ASIA–PACIFIC LEGAL METROLOGY FORUM

Report of the Seventh Meeting
& Working Groups Meetings

Taipei, Chinese Taipei
2 – 4 October 2000
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td>1</td>
</tr>
<tr>
<td>Agenda</td>
<td>2</td>
</tr>
<tr>
<td>Report of the Seventh Forum meeting</td>
<td>7</td>
</tr>
<tr>
<td>Work Program for 2000/2001</td>
<td>24</td>
</tr>
<tr>
<td><strong>List of Appendices</strong></td>
<td></td>
</tr>
<tr>
<td>1. Appendix 1 – Address by Mr Neng-Jong Lin, Director General of the Bureau of Standards, Metrology and Inspection, BSMI and Chairman of the Forum meeting.</td>
<td>28</td>
</tr>
<tr>
<td>2. Appendix 2 – Address by Mr John Birch AM President APLMF</td>
<td>29</td>
</tr>
<tr>
<td>3. Appendix 3 – Opening address by Mr Ruey-Jong Chen, Vice Minister of Economic Affairs, Chinese Taipei</td>
<td>30</td>
</tr>
<tr>
<td>4. Appendix 4 – List of delegates &amp; observers to Forum meeting</td>
<td>32</td>
</tr>
<tr>
<td>5. Appendix 5 – Report by Mr John Birch AM, President APLMF</td>
<td>35</td>
</tr>
<tr>
<td>10. Appendix 10 – Report of Working Group on Medical Measurements</td>
<td>41</td>
</tr>
<tr>
<td>14. Appendix 14 – Agenda for Working Groups meeting</td>
<td>45</td>
</tr>
<tr>
<td>List of delegates &amp; observers to the Working Groups meetings</td>
<td>47</td>
</tr>
</tbody>
</table>
ASIA–PACIFIC LEGAL METROLOGY FORUM

PROGRAM

SEVENTH ASIA–PACIFIC LEGAL METROLOGY FORUM MEETING

2 – 4 OCTOBER 2000
The Grand Hotel Taipei
Chinese Taipei

REGISTRATION OF DELEGATES
1 October 2000 (Sunday)  
14:00 – 17:00
2 October 2000 (Monday)  
08:00 – 08:50

2 OCTOBER 2000
WORKING GROUPS MEETINGS

Mutual Recognition Arrangements
Training
Utility Meters
Goods Packed by Measure
Medical Measurements
Rice Moisture Measurements
Taximeters
Intercomparison Calibration and Testing

3 – 4 OCTOBER 2000
SEVENTH APLMF MEETING

3 October 2000
Welcome Reception
hosted by
Mr John Birch AM, President APLMF
The Grand Hotel Taipei

4 October 2000
Farewell Reception
hosted by
Mr Neng-Jong Lin, Director General, BSMI
The Grand Hotel Taipei
AGENDA

SEVENTH ASIA–PACIFIC LEGAL METROLOGY FORUM MEETING
3 – 4 October 2000

The Grand Hotel
Taipei, Chinese Taipei

REGISTRATION OF DELEGATES
1 October 2000 (Sunday) 14:00 – 17:00
2 October 2000 (Monday) 08:00 – 08:50

OPENING CEREMONY
3 October 2000 (Tuesday)

PROGRAM

0800  Registration of delegates and participants
0900  Arrival of Vice-Minister Mr Chen and officials
       Introduction of Vice-Minister Mr Chen by Director General
       BSMI/Chairman of Forum meeting to President APLMF/Executive
       Committee/Heads of delegation of each economy
0930  Welcome Address by Mr. Neng-Jong Lin,
       Director General, BSMI and Chairman of Forum meeting
0940  Address by Mr John Birch  AM, President APLMF
0950  Address by Vice Minister and official opening of APLMF meeting
1010  Photographs
1015  Morning coffee/tea
1030  Guests depart and Forum meeting commences.

Chairman:  Mr. Neng-Jong Lin, Director General,
            Bureau of Standards, Metrology and Inspection (BSMI)

1. Welcome Address by Mr Neng-Jong Lin, Chairman of the Forum meeting.
2. Opening Remarks by Mr John Birch  AM, President, APLMF.
3. Roll call of members – attendance/apologies of members at Forum meeting.
4. Confirmation of Report of the Sixth Forum meeting held in Nusa Dua, Bali, Indonesia, on 7 – 9 September 1999.

5. Report of the APLMF by the President, Mr John Birch AM, including report by the APLMF Executive Committee.

6. Discussion on implementation of the Memorandum of Understanding for members of the Asia–Pacific Legal Metrology Forum and proposal for introduction of a category of fees for “least developing economies”.

7. Report of the Working Groups meetings held on 2 October 2000:
   7.1 Mutual Recognition Arrangements
   7.2 Training
   7.3 Utility Meters
   7.4 Goods Packed by Measure
   7.5 Medical Measurements
   7.6 Rice Moisture Measurements
   7.7 Taximeters
   7.8 Non-automatic weighing instruments

8. Report on progress of the Forum Work Plan:

   Work Program for 1999/2000

   • Establish a Working Group on Medical Measurements with a project on Sphygmomanometers (blood pressure meters).

   • Monitor the need for translating measurement legislation into English for those economies where their legislation is currently not in English.

   • Consider ways to involve consumers in Forum activities.

   • Finalise and publish the resource document on modernisation of legislative and administration systems.

   • Finalise the reports of the intercomparisons on non-automatic weighing instruments and load cells.

   • Commence the intercomparison on mass standards and master meters.

   • APLMF support the need for harmonisation of international standards in relation to Goods Packed by Measure, including:
     (a) standard sizes;
     (b) permitted deficiencies due to dehydration; and
     (c) drained weights.

   • APLMF to provide input into the development of harmonised international standards on Goods Packed by Measure, which is necessary to ensure the Asia-Pacific’s Region views and requirements are fully considered by those developing such international standards.
• The survey on prepacked goods requirements in other regions be continued.

• APLMF continue to discuss with OIML the need for priority to be given to extending the OIML recommendation on nett contents to include metrological control of packing facilities involving quality systems, accreditation of test facilities, statistical sampling of output and certification by the legal metrology authority.

• APLMF continue to discuss with OIML the consideration of developing an international system of marking of labelled measurement to facilitate international trade in prepacked goods (an extension of the European E mark system).

• The secretariat survey member economies to provide the contact details of the organisation/s within the member economy who have responsibility for administration of their economies legal provisions in relation to Goods Packed by Measure.

• Consideration be given to establishing a small “ad hoc” group within the Working Group on Goods packed by Measure, to develop proposals or requirements for goods packed by measure, for discussion and decision by APLMF.

• Following the adoption of the recommendation on water meters by the CIML, the secretariat to survey the application of this recommendation by member economies.

• Support OIML Technical Committees on:
  (a) Electricity meters; and
  (b) Statistical sampling.

• The train the trainer modules for the pattern approval and for the verification and inservice inspection of non-automatic weighing instruments be promoted and run as requested.

• Train the trainer modules for the pattern approval and verification of petroleum and LPG dispensers be developed and training courses run before the end of 2000.

• A Regional Directory of Training and a regional network of trainers be developed.

• Discussions be held with BIML on the development of an international legal metrology training network and international accreditation of legal metrology training courses.

• Consideration be given to developing training courses in:
  (a) Standards laboratory officers training;
  (b) Goods packed by measure;
  (c) High capacity weighing and high capacity flow measurement as extension of the introductory courses;
  (d) Compressed natural gas dispenser pattern approval and verification;
  (e) Vehicle speed measuring devices and evidential analysis devices;
  (f) Automotive emission measurements and other environmental measurements;
  (g) Measurement uncertainty in legal metrology; and
  (h) Application of accreditation and quality certification in legal metrology.
• Consider the Rice Moisture project by investigating the:
  (a) Variation in the measurement results using different instruments with the same sample. This is probably due to the lack of a program of pattern approval of the prototype. Then conduct regular verification and in service inspection of instruments used in the field to maintain acceptable level of consistency;
  (b) Poor quality of the instruments being used and their inability to stay in calibration for a reasonable period of time. This is related to the lack of pattern approval;
  (c) Variation in the samples used. This could be due to the way in which the samples are taken from the bulk grain, how it is stored and handled after being taken;
  (d) Quality and consistency of the standard reference materials used in calibrating the moisture meters, and lack of traceability back to a national standard;
  (e) Metrological control system, which is necessary to control fraud and ensure the integrity and transparency of the measurements.

• Accept the offer of PTB to pattern evaluate a number of rice moisture measuring instruments.

• Support the work of TC3/SC5 Conformity Assessment in developing a Mutual Acceptance Agreement on test reports.

• Survey action being taken by member economies to ensure compliance of production instruments with type.

• Establish a Working Group on application of weighing in bulk commodity shipping measurements in place of draft surveys.

• Establish a Working Group on Legislation and Administration to promote regional harmonisation of legislation and administration and prepare an analysis of coordination structures in legal metrology.

• Develop a project on economic analysis of legal metrology with the aim of setting priorities based on economic and social impacts.

• Circulate information to member economies on Measurement Canada’s Market Place Intervention Model and New Zealand’s economic analysis of trade measurement.

9. Discussion on topic nominated by host economy – Legal metrology and laboratory accreditation by Mr Nigel Jou, representative of APLAC

10. Country Report presentation by member economies: “Update on current developments in the legal metrology system”.

11. Development of programs in other areas of legal metrology.

12. Discussion on APEC Standards and Conformance issues and report of meeting between Specialist Regional Bodies (SRBs) (APLAC, APLMF, APMP, PAC, PASC) and APEC Standards and Conformance Sub-Committee.
13. Discussion on OIML issues.

14. Discussion on liaison with other regional legal metrology organisations.

15. Discussion on bilateral and multilateral assistance for development of legal metrology in the region.


18. Address by the out-going President.

19. Address by the President-elect.


21. Concluding remarks by the Chairman of the Forum meeting.

22. Any other matters.

23. Conclusion of seventh Forum meeting.
ASIA–PACIFIC
LEGAL METROLOGY FORUM

REPORT OF THE SEVENTH FORUM MEETING

Official Opening of the Forum

The Forum was chaired by Mr Neng-Jong Lin, the Director General of the Bureau of Standards, Metrology and Inspection, BSMI and opened by Mr Ruey-Jong Chen, Vice Minister, Ministry of Economic Affairs.

1. Welcome Address by Mr Neng-Jong Lin, Director General of the Bureau of Standards, Metrology and Inspection, BSMI

1.1 Mr Lin welcomed delegates to the seventh Forum meeting in Taipei on behalf of the Bureau of Standards, Metrology and Inspection and thanked the Vice Minister for presiding at the opening ceremony.

1.2 He spoke on the need for harmonization of weights and measures and the contribution of the APLMF to international development in its programs and activities. He hoped that the meeting in the next few days will further promote co-operation in the region and wished delegates a successful meeting.

1.3 The full text of the address is attached in Appendix 1.

2. Address by Mr John Birch AM, President, APLMF.

2.1 In his address, Mr Birch thanked the Vice Minister for attending and officially opening the seventh meeting of the Asia-Pacific Legal Metrology Forum and to have the opportunity for the Forum to meet in Taipei.

2.2 He emphasized the role of legal metrology and the relationship between the government and metrology in the area of measurement for trade in commodities and the importance of trust and confidence in the measurement, which minimizes disputation and reduces transaction costs.

2.3 He highlighted the role of the Asia-Pacific Legal Metrology Forum in facilitating trade and in developing trust and confidence amongst members through Forum activities and programs.

2.4 The full text of the address is attached in Appendix 2.
3. Opening address by Mr Ruey-Jong Chen, Vice Minister, Ministry of Economic Affairs

3.1 Mr Chen extended a warm welcome to delegates to Chinese Taipei. He emphasized the need to unify the system of measurements and the promotion of co-operation between economies. Mr Chen highlighted the achievements of the APLMF which has provided a forum for measurement authorities in the Asia-Pacific area to exchange their experiences in the area of legal measurements, worked to achieve mutual understanding among its regional members and built a solid foundation for future regional cooperation in legal measurement and importantly on the adoption of the Memorandum of Understanding (MoU) by the Forum membership.

3.2 He called on the APLMF to play a more forceful role in regional integration and on horizontal cooperation between different regions, leading to the establishment of a unified system of measurement standards and relevant legal rules.

3.3 The full text of the address is attached in Appendix 3.

4. Roll call of members – attendance/apologies of members at Forum meeting.

4.1 A total of fifty delegates and observers from thirteen economies attended the Forum meeting including international and regional organizations. Mr Magana, the nominated BIML Director represented BIML and WELMEC, Mr Faber, President of CIML represented CIML, Dr Seiler the Director of Technical Cooperation, the PTB and Mr Nigel Jou from CNLA represented APLAC.

4.2 The Forum noted that apologies were received from the following:

4.2.1 Member economies:
- Chile – Raul Nunez, Head of Metrology Division, INN-Chile
- Hong Kong China – KW Ma, Deputy Head of Trading Standards Investigation Bureau
- Mongolia – M Bayarmagnai, Chairman MNCSM
- Philippines – Jocelyn Blanco, DOST
- Russia – Dr V. Krutikov, Vice President, Gosstandart Russia

4.2.2 Regional/International organisations
- BIML Director – M B Athane
- WELMEC Chairman – Dr Seton Bennett
- World Trade Organisation – Ms Vivien Liu, Counsellor, Trade & Environment Division, Geneva

4.2.3 Specialist Regional Bodies and other organisations
- APLAC Chair – Dr W L Richards (represented by Nigel Jou of CNLA, Chinese Taipei)
- PASC Chairman – Mr M Tanaka
- Asian Development Bank – Mr John Lockhart

4.3 The list of delegates and observers is attached in Appendix 4.
4.4 New members of the Forum – Mr Birch informed members that the DPR Korea has joined the Forum and signed the MoU and that Cambodia had expressed interest in joining the Forum.

5. Confirmation of Report of the Sixth Forum meeting held in Nusa Dua, Bali, Indonesia, on 7 – 9 September 1999.

5.1 The secretary reported that the draft report had been circulated to members and no amendments had been received. The delegates confirmed and adopted the Report of the Sixth Forum meeting.

6. Report of the APLMF by the President, Mr John Birch AM, including report by the APLMF Executive Committee.

6.1 Mr Birch reported on the progress of APLMF programs and activities in relation to objectives of the Forum of developing mutual confidence between legal metrology authorities in the region, providing a forum for exchange of information identifying and promoting the removal of technical and administrative barriers to trade, and coordinating regional training courses in legal metrology.

6.2 The Forum membership has expanded from fifteen authorities in thirteen economies to twenty-seven authorities in twenty-five economies culminating in the adoption of a MoU and the introduction of a membership fee. However, despite the significant progress, there was a need for legal metrology to ensure that trust and confidence in physical measurements is maintained.

6.3 He stated that a major challenge facing the seventh meeting was the transfer of the Presidency and Secretariat to another Forum member and thanked the Forum members for their support and cooperation throughout the period of his presidency as well as commended the secretary for her work and commitment.

6.4 The President’s report is attached in Appendix 5.

7. Discussion on implementation of the Memorandum of Understanding for members of the Asia-Pacific Legal Metrology Forum and proposal for introduction of a category of fees for “least developing economies”.

7.1 The issue of the introduction of a new fee structure was discussed in association with funding support for the secretariat and the transfer of the presidency and secretariat functions.

7.2 On the implementation of the MoU, the secretary reported that as at 27 September 2000, nineteen economies (Australia, Canada, PR China, Hong Kong China, Indonesia, Japan, DPR Korea, Republic of Korea, Malaysia, Mongolia, New Zealand, Papua New Guinea, Philippines, Russian Federation, Singapore, Chinese Taipei, Thailand, USA and Vietnam) had signed the MoU, of which sixteen had paid membership fees with the total amount collected being US$15,882.48.
7.3 Mr Birch informed the Forum that Australia had provided the president and secretariat of APLMF with Australian government funding support since its establishment in 1994. However, the Australian government has informed the APLMF that it will be unable to provide funding support from 1 January 2001. In view of this and for the long term operation of the APLMF, it would be appropriate to establish an equitable membership fee structure whereby APLMF could become self funding/self sufficient, as far as possible, with the membership fees funding the economy taking on the president and secretariat.

7.4 The proposed fees were divided into five categories based on stage of development and population of the economy, with each progressive category doubling the previous category, raising US$64,900 as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>US $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category 1 – Fees US$550</strong></td>
<td></td>
</tr>
<tr>
<td>Laos, Cambodia</td>
<td>1,100</td>
</tr>
<tr>
<td><strong>Category 2 – Fees US$1,100</strong></td>
<td></td>
</tr>
<tr>
<td>Chile, Colombia, Indonesia, Malaysia, Mexico, Mongolia, Papua New Guinea, Peru, Philippines, Thailand, Vietnam, DPR Korea</td>
<td>13,200</td>
</tr>
<tr>
<td><strong>Category 3 – Fees US$2,200</strong></td>
<td></td>
</tr>
<tr>
<td>Hong Kong China, New Zealand, Singapore</td>
<td>6,600</td>
</tr>
<tr>
<td><strong>Category 4 – Fees US$4,400</strong></td>
<td></td>
</tr>
<tr>
<td>Australia, Canada, PR China, Republic of Korea, Russia, Chinese Taipei</td>
<td>26,400</td>
</tr>
<tr>
<td><strong>Category 5 – Fees US$8,800</strong></td>
<td></td>
</tr>
<tr>
<td>USA, Japan</td>
<td>17,600</td>
</tr>
</tbody>
</table>

**Total fees:** US$ 64,900

7.5 It was noted that whilst it may not be possible to expect any firm commitment from members at this stage, they were requested to provide either an in-principle support or comment on the fee proposal. The following response was recorded:

- **Australia**
  - Dr Bennett – Australia will only continue to provide the secretariat, if funding is available. Support fee increase.

- **Canada**
  - Mr Johnston – agree that Forum should be self sufficient and support the fee increase.

- **PR China**
  - Mr Han – need to discuss with the finance department but will support fee increase if necessary.
<table>
<thead>
<tr>
<th>Country</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>Mr Prawoko – need to propose to government first, but hopefully to be approved.</td>
</tr>
<tr>
<td>Japan</td>
<td>Dr Imai – fee increase is acceptable for Japan. Japan will nominate for positions of President and Secretary within one year, and requests Mr Birch to continue as President.</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>Mr Chung – have to consult with government.</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Mr Chen – support in principle but have to consult with government.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Mr Barker – support fee proposal.</td>
</tr>
<tr>
<td>Singapore</td>
<td>Mr Ong – have to consult with department, propose President draft letter to authorities to convince interest in APLMF activities.</td>
</tr>
<tr>
<td>Chinese Taipei</td>
<td>Dr Chen – support fee structure.</td>
</tr>
<tr>
<td>Thailand</td>
<td>Mr Skol – support in principle, should not be a problem.</td>
</tr>
<tr>
<td>USA</td>
<td>Dr Ehrlich – in principle support but have to negotiate with the department.</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Dr Luong – support in principle, but have to wait for decision.</td>
</tr>
</tbody>
</table>

7.6 In summary, it was noted that ten economies pledged full support or in principle support and three economies required to consult with governments.

7.7 Mr Birch noted the request of Mr Ong from Singapore and would take up the matter of drafting the letter to the relevant authorities or to have meetings with particular groups if necessary.

7.8 Mr Birch also informed members that the other specialist regional organizations APLAC and APMP have also introduced membership fees with APLAC charging fees per member organization.

7.9 **Survey on election of President and Secretary**

The secretary reported that thirteen economies had responded to the survey on this issue.

7.9.1 On the question “accept responsibility from 1 January 2001”, all the 13 economies replied NO.

7.9.2 On the question “willing to accept responsibility in future years”, five economies replied YES: Canada, PR China; Japan, New Zealand and USA.

7.9.3 On the question “impediments to your accepting this responsibility”, reasons cited by the economies included lack of funds, expertise, language, lack of legal metrology system and infrastructure.

7.9.4 On the question “comments on proposal of finance”, Canada, PR China and Japan supported the proposal.
7.9.5 Dr Imai informed the Forum that Japan would be able to assume responsibility for positions of President and Secretary from 1 January 2002. The Forum thanked Dr Imai and welcomed Japan’s offer.

7.10 Resolution:

The Forum endorsed the new fee structure for 2001 and the Secretary was requested to circulate it to members.

The Forum noted Japan’s expression of interest in nominating for the presidency at the 8th Forum meeting and accepting the presidential and secretarial responsibilities from 1 January 2002.

8. Report of the Working Groups meetings held on 2 October 2000:

8.1 Mutual Recognition Arrangements

Mr Birch who chaired the meeting (Dr Sam Chappell who is chairman of this working group retired this year) informed members on recent developments on this issue.

The Forum noted:

8.1.1 The report on progress on the OIML Mutual Acceptance Agreement (MAA) of Test Reports by Dr Ehrlich.

Dr Ehrlich (USA) informed members on the OIML’s development of a national capability survey to gather supplementary data, the “peer review” and “declaration of mutual confidence - DOMC”, the conformity assessment and accreditation within OIML certification and the coming “Round Table” meeting in London, which will consider the second draft of the MAA.

8.1.2 That training and intercomparison testing are important components in the development of capability in MAA, which will eventually ensure “trust and confidence”

8.1.3 The globalisation of accreditation and the advantages and disadvantages of accreditation and peer review.

8.1.4 The debate in the World Trade Organisation (WTO) on Technical Barriers to Trade (TBT) on the introduction of “self declaration” and noted that this would disadvantage developing economies with no testing capabilities.

8.1.5 The discussions of the working group and concluded that the MAA should have the necessary transparency and integrity to allow all members of OIML including developing members of OIML economies to participate.
8.1.6 The progress of the development of the Global MRA under the Metre Convention presented by Dr Imai, which was based on the acceptance of “mutual equivalence” and certificates issued by member countries.

8.1.7 The development of mutual recognition programs by members of the Forum e.g. Canada and the USA, China and the Netherlands, New Zealand and United Kingdom.

8.1.8 The text of the report is attached in Appendix 6. The list of delegates and observers to the Working Group meeting is attached in Appendix 14.

8.2 Working Group on Training

8.2.1 Mrs K Marston (Australia) who chaired the working group meeting presented the report of the working group which included a report on training activities during 2000 and suggestions for the training program 2001.

8.2.2 Mr Barker (New Zealand) introduced the issue of recognition and accreditation of the APLMF training courses by OIML and local organizations for wider acceptance. Mr Magana informed the meeting such accreditation was not under the purview of OIML.

8.2.3 Ms Marston reported on the progress on the “Directory of Regional Training Providers”. A survey has been conducted but the Directory has not been finalized as yet.

8.2.4 The Forum discussed the issue of “Measurement of uncertainty” and its importance and noted that an OIML working group TC 3/SC 5 is working on such a document.

8.2.5 The Forum endorsed the working group recommendations:

- The train-the-trainer courses for the pattern approval and for the verification of non-automatic weighing instruments be promoted and that further workshops be run as requested;

- To ensure that areas of inconsistency between economies identified through the results in the inter-comparison (e.g. the interpretation of the checklist) be adequately covered in future training courses;

- An APLMF train-the-trainer course for the verification of fuel dispensers and LPG dispensers be completed, trialed and run in China in March 2001;

- Run a workshop or seminar on accreditation and quality certification on legal metrology aimed at highlighting possible issues in particular those concerning:

  - Certifiers of private sector verifiers of weighing and measuring equipment; and
- Certification of packers of goods packed by measure.

- That training priority should be given to the following areas:
  - High capacity weighing;
  - High capacity flow measurement;
  - Goods packed by measure; and
  - Measurement uncertainty in legal metrology

- Consideration be given to organising in the future training courses on:
  - Standards laboratory officers training;
  - Compressed natural gas dispensers pattern approval and verification; and
  - Radar speed measuring devices and evidential breath analysers.

8.2.6 The Forum noted the development of training courses had achieved tangible benefits and commended Mrs Marston for her efforts.

8.2.7 The text of the report is attached in Appendix 7. The list of delegates and observers to the Working Group meeting is attached in Appendix 14.

8.3 Working Group on Utility Meters

8.3.1 Mr Birch, who chaired the working group, presented the report. The Forum noted the following:

8.3.2 The report by Dr Erhlich (USA) on developments of the OIML subcommittee on water meters which met this year to finalise development of the format of the Test Report for R49.

8.3.3 The report by Mr Birch on the revision of the OIML recommendation on electricity meters and the coming meeting at the PTB.

8.3.4 The current situation in Australia to include utility meters in legislation.

8.3.5 The report by NIST on “Measurement needs arising from deregulation in the electric utility industry”, which was available on the internet.

8.3.6 The report by Mr Vinet (Canada) on the current situation on electricity meters in Canada.

8.3.7 The Forum endorsed the working group recommendation:

*The APLMF be actively involved with the OIML electricity meter working group and keep members informed on developments in this area.*
8.3.8 The text of the report is attached in Appendix 8. The list of delegates and observers to the Working Group meeting is attached in Appendix 14.

8.4 Working Group on Goods Packed by Measure

8.4.1 Mr John Barker (New Zealand) who chaired the meeting of the working group presented the report.

8.4.2 Mr John Birch reported on progress within OIML on the revision of R 87 – Net content in Packages and proposals for the use of an “I” Mark on packages and the accreditation of packers. Two meetings of OIML TC 6 in Berlin, September 1999 and Paris, March 2000 have considered draft proposals and a further draft will shortly be published.

8.4.3 Mr Magana (nominated Director BIML/WELMEC representative) reported on a meeting between WELMEC and the European Commission on proposals for a compliance system for prepackaged goods based on quality management systems. The Working Group noted the work being carried out by OIML and WELMEC and the need for cooperation with APLMF to facilitate the trade in goods from and into the Asia-Pacific region.

8.4.4 The Working Group endorsed the following recommendation:

*That APLMF note the development in OIML and WELMEC on revision of requirements for goods packed by measure and support continued cooperation to develop requirements that facilitates trade in goods packed by measure.*

8.4.5 The text of the report is attached in Appendix 9. The list of delegates and observers to the Working Group meeting is attached in Appendix 14.

8.5 Working Group on Medical Measurements

8.5.1 Dr Chen Jay-San (Chinese Taipei) who chaired the working group presented the report.

8.5.2 The Forum thanked Dr Chen for the comprehensive survey on sphygmomanometers and endorsed the recommendation of the working group that a speaker be invited to address the next forum meeting on the importance of metrological control of medical measuring instruments particularly sphygmomanometers. It was noted that Austria held the secretariat for this OIML recommendation and could be invited to give the presentation.

8.5.3 Dr Seiler informed the Forum that some South America countries, particularly Brazil, have established verification procedures for blood
pressure instruments and Mr Magana highlighted that European Directives have been developed for such instruments.

8.5.4 The text of the report is attached in Appendix 10. The list of delegates and observers to the Working Group meeting is attached in Appendix 14.

8.6 Working Group on Rice Moisture Measurements

8.6.1 Mrs K Marston who chaired the working group meeting presented the report of the working group.

8.6.2 The Forum discussed the progress in the investigation into rice moisture measurement during 2000 and suggestions for future work in 2001.

8.6.3 The Forum thanked Dr Seiler (PTB) for his involvement in this project particularly the testing of the rice moisture instruments.

8.6.4 Mrs Marston stated that as the work program of this working group was functioning smoothly, it was appropriate at this stage that another member from the working group take over the responsibilities of the Chair of the WG and requested that members consider accepting the position.

8.6.5 The Forum endorsed the recommendation of the working group to:

- Conduct a study of the Rice Measurement Control System of Japan in the last week in August 2001; and

- Seek funding from the APEC SCSC to continue the project after the study tour of Japan.

8.6.6 The text of the report is attached in Appendix 11. The list of delegates and observers to the Working Group meeting is attached in Appendix 14.

8.7 Working Group on Taximeters

8.7.1 Mr Birch who chaired the working group meeting presented the report.

8.7.2 The Forum thanked Mr Magana for his reports on the progress of the OIML recommendation on taximeters and the European Directives and the software conference.

8.7.3 The Forum noted the survey on taximeters conducted by the APLMF secretariat and endorsed the recommendation of the working group that APLMF support OIML to revise the recommendation on taximeters.

8.7.4 The text of the report is attached in Appendix 12.
The list of delegates and observers to the Working Group meeting is attached in Appendix 14.

8.8 Working Group on Intercomparison Testing and Calibration

8.8.1 Mr Birch who chaired the working group meeting presented the report.

8.8.2 The Forum endorsed the recommendation of the working group that:

- The report on non-automatic weighing instruments, which had been finalised and circulated to members be sent for publication in the OIML Bulletin.
- The report on load cells be finalised and circulated to members
- The intercomparison testing of mass standards and master meters commence as soon as possible.

8.8.3 The text of the report is attached in Appendix 13.

The list of delegates and observers to the Working Group meeting is attached in Appendix 14.

8.9 Establishment of ad hoc groups

Mr Barker proposed the establishment of ad hoc groups to facilitate the operation of the working groups. These ad hoc or working groups could then report to the Forum meeting. The Forum agreed to the proposal and members were requested to inform the secretariat on their interest. (see also agenda number 20.1).

9. Report on progress of the Forum Work Plan:

The Forum considered the progress of the work program for 1999/2000 and reported as follows:

- Establish a Working Group on Medical Measurements with a project on Sphygmomanometers (blood pressure meters).

  The working group has been established (chaired by Dr Chen Jay-San from Chinese Taipei) and a survey on sphygmomanometers completed.

- Monitor the need for translating measurement legislation into English for those economies where their legislation is currently not in English.

  As funding has not been available for the translation this service has not been provided.

- Consider ways to involve consumers in Forum activities.

  The importance of consumer involvement was noted and it was proposed that a program be organized in association with the next Forum meeting.
• Finalise and publish the resource document on modernisation of legislative and administration systems.

_The APLMF will finalise the resource document, arising from the workshop on legislation and administration conducted in Tsukuba, as soon as possible._

_The Forum noted that OIML Document 1 – Model Law on Metrology (USA as secretariat), which describes the basic legislation on metrology, was currently under revision and requested OIML that work on this be speeded up and published._

• Finalise the reports of the intercomparisons on non-automatic weighing instruments and load cells.

_The report on the intercomparison on non-automatic weighing instruments had been circulated to members and discussed at the working group meeting. The Forum accepted the report and recommended that the report be finalised and sent for publication in the OIML Bulletin._

_The secretariat will prepare the report on load cells for circulation to members._

• Commence the intercomparison on mass standards and master meters.

_These intercomparisons will commence as soon as possible._

• APLMF support the need for harmonisation of international standards in relation to Goods Packed by Measure, including:
  (a) standard sizes;
  (b) permitted deficiencies due to dehydration; and
  (c) drained weights.

_This has been discussed in the working group on goods packed by measure._

• APLMF to provide input into the development of harmonised international standards on Goods Packed by Measure, which is necessary to ensure the Asia-Pacific’s Region views and requirements are fully considered by those developing such international standards.

• The survey on prepacked goods requirements in other regions be continued.

• APLMF continue to discuss with OIML the need for priority to be given to extending the OIML recommendation on nett contents to include metrological control of packing facilities involving quality systems, accreditation of test facilities, statistical sampling of output and certification by the legal metrology authority.

• APLMF continue to support the development by OIML of an international system of marking of labelled measurement to facilitate international trade in prepacked goods (an extension of the European E mark system).
- The secretariat survey member economies to provide the contact details of the organisation/s within the member economy who have responsibility for administration of their economies legal provisions in relation to Goods Packed by Measure.

- Consideration be given to establishing a small "ad hoc" group within the Working Group on Goods packed by Measure, to develop proposals or requirements for goods packed by measure, for discussion and decision by APLMF.

_Discussed under 20.1_

- Following the adoption of the recommendation on water meters by the CIML, the secretariat to survey the application of this recommendation by member economies.

- Support OIML Technical Committees on:
  (a) Electricity meters; and
  (c) Statistical sampling.

- The train the trainer modules for the pattern approval and for the verification and inservice inspection of non-automatic weighing instruments be promoted and run as requested.

_Discussed under report on training._

- Train the trainer modules for the pattern approval and verification of petroleum and LPG dispensers be developed and training courses run before the end of 2000.

_These training modules are being developed. A training course is scheduled for March 2001 (refer to report on training)._"}

- A Regional Directory of Training and a regional network of trainers be developed.

_A survey has been organized, refer to report on training._

- Discussions be held with BIML on the development of an international legal metrology training network and international accreditation of legal metrology training courses.

_Refer to report on training._

- Consideration be given to developing training courses in:
  a) Standards laboratory officers training;
  b) Goods packed by measure;
  c) High capacity weighing and high capacity flow measurement as extension of the introductory courses;
d) Compressed natural gas dispenser pattern approval and verification;
e) Vehicle speed measuring devices and evidential analysis devices;
f) Automotive emission measurements and other environmental measurements;
g) Measurement uncertainty in legal metrology; and
h) Application of accreditation and quality certification in legal metrology.

These issues will remain on the work program for 2000/2001.

- Consider the Rice Moisture project by investigating the:
  a) Variation in the measurement results using different instruments with the same sample. This is probably due to the lack of a program of pattern approval of the prototype. Then conduct regular verification and inservice inspection of instruments used in the field to maintain acceptable level of consistency;
  b) Poor quality of the instruments being used and their inability to stay in calibration for a reasonable period of time. This is related to the lack of pattern approval;
  c) Variation in the samples used. This could be due to the way in which the samples are taken from the bulk grain, how it is stored and handled after being taken;
  d) Quality and consistency of the standard reference materials used in calibrating the moisture meters, and lack of traceability back to a national standard;
  e) Metrological control system which is necessary to control fraud and ensure the integrity and transparency of the measurements.

Discussed under working group on rice moisture measurement, refer to report.

- Accept the offer of PTB to pattern evaluate a number of rice moisture measuring instruments.

Discussed under working group on rice moisture measurement, refer to report.

- Support the work of TC3/SC5 Conformity Assessment in developing a Mutual Acceptance Agreement on test reports.

Discussed under working group on Mutual Recognition Arrangements, refer to report.

- Survey action being taken by member economies to ensure compliance of production instruments with type.

- Establish a Working Group on application of weighing in bulk commodity shipping measurements in place of draft surveys.

To be established.
• Establish a Working Group on Legislation and Administration to promote regional harmonisation of legislation and administration and prepare an analysis of coordination structures in legal metrology.

• Develop a project on economic analysis of legal metrology with the aim of setting priorities based on economic and social impacts.

• Circulate information to member economies on Measurement Canada’s Market Place Intervention Model and New Zealand’s economic analysis of trade measurement.

9. Discussion on topic nominated by host economy – “Legal metrology and laboratory accreditation” by Mr Nigel Jou, representative of APLAC

9.1 The Forum thanked Mr Jou for his presentation. In his paper, he discussed the development of the laboratory accreditation system in Chinese Taipei and the activities of the Chinese National Laboratory Accreditation (CNLA), highlighted the international activities of laboratory accreditation, the use of ISO/IEC Guides and the role of APLAC in the establishment of MRA’s.

10. Country Report presentation by member economies: “Update on current developments in the legal metrology system”.

10.1 The Forum noted the presentations of delegates from each economy on the developments of legal metrology in their economy over the past year. The following delegates made presentations:

<table>
<thead>
<tr>
<th>Country</th>
<th>Delegate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Mr J Birch and Dr J Bennett</td>
</tr>
<tr>
<td>Canada</td>
<td>Mr A Johnston</td>
</tr>
<tr>
<td>PR China</td>
<td>Mr Han J P</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Mr Hari Prawoko</td>
</tr>
<tr>
<td>Japan</td>
<td>Dr Imai</td>
</tr>
<tr>
<td>Rep of Korea</td>
<td>Mr Chung</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Mr Chen S F</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Mr J Barker</td>
</tr>
<tr>
<td>Singapore</td>
<td>Mr M Ong</td>
</tr>
<tr>
<td>Chinese Taipei</td>
<td>Dr Chen J S</td>
</tr>
<tr>
<td>Thailand</td>
<td>Mr Skol</td>
</tr>
<tr>
<td>USA</td>
<td>Dr C Ehrlich</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Dr Luong</td>
</tr>
</tbody>
</table>

10.2 The Forum received the country reports of Forum members and noted the high degree of legislative and administrative change occurring in the national metrology systems in response to globalisation, market place reform and the expanding scope of legal metrology.

10.3 The Forum noted the importance of ensuring that these changes did not introduce legislative or administrative barriers to trade and requested OIML to finalise the revision of the document on “Law of Metrology”.

Seventh Asia-Pacific Legal Metrology Forum
11. Development of programs in other areas of legal metrology.

11.1 The Forum noted that the introduction of competition policy in a number of economies has led to the development of legal metrology in many areas of trade metrology. Other areas of development include high capacity gas measurement and vehicle speed and breath analysers. Mr Vinet informed the Forum that Canada had introduced the approval and verification and re-verification testing of gas meters, which required high pressure testing facilities.

12. Discussion on APEC Standards and Conformance issues and report of meeting between Specialist Regional Bodies (SRBs) (APLAC, APLMF, APMP, PAC, PASC) and APEC Standards and Conformance Sub-Committee.

12.1 Mr Birch reported that at the recent APEC conference held in association with the APEC SCSC meeting in Brunei in September, Mrs Marston (in absentia) contributed a paper on APLMF training to the conference.

12.2 He also reported on the contribution by APLMF to the APEC SCSC program under the four sectors of alignment, mutual recognition and conformity assessment, technical infrastructure development and transparency.

12.3 Additionally, the APEC SCSC, recognizing the contribution of the SRBs in the technical area, has established a memorandum of understanding with the SRBs which enables them to participate and contribute to APEC SCSC programs.

12.4 The Forum noted the reports provided by APLAC and APMP on their activities.

13. Discussion on OIML issues.

13.1 Mr Faber, President CIML presented the report on OIML issues. He expressed his appreciation at having been invited to participate in the APLMF meeting and thanked the Forum for inviting him.

13.2 Mr Faber commended the work done by the Regional Legal Metrology Organisations (RLMOs) and the APLMF in particular and advised members to keep the organization of the APLMF as informal as possible. He stressed on the importance of cooperation between the RLMOs and the OIML and for the RLMOs to identify priorities for the attention of the OIML.

13.3 He briefed the meeting on the impending conference and CIML meeting in London and the election of members of the presidential council, i.e. the posts of president, vice-president and director and highlighted the work of the Round Table on Mutual Acceptance Agreement.

13.4 He referred to the Action Plan of the OIML, which had been circulated to members, and urged members to endorse it.

13.5 On the development of Document 1 – Model Law on Metrology, he would request OIML to give priority to finalizing the document.
13.6 He touched on the software conference and the use of the internet for information dissemination and participation of members through the web pages.

14. Discussion on liaison with other regional legal metrology organisations.

14.1 The Forum noted the development and activities of the following regional legal metrology organizations.

Mr Birch and Mr Magana informed the Forum on the EMLMO which held its first meeting in association with the CIML meeting last year and which has progressed to developing a draft MoU and discussion on fee structure for its members.

14.3 SIM – Interamerican Metrology System.
Dr Ehrlich informed the Forum on the formation and membership of SIM and the workshop sponsored by NIST and NCWM for members of this organization last June. Two sub groups have been established and members are currently drafting the terms of reference.

14.4 Mercusor
Dr Seiler informed the Forum on activities between the European Union and Mercusor to harmonise measuring instruments based on European Directives.

14.5 IOLMF – Indian Ocean Legal Metrology Forum
Mr Birch, as Interim Convenor, informed the Forum on the establishment and membership of the IOLMF and the one-day workshop on legal metrology held in 1998. He also reported on the cooperation with SADCMEL (South African cooperation on legal metrology) on training resources and that the IOLMF and the SADCMEL are planning to organize a workshop on Legislation and Administration sometime in March 2001.

14.6 ASEAN – CER
Mr Birch informed the Forum on the ASEAN–CER MoU on standards and conformance and work program of the ACCSQ – CER.

15. Discussion on bilateral and multilateral assistance for development of legal metrology in the region.

15.1 Mr Birch informed the Forum that one of the impediments to overcome in order to obtain assistance for the development of legal metrology was to ensure that legal metrology is prioritised by the donor funding agency and recipient legal metrology organisation in the respective economy. This was a difficult issue in view of the objectives of sustainable development and poverty eradication in funding policies and therefore, there was a need to provide more information on the economic and social benefits of legal metrology programs. The Australian aid agency AusAID is proposing to fund an ASEAN regional project on economic integration that will include standards and conformance. He referred to the “Technical Infrastructure Survey” conducted by Dr Birkeland and
recommended it to be utilised as an important document for putting up a case for developmental assistance.

15.2 Dr Seiler provided information on the PTB, which is the implementing agency for funding for legal metrology, accreditation and certification. Currently, there are three projects on legal metrology in Thailand, Turkey and Mongolia and about thirty other projects, which involve metrology and legal metrology.

15.3 The new developments of the PTB are directed at supporting regional cooperation and regional trade, in a broader framework and not on specific projects. The PTB provides funding to support African countries, particularly the African regional organisation for standardisation, where a first awareness seminar was held last year to generate interest and formulate draft proposals to potential donors e.g. the European Union, to finance projects.

15.4 Dr Seiler informed the Forum on PTB funding for the first ASEAN seminar held in Chiang Mai last year and the second seminar to be held immediately after the APLMF meeting.

15.5 He emphasised that it was the responsibility of individual economies to instill awareness on the importance of legal metrology and to formulate programs addressing particular needs for regional cooperation for possible funding.

15.6 He also referred to the conference on “The role of legal metrology in economic and social development” held in Braunschweig in 1998, and the proposal for a follow up conference in 2001 in the USA.


The Forum discussed the work program to be carried out in the next few years and adopted the following work program.

APLMF WORK PROGRAM 2000/2001

- The train-the-trainer courses for the pattern approval and for the verification of non-automatic weighing instruments be promoted and that further workshops be run as requested;
- To ensure that areas of inconsistency between economies identified through the results in the inter-comparison (e.g. the interpretation of the checklist) be adequately covered in future training courses;
- An APLMF train-the-trainer course for the verification of fuel dispensers and LPG dispensers be completed, trialled and run in China in March 2001;
- Run a workshop or seminar on accreditation and quality certification on legal metrology aimed at highlighting possible issues in particular those concerning:
  - Certifiers of private sector verifiers of weighing and measuring equipment; and
  - Certification of packers of goods packed by measure.
- That training priority should be given to the following areas:
  - High capacity weighing;
- High capacity flow measurement;
- Goods packed by measure; and
- Measurement of uncertainty in legal metrology

Consideration be given to organising a seminar/workshop for training providers in legal metrology throughout the region.

Consideration also be given to organising in the future, training courses on:
- Standards laboratories officers training;
- Compressed natural gas dispenser pattern approval and verification;
- Vehicle speed measuring devices and evidential analysis devises.

The APLMF be actively involved with the OIML TC on electricity meters and keep members informed on developments in this area.

Support the OIML development of a Recommendation on Statistical Sampling.

The APLMF note the development in OIML and WELMEC on revision of requirements for goods packed by measure and support continued cooperation to develop requirements that facilitates trade in goods packed by measure.

That a speaker be invited to address the next Forum meeting on the importance of metrological control of medical measuring instruments particularly sphygmomanometers. It was noted that Austria held the secretariat for this OIML recommendation and could be invited to give the presentation.

Conduct a study of the Rice Measurement Control System of Japan in the last week in August 2000.

Seek funding from the APEC SCSC to continue the project after the study tour of Japan.

That APLMF support the OIML revision of the recommendation on taximeters.

That the report on non automatic weighing instruments, which had been finalised and circulated to members be sent for publication in the OIML Bulletin.

The report on load cells be finalised and circulated to members.

The intercomparison testing of mass standards and master meters commence as soon as possible.

Request the OIML to finalise the revision of Document on the Law of Metrology.

Consider ways to involve consumers in Forum activities.

Support the work of TC 3/SC 5 in developing the Mutual Acceptance Arrangements (MAA) on Test Reports.

Survey action being taken by member economies to ensure compliance of production struments with type.

Survey member on the establishment of a Working Group on Application of weighing bulk commodity shipping to replace draft survey.

Develop a project on economic analysis of legal metrology with the aim of setting priorities based on economic and social impacts.

Circulate information to member economies on Measurement Canada’s Market Place Intervention Model (available on the internet).

Provide reports to members on WTO review of TBT agreements
- Attend OIML and CIML meetings and provide reports on Forum meetings to the OIML bulletin
- Provide reports to APEC SCSC and attend at least one meeting a year.
- Exchange information with other specialist regional bodies and attend the annual meetings where appropriate.
- Exchange information with other regional legal metrology organizations (RLMOs) and attend coordinating meetings with RLMOs.
- Pursue opportunities for obtaining funding for the development of legal metrology in the region
- Strengthen the policy focus of the Forum meetings
- Support the organization of the 8th Forum meeting


17.1 There was no election of the president at this meeting, however the issue of the transfer of the responsibilities of the President and Secretary is discussed under agenda number 20.

18. Date and location of next Forum meeting in 2001.

18.1 Mr Barker extended an invitation to the APLMF to hold the eighth Forum meeting in Rotorua, New Zealand, which was the location of the APEC SCSC meeting in 1998.

18.2 Mr Birch informed the Forum that Mr A Thompson from the NCWM, USA had expressed an interest in hosting the eighth Forum meeting in Anchorage, Alaska and that Dr Krutikov, from Gosstandart, Russia had also indicated that Russia would consider hosting the meeting, in view of its offer to host the CIML meeting in Russia next year. The Forum resolved to accept the New Zealand offer and thanked Mr Thompson and Dr Krutikov for their offers.

19. Concluding remarks by the Chairman of the Forum meeting.

19.1 Mr Lin expressed his appreciation to Mr Birch and the delegates for their cooperation, patience and contributions, which had resulted in a fruitful meeting. He advised all members to implement the decisions of this meeting and report the results at the next meeting. He also thanked the members of the organising committee of BSMI for their assistance in the organisation and smooth functioning of the Forum meeting.

20. Any other matters.

20.1 Chairman of the various working groups

Mr Birch informed the Forum that it was appropriate at this time for members of other economies to assume responsibilities of Chair for the various working groups as the terms of reference and programs have been established. The following members were nominated for the working groups:
Mutual Recognition Arrangements
Training
Utility Meters
Rice Moisture Measurements
Intercomparison Testing & Calibration
Taximeters
Goods packed by measure
Medical measurements

Dr C Ehrlich, USA
Mrs K Marston, Australia
Canada
Japan
Australia and USA
--
Mr J Barker, New Zealand
Dr Chen Jay-San, Chinese Taipei

20.2 Dr Imai thanked Mr Birch and Mrs Khoo for retaining the responsibilities of APLMF president and secretary for another year as Japan required a little more preparation time to assume both these positions. He gave the date of 1 January 2002 for the transfer of both these positions to Japan.

20.3 Dr Imai also announced that Japan would accept the responsibility of Chair for the working group on Rice Moisture Measurements.

20.4 Mr Birch thanked Dr Imai for his offer to accept the responsibilities of president and secretary and was pleased that there was a succession plan and a target date for the transfer of the APLMF in place.

20.5 Mr Barker enquired on the health of Dr K Birkeland and Mr Faber informed the Forum that Dr Birkeland's condition had improved and that he would be attending the CIML meeting in London.

20.6 Mr Ong stated that as the involvement of consumers in legal metrology matters was an important issue, he proposed that this issue be included in the program on the first half day of the Forum meeting.

21. Conclusion of seventh Forum meeting.

21.1 Mr Birch expressed his appreciation to the Chairman for conducting the proceedings of the meeting and the seventh Forum meeting concluded with a vote of thanks to the Chair, the organising committee BSMI and all delegates for their participation and contribution.
Address by Mr Neng-Jong LIN  
Director General of the Bureau of Standards, Metrology and Inspection  
at the Official Opening of the 7th APLMF meeting  
on 3 October 2000  
at the Grand Hotel Taipei, Chinese Taipei

Vice Minister Chen, Mr. John Birch, the Forum President, Mr. Faber, the Chairman, all of the guests and the representatives of the members, how are you!

First of all, I welcome every one of you to participate in the annual meeting here in Taipei on behalf of the Bureau of Standards, Metrology and Inspection (BSMI). I express my special thanks to Vice Minister Chen, who while fully engaged, is presiding at the opening ceremony of the annual meeting and has added to the prestige of the 7th annual meeting of the forum.

There have been a few months since I came to the office of the Director BSMI. It is a big honor to be requested to be present and preside at the meeting. For the smooth operation of working parties meetings and the 7th annual meeting, I have been at the preparation meetings several times since I came to this position. I understand by my own international meeting experience that it is quite tough to have so many topics discussed in two-days’ time according to the meeting schedule.

As you know, the conception of the global village is increasingly accepted by almost all of the countries. Therefore, we are positively keeping our legal weights & measures regulations and international recommendation in harmonization. The new Weights and Measures Instrument Law draft has recently been submitted to Legislature for consideration. We hope consumers’ rights and interests will be fully protected and the professional measure & weights work. In the meanwhile, we hope that the meeting will be a contribution to the international development.

Several educational training projects have been conducted since the foundation of APLMF, which have improved the verification skills of the members in the region. The completion of intercomparison of non-automatic weighing instrument testing has laid the foundation of the future regional cooperation. We expect the plentiful and substantial achievements from the coming two days will promote the further cooperation in the region.

Finally, I wish a successful meeting! Wish every one a wonderful time in Taipei.

Thank you.
Address by Mr John Birch, AM
President APLMF
at the Official Opening of the 7th APLMF meeting
on 3 October 2000
at the Grand Hotel Taipei, Chinese Taipei

Mr Chen, Vice Minister of Economic Affairs
Mr Lin, Director General, Bureau of Standards, Metrology and Inspection
Mr Faber, President OIML
Forum members

Mr Chen, I am delighted that you have been able to find time to attend and officially open the 7th meeting of the Asia-Pacific Legal Metrology Forum.

Legal metrology was developed over 5,000 years ago to provide the information that governments needed to organize, plan, defend and tax with efficiency.

This traditional relationship between the State and metrology was well illustrated by the Shang dynasty some 3,500 years ago, which established standards and control of measurement for trade in commodities as well as for the production of weapons, handicrafts and the construction of vehicles.

An important component of any measurement system is trust and confidence in the measurement, which minimizes disputation and reduces transaction costs.

The Asia-Pacific Legal Metrology Forum was established in 1994 to support the APEC free trade agenda. The Forum has developed an active program to facilitate trade as these Forum meetings play an important role in developing trust and confidence amongst members.

Chinese Taipei is a foundation member of the Forum and has been active in all of its programs. We are delighted to have the opportunity to meet in Taipei on this occasion to learn more about your legal metrology system and the development of your economy.

Thank you.
Address by Mr Steve Ruey-Long CHEN,  
Vice Minister of Economic Affairs  
at the Official Opening of the 7th APLMF meeting  
on 3 October 2000  
at the Grand Hotel Taipei, Chinese Taipei

Chairman Lin, Forum President Birch, OIML President Faber and all members of the APLMF, welcome!

It gives me great pleasure to welcome you to Taiwan for the 7th Asia-Pacific Legal Metrology Forum meeting.

We all know that the main purpose of the legal measurement system is to ensure fair trade among people everywhere.

Historical documents show us that a system of weights and measures has been with us for thousands of years. However, geographical factors and inconvenient travel have resulted in differences of cultures and standards.

As a consequence, we all have different measurement systems. Since the dramatic development of transportation and the rise of international free trade, it has become necessary to unify our system of measurements.

To promote cooperation between economies, there is also an urgent need for the mutual recognition of measurements. The most effective way to achieve this mutual recognition is through multilateral or regional cooperation.

The main contribution of the APLMF is to provide a forum for measurement authorities in the Asia-Pacific area to exchange their experiences in the area of legal measurements.

The APLMF also works to achieve a mutual understanding among its regional members. At the same time, it is building a solid foundation for future regional cooperation in legal measurement.

The APLMF has made a number of achievements since 1994, thanks to the hard work of its President and the cooperation that has been carried among its members.

In the area of education and training, for instance, a number of training courses have been provided such as technical training for the non-automatic weighing instrument and technical seminars. This training is helping members to greatly improve their technical skills.

In the technical area, the APLMF has completed the intercomparison testing of non-automatic weighing instrument.
As a result, it has established grounds for mutual recognition between economies. This is a highly impressive achievement.

The primary goal of legal measurement is to ensure the fairness of trade. Also, the APLMF has recently been working towards the development of health and environmental protection.

At present, it is paying a great deal of attention too to international trade and economic growth.

In Taiwan, we are trying to modify the weights and measures law to eliminate unnecessary rules and to enhance industrial development.

Economic development has advanced so rapidly in Taiwan that we find it necessary to add rules in certain areas to protect the interests of our people.

The 5th APLMF passed an MOU in 1998 setting standards for the Forum’s membership and constructing a framework for its operations. This MOU has already been signed by a majority of the member economies.

We can see from this that the APLMF will continue carrying out its operations in a more organized way in the future.

We are all looking forward to seeing the APLMF play a more forceful role in regional integration and on horizontal cooperation between different regions, leading to the establishment of a unified system of measurement standards and relevant legal rules.

Today, on behalf of our government, I wish complete success to the 7th APLMF.

I hope that you will take advantage of your free time during these meetings and of your holidays later on, to learn more about Taiwanese culture. I hope you’ll enjoy your time in Taiwan.

Thank you.
# 7th ASIA-PACIFIC LEGAL METROLOGY FORUM MEETING

## LIST OF DELEGATES & OBSERVERS

**TAIPEI, CHINESE TAIPEI**  
3 – 4 OCTOBER 2000

**Chairman:** Mr Neng-Jong LIN, Director General,  
Bureau of Standards, Metrology and Inspection (BSMI)  
Ministry of Economic Affairs (MOEA), Chinese Taipei

<table>
<thead>
<tr>
<th>Economy</th>
<th>Delegate</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Mr John BIRCH AM</td>
<td>-President APLMF, &amp; Adviser, National Standards Commission</td>
</tr>
<tr>
<td></td>
<td>Dr Judith BENNETT</td>
<td>-Executive Director, National Standards Commission</td>
</tr>
<tr>
<td></td>
<td>Mrs Loon KHOO</td>
<td>-APLMF Secretariat</td>
</tr>
<tr>
<td></td>
<td>Mrs Kerry MARSTON</td>
<td>-Regional Training Coordinator, National Standards Commission</td>
</tr>
<tr>
<td>Canada</td>
<td>Mr Alan JOHNSTON</td>
<td>-President, Measurement Canada, Industry Canada</td>
</tr>
<tr>
<td></td>
<td>Mr Gilles VINET</td>
<td>-Vice-President, Program Development Measurement Canada, Industry Canada</td>
</tr>
<tr>
<td>P R China</td>
<td>Mr HAN Jianping</td>
<td>-Director, Office of OIML Affairs, Metrology Dept, China State Bureau of Quality &amp; Technical Supervision, CSBQTS</td>
</tr>
<tr>
<td></td>
<td>Mr LIU Xinmin</td>
<td>-Deputy Director, Department of International Cooperation, China State Bureau of Quality &amp; Technical Supervision, CSBQTS</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Mr Gunaryo</td>
<td>-Director, Directorate Metrology</td>
</tr>
<tr>
<td></td>
<td>Mr Hari PRAWAKO</td>
<td>-Engineer, Directorate Metrology</td>
</tr>
<tr>
<td>Japan</td>
<td>Dr H. IMAI</td>
<td>-Director General, National Research Laboratory of Metrology (NRLM)</td>
</tr>
<tr>
<td></td>
<td>Mr Kazuo NEDA</td>
<td>-Chief Standards Dissemination Section, NRLM</td>
</tr>
<tr>
<td></td>
<td>Mr Kenji NISHIKAWA</td>
<td>-Office of International Relations, NRLM</td>
</tr>
<tr>
<td></td>
<td>Mr Isssei AKAMATSU</td>
<td>-Office of International Relations, NRLM</td>
</tr>
<tr>
<td></td>
<td>Mr Tomosaburo YANO</td>
<td>-Measurement Standards &amp; Technical Infrastructure Division, AIST, MITI</td>
</tr>
<tr>
<td>Region</td>
<td>Name</td>
<td>Position</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>Mr CHUNG Kuy-Hoon</td>
<td>- Metrology Division, Agency for Technology &amp; Standards (ATS), MOCIE</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Mr MD Nor Md Chik</td>
<td>- General Manager, National Metrology Centre, SIRIM Berhad</td>
</tr>
<tr>
<td>Singapore</td>
<td>Mr John BARKER</td>
<td>- Manager, Trade Measurement, Trading Standards Service, Ministry of Consumer Affairs</td>
</tr>
<tr>
<td>Chinese Taipei</td>
<td>Mr Neng-Jong LIN</td>
<td>- Director General, Bureau of Standards, Metrology &amp; Inspection, BSMI, MOEA</td>
</tr>
<tr>
<td>Thailand</td>
<td>Mr Skol HARNSUTHIVARIN</td>
<td>- Deputy Director General, Dept of Commercial Registration, DCR</td>
</tr>
<tr>
<td>United States of America</td>
<td>Dr Charles EHRICH</td>
<td>- Chief, Technical Standards Activities Program, NIST</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Dr Nguyen Tien LUONG</td>
<td>- Deputy Director, Directorate for Standards and Quality (STAMEQ)</td>
</tr>
<tr>
<td></td>
<td>Mr MoON Huei-Kwan</td>
<td>- Metrology Division, Agency for Technology &amp; Standards (ATS), MOCIE</td>
</tr>
<tr>
<td></td>
<td>Mr NA Ki-Hyung</td>
<td>- Metrology Division, Agency for Technology &amp; Standards (ATS), MOCIE</td>
</tr>
<tr>
<td></td>
<td>Mr CHEN Soo Fatt</td>
<td>- Manager of Mechanical Metrology, National Metrology Centre, SIRIM Bhd</td>
</tr>
<tr>
<td></td>
<td>Mr Abdul Rahman bin Ghazali</td>
<td>- Deputy Director, Enforcement Division, Ministry of Domestic Trade &amp; Consumer Affairs</td>
</tr>
<tr>
<td></td>
<td>Ms. Angela MH CHANG</td>
<td>- Director, Dept of Metrology BSMI</td>
</tr>
<tr>
<td></td>
<td>Mr. CHEN Wu-Hsiung</td>
<td>- Deputy Director, Dept of Metrology BSMI</td>
</tr>
<tr>
<td></td>
<td>Mr. LAI Tsang-Cheng</td>
<td>- Section Chief, Dept of Metrology BSMI</td>
</tr>
<tr>
<td></td>
<td>Mr. TU Cheng-Pai</td>
<td>- Section Chief, Dept of Metrology BSMI</td>
</tr>
<tr>
<td></td>
<td>Mr. LIN Hsing-Ming</td>
<td>- Section Chief, Dept of Metrology BSMI</td>
</tr>
<tr>
<td>Observers</td>
<td>Mr Yueh Feng, CHANG</td>
<td>- Senior Specialist, Dept of Metrology BSMI</td>
</tr>
<tr>
<td></td>
<td>Mr YANG Jenn-Chyi</td>
<td>- Specialist, Dept of Metrology BSMI</td>
</tr>
<tr>
<td></td>
<td>Mr. WANG Kuo-Lung</td>
<td>- Specialist, Dept of Metrology BSMI</td>
</tr>
<tr>
<td></td>
<td>Mr. HU Mou-Ning</td>
<td>- Section Chief, BSMI</td>
</tr>
<tr>
<td></td>
<td>Mr. CHAO Ching-Ping</td>
<td>- Senior Specialist, BSMI</td>
</tr>
<tr>
<td></td>
<td>Mr CHEN Liang-Hsing</td>
<td>- Engineer, NML</td>
</tr>
<tr>
<td></td>
<td>Mr CHANG Chi-Sheng</td>
<td>- Researcher, NML</td>
</tr>
<tr>
<td></td>
<td>Ms KAO Pao-Chu</td>
<td>- Engineer, NML</td>
</tr>
<tr>
<td></td>
<td>Mr. CHEN Wen-Chang</td>
<td>- Manager, TERTEC</td>
</tr>
<tr>
<td></td>
<td>Mr. Herman, Hai-Ching LI</td>
<td>- Manager, ETC</td>
</tr>
</tbody>
</table>
International and Regional Organisations

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominated BIML Director/ WELMEC</td>
<td>Mr J F Magana</td>
<td>Sous-Directeur de la Metrologie, Ministere de l'Economie, des Finances et de l'Industrie, 20, Ave de Segur, 75353 Paris</td>
</tr>
<tr>
<td>CIML</td>
<td>Mr Gerard Faber, President CIML</td>
<td>c/- Nederlands Meetinstituut B.V. P O Box 654, 2600 AR Delft, Netherlands</td>
</tr>
<tr>
<td>PTB, Germany</td>
<td>Dr E. Seiler</td>
<td>Physikalisch-Technische Bundesanstalt (PTB), Bundesallee 100, 38116 Braunschweig, Germany</td>
</tr>
<tr>
<td>APLAC</td>
<td>Mr Nigel Jou</td>
<td>Chinese National Laboratory Accreditation, CNLA, No. 30, Ta-Hsueh Road, Hsinchu, Chinese Taipei</td>
</tr>
</tbody>
</table>

Apologies

Member Economies
Chile                      Raul Nunez, Head of Metrology Division, INN-Chile
Hong Kong China           KW Ma, Deputy Head of Trading Standards Investigation Bureau
Mongolia                  M Bayarmagnai, Chairman MNCSM
Philippines               Jocelyn Blanco, DOST
Russia                    Dr V. Krutikov, Vice President, Gosstandart Russia

Regional/International organisations
BIML Director             M B Athane
WELMEC Chairman           Seton Bennett
World Trade Organisation  Vivien Liu, Counsellor, Trade & Environment Division, Geneva

Specialist Regional Bodies and other organisations
APLAC Chair               Dr W L Richards (represented by Nigel Jou of CNLA, Chinese Taipei)
PASC Chairman             M Tanaka
Asian Development Bank    John Lockhart
REPORT BY MR JOHN BIRCH AM, APLMF PRESIDENT, 
TO DELEGATES TO THE 
7th ASIA–PACIFIC LEGAL METROLOGY FORUM MEETING

The Forum was established in November 1994 with the principal objectives of:

- Developing mutual confidence between legal metrology authorities in the region.
- Providing a forum for exchange of information.
- Identifying and promoting the removal of technical and administrative barriers to trade, and
- Co-ordinating regional training courses in legal metrology.

The Forum has made considerable progress on these objectives including:

- Organisation of workshops on:
  - Modernisation of legislation and administrative systems.
  - High capacity oil and gas flow measurement, and
  - High capacity weighing.
- Development and presentation of competency based train-the-trainer courses on the pattern approval, verification and in field inspection of weighing and flow measuring instruments.
- Actively cooperated with the International Organisation of Legal Metrology (OIML), other regional legal metrology and related organisations and the APEC Standards & Conformance Sub Committee.
- Conducted a wide range of surveys on legal metrology issues in the region.
- Conducted intercomparison testing of non-automatic weighing instruments and load cells in support of mutual recognition; and
- Commenced programs on rice moisture measurement and medical measurements.
In the six years since its formation, membership has expanded from fifteen authorities in thirteen economies to twenty-seven authorities in twenty-five economies. A MOU has been finalised and a membership fee introduced.

Despite this significant progress, much still needs to be done and this reflects the challenges facing legal metrology at the beginning of the 21st century. These challenges arise probably from:

- Development of new technologies and particularly the interfacing of measuring devices with computers and the software challenges this pose.
- Expanding scope of legal metrology probably in areas of environmental control, road traffic control, occupational health and safety and medical measurements and in the expansion of traditional weights and measures to commercial and quality measurements.
- Changing role of government under the influence of competition policy leading to the privatisation of many government services.
- Globalisation and the challenges it poses for the control of measurements between national economies.

In meeting these challenges legal metrology authorities must ensure that trust and confidence in physical measurements is maintained. This will require a renewed commitment from governments, significant changes to legislation and administration systems and the development of new international structures.

The last six years have been the establishment phase for the APLMF. We are well placed to contribute to the new challenges and to develop new programs particularly in the areas of:

- Modernisation and harmonisation of legislation.
- Analysis of the economic and social costs and benefits of legal metrology.
- Strengthening the policy focus of Forum meetings.

A major challenge facing the seventh meeting of the Forum will be the transfer of the Presidency and Secretariat to another Forum member. A successful transfer will highlight the maturity of the Forum.

Finally, I would like to pay tribute to the work and commitment of the Forum secretary Mrs Loon Khoo and express my personal appreciation of the opportunity the Forum has given me to lead the organisation for the past six years. Throughout this period, I have received unfailing support and cooperation from all members such that the success of the Forum is one that we share jointly.

John Birch AM
1 September 2000
REPORT OF THE APLMF
WORKING GROUP ON MUTUAL RECOGNITION ARRANGEMENTS.
HELD ON 2 OCTOBER 2000 IN TAIPEI, CHINESE TAIPEI

The Working Group met in Taipei on 2 October 2000 and was chaired by Mr John Birch (Australia) and delegates from the following economies attended:

Australia, Canada, People’s Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

Dr Charles Ehrlich (USA) reported on progress on the OIML Mutual Acceptance Agreement (MAA) of the Test Reports.

The Forum received the report by Dr Ehrlich on the development of the OIML Acceptance Arrangement for Test Reports.

The Forum noted the proposals to use self-assessment to establish mutual confidence.

The Forum believed that the MAA should have the necessary transparency and integrity to allow all members of OIML including developing members of OIML economies, to participate.
REPORT OF THE APLMF
WORKING GROUP ON TRAINING
HELD ON 2 OCTOBER 2000 IN TAIPEI, CHINESE TAIPEI

The Working Group met in Taipei on 2 October 2000 and was chaired by Ms Kerry Marston (Australia) and delegates from the following economies attended:

Australia, Canada, People’s Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

A report on training activities during 2000 was presented and suggestions for the training program 2001 were discussed:

The working group recommended that:

- The train-the-trainer courses for the pattern approval and for the verification of non-automatic weighing instruments be promoted and that further workshops be run as requested.

- To ensure that areas of inconsistency between economies identified through the results in the inter-comparison (e.g. the interpretation of the checklist) be adequately covered in future training courses.

- An APLMF train-the-trainer course for the verification of fuel dispensers and LPG dispensers be completed, trialed and run in China in March 2001.

- Run a workshop or seminar on accreditation and quality certification on legal metrology aimed at highlighting possible issues in particular those concerning:
  - Certifiers of private sector verifiers of weighing and measuring equipment; and
  - Certification of packers of goods packed by measure.

- That training priority should be given to the following areas:
  - High capacity weighing;
  - High capacity flow measurement;
  - Goods packed by measure; and
  - Measurement uncertainty in legal metrology.

- Consideration be given to organising in the future training courses on:
  - Standards laboratory officers training;
  - Compressed natural gas dispensers pattern approval and verification; and
  - Vehicle speed measuring devices and evidential breath analysers.
REPORT OF THE APLMF
WORKING GROUP ON UTILITY METERS
HELD ON 2 OCTOBER 2000 IN TAIPEI, CHINESE TAIPEI

The Working Group met in Taipei on 2 October 2000 and was chaired by Mr John Birch (Australia) and delegates from the following economies attended:

Australia, Canada, People’s Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

The working group noted:

• The report by Dr Ehrlich (USA) on developments of the OIML subcommittee on water meters which met this year to finalise development of the format of the Test Report for R49

• The report by Mr Birch on the revision of the OIML recommendation on electricity meters and the coming meeting at the PTB.

• The current situation in Australia to include utility meters in legislation.

• The report by NIST on Measurement needs arising from deregulation in the electric utility industry, which was available on the internet.

• The report by Mr Vinet (Canada) on the current situation on electricity meters in Canada.

The working group recommended that:

• The APLMF be actively involved with the OIML working group and keep members informed on developments in this area.
REPORT OF THE APLMF
WORKING GROUP ON GOODS PACKED BY MEASURE
HELD ON 2 OCTOBER 2000 IN TAIPEI, CHINESE TAIPEI

The Working Group met in Taipei on 2 October 2000 and was chaired by Mr John Barker (New Zealand) and delegates from the following economies attended:

Australia, Canada, People’s Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

Mr John Birch reported on progress within OIML on the revision of R 87- Net content in Packages and proposals for the use of an “I” Mark on packages and the accreditation of packers. Two meetings of OIML TC 6 in Berlin, September 1999 and Paris, March 2000 have considered draft proposals and a further draft will shortly be published.

Mr Magana (nominated Director BIML/WELMEC representative) reported on a meeting between WELMEC and the European Commission on proposals for a compliance system for prepackaged goods based on quality management systems. The Working Group noted the work being carried out by OIML and WELMEC and the need for cooperation with APLMF to facilitate the trade in goods from and into the Asia-Pacific region.

The Working Group endorsed the following recommendation:

• That APLMF note the development in OIML and WELMEC on revision of requirements for goods packed by measure and support continued cooperation to develop requirements that facilitates trade in goods packed by measure.
REPORT OF THE APLMF
WORKING GROUP ON MEDICAL MEASUREMENTS
HELD ON 2 OCTOBER 2000 IN TAIPEI, CHINESE TAIPEI

The Working Group met in Taipei on 2 October 2000 and was chaired by Dr Chen Jay-San (Chinese Taipei) and delegates from the following economies attended:

Australia, Canada, People's Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

Dr. Chen reported on the Survey on the metrological control of sphygmomanometers. The report was then discussed by the working group.

As a result of this discussion the working party recommended that:

* A speaker be invited to address the next forum meeting on the importance of metrological control of medical measuring instruments particularly sphygmomanometers. It was noted that Austria held the secretariat for this OIML recommendation and could be invited to give the presentation.
REPORT OF THE APLMF
WORKING GROUP ON RICE MOISTURE MEASUREMENT
HELD ON 2 OCTOBER 2000 IN TAIPEI, CHINESE TAIPEI

The Working Group met in Taipei on 2 October 2000 and was chaired by Mrs Kerry Marston (Australia) and delegates from the following economies attended:

Australia, Canada, People's Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

A report on progress in the investigation into rice moisture measurement during 2000 was presented and suggestions for future work in 2001 were discussed. As part of the report Dr Seiler (PTB) presented the first preliminary results of the pattern evaluation of the selection of instruments sent to PTB for assessment.

The working group recommended that:

- Conduct a study of the rice measurement control system of Japan in the last week in August 2001; and

- Seek funding from the APEC SCSC to continue the project after the study tour of Japan.
REPORT OF THE APLMF
WORKING GROUP ON TAXIMETERS
HELD ON 2 OCTOBER 2000 IN TAIPEI, CHINESE TAIPEI

The Working Group met in Taipei on 2 October 2000 and was chaired by Mr John Birch (Australia) and delegates from the following economies attended:

Australia, Canada, People’s Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

The working group thanked Mr Magana for his report on the current status of the OIML recommendation and the European Directives. Mr Magana also reported on developments of the software conference held in Paris last year and particularly the paper on Fraud in Taximeters. The working party thanked Mr Magana for his presentation.

Mr Birch reported on the APLMF survey on taximeters conducted earlier this year.

The working group recommended:

• That APLMF support the OIML to revise the recommendation on taximeters.
REPORT OF THE APLMF
WORKING GROUP ON INTERCOMPARISON TESTING AND CALIBRATION
HELD ON 2 OCTOBER 2000 IN TAIPEI, CHINESE TAIPEI

The Working Group met in Taipei on 2 October 2000 and was chaired by Mr John Birch (Australia) and delegates from the following economies attended:

Australia, Canada, People’s Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

The working group discussed the reports of the intercomparison testing of non automatic weighing instruments, load cells, mass standards and master meters and recommended that:

- The report non-automatic weighing instruments, which had been finalised and circulated to members be sent for publication in the OIML Bulletin.

- The report on load cells be finalised and circulated to members.

- The intercomparison testing of mass standards and master meters commence as soon as possible.
7th ASIA-PACIFIC LEGAL METROLOGY FORUM
WORKING GROUPS MEETING
TAIPEI, CHINESE TAIPEI
2 OCTOBER 2000

AGENDA

REGISTRATION OF DELEGATES
1 October 2000 (Sunday) 14:00 – 17:00
2 October 2000 (Monday) 08:00 – 08:50

Chairman: Mr John Birch AM President, APLMF.

Introduction and Welcome
by Mr John Birch AM, President, APLMF.

Session 1: Working Group on Mutual Recognition Arrangements
Chairman: Mr John Birch AM, President APLMF

1. OIML Mutual Recognition Agreement
2. Development of APLMF Mutual Recognition Agreements for test reports.

Session 2: Working Group on Training
Chairperson: Ms Kerry Marston, Regional Training Coordinator

1. Report on development of training course on pattern approval and verification of fuel dispensers for motor vehicles and LPG dispensers.
2. Training course on verification and reverification of weighing instruments.

Session 3: Working Group on Utility Meters
Chairman: Mr John Birch AM, President APLMF

1. Survey on heat meters, refurbishment/reconditioning of utility meters.
Session 4:  Working Group on Goods Packed by Measure  
Chairman: Mr John Barker, Trade Measurement, New Zealand

1. Discussion on mutual recognition of net content labeling.
2. Report on WELMEC WG 6 on “e” marked products

Session 5:  Working Group on Medical Measurements  
Chairman: Mr Chen Jay-San, Chinese Taipei

1. Report on survey on sphygmomanometers

Session 6:  Working Group on Rice Moisture Measurement  
Chairperson: Ms Kerry Marston, Regional Training Coordinator

1. Report on development of rice moisture measurement project

Session 7:  Working Group on Taximeters  
Chairman: Mr John Birch AM, President APLMF

1. Report on survey on taximeters

Session 8:  Working Group on Intercomparison Calibration and Testing  
Chairman: Mr John Birch AM, President APLMF

1. Report on non-automatic weighing instruments intercomparison
2. Report on Load cell intercomparison
3. Report on master meter intercomparison
4. Report on mass intercomparison
# 7th ASIA-PACIFIC LEGAL METROLOGY FORUM
WORKING GROUPS MEETING

LIST OF DELEGATES & OBSERVERS

TAIPEI, CHINESE TAIPEI
2 OCTOBER 2000

**Chairman:**  
Mr John Birch AM  
President APLMF

<table>
<thead>
<tr>
<th>Economy</th>
<th>Delegate</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Mr John BIRCH AM</td>
<td>-President APLMF, &amp; Adviser, National Standards Commission</td>
</tr>
<tr>
<td></td>
<td>Dr Judith BENNETT</td>
<td>-Executive Director, National Standards Commission</td>
</tr>
<tr>
<td></td>
<td>Mrs Loon KHOO</td>
<td>-APLMF Secretariat, National Standards Commission</td>
</tr>
<tr>
<td></td>
<td>Mrs Kerry MARSTON</td>
<td>-Regional Training Coordinator, National Standards Commission</td>
</tr>
<tr>
<td>Canada</td>
<td>Mr Alan JOHNSTON</td>
<td>-President, Measurement Canada, Industry Canada</td>
</tr>
<tr>
<td></td>
<td>Mr Gilles VINET</td>
<td>- Vice-President, Program Development Measurement Canada, Industry Canada</td>
</tr>
<tr>
<td>P R China</td>
<td>Mr HAN Jianping</td>
<td>-Director, Office of OIML Affairs, Metrology Dept, China State Bureau of Quality &amp; Technical Supervision, CSBQTS</td>
</tr>
<tr>
<td></td>
<td>Mr LIU Xinmin</td>
<td>-Deputy Director, Department of International Cooperation, China State Bureau of Quality &amp; Technical Supervision, CSBQTS</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Mr Gunaryo</td>
<td>-Director, Directorate Metrology</td>
</tr>
<tr>
<td></td>
<td>Mr Hari PRAWAKO</td>
<td>-Engineer, Directorate Metrology</td>
</tr>
<tr>
<td>Japan</td>
<td>Dr H. IMAI</td>
<td>-Director General, National Research Laboratory of Metrology (NRLM)</td>
</tr>
<tr>
<td></td>
<td>Mr Kazuo NEDA</td>
<td>-Chief Standards Dissemination Section, NRLM</td>
</tr>
<tr>
<td></td>
<td>Mr Kenji NISHIKAWA</td>
<td>-Office of International Relations, NRLM</td>
</tr>
<tr>
<td></td>
<td>Mr Issei AKAMATSU</td>
<td>-Office of International Relations, NRLM</td>
</tr>
<tr>
<td></td>
<td>Mr Tomosaburo YANO</td>
<td>-Measurement Standards &amp; Technical Infrastructure Division, AIST, MITI</td>
</tr>
<tr>
<td>Country</td>
<td>Name and Title</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>Mr CHUNG Kuy-Hoon - Metrology Division, Agency for Technology &amp; Standards (ATS), MOCIE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr MOON Huei-Kwan - Metrology Division, Agency for Technology &amp; Standards (ATS), MOCIE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr NA Ki-Hyung - Metrology Division, Agency for Technology &amp; Standards (ATS), MOCIE</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>Mr Md Nor Md Chik - General Manager, National Metrology Centre, SIRIM Berhad</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr CHEN Soo Fatt - Manager of Mechanical Metrology, National Metrology Centre, SIRIM Bhd</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr Abdul Rahman bin Ghazali - Deputy Director, Enforcement Division, Ministry of Domestic Trade &amp; Consumer Affairs</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>Mr John BARKER - Manager, Trade Measurement, Trading Standards Service, Ministry of Consumer Affairs</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>Mr Michael ONG - Deputy Director, Singapore Productivity and Standards Board</td>
<td></td>
</tr>
<tr>
<td>Chinese Taipei</td>
<td>Mr Neng-Jong LIN - Director General, Bureau of Standards, Metrology &amp; Inspection, BSMI, MOEA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr. CHEN Jay-San - Deputy Director General BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ms.Angela MH CHANG - Director, Dept of Metrology BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr. CHEN Wu-Hsiung - Deputy Director, Dept of Metrology BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr. LAI Tsang-Cheng - Section Chief, Dept of Metrology BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr. TU Cheng-Pai - Section Chief, Dept of Metrology BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr. LIN Hsing-Ming - Section Chief, Dept of Metrology BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr Yueh Feng, CHANG - Senior Specialist, Dept of Metrology BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr YANG Jenn-Chyi - Specialist, Dept of Metrology BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr. WANG Kuo-Lung - Specialist, Dept of Metrology BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr. HU Mou-Ning - Section Chief, BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr. CHAO Ching-Ping - Senior Specialist, BSMI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr CHEN Liang-Hsing - Engineer, NML</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr CHANG Chi-Sheng - Researcher, NML</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ms KAO Pao-Chu - Engineer, NML</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr. CHEN Wen-Chang - Manager, TERTEC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr. Herman, Hai-Ching LI - Manager, ETC</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>Mr Skol HARNSUTHIVARIN - Deputy Director General, Dept of Commercial Registration, DCR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr Veerasak VISUTTHATHAM - Director, Bureau of Weights &amp; Measures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr Satit CHUSUWAN - Bureau of Weights &amp; Measures</td>
<td></td>
</tr>
<tr>
<td>United States of America</td>
<td>Dr Charles EHRLLICH - Chief, Technical Standards Activities Program, NIST</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr GW DIGGS - Chairman, National Conference of Weights &amp; Measures (NCWM)</td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>Dr Nguyen Tien LUONG - Deputy Director, Directorate for Standards and Quality (STAMEQ)</td>
<td></td>
</tr>
</tbody>
</table>
### International and Regional Organisations

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominated BIML</td>
<td>Mr J F Magana</td>
<td>Sous-Directeur de la Metrologie, Ministere de l’Economie, des Finances et de l’Industrie, 20, Ave de Segur, 75353 Paris</td>
</tr>
<tr>
<td>Director/ WELMEC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTB, Germany</td>
<td>Dr E. Seiler</td>
<td>Physikalisch-Technische Bundesanstalt (PTB), Bundesallee 100, 38116 Braunschweig, Germany</td>
</tr>
</tbody>
</table>

### Apologies

<table>
<thead>
<tr>
<th>Member Economies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>Raul Nunez, Head of Metrology Division, INN-Chile</td>
</tr>
<tr>
<td>Hong Kong China</td>
<td>KW Ma, Deputy Head of Trading Standards Investigation Bureau</td>
</tr>
<tr>
<td>Mongolia</td>
<td>M Bayarmagnai, Chairman MNCSM</td>
</tr>
<tr>
<td>Philippines</td>
<td>Jocelyn Blanco, DOST</td>
</tr>
<tr>
<td>Russia</td>
<td>Dr V. Krutikov, Vice President, Gosstandart Russia</td>
</tr>
</tbody>
</table>