in the OIML conformity assessment program

and take it into account in their legal metrology systems.

This will require that Member States strongly commit themselves to developing mutual confidence, not only providing elements to provide confidence to others, but also willing to recognize other Members' certifications. Mutual confidence and recognition is necessary for all OIML Member States and requires efforts, open-mindedness and a broad sense of common interest.

8 Conclusion

OIML Member States have the responsibility for legal metrology in their countries, but they also share the responsibility of the OIML's success or failure to meet these objectives. Failure in this respect would dramatically affect the national metrology systems.

All those who participate in OIML work must consider that the progress of our projects is of common interest. They do not have to leave aside national interests, but they must be highly committed to building an international and global legal metrology system. ■

For the full Program, please see page 20

This report contains certain proposals for action on the part of the OIML that are derived from the lectures delivered in Saint-Jean-de-Luz.

These will be considered by the Presidential Council and by the International Committee of Legal Metrology.

Seminar: What Will Legal Metrology be in the Year 2020

– Program –

Thursday 26 September 2002

G. Faber	Introduction
T. Gaudin	The role of metrology in the cognitive society
M. Kochsiek	Trends in legal metrology towards a global measurement system
J.F. Magaña	How will the development of regional authorities and local authorities affect intergovernmental organizations such as the OIML?
L. Issaev	Legal metrology and the Meter Convention
J. Bennett and A. Caster	Pattern approval and pattern compliance in an age of globalization - The Australian approach
S. Carstens	The face of legal metrology in South Africa and its possible influence in Africa supporting the New Program for African Development (NEPAD)
Jackai Derrick Mosima	Legal metrology in 2020 - Role of governments of Africa's developing countries
A. Ooiwa	Desirable legal metrology framework for APLMF
Li Dai, Zhou Yuangen	Perspectives for China's legal metrology
A.Astashenkov & L. Issaev	Legal metrology tendencies in the Russian Federation

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C. Ehrlich	Issues and trends in legal metrology from a U.S. perspective
J. Birch	The expanding scope of legal metrology and the changing role of the State in a globalization world
B. Vaucher	Towards total approach in legal metrology
G. Lagauterie	New methods of intervention of the State and new tasks for legal metrology officers
P. van Breugel	Metrology in a global market
D. Tonini, D. Flocken	The pattern approval process: the past, the present, the future, as seen by U.S. instrument manufacturers
W. Schulz	Change of the consumer protection in legal metrology as a result of new technologies
W. Volmer	Measuring instruments invisibly connected
M. Tanaka	Measuring instrument technology and customer and contractor of legal metrology in mid 21c
M. Birdseye	Progress and our genius for compromise
S. Chappell	Opportunities and future trends in legal metrology control of measuring instruments

General conclusions and closure

INFRASTRUCTURES

Metrology in Cambodia

MEAS PHON, Deputy Director,
Department of Metrology, MIME

1 Situation and activities

1.1 History

1964	Establishment of the National Service of Weights and Measures, under the Ministry of Industry
1975–1979	Cambodia was under genocidal regime, no activities
1995	Re-establishment of the Weights and Measures Unit, under the Technical Department of the Ministry of Industry, Mines and Energy (MIME)
1999	Upgraded to be the Department of Metrology
2000	Became an OIML Corresponding Member
2001	Became a Member of the APLMF

1.2 Laws and Regulations

The Department of Metrology was set up based on:

- ▶ Circular No. 03 DT/PMC dated October 6, 1995;
- ▶ Sub-decree No. 35 AK/PK dated April 26, 1999, on the organization and functioning of MIME;
- ▶ Prakas No. 154 P/PK dated March 14, 2000 of MIME, defining the organization and functioning of the Provincial office of Metrology;
- ▶ Decision No. 03 DM/DCS dated January 11, 2000 of MIME, defining the responsibility of the Department and Office of Metrology.

Referring to the Law on Management of Quality and Safety of Products and Services, effective June 21, 2000, some articles expressed the need to have a Sub-decree to ensure the functioning of the metrology services: Art 16,

Art 21 and Art 59 ensure “identity, type, nature, place of origin, physical and nutritional quality, contents and quantity”, “measuring instruments used for producing or commercializing products”, “regulations concerning measuring instruments and their certification” and some articles concerning the control and laboratory testing to meet the requirements as prescribed by law.

1.3 Management

1.3.1 Role and responsibilities

Following the Sub-decree No. 35 AK/PK dated April 26, 1999, the MIME is in charge of managing metrology, with the Department of Metrology as headquarters to:

- ▶ Ensure the functioning of the metrology services: organization, role and responsibilities, conservation use and verification and facilitation of the duties of the dealers in and users of measuring equipment, and to take measures against violations of metrological regulations;
- ▶ Implement the National Metrology Policy and issue documents concerning manufacturing, consumption, import-export and repair of equipment used for measurement;
- ▶ Ensure the conservation of secondary standards;
- ▶ Ensure the proper design, verification and use of measuring instruments;
- ▶ Review the need, establish the work plan and monitor the implementation;
- ▶ Carry out evaluation and supervision of measuring equipment to ensure its effectiveness and efficiency;
- ▶ Improve and disseminate national metrology technology;
- ▶ Organize the training of metrological staff;
- ▶ Administer the metrological laboratories; and
- ▶ Cooperate with international organizations dealing with metrology.

According to the circular No. 03 DT/MPC dated October 6, 1995, the Department of Metrology, operating under the Director General of Industry of MIME, is in charge of registration, calibration, verification and inspection of measuring equipment and issuing licenses to manufacturers, importers, repairers and sellers of weights and measures instruments.

According to Prakas No. P/PK dated May 13, 1999 of the MIME, the Office of Metrology in each province and city plays these roles on behalf of the Department, for the lower level business.

1.3.2 Technical tasks: Verification and standards

By circular No. 03 DT/PMC dated October 6, 1995, there are three types of verification of measuring equipment:

- ▶ Initial verification;
- ▶ Periodical verification; and
- ▶ Unexpected verification.

After verification, a written certificate is issued to the effect that the piece of equipment is a “legal measuring equipment” and the modification, repair or readjustment can be demanded if needed. The permissible tolerance is:

- ▶ $\pm 0.5\%$ for ordinary business; or
- ▶ $\pm 0.0003\%$ for highest level businesses such as the gold industry.

The indication or labeling and delivery of a definite quantity of product must be liable to state metrological controls.

There are four types of standards:

- ▶ National or primary standards;
- ▶ Secondary standards;
- ▶ Third level standards; and
- ▶ Fourth or Ordinary level standards.

The meter and the kilogram comply with international standards. These standards must be available and should be located, kept and maintained accordingly.

The Department of Metrology is responsible for the secondary standards, and the Provincial Office of Metrology for the third level standards. The ordinary standards are simple and used throughout the whole country.

We have observed that the business sector uses different metrology units (traditional unit, SI unit or Anglo unit). It needs to harmonize use by defining the equivalence between units.

2 Objectives, strategy, action plan

2.1 Objectives

With the objectives of improving the work of the metrology services and protecting citizens against the harmful effects of inaccurate measurements, a legal framework is required to prescribe the standardization of units, standards, certification and accreditation of measuring equipment, and to accelerate the modernization of measurements.

This will also include the legal units of measurement, especially the traditional and SI units and their equivalence. The harmonized legal metrology system will facilitate and promote commercial trade.

The officers of the metrological service must have complete freedom of access to all industrial establishments or commercial premises where measuring equipment is installed, used or kept.

Fees may be payable for metrological work to pay for services rendered: production, verification and repair of the measuring equipment. These fees will be approved jointly by MIME and MEF.

2.2 Strategy

Measurements have a great impact on our everyday lives and play a leading role in all fields especially in trade, contributing significantly to economic development. Different measurement systems have been established for these needs. There are two broad areas of metrology: legal metrology and industrial metrology.

- ▶ Legal metrology guarantees the reliability and precision of measurements to ensure the exchange of goods and services;
- ▶ Industrial metrology focuses on the provision of calibration services to industry in line with standards, ensuring adequate precision and contributing to quality control and quality management to ensure the required product quality before marketing.

In Cambodia, metrology management is in the early stages of its experience, which needs to be strengthened for the possibility of regionalization and globalization and primarily for the purposes of successful integration in the ASEAN region:

- ▶ Human resource development;
- ▶ Structure and organization documentation;
- ▶ Institute and laboratories, equipment;
- ▶ Information technology, seminars, exchange of information; and
- ▶ International cooperation to harmonize the activities, especially with ASEAN countries, for the transfer of technology, technical assistance and mutual confidence.

2.3 Action plan

The action plan is as follows: To focus on the expansion of the metrology infrastructure, according to our needs

and the level of development to ensure the proper functioning of a credible measurement system and its legal application for fair and efficient trade.

- ▶ 2002: establishment of provincial offices;
- ▶ 2003–2004: establishment of a regional center in Phnom Penh;
- ▶ 2005: Establishment of the centers in Sihanouk Ville and Battambang;
- ▶ 2006–2007: Establishment of the centers in Rattanakiri and Kg Cham;
- ▶ Study and construction of the National Institute of Metrology; and
- ▶ Establishment of metrological laboratories.

Expected cooperation:

- ▶ With a grant from NORAD, UNIDO has the possibility of launching phase I of the project “Market Access and Trade Facilitation Support for Mekong Delta Countries Through Strengthening Legal and Institutional National Capacities Related to

Standards, Metrology, Testing and Quality (SMTQ)”. Phase I during the period 2003–2004;

3 Suggestions

- ▶ Cooperation with the National Institutes of Metrology of ASEAN countries, especially the six most experienced members;
- ▶ Cooperation program among ASEAN countries, training, study tours, exchange of experience;
- ▶ Technical assistance from the OIML, the PTB, the Japanese Institute and others;
- ▶ Documentation and information technology; and
- ▶ Experts expected from the WTO to be employed to assist in drawing up a law and regulations on metrology. ■

► **Development Council Meeting**

► **37th CIML Meeting**

Saint-Jean-de-Luz (France)

1–4 October 2002

*Two meetings were held at the
Hélianthal Hotel, Saint-Jean-de-Luz,
organized by the BIML.*



- *The **OIML Development Council** met during the morning of Tuesday 1 October following a meeting of the newly formed Task Group, and*
- *The **International Committee of Legal Metrology** held its Thirty-Seventh Meeting from 1 (afternoon) through 4 October.*

SAINT-JEAN 2002

OIML Development Council Meeting

1 October 2002

REPORT BY IAN DUNMILL, BIML

Introduction

The OIML Development Council met on 1 October 2002 at the Hélianthal Hotel, Saint-Jean-de-Luz, in conjunction with the 37th CIML Meeting.

The meeting was chaired by Mrs. Ghaïet-El-Mouna Annabi, Development Council Chairperson. Also at the presiding table were Mr. G. Faber, CIML President, Mr. J.-F. Magaña, Director of the BIML and Mr. I. Dunmill, Assistant Director of the BIML.

Mr. Faber and Mrs. Annabi welcomed Delegates then Mr. Magaña established that 38 Member States and 7 Corresponding Members were present, as well as representatives from the World Trade Organization (WTO) and the Inter-American Metrology System (SIM). In addition there were two observers from the Ivory Coast, two CIML Honorary Members and members of the BIML Staff.

1 Election of the Chairperson

The Council approved the agenda (see insert) and proceeded to elect the Council Chairperson for 2002–2004. Since Mrs. Annabi's term of office was due to end on the occasion of this meeting and since she had expressed the desire to continue in the position and no other candidacies had been put forward, she was unanimously re-elected for a two-year period.

2 Reports from Working Groups

Written reports on the activities of the three Working Groups since the 2001 meeting of the Council (held in Moscow) were circulated during the meeting. These are

Agenda

Participation
Opening
Roll call
Approval of the agenda

- 1 Election of the Chairperson of the OIML Development Council for the period 2002–2004
- 2 Reports from Working Groups on activities since the 2001 meeting of the Development Council (Moscow, Russian Federation)
- 3 Report and discussion on the first meeting of the Development Council Task Group (30 September 2002)
- 4 Proposal for the Development Council activities for 2002–2003
- 5 Other matters
- 6 Next meeting
- 7 Conclusion and closure of the meeting



Mr. Faber and Mrs. Annabi

summarized below, and the full texts are published in the *Minutes* of the Development Council meeting, which can be freely downloaded from the OIML web site as a PDF file: www.oiml.org/download

WG 1 – Training

Mr. Wallerus reported that following a questionnaire which he had circulated, various points had been noted for inclusion in the revision of OIML D 14 *Training of legal metrology personnel*. He added that following the meeting in Moscow many valid comments had been made, although others were always welcome. He explained that some aspects of the modular training system used by the Deutsche Akademie für Metrologie (DAM) were also useful in the revision of D 14. The revised draft of the revision of D 14 would be sent to the Working Group by the end of 2002 for comment.

WG 2 – Information

Mr. Mardin reported that the activities of WG 2 over the last year had followed the work program agreed at the Development Council meeting in Moscow, notably concerning the collection of data on the specific information needs of developing countries, the dissemination of information, new information technologies, and also the compilation of a bibliography of publications related to technical assistance in metrology with a view to a brochure being produced during 2003.

He asked for confirmation as to which countries wished to participate in the work of WG 2.

Mr. Vaucher said that Switzerland was particularly keen to assist in this WG's activities, and explained his country's "LegNet" system which he felt could be of use in this WG's work.

Mr. Magaña informed Participants that it was proposed to make available means for a more efficient exchange of information via the Internet; this work would be conducted in close liaison with WG 2. He also mentioned that the BIML had been informed by the World Bank of a project to help in providing high speed Internet access to the standardization bodies of developing countries.

WG 3 – Equipment

Mr. Issaev reported that WG 3 aimed to suggest approaches for equipping metrological laboratories in developing countries using those which are applied in Russia and explained how traceability was established through this scheme: "complete verification laborat-

ories" (designated by the Gosstandart of Russia) are custodians of the state measurement standards and developers of the state verification schemes. These formed a basis for the dissemination of units of physical quantities from the state measurement standards to working measuring instruments.

In their approach, WG 3 was considering the following activities:

- They need to obtain information on the needs of national metrology services in their priority areas of measurement;
- Complete verification laboratories would be used as the basis for proposals on equipment for metrological laboratories in developing countries; and
- A series of typical complete verification laboratories would be developed, starting with dimensional measurement, mass, pressure, flow, temperature and electrical measurements.

3 First meeting of the Development Council Task Group (30 September 2002): Report and discussion

A written report on the first meeting of the Task Group was distributed (see page 31). One particular concern was that the Development Council meeting was very similar to the CIML Meeting, which was not a very effective way of working. Mr. Faber felt that help for developing countries was one of the OIML's key work areas; the Presidential Council had discussed this matter, and had decided to set up a "Task Group".

Mr. Magaña explained that the first meeting had been a "brainstorming" session which had concentrated on two subjects: the action plan for the OIML's assistance to developing countries, and the structure which could be put in place to enable these actions to be completed as effectively as possible.

Two main themes had been considered: actions to enable developing countries to participate in OIML activities, and actions which the OIML could undertake to help developing countries further their legal metrology systems.

A preliminary list of actions had been established, among which was the revision of OIML D 1 *Law on metrology*. The revised form of D 1 was intended to act as a guide, indicating what the content of such a law should be rather than a text which could be copied into national law. He added that the BIML would try to ensure the fastest possible completion of this project.

Other subjects discussed by the Task Group had included the importance of improving links to other development and funding organizations, help required

by developing countries to identify the types of laboratories and equipment needed, and possible future structural changes that were necessary for the OIML's work on aiding developing countries.

Most of the work of the Task Group would take place by e-mail and using an Internet based forum, but it would also meet twice per year.

Many of those present voiced the opinion that it was time to change the structure of the existing Development Council to enable the OIML to better respond to the needs of developing countries as well as to raise the awareness of the importance of metrology in other organizations, including regional ones which included countries that were neither OIML Member States nor Corresponding Members. It was therefore extremely important to take their views into consideration, both in the implementation of activities and in making the opinions and needs of developing countries heard.

The OIML could help in identifying appropriate experts and an on-line resource center for developing countries could also be set up. However, it was felt that the provision of training in the language of the country in which it was needed was perhaps best dealt with by regional organizations, which were most able to respond to local needs.

Mr. Leitner said that Austria considered it important to ensure close cooperation between the OIML, UNIDO and the Metre Convention. Mr. Magaña replied that in order to improve such coordination, a joint committee including the OIML, BIPM, ILAC, ISO, IEC and IAF had been established in February 2002 to coordinate assistance to developing countries. In particular, it aimed to help development organizations put into place coherent programs in which metrology was presented in a consistent manner. In this way, developing countries would be able to establish a global infrastructure including primary and legal metrology, calibration, accreditation, etc. This committee's first meeting had taken place in June, and the second (at which the OIML had been represented by the BIPM) during the weekend before this meeting. Mr. Seiler suggested that this joint committee would help in raising public awareness of the importance of metrology, so that it would become easier to obtain help from donor organizations. He thanked the BIPM for the support which had been given to Germany's development activities and asked others to consider implementing similar development programs.

Mr. Magaña continued by saying that UNIDO was an important organization for the OIML, with which there were close links and with which there were already some joint actions.

Mrs. Liu gave Delegates an update on the trade-related technical assistance activities of the World Trade Organization (WTO). Firstly she reported on the WTO Ministerial Conference held in Doha, at which it was

decided that technical assistance was to be an important element of the WTO's work. This concerned not only assistance related to the implementation of the WTO Technical Barriers to Trade agreement, but also capacity building. The objective of all these activities was to help developing countries participate in the global trading system.

She said that her presence at the meeting indicated the WTO's focus on technical assistance activities, since she wanted to see how they could cooperate and work with the OIML. She reported that concerning technical assistance within the TBT area there were two mandates from ministers: the first, which was given to the Director General of the WTO, was to work with other organizations, especially international standard-setting organizations, to see how the WTO could help developing countries with their participation in international standard-setting activities. The second was to work with other organizations on technical assistance in capacity building. The Doha meeting had also mandated the TBT Committee to develop a technical cooperation program. A survey had been circulated, to which 45 developing countries had so far responded. Many of these mentioned metrology as being an important concern, so the WTO was very interested in working with the OIML. Mrs. Liu indicated that in the short term, she hoped to work closely with the OIML during 2003 to run some regional workshops to see how developing countries could be helped in the field of metrology. She stressed that these projects were intended to be demand-driven, so feedback from developing countries was essential.

Mr. Seiler remarked that trade-related development activities were mainly conducted through national standards bodies, which frequently did not have good contacts with the metrology bodies. He therefore urged Participants to contact their national standards bodies in order to keep up to date with such activities and in order to ensure that their views were represented in the responses to surveys such as that mentioned by Mrs. Liu.

Mr. Magaña concluded this item by mentioning that any comments or suggestions could be sent to the BIPM so that the final action plan for the Task Group could be put into place as soon as possible.

4 Proposal for the Development Council activities for 2002–2003

Mr. Magaña suggested that the proposals detailed at the end of item 3 of the agenda be considered as the work program for the Development Council for the coming year. Mrs. Liu proposed that joint WTO/OIML activities

could also be added to the program, which was agreed to.

Mr. Eggermont asked what the relation between the existing Working Groups and the new Task Group was to be. Mr. Magaña answered that the three existing Working Groups should continue their work (in close cooperation with the Task Group) since the Task Group could make important contributions to their work. Each WG could also decide to transfer some or all of its work to the Task Group.

5 Other matters

5.1 UNIDO – OIML – PTB project in Africa

Mr. Ela Essi asked whether there was any up to date information on this project, further to a visit by experts to Cameroon some two years ago. Mr. Seiler replied that a letter of intent had been signed by UNIDO, the OIML and the PTB concerning cooperation for developing country activities, especially in Africa. The PTB was also implementing a technical cooperation project for the support of metrology and testing in West African countries, in close cooperation with UNIDO. The aim was to ascertain what help was needed in metrology and testing and to provide an integrated solution so that maximum benefit may be derived by the countries in question. Special seminars on verification of weighing instruments, fuel dispensers, etc. were also to be held in the near future and Mr. Seiler added that the participation of other countries was always welcome. A similar project for least developed countries in Asia was also just beginning.

5.2 Euro-Mediterranean Legal Metrology Forum (EMLMF)

Mr. Lagauterie reported that the EMLMF had met on Saturday 28 September 2002 and had discussed three main points:

- To recognize the official establishment of the EMLMF, its Memorandum of Understanding (MoU) having been signed by around ten members;
- To elect a Chairperson. Since it was hoped that in the near future there would be considerably more than the current ten signatories to the MoU, the Chairperson had been elected for one year; and

- Offers of training, which had been received from DAM (Germany), METAS (Switzerland), LNE (France) and AFNOR (France) concerning legal and general metrology as well as accreditation and certification. Finance for these training proposals had still to be found, although Mr. Kochsiek had made proposals which needed only a few remaining details to be clarified (location, language, etc).

On the subject of the language used for training, Mr. Magaña highlighted the importance of courses held in the language of the country receiving the training, and said that the BIML was open to proposals by Members who wished to translate OIML publications into other languages, which could then be published by the BIML. Anyone having already undertaken such translations was invited to contact the BIML.⁽¹⁾

5.3 Training in the SADC MEL region

Mr. Carstens reported that the document on the minimum training requirements for legal metrologists in the region was nearly completed. Once this was adopted by members, train-the-trainer courses would be developed. A workshop on the modernization of legal metrology and legislation had been conducted in Pretoria and was attended by all member countries. A course on the verification of nonautomatic weighing instruments had also been held which was attended by twelve member countries.

5.4 Translation of publications into Arabic

Mr. Magaña reported that Mr. Al-Gossair had requested that the subject of the translation of OIML publications into Arabic be added to the work program. The BIML would work with him to make progress on this suggestion.

6 Next meeting

It was proposed that the next meeting of the Development Council be held in conjunction with the 38th CIML Meeting to be held in Kyoto, Japan in November 2003. The Task Group would meet again in about six months.

⁽¹⁾ A report on the EMLMF meeting will be published in the April 2003 edition of the Bulletin

7 Conclusion and closure

Mrs. Annabi concluded the meeting, saying that she had hoped that there would have been more reaction from Participants concerning the possibilities for the restructuring of the Development Council since it was

hoped that this would make the work more dynamic and efficient.

She thanked Participants for their interest in the Council, undertaking to work to help developing countries in promoting legal metrology as far as possible during the coming year. ■



The French translations of these accounts will be published in the April 2003 edition of the Bulletin

Report of the Task Group meeting held on 30 September 2002

Participation

The participants at the meeting (listed in alphabetical order) were as follows:

Mrs. G. E. Annabi	Development Council Chairperson
Mr. I. Dunmill	BIML Assistant Director
Mr. G. Faber	CIML President
Mr. O. Harasic	SIM
Mr. Kochsiek	CIML Vice-President
Mr. Long	STAMEQ (Vietnam)
Mr. J-F. Magaña	BIML Director
Mrs. R. Marbán	SIM
Mr. J. Pellecer	SIM
Mr. E. Seiler	PTB (Germany)
Mr. K. Seta	NMIJ (Japan)
Mr. da Silva	Brazil
Mr. Tran	STAMEQ (Vietnam)
Mr. Zhagora	COOMET

Introduction to the role of the Task Group

Mr. Faber began by saying that the Task Group had been established following comments which had been made after last year's Development Council meeting and discussions with various persons, including the Chairperson of the Development Council, Mrs. Annabi. These discussions had led to the conclusion that the existing Development Council structure and working methods were not producing the desired results and that something needed to be done to fulfill the OIML's responsibilities towards developing countries. He felt that the new Task Group should concern itself initially with two main topics:

- The production of a very concrete, challenging action plan which would enable everyone to see what was being done by the OIML to help developing countries and to follow the progress made during the implementation of this plan; and
- The structure of the Development Council itself which would be necessary to achieve these results.

Mr. Magaña explained that the membership of the Task Group had been proposed at the Presidential Council meeting held in February 2002, and was designed to give a wide regional representation as well as including experts in technical assistance.

OIML actions for developing countries for the year 2002–2003

The participants introduced various ideas for actions for the coming year. In particular, it was felt that the following items should be high priority actions for the coming year:

- A request should be made to the BIML to ensure the rapid advancement of the work on the revision of D 1 *Law on Metrology*;
- A seminar should be held in May 2003 in Moscow in association with COOMET; and
- A metrology seminar for African countries should be held during 2003, in association with the PTB.

It was decided that the Task Group should recommend to the Development Council that the BIML should be asked to develop these points into a concrete action plan by November 2002.

Terms of reference for the Task Group

Mr. Magaña detailed the history of the current Development Council structure, which had been established by a decision of the 6th Conference in 1980, and then asked for the Task Group's reactions concerning this structure.

The participants indicated that they considered the existing format to be inefficient and felt that it was easier to make policy decisions in a small group which could call upon experts where necessary to assist with specific tasks. An active secretariat was also considered essential and internet and e-mail should be used to improve the group's efficiency.

It was decided to recommend to the Development Council that the existing structure be changed by the 12th Conference in 2004. Detailed proposals should be put forward by the BIML for consideration at the next meeting of the Task Group.

Next meeting

The Task Group felt that if reasonable progress was to be made between meetings of the Development Council, then more than one meeting a year would be necessary. It was decided to examine the possibility of holding another meeting in around six months' time. ■

SAINT-JEAN 2002

37th CIML Meeting

Opening Address

GERARD FABER, CIML President



Ladies and Gentlemen,

It is indeed my pleasure to welcome you to this 37th Meeting of our Committee and I thank you in advance for your participation which, I am sure, will be as positive and fruitful as usual.

The venue of this meeting is rather unusual, as Saint-Jean-de-Luz is not one of the large international cities in which we are used to meeting. We shall have the opportunity to become acquainted with this region, which has a very specific culture and which provides attractive sites and landscapes.

According to tradition, I would like to start with some words concerning our new Members.

We have the pleasure to have a new Member, Albania having changed its position of Corresponding Member to full membership. The OIML now has 58 Member States, and the perspectives of increasing the membership of the OIML are rather good. Concerning Corresponding Members, Libya has been relisted and shows interest in our work, while the Philippines have asked to be delisted.

Concerning the composition of our Committee, I have the pleasure to welcome the following new Members:

- from Albania, Mr. Bashkim Koçi,*
- from Bulgaria, Mr. Ivelin Burovok,*
- from the People's Republic of China, Mr. Wang Qinqing,*
- from the Democratic People's Republic of Korea, Mr. Jon In Chol,*
- from the Republic of Korea, Mr. Yeon-Jae Lee,*
- from Slovenia, Dr. Ivan Skubić, and*
- from the United Kingdom, Dr. Jeff Llewellyn.*

I also welcome the participants in this meeting who are in the process of becoming officially appointed CIML Members.

Our Organization is increasingly linked with other international Organizations, and I am very pleased to welcome Mrs. Liu, General Secretary of the WTO TBT Committee, and to thank her for the interest that she continues to show in the OIML.

On a sadder note, it is with deep regret that I have to inform you of the death of one of our past BIML Assistant Directors, Mr. Referowski, who passed away some two weeks ago; he will be dearly missed and we extend our deepest sympathy to his family and friends.

This CIML Meeting is following in the wake of several events which many of you have attended and which show that our Organization is changing and adapting to the evolutions of society and of the economy: an OIML Seminar "What Will Legal Metrology be in the Year 2020?", a meeting of the OIML Development Council and a meeting of a Task Force which discussed the evolutions of the Development Council. Reports on these events will be given during this Committee Meeting.

Our Meeting, as always, has to address issues of major importance for the future and for the evolution of our Organization.

We shall in particular be discussing the relations of the OIML with other organizations, the extremely important role of Regional Legal Metrology Organizations, the future evolutions of the OIML Development Council, and also the Mutual Acceptance Arrangement.

Mr. Birch will give you an overview of the study that he is conducting for the OIML about the "The Benefits of Legal Metrology for the Economy and Society". We shall also have a presentation of "The Evolution of Legal Metrology in Europe", by Mr. Freistetter, WELMEC Chairman.

Methods of work are also an essential issue for the efficiency of the Organization, and we shall have a presentation on the acceleration of OIML technical work, and presentations on the evolutions of the methods of work of the Bureau.

Last but not least we shall examine the question of the election of a new President, which will take place next year. This is a key event in the life of our Organization.

These are, my dear Colleagues, the major topics that we shall have to examine and/or decide upon during this meeting.

So, at the end of my opening address, may I ask the BIML Director to proceed with the roll-call of participants before we embark on the various items on our agenda.

Thank you for your attention, and may I wish you a very successful meeting.



SAINT-JEAN 2002

37th CIML Meeting

1–4 October 2002

REPORT BY JFM, AS, ID & CP (BIML)

The CIML met from 1st through 4th October 2002 at the Hélianthal Hotel, Saint-Jean-de-Luz, France. 54 CIML Members (out of 58) were present or represented, making this one of the highest ever percentages of Member States present at a Committee Meeting.

The agenda (see insert) was approved, as were the minutes of the 36th CIML Meeting (without modification).

On the subject of the implementation of the Decisions and Resolutions of the 11th Conference and 36th CIML Meeting, Mr. Faber explained that since most of the items in these documents were on the agenda for the current CIML Meeting, he therefore did not feel it was necessary to review each one individually.

Mr. Magaña reminded Participants that a revised version of the 1999–2002 + 2003–2004 Action Plan had been distributed about a year ago for CIML approval. He commented that a number of key actions had already been completed, and then highlighted the main points of the Plan: The first draft of the revision of the *Technical Directives*; The OIML technical work program; Activities to increase Member State participation in technical work; Activities on *Software*; The OIML Certificate System for Measuring Instruments; The OIML Mutual Recognition Arrangement; Acceptance of test results, the MAA and accreditation; The revision of R 87 *Net content in packages*; John Birch's study on *The Benefits of Legal Metrology for the Economy and Society*; Structural improvements, including cooperation with the RLMOs; and Training and public relations/promotion, including developments in the OIML web site.

Mr. Faber voiced the opinion that the Organization was working at a fast pace, covering much new ground and following the Action Plan as stipulated.

Mr. Magaña next informed Participants of developments in the OIML Membership:

- Albania had recently become a Member State, and was warmly welcomed by Mr. Faber. This country was previously a Corresponding Member;
- Libya had been relisted as a Corresponding Member;

Agenda

Opening address
Roll-Call - Quorum
Approval of the agenda

- 1 Approval of the minutes of the 36th CIML Meeting
- 2 Implementation of the Decisions and Resolutions of the 11th Conference and 36th CIML Meeting
- 3 1999–2002 + 2003–2004 Action Plan implementation and final extension up to the end of 2004
- 4 Member States and Corresponding Members
 - 4.1 New Members - Expected accessions
 - 4.2 Situation of certain Members
- 5 Financial matters
 - 5.1 Adoption of the Auditor's report for 2001
 - 5.2 Examination of the financial situation for 2002 and 2003
 - 5.3 Analysis of the operating costs of the BIML
- 6 Presidential Council activities
- 7 The situation at the BIML
 - 7.1 Amendments to the Staff Regulations
 - 7.2 BIML Staff
 - 7.3 BIML activities
 - 7.4 Progress in the use of Internet and e-mail
- 8 Technical activities
 - 8.1 Work program of TCs/SCs
 - 8.2 Examination of the situation of certain TCs/SCs, if appropriate
 - 8.3 Acceleration of technical work
 - 8.4 Approval of draft Documents and Recommendations
- 9 OIML Certificate System for Measuring Instruments
 - 9.1 General information
 - 9.2 New Recommendations applicable within the System
 - 9.3 Plans for future developments
- 10 Evolutions
 - 10.1 Mutual Acceptance Arrangement (MAA)
 - 10.2 Horizontal documents
 - 10.3 Report on the study *The Benefits of Legal Metrology for the Economy and Society*
 - 10.4 Preliminary examination of the output of the Seminar *Legal Metrology in 2020*
- 11 Report on the Development Council
 - 11.1 Presentation of the World Bank programs
 - 11.2 Activities of the Development Council, action plan and possible evolutions of its structures
- 12 Liaisons with international and regional institutions
 - 12.1 Regional Legal Metrology Organizations (RLMOs)
 - 12.2 Other institutions (Metre Convention, ILAC, ISO, WTO, etc.)
 - 12.3 Information on legal metrology developments in the Regions
- 13 Election of the CIML President, 2003
- 14 Future meetings
 - 14.1 38th CIML Meeting (2003)
 - 14.2 39th CIML Meeting and 12th Conference (2004)
 - 14.3 40th CIML Meeting (2005)
- 15 Other matters
- 16 Adoption of decisions

Closure

- New Zealand and Vietnam were both considering becoming Member States, presently also Corresponding Members; Mr. Faber confirmed that the OIML door was wide open and ready to welcome these countries as full Members when they were ready; and
- The Philippines had recently requested to be de-listed as a Corresponding Member due to financial constraints.

Mr. Magaña then went into detail concerning the financial situation of a number of countries and reminded Participants that in Moscow and London, the Committee and Conference respectively had examined their arrears. Since then, the majority had settled the amounts outstanding, although the considerable arrears of three countries did now need to be examined. Details are given in the full *Minutes* of the meeting.

Next, the Auditor's report for 2001 was adopted; no comments were received from Delegates.

Examining the financial situation for 2002 and 2003, Mr. Magaña explained that the Organization was globally on schedule with the budget and that objectives were being met - and would be met at the end of the period. The forecasts for 2003 were also scheduled to be in line with the budget. He noted that the rate of inflation in France was also reasonably low, and steady.

He went on to explain that a new model of accountancy system was currently being defined with a view to its application for the BIML accounts in the future. However, it was for the Conference to decide on such a decision and he would make a detailed proposal for consideration in 2004. He gave some specific examples of how certain costs would be accounted for under the new system, and had also made a summary of the allocation of the BIML Staff's time in carrying out various activities. The major portion of this time was spent on

Committee and Conference meetings, technical editing including translation, TC/SC support activities, attendance at RLMO and other liaison organization meetings, the OIML Bulletin and administrative tasks.

Mr. Faber agreed that this was a very important development and would clarify matters when making financial decisions in the future.

He then gave a report on Presidential Council activities over the last year, and welcomed the newest member of the Council, Mrs. Judith Bennett (Australia). One meeting had been held in Moscow in September 2001 and a second in February 2002, during which the OIML's finances, the Development Council structure and the MAA document had been discussed.

Moving on to item 7 on the situation at the BIML, Mr. Faber explained that from time to time it was necessary to update and modernize the BIML Staff Regulations. Mr. Magaña had discussed this document with members of Staff and drawn up draft proposals to modify certain parts of the text in view of the fact that the document had become outdated. However, the Annexes had not yet been re-evaluated and the salary scales had not yet been revised.

Concerning the BIML Staff itself, there had been two changes since the last Committee Meeting: a *Systems Engineer* had been recruited in November 2001 to take over the management and development of the BIML computing equipment, internal network and technical programming, and an *Office Manager* had been recruited at the beginning of September 2002, in charge of the general administrative functions of the BIML including responsibility for the two administrative employees (one Secretary and one Archivist). Mr. Magaña explained that despite these two changes, the total number of BIML Staff was still at the same level as it was two years ago due to two other Staff members having left.

Mr. Magaña commented on several BIML activities of note:

- The organization of the Saint-Jean meetings had been more complex than usual since the BIML had masterminded the whole event;
- The Bureau had allocated a certain amount of time to drawing up documents for the Presidential Council;
- It had also participated significantly in Development Council activities, notably in setting up the new Task Force;
- Time had been allocated to forming a strategy concerning the best way to speed up OIML technical activity;
- The web site had taken a significant time to develop; and
- The BIML had actively participated in regional legal metrology meetings over the past year, as well as in meetings of international organizations.



Routine activities such as accountancy, secretarial work, etc. were also carried out by the Bureau, even though they were not listed specifically.

Concerning progress made in the use of Internet and E-mail, Mr. Magaña explained that much work had recently been carried out by the Bureau to update and harmonize the various databases, notably to render them compatible with the restructured web site. This had already served to simplify the handling of data concerning Members' Institutions, publications, Issuing Authorities and technical activities. A live demonstration of the web site was also given.

Virtually all the OIML publications were now available to Members as PDF files on the web site; this work had been carried out by the Bureau since the 36th CIML Meeting and each Delegation was given a copy of the complete set of files on a CD ROM.

Further developments planned for the web site included an improved database of registered certificates, forums for TCs/SCs, updating of the Development Council sub-site and other specific modules.

Mr. Faber congratulated the BIML for the progress made in this field and for the live demonstration of the web site, and confirmed that this was definitely a major step forward in improving the flow of information between the Organization and its Members.

Under item 8 *Technical activities*, Attila Szilvássy distributed a written report which was commented by Mr. Issaev, responsible for following OIML technical activities as CIML Vice-President.

Mr. Issaev began by drawing attention to the fact that the responsibility for the 67 technical bodies was shared by only 15 Member States; this particular problem would be addressed later on.

He stated that the actual implementation of OIML Recommendations and Documents by OIML Members was of great importance, in addition to developing and revising them, though about one-quarter of Member States had not sent in the information requested.

He then evoked the situation of the two technical bodies that had been vacant for at least two years:

- TC 8/SC 2 *Static mass measurement* was not an urgent necessity since Russia had assumed responsibility for its sole work project, i.e. the Annex to R 125: *Test report format for the evaluation of mass measuring systems for liquids in tanks*.
- Slovenia had recently volunteered to take on the Secretariat of TC 5 *Electronic instruments and software*.

There had also been a proposal from Australia to establish a new OIML Subcommittee *Instruments for quality analysis of agricultural products* within TC 17 together with a work project *Measuring instruments used for protein determination in grain*.

Mr. Skubic explained that by volunteering to take on responsibility for the Secretariat of TC 5, Slovenia

wished to contribute to the work of this Technical Committee and its two Subcommittees. He confirmed that his country's National Institute had the necessary resources and infrastructures to do this.

Mr. Szilvássy gave information concerning TCs and SCs:

- Annual reports received from 15 TCs and 45 SCs had been sent to CIML Members early in 2002;
- A summary of OIML technical activities in 2001 and forecasts for 2002 were published in the April 2002 OIML Bulletin;
- In 2002 there were 117 approved projects for 10 TCs and 43 SCs, of which 72 were ongoing;
- There were also 44 projects of which 26 had not yet been commenced;
- 8 TCs and 6 SCs had, for the time being, no approved projects;
- Since the 36th CIML Meeting only TC 12 and two SCs (TC 8/SC 5 and TC 9/SC 2) had held International Working Group meetings;
- The Secretariat of TC 13 *Measuring instruments for acoustics and vibration* was no longer vacant: Germany had again taken on responsibility for this Secretariat;
- As a result of the technical activity since the 36th CIML Meeting, 17 Committee Drafts had been produced and circulated by 2 TCs and 10 SCs and two drafts (revisions of D 18 and of the document on the *OIML Certificate System for Measuring Instruments*) approved by postal vote by the CIML;
- Two Draft Recommendations were presented for CIML approval under Item 8.3 and a further DR, the *Test Report Format* to the new Recommendation on *Total vehicle weighing* would be presented for CIML approval by postal ballot after this CIML Meeting.
- The final draft revision of OIML R 111 *Weights of classes E_1 , E_2 , F_1 , F_2 , M_1 , M_{1-2} , M_2 , M_{2-3} and M_3* had been delayed owing to a number of comments having been received from CIML Members and requested the Committee to endorse the proposed procedure to approve the draft by CIML postal ballot;
- Based on progress made during 2002–2003 at least four DRs (revisions of R 84, R 61 and R 52 and a new Recommendation on *Spectrophotometers* for medical laboratories) were likely to be presented for approval at the 38th CIML Meeting;
- In addition to the draft of R 49-3 (Test report format for water meters), two drafts of International Documents (D 6/D 8 plus D 9) appeared to be at a well-advanced stage and it was therefore very likely that they would be presented for CIML postal approval in 2003; and
- Other drafts were being developed which could reach the status of DR or DD (e.g. two drafts from

TC 8/SC 7 and the revision of R 51) by early 2003 if efforts were made by the Secretariats and P-members of the TCs and SCs concerned, especially in the case of priority projects.

In summary, there had in fact been a slight decrease in the overall activity of OIML technical bodies during the past year compared with previous years.

Concerning the 39 high priority and priority projects, Mr. Szilvássy remarked that:

- Six had already been approved;
- Four had reached DR status;
- 16 were at advanced CD status; and
- 13 were only at WD status or had yet to be started.

This situation needed to be improved and the TCs and SCs concerned had to start working on these projects.

It was proposed to the Committee to approve the projects on:

- *Procedure for the control of the main parameters and characteristics of thermovision instruments* as proposed by TC 11/SC 3, and
- *Automatic refractometers. Method and means for verification* as proposed by TC 17/SC 2.

The revision of R 126 *Evidential breath analyzers* (the review of which was due in 2003) was also put forward following a US proposal to amend it. The US offered assistance to the French Secretariat in its revision.

Concerning the situation of certain TCs/SCs Mr. Szilvássy said that apart from TC 8/SC 2 being vacant (as already mentioned by Mr. Issaev) volunteers would also soon be needed to assume responsibility for TC 10/SC 3 *Barometers* since the UK had indicated its intention to resign as Secretariat.

As for the Australian proposal to establish a new Subcommittee *Instruments for quality analysis of agricultural products* within TC 17 together with a work project *Measuring instruments used for protein determination in grain* it was recommended to the Committee to i) approve this proposal since it was supported by nine TC 17 P-members (out of 12) and ii) allocate the Secretariat of the new TC 17/SC 8 to Australia.

Concluding his report, Mr. Szilvássy said that the BIML had proceeded with the amendment of R 49-1 and R 49-2 as accepted by the CIML. The final Committee Draft of R 49-3 was expected soon and would be circulated to CIML Members for postal approval.

Mr. Kochsiek then gave brief information on the results of a joint meeting of the TC 8/SC 3 and SC 4 WGs which had taken place in Braunschweig in mid September. The main outcomes of the meeting were the recommendations to merge R 105 and R 86 into R 117 and to extend the scope of R 117 to ultrasonic and vortex meters.

Following a short introduction on the recent TC 12 Workshop and Committee Meeting, Mr. Kochsiek requested that CIML Members check their countries' participation in TC 12 since this was very important for the revision of R 46.

Mr. Valkeapää reminded Delegates that the work on the revision of R 46 had been started at a TC 12 meeting in Braunschweig in October 2000 when it had been realized that the work on the revision of R 46 needed to be speeded up. In order for members to become better informed it had been decided that SP Sweden would organize a workshop in conjunction with the TC 12 committee meeting. The Workshop on "Measurements of Electrical Energy" in Borås had been attended by some 60 participants from OIML Members, manufacturers, utility companies and other authorities. The outcome was that different standards and different technologies existed in the world, and there was a need for harmonization. The Committee meeting, which was attended by 35 participants from all over the world representing 20 Member States and liaison organizations, agreed on the scope of the revision of R 46, prioritized the tasks and split up the work into smaller sections in order to create a series of documents.

Mr. Lagauterie explained the urgent need to immediately start revising R 126, taking into account the US proposal for an amendment, the numerous comments and suggestions collected from members during 2002 and the needs of a number of Member States which had declared their intention to implement this Recommendation once it had been revised.

Mr. Al-Gossair asked about the difference between the work of ISO/IEC and the OIML when issuing standards for the same subject, e.g. for water meters.

Mr. Szilvássy answered that according to the *Directives for OIML technical work* it was the obligation of OIML technical bodies to establish and maintain liaisons with external organizations in coordination with the Bureau - such as ISO and the IEC - so as to ensure that the existing (or drafted) OIML Recommendations and the existing (or drafted) international standards were, as far as possible, compatible with each other. As examples of the compatibility ensured in this way he mentioned the first joint publication, OIML R 99/ISO 3930 and R 93 and R 122 (together with its Annex C) that had been developed on the basis of existing ISO standards. In the case of R 49 on water meters, this publication had been drawn up in parallel and in close cooperation with ISO TC 29.

In reply to an earlier question, Mr. Magaña stated that the revision of D 1 *Law on metrology* was a *high priority* project and had been requested by Development Council members too. The production of the 1 CD of the revision of D 1 had been undertaken by the US Secretariat and himself after the 36th CIML Meeting. Since two liaison organizations (the CIPM/BIPM and ILAC)

were very interested in participating in the development of the new revised document and it was recognized that this kind of document could not be developed without their contribution. A new Joint Working Group had been established during the last annual CIPM-ILAC-CIML meeting in February 2002 and the 1 CD circulated among TC 3 members then transmitted to the BIPM and ILAC for comments. He requested CIML Members to send their comments as soon as possible in order for the Secretariat and the Bureau to be able to prepare the 2 CD for circulation and discussion by the Joint Working Group at the next annual meeting of the three organizations to be held in February 2003 at the BIML. In addition he mentioned that the approach followed in the revision would be different to that of the present D 1, since it was a kind of model law on metrology which it was recommended to follow or copy into national legislation. The revised Document would contain a series of considerations proposed to those countries intending to create or revise their national legislation on metrology.

Mr. Kochsiek gave further information on the state of the project on *Light absorption spectrometers for medical laboratories* developed by TC 18/SC 5 which had reached the state of final committee draft. The final version would soon be sent to the BIML in order to circulate it as a DR with a view to its subsequent approval by the CIML at its 38th Meeting.

To conclude these two items the Committee approved the establishment of the new Subcommittee TC 17/SC 8 under Australia's responsibility, allocated the Secretariat of TC 5 to Slovenia and approved the three new work projects as proposed.

Under item 8.3 *Acceleration of technical work* Mr. Faber said that he and the Presidential Council were worried about the speed at which OIML technical work was advancing since this was, after all, the core activity of the Organization. It was not only about the slowness of developing new OIML documents but also about lagging behind in regular reviews and revisions of existing Recommendations and Documents.

The Presidency had looked into the distribution of TCs/SCs and the tasks allocated and had found that the US and the Russian Federation held half of the Secretariats. Four Member States were developing about 75 % of ongoing projects. Several means of assistance to technical bodies would be put forward: informal contacts and visits would be proposed in order to i) identify those problems within TCs and SCs that needed to be attended to, ii) help identify potential sources of assistance by various other Member States and iii) attempt to persuade them to take on certain responsibilities. Mr. Faber affirmed that he was well aware of the difficulties facing most metrology services: shortage of time, resources and staff, and agreed that each situation had to be studied case by case.

Mr. Magaña confirmed that there were currently about 150 OIML publications; this meant that on average 30 were due for review. If one assumed that revisions were due on average every fifteen years, this would mean around ten publications had to be revised per year. All this meant that the OIML had a real problem in revising publications. He further mentioned that the Bureau had held meetings with the CIML President and Vice-President to examine the present situation, the possibilities of offering assistance to TCS and SCs, and how to achieve a more balanced distribution of the technical bodies (and therefore the resulting tasks) among Member States with a view to encouraging a certain number of countries to assume responsibility for certain Secretariats or even accept more tasks.

He also mentioned that the revision of the *Directives for OIML Technical work. Part 1* was advancing well and these Directives were intended to facilitate technical activities.

Mr. Faber considered that this action to further the acceleration of technical work was accepted by the Committee since there were no objections or additional proposals.

The Committee proceeded to approve two draft Recommendations:

- Automatic instruments for weighing road vehicles in motion (R 134), Part A: Total vehicle weighing; and
- Platinum, copper and nickel resistance thermometers (for industrial use) (Revision of R 84) - to become applicable within the *Certificate System*.

Moving on to item 9 *OIML Certificate System for Measuring Instruments*, Mr. Kochsiek said that the System had made good progress over the last decade and the revised document *OIML Certificate System for Measuring Instruments* provided for its further development



and was being edited for publication. He mentioned that the number of registered OIML certificates would very likely exceed 1000 by the end of 2002, and three more Member States (Japan, Finland and the Republic of Korea) had recently established their respective Issuing Authorities. There were now 26 Issuing Authorities established in 23 Member States.

But he mentioned that OIML certificates had only been issued and registered for 13 categories of measuring instruments out of the 36 that were applicable within the System and these certificates had been issued only by 16 Issuing Authorities in 14 Member States out of a total of 26 established to date.

As far as the plans for future developments were concerned Mr. Kochsiek pointed out that among the numerous concrete actions that were to be carried out in the near future as defined in the *OIML Long-term Policy: 1999–2002 Action Plan*, the development and accomplishment of the MAA was a very important one which was to be discussed later under item 10.

Currently, 20 OIML technical bodies had 24 ongoing projects with the aim of developing, revising or completing Recommendations for use in the System, but unfortunately progress had only been made on 12 projects by 9 technical bodies during this period.

The *Certificate System* page of the OIML web site was regularly updated, and the file of the updated document on Issuing Authorities and Recommendations applicable within the System (and soon the file of the revised document on the System) could be downloaded from the site. It was further envisaged to place the PDF files of all registered certificates on the OIML web site, though for the moment this posed a technical file size problem.

Among the present characteristics of the System he mentioned the steady increase in the number of registered certificates over the last three years and in the number of Recommendations applicable within the System, which would doubtless reach 39 by the end of 2002.

The Committee decided that in addition to R 84 two Recommendations, R 134 on Automatic instruments for total weighing of road vehicles in motion and R 49 on Water meters for cold potable water would become applicable within the System as soon as their Test Report Formats were approved by CIML postal vote and published.

The question of the applicability within the System of the revised R 111 containing the Test Report Format annex would be decided by the CIML at the same time as its postal approval.

Concerning plans for future developments of the System, Mr. Szilvássy reminded Delegates that a number of concrete actions to be carried out in the near future had already been included in the *OIML Long-term Policy: 1999–2002 Action Plan*.

In addition he pointed out that the revised *OIML Certificate System for Measuring Instruments* document shifted the central role from the CIML Member to the Issuing Authority and extended the scope of the System in two directions: certification of modules and certification of families of types and modules of measuring instruments. It also included new provisions (e.g. the requirement to list specified manufacturers' documentation, including references to software programs) necessary for the identification of the type (to be) certified, and implicitly included requirements as to what had to be specified in the relevant Recommendations (e.g. definition of families, identification of modules and/or families together with their prescribed metrological requirements, test methods and test report formats, etc). Provisions for how to do this would be included in Part 2 of the Directives, currently being revised. The implementation of all these changes in the scope of the System would require concrete additional actions by the TCs and SCs concerned when developing new Recommendations or revising existing ones intended for application within the System.

The next action, already formulated in the Action Plan and relating to the individual certification of measuring instruments or modules, was due to be started soon. Since no concrete recent proposals on this matter were available (the proposals in the BIML's possession dated back to the mid 1990's) it was envisaged to draw up and circulate a questionnaire by the TC 3/SC 5 Co-Secretariats as to the scope, content, requirements and rules of individual certification under the System.

Mr. Szilvássy concluded that there were two directions to follow: one was the development of the System itself and the other was the development of the MAA,



and added that general actions by CIML Members and the BIML were necessary to further promote the System at national, international and regional levels, especially among Corresponding Members, and to keep international and regional liaison organizations informed of the advantages of the System.

Mr. Johansen said that it was very interesting to see how the System was developing, and especially to see the new developments in the direction of both individual certification and the MAA. He had some concerns about the bureaucracy and the economics behind all these developments and suggested that these questions had to be examined in the context of future developments. It was clear that the manufacturers and users benefited from the System and it was also evident that they had to pay for the necessary activities of the Bureau to deal with it, but looking at the MAA and the increasing future tasks of the Bureau it was absolutely necessary that the users pay more in the future.

Mr. Kochsiek explained his personal view that the bureaucracy with the Certificate System had actually been very low, and agreed with the opinion that the administrative workload of the future implementation of the MAA should be kept as low as possible.

Mr. Magaña added that until now the administrative workload of the Bureau in connection with the registration of OIML certificates was limited to registration, circulation among OIML Members and placing the reference on the web site; applicants' fees practically covered these costs. Since the MAA would give rise to many additional tasks within the BIML, including for example a more extensive follow up to registered certificates, the fee scale would definitely have to be revised.

Mr. Boudissa raised a question that he felt was of importance for developing countries in connection with the future MAA. There was a need for these countries to have an infrastructure and legislation in place in order for them to be able to issue certificates that would be recognized by others at the same time as they recognized the results of others. He wondered whether that level of capacity and competence existed and whether they could be recognized, because there was a risk of developing countries not being accepted which would negatively effect the development of these countries' metrology systems.

He requested that the Bureau consider this problem together with developing countries, with a view to ensuring that "mutual recognition" was really mutual and not just one-sided.

Mr. Magaña said that the subject raised by Mr. Boudissa led to a transition from this discussion item to that on the MAA and put forward two points of view: the first related to the fact that quite a few industrialized OIML Member States had not yet established Issuing Authorities due to a lack of laboratory infrastructure and/or competence to issue OIML certificates;

nevertheless numerous examples of unilateral voluntary recognition among them already existed. His second view was that the main goal of the MAA was to go beyond this and to facilitate acceptance and recognition among OIML Members.

Mrs. Bennett made an observation based on Australia's experience that there were considerable differences in the technical content of certificates issued by different Issuing Authorities and she deemed that in connection with the MAA there would be a need for further harmonization and some guidelines as to the required technical information that had to be considered.

Mr. Kochsiek concluded the discussion by saying that one of the directions of future developments of the Certificate System was the OIML MAA and some comments already put forward could be discussed under the next item.

Mr. Faber introduced item 10.1 on the Mutual Acceptance Arrangement, explaining that this was one of the most important items on the Agenda, and that he strongly believed that finalizing this document was essential for the future of the OIML.

This project had been instigated in 1998 by Mr. Chappell, with a meeting of TC 3/SC 5. Following the Moscow meeting, a 9th Committee Draft had been circulated among TC 3/SC 5 members for comments and vote. Among the 23 P-Members of this Subcommittee, 15 "yes" votes, 7 "no" votes and one abstention were received.

The MAA was regarded as being crucial for the OIML, though there was a need for clarification as to its scope since it was an arrangement that concerned test results and not certificates.

Four categories of comments had been received from the TC 3/SC 5 Members, probably due to a misunderstanding of what was being said in the document; and clarifications could be made to solve this problem:

- One category of comments had to do with the question of whether the arrangement should be decided among Issuing Authorities or among testing laboratories; in fact the opinions were shared between these two possibilities, probably due to the obligations of notified bodies and testing laboratories in the European Union (all the negative voters were European countries);
- The second issue related to the cost of the procedures for establishing confidence, and deciding whether accreditation or peer review (maybe less expensive) was required;
- The third related to the equivalence of the level of confidence resulting from accreditation and from peer review; some compromise could be achieved; and
- The fourth, raised by Germany, was whether or not to accept that "supplementary requirements" be taken

into account in the Declarations of Mutual Confidence.

Since this vote, one P-Member had changed their vote from abstention to "yes". According to the Technical Directives, this Committee Draft could now pass the Subcommittee level and become a Draft Document, to be submitted to the CIML.

A number of countries expressed the concern that if the MAA was adopted without the required consensus then it would affect the success of the Certificate System; a significant number of "no" votes gave cause for concern.

Mr. Faber added that the Draft Document would need a four-fifths majority CIML vote, as stated in the Convention. But the fact that the Draft had passed the TC 3/SC 5 level vote with a two-thirds majority did not guarantee that it would be approved at CIML level. The Secretariat would have to take this into account when preparing the Draft for CIML consultation and vote.

Mr. Johansen agreed that this project was of utmost importance; this was why he felt that the consensus should be larger. If the MAA was adopted without the required consensus then it would affect the success of the Certificate System.

Mr. Ehrlich appreciated these concerns, but considered that at this point it would be more useful to obtain the opinion and comments of all the CIML Members, and not only those of the TC 3/SC 5 Members.

Mr. Kochsiek pointed out that Germany had voted "no" in order to limit the MAA to those participants who had implemented OIML Recommendations in their countries. National requirements were only acceptable if they were equivalent to OIML Recommendations, and the MAA should support the objective of harmonization, which meant that additional testing should be avoided.

Mr. Ehrlich responded that the main concern was that it was not possible to require that every country simply adopted the OIML requirements in order to participate in the MAA, because this was unlikely to happen, due for example to technological evolutions. However, he did agree that this issue on supplementary requirements had to be reworded in order to avoid requirements substantially deviating from those of the OIML.

Mr. Tanaka agreed with Germany that the MAA should preserve the coherence of the national regulations of the participating countries with OIML Recommendations.

Mr. Lagauterie explained the reasons behind France's negative vote. The first reason was that countries that did not implement OIML Recommendations should not be accepted. On the other hand it may be acceptable to take into account national specificities (for example climatic conditions). The second reason was

the ambiguity of the scope of the MAA: it seemed to be applicable only to test results (covered by ISO 17025), but a number of items in this Draft made reference to certificate Issuing Authorities and to ISO Guide 65, which was dedicated to certification bodies.

Mr. Ehrlich answered that the MAA should allow some flexibility: the OIML test reports were made available by Issuing Authorities and may emanate from several test laboratories under the authority/supervision of the Issuing Authority.

Mr. Vaucher gave the reasons for Switzerland's negative vote. Firstly, the scope caused some misunderstandings. This MAA should be a step forward to promote the OIML Certificate System, but Switzerland would not be satisfied if the scope of mutual acceptance was too strictly limited. There was also a risk of growing bureaucracy by requesting accreditation or peer assessment for each category of instruments. He felt it was also necessary to define peer assessment more precisely, as other ways of building confidence were not described anymore. But the cost of establishing confidence had to remain affordable.

Mr. Faber noted the above interventions, and made two proposals. The first was to decide that as this MAA was meant to have far-reaching consequences for the OIML and on legal metrology activities in the various countries, it could not be considered as a plain informative Document and hence be adopted by a Committee decision with a four-fifths majority.

The second proposal was that the TC 3/SC 5 Secretariat, taking into account all the comments received, might develop a further version, including any necessary clarification, and organize a workshop with any interested CIML Members to discuss this improved version, in order to obtain the best possible consensus on the MAA. The version submitted to the CIML at its 38th Meeting would be developed on the basis of this workshop and of these bilateral discussions.

Mr. Chappell added that for this particular voluntary program, the opinion of all Members should be sought. If the program was successful, it would be hoped that Member States would realize its benefits.

In conclusion, Mr. Ehrlich and the BIML were asked by the President to make progress on the principles explained above, with a view to the possible adoption of the MAA in 2003.

Moving on to item 10.2 *Horizontal documents*, Mr. Magaña recalled that in Moscow it had been decided to develop a policy paper on horizontal documents. A first draft had been drawn up and discussed at the Presidential Council. This paper considered and tried to distinguish several kinds of documents. Some OIML publications, such as D 11, were not merely informative but also served as a basis for most of the OIML International Recommendations. This would also be the case of the documents on software. A number of comments were

expressed by Presidential Council Members on this first paper, which would be reconsidered by the Bureau with a view to its being presented to the Presidential Council at its meeting in February 2003, in the form of a better draft which could then be submitted to CIML Members with a view to its adoption at the next CIML Meeting. This paper would redefine the different kinds of OIML publications in order to clarify their use and their mode of adoption.

Mr. Birch then gave a detailed report on his Study *The Benefits of Legal Metrology for the Economy and Society* which had been requested by the Presidential Council. His work had consisted in reviewing studies carried out over the last years, with the aim of extracting the lessons learned from work already accomplished, and coming up with a number of social and economic criteria which could be used in determining resource allocation, to provide a rudimentary cost-benefits analysis for metrology.

He had started by contacting OIML Members and asking them to provide existing studies and reports on this subject and seeking any comments they had. Then he had gone through available literature and compiled a bibliography comprising some 138 items essentially dealing with general metrology rather than legal metrology.

He recalled some of the benefits of legal metrology: consumer protection, effective stock control, fraud control, reducing disputes in transaction costs, full national benefit for commodity exports, full collection of government taxes and excise, and support of global trade in measuring instruments.

Regulatory metrology had some quite distinct benefits: increased compliance with regulations and enhanced cost-benefits ratio. And the benefits of legal metrology to society were the reduction in the number of disputes, deaths and injuries, and an improved natural environment.

Further steps should be taken to quantify those benefits. Studies carried out by the NBS (USA) between 1965 and 1985 evaluated measurement-related activities to 3.5 % of the GNP of modern industrial societies. The Poulson study (1977) had concluded that a true cost-benefit analysis of the total measurement system was just not possible. In terms of added value, Don Vito's study (1985), which came up with the figure of 3.5 %, was criticized by some experts.

The studies carried out by Measurement Canada in the mid eighties were interesting from a legal metrology point of view: the value of goods traded using legally controlled instruments was first calculated, and then the effect of short- and over-measure in those instruments was established at the time of reverification. By taking the difference between these two values into account for all the instruments checked, it appeared that each inspector could prevent something like \$2 million of out-of-tolerance measurements from occurring. This

cost saving covered the cost of verification by a ratio of 11:1. 65 % of the out-of-tolerance measurements were short-measure, 35 % were over-measure and the total value of measurements made by these instruments was 40 % of Canada's GNP.

NIST had looked into sectoral studies such as measurement needs in a deregulated utility market.

Mr. Birch said that three recent studies should also be mentioned:

- The "KPMG" study on the Institute for National Measurement Standards in Canada: based on the evaluation of needs arising from the application of ISO 9000 certification and from laboratory accreditation activities, that methodology is probably not applicable to legal metrology.
- KPMG also conducted a study for the CIPM on the Mutual Recognition Arrangement, and the savings that could be expected. Members were asked about the costs of maintaining bilateral agreements with other countries compared to the probable costs of maintaining a multilateral agreement. The conclusion was an estimated average saving of \$2 million per country, though this evaluation was probably overestimated. Another approach had been to consider the total trade between the countries of the Metric Treaty, which was \$4 trillion. If the MRA was to have an impact on only 0.1 % of this trade, that would be a saving of \$4 billion per year.
- A series of studies was carried out for the European Measurement Project. These studies evaluated the impact of metrology through the number of patents dealing with metrology or measurements, though this criteria did not seem appropriate.



Mr. Birch expressed his need for feedback from OIML Members on this interim report, notably concerning which particular questions should be answered, which type of economic analysis they believed was necessary to explain the stakes of legal metrology to their Governments, and which areas particularly needed to be supported.

The progress report submitted to the BIML listed the bibliography and a summary of the papers, highlighting the key elements in those particular papers. This progress report can be downloaded from the OIML web site by Members.

Mr. Faber emphasized the importance of this work for each Member as well as for the OIML itself and mentioned that this report would be one of the basic documents on which the Organization would conduct its reflection for the future.

Summarizing the Seminar *Legal Metrology in 2020* Mr. Faber expressed the sentiment that this event had been both successful and very positive. A large number of different ideas had been put forward covering many aspects of legal metrology. The possibility should be considered of holding such a Seminar not necessarily every year, but once every three to five years, to see how the various themes evolved.

Mr. Ehrlich considered that it was very interesting to see that most of the presentations went in the same direction. The OIML could now draw on those to shape the future.

Mr. Vaucher supported the idea of repeating such a Seminar in due course, but focusing on specific issues and inviting some keynote speakers to introduce specific items.

The Seminar conclusions are published in this edition of the Bulletin.

Under item 11.1 *Presentation of the World Bank programs*, Mr. Magaña reported that unfortunately Mr. Wilson of the World Bank had been unable to attend. But he said that the BIML would maintain contacts with the World Bank and ensure that any information of interest to CIML Members would be circulated via the OIML Bulletin and/or web site.

It had been proposed to hold an awareness seminar at the World Bank, but it had now been decided to hold this in conjunction with other international organizations working in fields related to that of the OIML (such as the BIPM, ILAC, ISO, IEC). This would ensure that this action had a greater impact.

A report and discussions followed on the Development Council meeting and the setting up of a new "Task Group"; full reports are published in this issue.

Mr. Magaña introduced item 12 *Liaisons* with International and Regional Institutions by presenting the status of work on relations with the RLMOs. At the last Committee Meeting, the Bureau had been asked to come up with a policy paper on this subject and had drawn up a first draft which was examined by the Presidential Council. A number of comments and amendments had to be taken into account and a second draft would be presented to the Presidential Council at its meeting in February 2003, with a view to distributing it to CIML Members for adoption at the 38th CIML Meeting. The RLMOs would also be formally consulted on this policy paper.

Mr. Faber then informed the CIML of ongoing cooperation with the Metre Convention and ILAC. The annual meeting with these two organizations had been held on 27 February 2002 at the BIPM; Mr. Faber presented the report of this meeting (see full Minutes) and emphasized the fact that participating in joint working groups was essential, but that doing so must not result in unacceptable delays in the OIML's work programs.

Concerning relations with the WTO, Mr. Magaña reported that the Bureau had Observer Status in the TBT Committee, and was hence in frequent contact with this Organization. As Mrs. Liu explained in her presentation, the WTO intended to help the OIML in its actions towards developing countries, and in particular two Regional seminars on enhancing the participation of developing countries in the OIML's work could be organized in 2003.

Mr. Dunmill reported on ISO DEVCO, with which the Bureau had had a number of contacts. It appeared that the latter had a similar problem in that they were currently examining actions in favor of developing countries.

Mr. Singyangwe then presented regional activities in Botswana: there had been a workshop under the auspices of the German Technical Cooperation, attended by representatives from SADC SQAM structures and the workshop reviewed PTB support to these structures.



Representatives of SADCSTAN, SADC MET, SADCA and SADC MEL had requested new additional resource funding for the next four years, and the SADC Secretariat would meet with the German Ministry of Technical Cooperation to consider this request.

WELMEC

Mr. Freistetter, WELMEC Chairman, outlined the history of WELMEC and reported on recent activities. During the last year WELMEC WG8 (chaired by Gerard Lagauterie) had carried out much work related to the MID under preparation in order to develop technical requirements in line with OIML Recommendations. Guides were amended, especially for software in metrology, weighing instruments and prepackages. WELMEC was also considering strategic issues, organizational changes, future objectives and tasks. More information is available in the October 2002 OIML Bulletin and on the WELMEC web site (www.welmec.org).

He explained that the MID was very complex. The document officially available was a draft Directive, already two years old and which had since evolved. A decision should be taken in 2003, and after a transition period of two years the MID could come into force by 2005 or 2006. Ten different categories were mentioned in the MID: water meters, gas meters, electricity meters, heat meters, measuring systems for liquids other than water, automatic weighing instruments, taximeters, material measures, length measuring instruments and exhaust gas analyzers; other categories were not covered.

The scope of the MID was to harmonize the placing on the market and implementation of these instruments. After the latter, national laws were applicable. The MID was optional: each Member State could decide whether each category would be submitted to legal control or not. If it was decided to submit a category to legal control, this control (up to the putting into use), had to conform to the Directive. The requirements were divided into two types: essential requirements applicable to all categories of instruments covered by the Directive, and instrument-specific requirements for each category.

Conformity assessment procedures were also described in the Directive, and it was possible for manufacturers to show conformity in two different ways: either by reference to harmonized standards developed by European standardization bodies on a mandate of the European Commission, or by reference to OIML Recommendations whose appropriateness was decided on by a Measuring Instruments Committee set up in ap-

plication of the Directive. The OIML had no specific tasks in this project, but its Recommendations were recognized so long as they satisfied the requirements. The two main issues for the legal metrology systems which resulted from the MID were quality at the level of the manufacturers, and market surveillance in the Member States. This resulted in a shift from verification to surveillance.

Mr. Vinet asked for clarification concerning the decision about the way of deciding acceptability of CEN/CENELEC standards versus OIML Recommendations. Mr. Freistetter explained that it was foreseen that the Measuring Instruments Committee, installed by the Directive and composed of EU Member State experts, would have to evaluate both kinds of documents to ascertain their conformity to the essential requirements of the Directive.

Mr. Issaev asked for clarification as to what was meant by "the change from verification to surveillance". Mr. Freistetter explained that the new approach Directives were fundamentally based on the declaration of conformity by the manufacturer and on the manufacturer's responsibility. The systematic verification of instruments by legal authorities gave way to an *a posteriori* control exerted by the surveillance of manufacturers' obligations, surveillance of the notified bodies and "market surveillance" of the products.

Answering a question from Mr. Pakay, Mr. Freistetter gave the example of water meters. He explained that this category of instruments was subject to legal control in some European countries but not all. And the decision to submit water meters to legal control in a country depended on the priorities that were adopted in that country. Therefore the MID did not intend to force all countries to submit water meters to legal control, and this decision remained a national one. But when a country did decide to submit them, the requirements must be those of the MID.

Mr. Tanaka asked if the MID might not result in differing interpretations of the technical requirements among EU countries. Mr. Freistetter answered that this had precisely been one of the essential tasks of WELMEC, i.e. to solve interpretation differences and to come to a better common understanding of the essential requirements and procedures.

Mrs. Bennett asked if the Measuring Instruments Committee would be looking at OIML test reports from notified bodies within the EU or within WELMEC, or whether it would be considering test reports from third countries. Mr. Freistetter replied that the Committee would not look at test reports, but only at OIML Recommendations, in order to decide which Recommendations contained requirements that may be considered as giving a presumption of conformity to a part of or all of the requirements that the MID assigned to a category of instruments.

APLMF

Mr. Ooiwa, APLMF President, reported on the APLMF's activities. He commented that the APLMF had 26 Members including 19 full Members and 7 corresponding Members.

Eight meetings of APLMF working groups had been organized in November 2001 in Auckland, New Zealand, with a total of 76 delegates and observers from 19 APLMF economies. The Secretariat had been taken over by Japan, together with the new Presidency.

The APLMF was in particular developing an important project on rice moisture meters which would lead to a proposal to revise the OIML Recommendation on water content in grain so as to introduce an article covering rice moisture meters.

Activities on training had included a train-the-trainer course on NAWIs in Hanoi, Vietnam in April 2002, with 22 participants from four APLMF economies. This was funded by the Australian Government.

Another APLMF project was a symposium on traceability in legal metrology to be held in October 2003 in Kyoto. Further information: www.aplmf.org.

SADC MEL

Mr. Carstens reported on SADC MEL activities from October 2001 to October 2002. SADC MEL was currently chaired by Mr. Sinyangwe (Zambia) and South Africa handled the Secretariat. The following technical committees were established:

- TC1 Sale of goods, chaired by South Africa,
- TC2 Instruments, chaired by Zambia,
- TC3 Rules of procedures, chaired by Zambia, and
- TC4 Training, chaired by Botswana.

The following meetings were held, together with TCs meetings:

- Pretoria, South Africa, November 2001, and
- Mahé, Seychelles, April 2002.

He explained that SADC MEL was participating in the development of a technical regulation framework for the Region, within the SQAM structure.

EMLMF

Mr. Lagauterie informed the CIML of developments within the EMLMF. A meeting had been held on Saturday 28 September at which the EMLMF's status had changed from being a project to an official RMLO, the

MoU having been signed by ten countries. During this meeting he had been elected as chairman for one year.

The first outcome of the EMLMF's work concerned training proposals. Proposals had been received from the PTB and from four other bodies: DAM (Germany), METAS (Switzerland), LNE (France) and AFNOR (France). Financing had to be found for them, though this matter would probably be facilitated by the establishment of the formal MoU.

Moving on to item 13, Mr. Faber gave information concerning the election of the CIML President which would take place in Kyoto in November 2003 and reminded Participants that this was a key event in the life of the Organization.

Mr. Faber had been re-elected in London in 2000 for a second term of office, but had wished to limit his term to three years. Hence, in 2003 a new election would take place.

Initially, the deadline for the submission of candidacies had been set at the end of August 2002. Currently, only one candidate had made known his intention to be considered: Mr. Charles Ehrlich (USA).

Mr. Faber went on to say that it was essential that the future CIML President be a well-known, experienced figure who had already been a CIML Member for some time. And the new President should be prepared to carry out his duties for a full six-year term. He felt confident that Mr. Ehrlich met all these criteria.

On the other hand, he felt it was more appropriate that there be more than one candidate for President, and therefore proposed that the deadline be extended to 31 January 2003. The 4/5 or 80 % majority of votes rule would apply for this election as specifically stipulated in the Convention (even if there was only one candidate).

Mr. Faber went on to explain that the two Vice-Presidents Mr. Kochsiek and Mr. Issaev were both close to retirement and did therefore not intend to stand for Presidency. As far as Mr. Faber himself was concerned, the reason why he had stipulated that he was only prepared to continue as CIML President for three years was that he felt that a number of projects were ongoing in the OIML and he wanted to see them through; he now felt that this had been accomplished and confirmed that the time was right to move on and that the CIML should proceed with the selection of a new President.

The Committee proceeded to take decisions concerning the venues for its future meetings, and first decided to accept Japan's invitation to hold the 38th Meeting at the KICH (Kyoto International Conference Hall) from 4–8 November 2003; Mr. Tanaka gave an illustrated presentation on initial plans that had already been made by the Ministry of Economy, Trade and Industry (METI) and the National Metrology Institute of Japan

(NMIJ) to host this meeting and also a meeting of the APLMF (2–4 November), and formally confirmed his country's invitation. 2003 would be the centenary anniversary of the NMIJ.

Mr. Faber explained that two options were open for the 12th Conference and 39th CIML Meeting in 2004: Israel and Germany. He informed the Committee that Israel maintained their option open, but without specifying a year in view of the current events which might lead to the required quorum not being met. He was grateful to the Israeli Delegation for their understanding and again thanked them for maintaining their invitation open. He concluded that the remaining possibility was therefore Germany; Mr. Kochsiek noted that Germany required a definite commitment in order to obtain the necessary budget and begin making preparations. He had consulted with the Israeli Delegation, which had assured him that no sentiment of "competition" existed and that Germany should feel free to host the 2004 event.

The Committee unanimously accepted the German invitation and thanked Mr. Kochsiek for the invitation.

Mr. Faber reminded Participants that 2005 was the fiftieth anniversary of the OIML, and proposed to hold the 40th meeting in Paris. This would therefore be retained as the first option for 2005 and discussions would be instigated with the French Government.

Under item 15 *Other matters* The Committee decided to make awards to three distinguished experts who had greatly contributed to the work of the OIML: Dr. Dieter Buer (Germany), Dr. Detlev Mencke (Germany) and Dr. Ambler Thompson (USA).

Mr. Ehrlich announced a forum on metric-only labeling of prepackages which would take place in the US on 7 November 2002; a report will be published in the April edition of the Bulletin.

Thirdly, Mr. Kochsiek requested that the Bureau include the actions to be taken resulting from the decisions taken at the present meeting in the updated Action Plan; Mr. Faber replied that this would be done.

The Decisions and Resolutions were approved by the Committee, and in closing the meeting Mr. Faber commented that a lot was happening in the OIML currently. He was especially pleased to note the increasing use of the Internet and the BIML's modernizing of its working methods and was confident that this policy would ensure that the Organization kept up with the times. He was also encouraged to see that concrete ideas were being put forward to accelerate the OIML technical work which was, after all, the core activity.

He also anticipated that the 2003 CIML Meeting would have a very full agenda in view of the number of documents that were to be produced following the Saint-Jean Meeting: for example there would be the draft of the paper on horizontal documents, a final policy paper on OIML cooperation with Regional Organiza-

tions, the final version of the BIML Staff Regulations, and the final version of the document on OIML liaisons and cooperation with International Organizations.

The thought process concerning the analysis of OIML strategy must continue, and Mr. Faber was pleased to note that analytical thinking on policy matters was becoming more regular and more thorough. And last but not least, he was encouraged by the discussions on the MAA which was a very important item for the future: he hoped that a final draft could be reached by the next CIML Meeting in Kyoto. He complimented the USA Delegation on the sheer volume of work that they had already done on this document and was confident that with the help of other Delegations, this could be accomplished.

Mr. Faber reiterated that a large quantity of work was currently ongoing - especially for the Bureau - and went on to express his thanks to the BIML, who had organized and hosted the whole series of meetings in Saint-Jean, including the 2020 Seminar. He expressed his thanks to the BIML Director whose first CIML Meeting this had been as Director, and to all the BIML Staff Members who had gone out of their way to make the event a success.

He also thanked Mr. Bruno Dard from the French *Sous-Direction de la Métrologie* for the administrative support he had given the Bureau, and for the Interpreters who had done their usual excellent job.

He wound up the Meeting by thanking all the Observers, Corresponding Members and CIML Members for their participation and contributions, and looked forward to the next CIML Meeting in Kyoto at the beginning of November 2003. ■



Thirty-Seventh Meeting of the International Committee of Legal Metrology

Item 7.3: BIML Activities (October 2001 – September 2002)

Below is a report on BIML activities since the last CIML Meeting; this report was distributed in Saint-Jean-de-Luz

Subject	Activities
Follow-up of the 36th CIML Meeting	- Editing and distribution of the Decisions and Resolutions and also the Minutes of the 36th CIML Meeting - Implementation of the Decisions and Resolutions (see detailed information below under the various headings)
Preparations for the 37th CIML Meeting	- Preparations by the BIML staff - Information to invited countries and regional organizations (RLMOs); editing and distribution of administrative, financial and technical papers to be examined and/or discussed (see more detailed information below); design and printing of the information brochure
Presidential Council	- Organization of a meeting in Paris (February 2002); preparation of reports on the various aspects of OIML activities of interest to the Council; publication of the Council meeting report in the OIML Bulletin - Development of a short-term action plan for the Council - Preparations for a meeting in Saint-Jean-de-Luz in September – October 2002 - Multiple contacts with the CIML President and Vice-Presidents and other Council members
Development Council	- Editing and distribution of the minutes of the Moscow Meeting - Working meetings with the Chairperson of the Development Council; contacts with the secretariats of the Development Council working groups - Development of the Development Council (and working group) work programs - Preparations for the Saint-Jean-de-Luz meeting - Establishment of, and preparation for the first meeting of the Development Council Task Group - Liaisons with ISO/DEVCO/CASCO, UNIDO, WTO, etc. - Contacts with national bodies offering assistance to developing countries (PTB-Germany, SDM-France, NSC-Australia, NWML-UK, etc.)
OIML Policy	- Assessment of activities for 2001 (with distribution to OIML Members and publication in the OIML Bulletin and on the web site) - Updating and distribution of the 1999–2002 Action Plan with preliminary extension to 2003–2004 following the decision of the 36th CIML Meeting
Technical committees and subcommittees	- Annual reports: distribution to CIML Members and publication of a synthesis in the OIML Bulletin; reports to the Presidential Council and the CIML - Implementation of OIML Recommendations: finalization and distribution of this document - Examination of the situation of, and contact with, numerous TCs/SCs - Participation in the work of certain TCs/SCs (see also participation in meetings below) - Active participation in the work of TC 3 (ICD revision of D 1) and in that of TC 3/SC 5 (MAA and OIML Certificate System) for which the BIML is co-secretariat - Liaison between certain TCs/SCs and international and regional bodies - Postal inquiries concerning a number of drafts; distribution of two draft Recommendations for approval by the CIML at its 37th Meeting - Updating of papers (state of progress, list of high priority and priority projects, etc.) related to TCs/SCs; list of contact persons, permanent updating of information posted on the OIML web site - Distribution of the first draft revision of the <i>Directives for OIML technical work: Part 1</i>

Participation in OIML technical meetings

- TC 9/SC 2 (Teddington, November 2001)

Certification

- Registration of OIML certificates; information on OIML Members; list of certificates published in the OIML Bulletin and on the web site
- Development and distribution for postal approval of the draft revision of the document on the OIML Certificate System (TC 3/SC 5)
- Reports for the Presidential Council and the CIML
- Follow-up of conformity assessment, quality management, certification and accreditation and other activities within IAF, ILAC, ISO/IEC, WTO, UN/ECE, EA, etc.

Technical publications

- Editing, posting on the web site, printing and distributing of R 75-1 and 2; R 16-1 (English and French versions); preparing for printing of R 16-2, R 133 and D 18
- PDF files of all Rs and Ds, including compiling a CD

OIML Bulletin

- Production of four issues
- Preparation of reports and information for publication
- Over 3 years of past editions now online on the OIML web site
- Broad scope of original contributions

Communication and web site*Web site:*

- Site updated at least weekly; more often if required
- New dedicated high-speed external web host server giving faster access times, more storage space and higher security

Local network:

- Recruitment of an IT specialist to handle programming and hardware configuration
- Total internal networking of the BIML with "always-on" ADSL internet access via a router
- SSL encryption of outgoing e-mails and FTP communications
- Partial renewal of the BIML computing equipment
- Windows 2000 Pro or XP upgrade on all workstations

Communication:

- MailMan bulk e-mailer program used for regular Member updates
- Re-structuring of the internal BIML database which is now online, resulting in the elimination of duplicate data entry and reduction in errors
- Regular updating of the Blue Brochure Annexes

Participation in meetings organized by OIML Members; Liaisons with other institutions (including participation in meetings)

- APLMF Committee Meeting (November 2001, Auckland)
- EA General Assembly (November 2001, Budapest)
- ISO CASCO 17th plenary meeting (November 2001, Geneva)
- SIM Annual Meeting + World Bank (December 2001, Miami and New York)
- Metrology and testing systems – catalysts for economic development (Burkina Faso, December 2001)
- Seminar on the WTO/TBT Agreement and standards matters for Caribbean countries (St. Lucia, February 2002)
- Introduction to metrology (Abidjan, June 2002)
- Joint BIPM/ILAC/OIML meeting (BIPM, February 2002)
- JCGM WG 2 (BIPM, November 2001 and May 2002)
- SADCMEC Committee Meeting (Seychelles, April 2002)
- WELMEC Committee Meeting (Vienna, June 2002)
- WTO TBT Committee Meetings (Geneva, October 2001 and March 2002)
- UN/ECE Working Party Meeting (Geneva, October 2001)
- Metrologia 2002 (Rio, April 2002)
- Symposium on Metrology (Havana, May 2002)

Note: Miscellaneous information and visits from/to OIML Members are no longer mentioned so as to keep this report as short as possible

OIML Certificate System:

Certificates registered 2002.08–2002.10

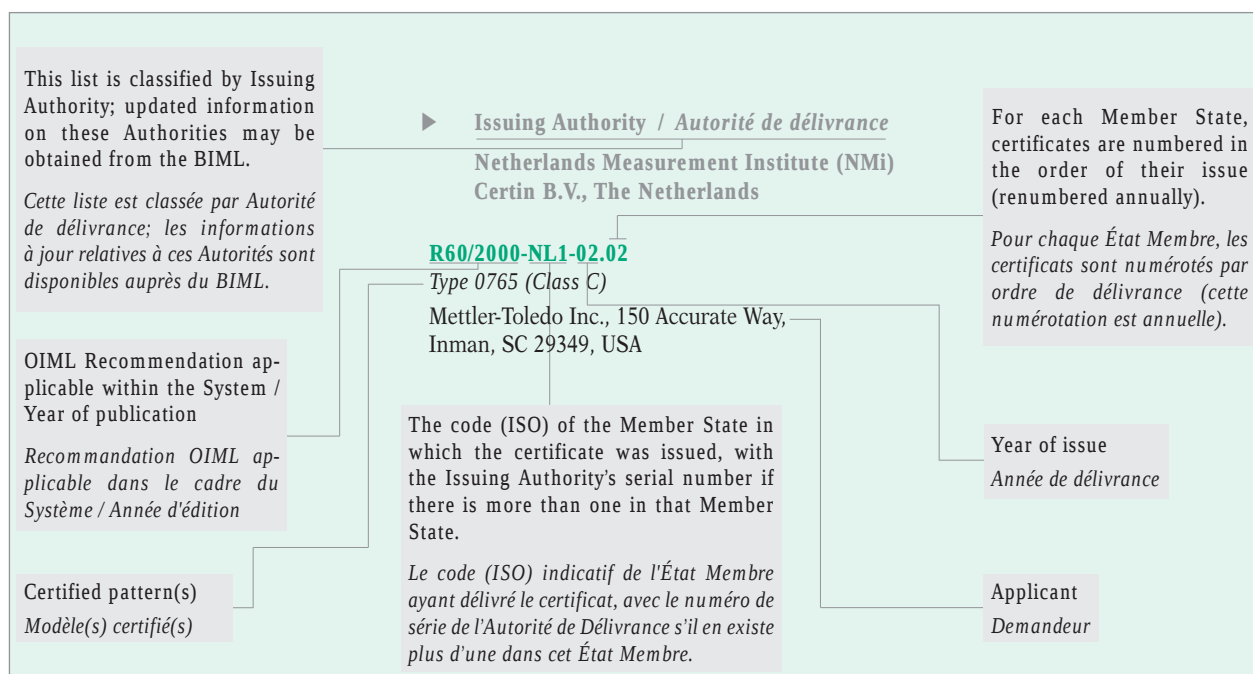
For up to date information: www.oiml.org

The OIML Certificate System for Measuring Instruments was introduced in 1991 to facilitate administrative procedures and lower costs associated with the international trade of measuring instruments subject to legal requirements.

The System provides the possibility for a manufacturer to obtain an OIML certificate and a test report indicating that a given instrument pattern complies with the requirements of relevant OIML International Recommendations.

Certificates are delivered by OIML Member States that have established one or several Issuing Authorities responsible for processing applications by manufacturers wishing to have their instrument patterns certified.

OIML certificates are accepted by national metrology services on a voluntary basis, and as the climate for mutual confidence and recognition of test results develops between OIML Members, the OIML Certificate System serves to simplify the pattern approval process for manufacturers and metrology authorities by eliminating costly duplication of application and test procedures. ■



Système de Certificats OIML:

Certificats enregistrés 2002.08–2002.10

Pour des informations à jour: www.oiml.org

Le Système de Certificats OIML pour les Instruments de Mesure a été introduit en 1991 afin de faciliter les procédures administratives et d'abaisser les coûts liés au commerce international des instruments de mesure soumis aux exigences légales.

Le Système permet à un constructeur d'obtenir un certificat OIML et un rapport d'essai indiquant qu'un modèle d'instrument satisfait aux exigences des Recommandations OIML applicables.

Les certificats sont délivrés par les États Membres de l'OIML, qui ont établi une ou plusieurs autorités de délivrance responsables du traitement des

demandes présentées par des constructeurs souhaitant voir certifier leurs modèles d'instruments.

Les services nationaux de métrologie légale peuvent accepter les certificats sur une base volontaire; avec le développement entre Membres OIML d'un climat de confiance mutuelle et de reconnaissance des résultats d'essais, le Système simplifie les processus d'approbation de modèle pour les constructeurs et les autorités métrologiques par l'élimination des répétitions coûteuses dans les procédures de demande et d'essai. ■

INSTRUMENT CATEGORY CATÉGORIE D'INSTRUMENT

Automatic catchweighing instruments *Instruments de pesage trieurs-étiqueteurs à fonctionnement automatique*

R 51 (1996)

- Issuing Authority / *Autorité de délivrance*
Physikalisch-Technische Bundesanstalt (PTB),
Germany

R51/1996-DE-02.01

Type SW-100 (Class X(1))

ROVEMA Verpackungsmaschinen GmbH,
Industriestraße 1, D-35463 Fernwald, Germany

R51/1996-DE-02.04

Type GLM-I (Classes Y(a) and X(1))

Bizerba GmbH & Co. KG, Wilhelm-Kraut-Straße 65,
D-72336 Balingen, Germany

R51/1996-DE-02.05

CWM (Class X(1))

Bizerba GmbH & Co. KG, Wilhelm-Kraut-Straße 65,
D-72336 Balingen, Germany

R51/1996-DE-02.07

Type MC 2000 (Classes Y(a) and Y(b))

Stetter GmbH, Dr.-Karl-Lenz-Straße,
D-87700 Memmingen, Germany

- Issuing Authority / *Autorité de délivrance*
National Weights and Measures Laboratory (NWML),
United Kingdom

R51/1996-GB1-02.02

Types AS1500, AS5000 and AS Draglink
(Accuracy class X(0.5))

Loma Systems Ltd, Southwood, Farnborough,
Hampshire GU14 0NY, United Kingdom

INSTRUMENT CATEGORY CATÉGORIE D'INSTRUMENT

Metrological regulation for load cells *Réglementation métrologique des cellules de pesée*

R 60 (1991), Annex A (1993)

- Issuing Authority / *Autorité de délivrance*
Netherlands Measurement Institute (NMI) Certin
B.V., The Netherlands

R60/1991-NL1-99.02 Rev. 1

Type MT-1022 (Class C)

Mettler-Toledo (Changzhou) Scale & System Ltd.,
111 Changxi Road, Changzhou, Jiangsu 213001, China

INSTRUMENT CATEGORY CATÉGORIE D'INSTRUMENT

Metrological regulation for load cells (applicable to analog and/or digital load cells) *Réglementation métrologique des cellules de pesée (applicable aux cellules de pesée à affichage analogique et/ou numérique)*

R 60 (2000)

- Issuing Authority / *Autorité de délivrance*
Physikalisch-Technische Bundesanstalt (PTB),
Germany

R60/2000-DE-01.04

Type BCL (Classes D1, C3 and C3 MR)

CAS Corporation, CAS Factory # 19 Kanap-ri,
Kwangjeok-myon, Yangju-kun Kyungki-do, Rep. of Korea

R60/2000-DE-02.03

Model 1250 (Classes C1 to C3,5)

Tedea Huntleigh International Ltd.,
60 Medinat Hayehudim, Herzliya 46120, Israël

R60/2000-DE-02.04

Type MP57... (Classes C3, C3 MR and C3 MR+)

GLOBAL Weighing Technologies GmbH, Meiendorfer
Str. 205, D-22145 Hamburg, Germany

R60/2000-DE-02.05

Type MP52 ... (Classes C3 and C3 MR)

GLOBAL Weighing Technologies GmbH, Meiendorfer
Str. 205, D-22145 Hamburg, Germany

- Issuing Authority / *Autorité de délivrance*
Netherlands Measurement Institute (NMI) Certin B.V., The Netherlands

R60/2000-NL1-02.09 Rev. 1

Type BK2 (Class C)

Flintec GmbH, Bahnhofstraße 52-54,
D-74909 Meckesheim, Germany

R60/2000-NL1-02.22

Type VC2600 (Class C)

Thames-Side Maywood Ltd., 17 Stadium Way, Tilehust,
Reading, Berkshire RG30 6BX, United Kingdom

R60/2000-NL1-02.23

Type 220 - 230 (Class C)

Tedea Huntleigh Europe Ltd., 37 Portmanmoor Road,
Cardiff CF2 2HB, United Kingdom

R60/2000-NL1-02.24 Rev. 1

Type 1263 (Class C)

Tedea Huntleigh International Ltd., 5a Hatzoran St.,
New Industrial Zone Netanya 42506, Israël

R60/2000-NL1-02.25

Type 1265 (Class C)

Tedea Huntleigh International Ltd., 5a Hatzoran St.,
New Industrial Zone Netanya 42506, Israël

R60/2000-NL1-02.26

Type HVC (Class C)

Celtron Technologies Inc., 15F, No. 86, Sec. 1 Hsin Tai
Wu Road, Hsi Tzu, Taipei Hsien, R.O.C, Taiwan

R60/2000-NL1-02.27

Type BC5 (Class C)

Raute Precision Oy, Mestarinkatu 10,
15800 Lahti, Finland

R60/2000-NL1-02.28

Type HOC (Class C)

Celtron Technologies Inc., 15F, No. 86, Sec. 1 Hsin Tai
Wu Road, Hsi Tzu, Taipei Hsien, R.O.C, Taiwan

R60/2000-NL1-02.29

Type SSP1022 (Class C)

Mettler-Toledo (Changzhou) Scale & System Ltd.,
111 Changxi Road, Changzhou, Jiangsu 213001, China

R60/2000-NL1-02.30

Type LOC (Class C)

Celtron Technologies Inc., 15F, No. 86, Sec. 1 Hsin Tai
Wu Road, Hsi Tzu, Taipei Hsien, R.O.C, Taiwan

R60/2000-NL1-02.32

Type MP59/xxx or MP59T/xxx (Classes C3 and C3MR)

GLOBAL Weighing Technologies GmbH, Meindorfer
Str. 205, D-22145 Hamburg, Germany

R60/2000-NL1-02.33

Type 1033 (Class C)

Tedea Huntleigh International Ltd., 5a Hatzoran St.,
New Industrial Zone Netanya 42506, Israël

INSTRUMENT CATEGORY

CATÉGORIE D'INSTRUMENT

Automatic gravimetric filling instruments

Doseuses pondérales à fonctionnement automatique

R 61 (1996)

- Issuing Authority / *Autorité de délivrance*

Netherlands Measurement Institute (NMI) Certin B.V.,
The Netherlands

R61/1996-NL1-02.02

Type Auger Filling Instrument (Class Ref (1))

G. Webb Automation Ltd., Link Industrial Estate,
Howsell Road, Malvern Link, Worcestershire WR14 1TF,
United Kingdom

INSTRUMENT CATEGORY

CATÉGORIE D'INSTRUMENT

Nonautomatic weighing instruments

*Instruments de pesage à fonctionnement
non automatique*

R 76-1 (1992), R 76-2 (1993)

- Issuing Authority / *Autorité de délivrance*

Physikalisch-Technische Bundesanstalt (PTB),
Germany

R76/1992-DE-00.08 Rev. 1

Type GLP-W. . . (Class III)

Bizerba GmbH & Co. KG, Wilhelm-Kraut-Straße 65,
D-72336 Balingen, Germany

R76/1992-DE-02.05

Types seca 963, 959 and 958 (Classes III and IIII)

Seca Meß- und Wiegetechnik or Vogel & Halke GmbH
& Co., Hammer Steindamm 9-25,
D-22089 Hamburg, Germany

► Issuing Authority / Autorité de délivrance

Korean Agency for Technology and Standards,
MOCIE, Republic of Korea

R76/1992-KR-02.01

Type BL (Class III)

CAS Corporation, CAS Factory # 19 Kanap-ri,
Kwangjeok-myon, Yangju-kun Kyungki-do, Rep. of Korea

R76/1992-KR-02.02

Type NC-1 (Class III)

CAS Corporation, CAS Factory # 19 Kanap-ri,
Kwangjeok-myon, Yangju-kun Kyungki-do, Rep. of Korea

R76/1992-KR-02.03

Type DL (Class III)

CAS Corporation, CAS Factory # 19 Kanap-ri,
Kwangjeok-myon, Yangju-kun Kyungki-do, Rep. of Korea

► Issuing Authority / Autorité de délivrance

Netherlands Measurement Institute (NMI) Certin B.V.,
The Netherlands

R76/1992-NL1-01.42 Rev. 1

Type ASTRA (Class III)

Ishida Co., Ltd., 44, Sanno-cho, Shogoin, Sakyo-ku,
Kyoto-city 606-8392, Japan

R76/1992-NL1-01.52 Rev. 1

ASTRA-XT (Class III)

Ishida Co., Ltd., 44, Sanno-cho, Shogoin, Sakyo-ku,
Kyoto-city 606-8392, Japan

R76/1992-NL1-02.23

IPC series (Class III)

Ishida Co., Ltd., 44, Sanno-cho, Shogoin, Sakyo-ku,
Kyoto-city 606-8392, Japan

R76/1992-NL1-02.24

Types TBF-410MA, TBF-300MA, BC-418MA (Class III)

Tanita Corporation (Brand names: Tanita, Rhewa,
Wunder), 14-2, 1-Chome, Maeno-cho, Itabashi-ku,
Tokyo 147-8630, Japan

R76/1992-NL1-02.25

K-series (Class III)

DIBAL S.A., c/ Astintze Kalea, 24, Poligono Industrial
Neinver, E-48016 Derio (Bilbao-Vizcaya), Spain

R76/1992-NL1-02.26

2100 series, EP20-100 series (Class III)

Ranger Instruments, 41 Success Street, Acacia Ridge,
QLD 4110, Australia

R76/1992-NL1-02.27

Type CW-11 (Class III)

Ohaus Corporation, 19A Chapin Road, Pine Brook,
New Jersey 07058, USA

R76/1992-NL1-02.28 Rev. 1

Type RM-40.. (Class III)

Shanghai Teraoka Electronic Co., Ltd., Tinglin Industry
Developmental Zone, Jinshan District, Shanghai 201505,
China

R76/1992-NL1-02.29

Type AEP (Class II)

ADAM Equipment Co. Ltd., Bond Avenue, Denbigh East
Industrial Estate, Milton Keynes MK1 1SW,
United Kingdom

R76/1992-NL1-02.30

Type WPX (Class II)

Radwag Zaklad Mechaniki, 26-600 Radom,
ul. Grudniowa 37/39, Poland

R76/1992-NL1-02.31

TROOPER count scale (Class III)

Ohaus Corporation, 19A Chapin Road, Pine Brook,
New Jersey 07058, USA

R76/1992-NL1-02.32

Type 8434(RN00) (Class III)

Mettler-Toledo (Changzhou) Scale & System Ltd.,
111 Changxi Road, Changzhou, Jiangsu 213001, China

R76/1992-NL1-02.33

Type CW-11 / CD-11 (Class III)

Ohaus Corporation, 19A Chapin Road, Pine Brook,
New Jersey 07058, USA

R76/1992-NL1-02.34

Type AF (Class I)

Shinko Denshi Co., Ltd, 3-9-11 Yushima, Bunkyo-ku,
Tokyo 113-0034, Japan

► Issuing Authority / Autorité de délivrance

Russian Research Institute for Metrological Service
(VNIIMS) of Gosstandart of Russian Federation,
Russian Federation

R76/1992-RU-02.04

Scale BHY-2/15 (Class III)

OOO "MERA", 6, Energeticheskii proezd,
Moscow 111116, Russian Federation

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Automatic rail-weighbridges

Ponts-bascules ferroviaires à fonctionnement automatique

R 106 (1997)

- Issuing Authority / *Autorité de délivrance*
Physikalisch-Technische Bundesanstalt (PTB),
Germany

R106/1997-DE-02.02

Multirail for accuracy classes 0.5; 1 and 2
Schenk Process GmbH, Landwehrstraße 55,
D-64293 Darmstadt, Germany

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Fuel dispensers for motor vehicles

Distributeurs de carburant pour véhicules à moteur

R 117 (1995) [+ R 118 (1995)]

- Issuing Authority / *Autorité de délivrance*
Netherlands Measurement Institute (NMI) Certin B.V.,
The Netherlands

R117/1995-NL1-02.01 Rev. 1

model SK700 for accuracy class 0.5
Gilbarco GmbH & Co. KG, Ferdinand-Henze-Straße 9,
D-33154 Salzkotten, Germany

**Updated information
on OIML certificates:**

www.oiml.org

OIML TC MEETING

OIML TC 12: Instruments for measuring electrical quantities – Revision of OIML R 46

SP, Borås, Sweden,
2002.09.19–20

HANS BACHMAIR, PTB (TC 12 Secretariat)

OIML TC 12 *Instruments for measuring electrical quantities* held its first meeting on 19 September 2002 at the First Hotel Grand in Borås, Sweden, hosted by the Swedish National Testing and Research Institute. Thirty-two delegates from twenty OIML Member States were present.

The main topics were:

- Presentation and discussion of the results of an OIML questionnaire concerning the revision of OIML R 46;
- Main metrological requirements on electricity meters; and
- Meeting of the Working Group on the revision of R 46 (TC 12 WG).

The secretary of TC 12 welcomed the participants and warmly thanked the Swedish National Testing and Research Institute for hosting the meeting. He then gave a short summary of TC 12 activities since the last meeting of the TC 12 WG on 26 October 2000 at the PTB in Braunschweig, Germany.

At the end of March 2001, SP had agreed to chair the TC 12 WG and to come up with a questionnaire concerning the revision of R 46. Together with this questionnaire, delegates were also requested to express their opinion on a workshop on “Measurements of Electrical Energy in a Deregulated Market”. This workshop took place on 17/18 September 2002 in Borås, Sweden (just prior to the TC 12 meeting on 19 September and the TC 12 WG meeting on 20 September).

Presentation and discussion of the results of an OIML questionnaire concerning the revision of OIML R 46

The questionnaire was sent out to 42 countries. SP received 17 responses, of which 14 were from European countries. The answers differed considerably and a short summary is given below.

Most of the countries refer to IEC standards for type testing and verifying electricity meters, a smaller number to OIML or national standards. However, all countries (except four) have national regulations concerning the measurement of electrical power and energy.

The majority of the countries do see the need for a revision of R 46, which should be adapted to already existing IEC standards. In the beginning, work should concentrate on active energy meters of both inductive and electronic types. A revision of uncertainty requirements and environmental tests is also considered necessary.

In addition, aspects related to functionality (software), initial verification, re-verification, reliability and dependability of meters should be addressed.

Main metrological requirements for electricity meters and discussion on a position paper of OIML TC 12 concerning future work on standardization

The discussions on the main metrological requirements for electricity meters and the scope of the revised R 46 took up the main part of the meeting. The following topics were discussed in detail and considered necessary for inclusion in the revised Recommendation for electricity meters:

- Level of consumers to be addressed;
- Type of meters to be included;
- Definitions (Terminology);
- Reference and operating conditions for voltage, frequency etc.;
- Influence quantities;
- Definition of error;
- Communication;
- Durability;
- Type approval;
- Initial verification and subsequent verification; and
- Other technical requirements.

This list formed the basis for a meeting of the TC 12 WG which took place the day after the TC 12 meeting.

A position paper of OIML TC 12 proposed by Mr. Magaña concerning future work on standardization was not discussed during the meeting.

Meeting of the Working Group on the revision of R 46 (TC 12 WG)

Delegates confirmed Sweden's chairmanship of the TC 12 WG. Anders Bergman, Head of the Electric Power

Section of SP, was appointed chairman of the Working Group which consists of 21 members from 17 OIML Member States. This group met on Friday, 20 September 2002 to discuss the scope for the revision of R 46 in more detail and to assign the tasks among the members of the Working Group.

Sweden has set up a restricted access website where documents can be both uploaded and downloaded, and where the workshop documentation will be available. The deadline for the first version of the results from the work packages was set at 30 November 2002, and SP will publish a first working draft before 15 January 2003.

The next meeting of the Working Group is scheduled for 27–28 March 2003 in Maastricht, The Netherlands. ■

COOMET

12th COOMET Committee Meeting

Habana (Cuba)
25–26 May, 2002

The 12th COOMET Committee meeting was held on 25–26 May, 2002 in Habana (Republic of Cuba) and was attended by representatives from Belarus, Cuba, Germany, Romania, Russia, Slovakia and Ukraine. Participants also welcomed Mr. J.F. Magaña from the BIML and thanked him for his valuable contribution to the meeting.

Main discussion topics

- Associate membership of DPR of Korea in COOMET;
- Election of new COOMET Vice-presidents;
- COOMET activity in the period between Committee meetings and its tasks on further increasing the effectiveness of cooperation - report by the COOMET President;
- Progress with COOMET Working Program for 2001–2002;
- Adoption of a new organizational structure and the appointment of heads of structural units;
- Changes and additions to the COOMET Memorandum of Understanding (MoU) and Rules of Procedure;
- Results of the first meeting of the COOMET Quality Forum and tasks for further cooperation in establishing QMS of NMIs; and
- International activity of COOMET member countries and participation in the Mutual Recognition Arrangement of national measurement standards.

Report of the COOMET President

On behalf of COOMET President Dr. N. Zhagora, Vice-president Dr. V. Belotserkovsky reported on the general situation concerning COOMET activities in the period between Committee meetings. The following important points were noted:

- COOMET activities over the reported period were strictly dedicated to producing the COOMET Working Program;
- COOMET noticeably increased activity in reviewing CMC tables prepared by the member countries and other regional metrology organizations;
- COOMET continued to encourage member countries' cooperation with various regional and international organizations e.g. OIML, EUROMET, WELMEC, APMP, etc.;
- COOMET continued to find ways to disseminate information about its organizational structure and activities on the international level thorough mass media and via its global network. Work was continuing to constantly improve the COOMET web site;
- COOMET member countries have been paying much attention to the problem of training experts in the field of metrology.

Main resolutions

- To grant associate COOMET membership to the Central Institute of Metrology, DPR of Korea;
- To adopt the new organizational structure of COOMET and accept the appointment of heads of technical committees (the organizational layout can be found at www.coomet.org);
- To accept changes in the COOMET MoU and Rules of Procedure according to the new organizational structure (see www.coomet.org);
- To give priority to the preparation of CMCs and review the process, as well as to seek participation in regional and international key comparisons.
- To encourage the establishment of quality management systems of NMIs. This should be achieved by sharing experience and providing consultations through workshops or visits.

It was decided to hold the 13th COOMET Committee meeting in April, 2003 in the Ukraine. ■



SUMMARY REPORT

Public Forum: NIST proposal to update the Fair Packaging and Labeling Act (FPLA) to permit metric-only labeling

7 November, 2002 (USA)

1 Summary

On November 7, 2002, NIST's Weights and Measures Division and the National Conference on Weights and Measures (NCWM), (an organization the NIST participates in to develop model legal metrology regulations for adoption by states and local weights and measures officials) sponsored a public forum on metric labeling. The purpose of the forum was to initiate support for a Congressional Amendment of the Fair Packaging and Labeling Act (FPLA) to permit manufacturers the option of using metric-only labeling on all packages. (Currently FPLA requires manufacturers to mark packages with both metric and inch-pound units, called "dual-units declaration".)

The forum included several presentations that explained how changes in the global labeling environment, and retail marketplace, have substantially increased consumer familiarity and acceptance of metric units in connection with retail packages. Several speakers highlighted the successful use of metric units on consumer packages to provide net quantity, nutrition and health related information, and its use with prescription and over the counter medicines, vitamins and mineral supplements, and other consumer products.

The forum provided an extensive public comment period and succeeded in identifying potential problems that may arise if metric-only labeling were permitted (see below for details). The forum presentations and public comments provided the opportunity to counter some opposition to the proposal by explaining why the metric-only labeling option is needed and how it can be implemented so that it has a positive impact in the marketplace.

A collaborative partnership among the government, industry and other interested forum attendees was established at the forum's conclusion to work for Congressional

action to permit metric-only labeling through the amendment to the FPLA. This effort will be coordinated through a working group on labeling which will be sponsored by NIST and the NCWM. Participation is open to any interested party. The group will develop support for the amendment and responses to any objections that arise. The group will ultimately assist stakeholders in implementing metric-only labeling in a manner that will be both cost effective for industry and will ensure that consumers can easily make value comparisons.

Comments and key lessons of the forum

- The Federal government must work with the states, industry, and others to promote greater consumer understanding and use of metric units, to encourage consumers to use value comparison tools (e.g. unit pricing) which can assist them in making the transition to metric-only labels and in getting the best value in their purchases.
- The NCWM reported that more than 75 percent of the states have amended their labeling requirements to permit the use of metric-only units on packages of consumer products subject only to state jurisdiction. With an update to the FPLA numerous Federal and state laws and regulations (e.g. regulations promulgated by the United States Department of Agriculture, Federal Trade Commission, the Food and Drug Administration and other agencies) may need to be revised to ensure consumers have access to consistent information on package labels.
- After January 1, 2010, the member states of the European Union will not permit inch-pound units to appear alongside metric units on consumer packages. Representatives of several consumer product companies reported that if FPLA were not amended their firms would be burdened with increases in their production, warehousing and other costs in order to maintain two different sets of packaging materials (i.e. metric-only for the EU and all other countries and "dual units" for the U.S. market) for the same product.
- Industry representatives (e.g. Proctor and Gamble, a multinational paper company, Crayola and other members of the Art and Creative Materials Industry) expressed strong support for changing FPLA to allow them the option to label the net contents in metric-only units. The intent of the amendment is to let the marketplace determine when consumer packages should be changed to have metric-only units.
- Proctor and Gamble's representative stated that in order to avoid negative customer reactions, the company must consider the concerns of both retailers and consumers

when undertaking any packaging change and they would take the same level of care when a change to metric-only units is contemplated. The company also said that industry has no incentive to conduct consumer studies at this time, as they do not have the option of labeling net contents in metric-only units.

- Companies must, and will, do consumer research before introducing metric-only labels into the marketplace. Several industry representatives stated that they do not expect an immediate change in their U.S. marketing practices even if FPLA is changed. Several manufacturers commented that if FPLA were changed they would most likely introduce metric-only labeling during new product introductions or when current products undergo a significant change in packaging or formulation.
- The supporters of the FPLA amendment must make a concerted effort to change the perception that many people have, equating conversion to the metric system with a mandatory change in package sizes (called “hard conversion”). This mindset is a major stumbling block to broader voluntary adoption of the metric system. A majority of the objections to the metric-only labeling option expressed at the forum were directly related to fears of having to change package sizes. As mentioned above, the states, through the NCWM, have taken the lead in metric-only labeling by eliminating package size restrictions for most products. Most states now permit the use of metric-only labeling on a number of products along with complete flexibility in package sizes.
- Objections to the use of metric-only labels came from representatives of the retail food and dairy industry. The majority of the objections appear to be about problems that may occur if package size changes were imposed (i.e. conversion to “hard” or “rational” metric sizes) but this would not be required by the proposed amendment. Other concerns related to the cost of replacing shelf labels (e.g. those labels that provide consumers with

product identity, quantity, unit price and total price information), and to the possibility of consumer complaints over inch-pound units not appearing on packages and the concern that consumers may not be able to use metric-only units to make value comparisons.

2 Participation

More than sixty people including representatives of state and federal agencies, foreign governments, trade associations, manufacturers, retailers and other interested parties attended the forum held at the U.S. Department of Commerce in Washington, D.C.

The following groups were represented:

International

Canada, and the European Union / Delegation of the European Commission.

Federal Agencies

Food and Drug Administration, Federal Trade Commission, the U.S. Department of Transportation, and the U.S. Department of Commerce.

Trade Associations

American Meat Institute, The Arts and Creative Materials Institute, The Food Marketing Institute, Grocery Manufacturers of America, International Dairy Foods Association, National Food Processors Association and the Small Business Legislative Council.

Others

The National Conference on Weights and Measures and the United States Metric Association. Representatives of the States of Maryland and Michigan also attended. ■

SADC MEL News

As part of the SADC MEL initiative to harmonise technical regulations and assist with capacity building in the region, a training course on the verification of non-automatic self-indicating weighing instruments was presented to participants from 12 member countries from 19 to 23 August 2002. The course was held at the South African Bureau of Standards in Pretoria.

Not all member countries have adopted OIML R 76-1 and the course objective was to give an overview of requirements with the emphasis on those pertaining to verification. Practical demonstrations on the verification of analogue and digital weighing instruments, including a 60 t road vehicle scale, were carried out.

The course was funded by the PTB of Germany who also provided a consultant to assist with a needs analysis of equipment requirements. The aim of this exercise was to provide basic equipment for least developed countries to start a verification activity and, where possible, to assist others to upgrade infrastructure to be able to test according to OIML R 76-1 requirements.

Participants generally agreed that their knowledge of OIML R 76-1 had greatly improved but that more practical experience was required on their return home in order to reach full competence to verify instruments. ■

Our knowledge and experience is your advantage...



LEGAL METROLOGY TRAINING COURSE

23rd June - 9th July 2003 - Teddington, UK

NWML is an international centre of excellence in legal metrology. It is responsible for maintaining confidence in measurement in the UK by ensuring accurate fair and legal measures. Our course is designed for officers of national metrology services who wish to benefit from the UK's expertise in the theory and practical application of Legal Metrology. The course is led by Mr Chris Rosenberg, NWML's Director of Metrology & Quality who has over 30 years' experience in this field.

The course covers:

- Basic theory of measurement & measurement uncertainties
- In-depth study of mass, length & volume
- Type examination, verification testing & packaged goods
- Latest European developments in product conformity, control and market surveillance
- International developments & OIML
- Laboratory accreditation
- Calibration of standards
- Study visits to enforcement authorities & manufacturers of measuring instruments

COURSE FEE: £3,000 for delegates

UK Government subsidy available for some participants

www.nwml.gov.uk

For further information or to reserve a place contact Catherine Hill
Tel: +44(0)20 8943 7274
Fax: +44(0)20 8943 7270

SETTING THE STANDARDS IN LEGAL METROLOGY



SOUTH YORKSHIRE INTERNATIONAL WEIGHING CONFERENCE 2003

17–18 June 2003

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Papers on:

- Laboratory accreditation
- Redefinition of the kilogram
- All you need to know about magnetic properties of weights
- Latest developments in weights and weighing
- Balance specifications and their use

PROGRAMME:

Tuesday 17 June 2003

- 10.30 – 12.00 **The redefinition of the kilogram – what, when, why and how**
Stuart Davidson - National Physical Laboratory
Techniques for the use of automated weight handlers in mass dissemination
Lee Shih Mean and Lim Gin Yen, National Measurement Center (Singapore)
Matthew House, Measurement Technology Laboratories (USA)
- 13.00 – 14.20 **Metrology assurance in a regional jurisdiction**
Emil Hazarian – Los Angeles County Department of Agricultural Commissioner/Weights and Measures (USA)
Laboratory Accreditation
David A Dikken – Measurement Technology Laboratories (USA)
- 14.35 – 15.45 **NPL Weighing and Density Club – Open Session**
- 16.15 Visit to the Calibration Laboratories of SYTSU
- 18.00 – 22.00 Reception; Dinner; Speakers' Reception

Wednesday 18 June 2003

- 09.30 – 11.15 **The new OIML R 111 specification – implication on the magnetic properties of mass standards**
Dr. Michael Gläser – PTB (Germany)
Sartorius susceptometer for precise measurement of susceptibility and magnetization of weights
Dr.-Ing Thomas Fröhlich – Sartorius AG (Germany)
Thomas Fehling – Sartorius AG (Germany)
Dr. Detlef Heydenbluth – Technische Universität Ilmenau (Germany)

- 09.30 – 11.15 **What the mass community need to know about magnetic properties and their traceable measurement**
Dr Michael Hall - National Physical Laboratory
The measurement of solids' mass flow rate
Professor John R Pugh – Glasgow Caledonian University
Intelligent load cells and the field bus
Steve Maclean – Thames Side-Maywood Ltd
A strain-load methodology for fast verification of medium capacity non-automatic weighing instruments
Giuseppe Ardimento – Camera di Commercio Industria Artigianato e Agricoltura (Italy)
- 11.30 – 12.45 **Balance specifications and their use in weighing guidelines**
Frank Hardcastle – Mettler-Toledo Limited
Modelling of weighing procedures for uncertainty evaluation
Dr.-Ing K-D Sommer – Landesamt für Mess- und Eichwesen Thüringen (Germany)
Professor Dr Manfred Kochsiek – PTB (Germany)
- 11.30 – 12.45 **Comparison of mass measurement uncertainty estimates using different methods**
John P Clark – Westinghouse Savannah River Company (USA)
Information management on calibration items: a way of reducing costs
Carlos M Moreira da Silva - DRN-Ministério da Economia (Portugal)
- 14.00 – 15.20 **Density determination using the Mettler-Toledo M_One comparator**
Arthur Reichmuth - Mettler-Toledo GmbH (Switzerland)
What is a good calibration of a measuring instrument?
Dr.-Ing Christian U Volkmann (Germany)
- 15.45 – 16.30 **Getting the most out of certificates of calibration**
Peter Kelley – United Kingdom Accreditation Service
- 16.30 – 17.00 Open Forum - followed by a Conference Dinner at 19:30 for 20:00

The OIML is pleased to welcome the following new

■ CIML Members

■ **Bulgaria**
Mrs. A. Todorova

■ **Kenya**
Mr. I.M. Ngatia

■ **South Africa**
Mr. S.H. Carstens

■ Corresponding Members

■ **Libya**

■ **Nicaragua**

■ OIML Meetings

27–28 March 2003 - Maastricht, The Netherlands

TC 12 (WG) - Instruments for measuring electrical quantities
Revision R46

June 2003 - Date and venue to be confirmed

TC 3 - Metrological control
Revision D 1 + Workshops on the MAA

6–9 October 2003 - Paris, France

TC 8/SC 3 Dynamic volume measurement
(liquids other than water) +
TC 8/SC 4 Dynamic mass measurement
(liquids other than water)

4–8 November 2003 - Kyoto, Japan

Development Council Meeting
38th CIML Meeting

■ Committee Drafts

Received by the BIML, 2002.08.01 – 2002.10.31

Revision D 6 + D 8 Measurement standards. Choice, recognition, use, conservation and documentation	E	3 CD	TC 4	Slovakia
Combined revision of: R 101 Indicating and recording pressure gauges, vacuum gauges and pressure-vacuum gauges with elastic sensing elements (ordinary instruments) and	E	1 CD	TC 10/SC 2	Russian Federation
R 109 Pressure gauges and vacuum gauges with elastic sensing elements (standard instruments)				

Happy New Year
to all our Readers