

REPORT ON THE TWELFTH MEETING OF THE JCRB
Held on 3-4 May, 2004, at the CENAM, Queretaro, Mexico

Note: Discussion documents are available in the JCRB web page
<http://www.bipm.org/cc/JCRB/Restricted/WorkingDocuments.jsp>
Links to specific documents are provided in this report where appropriate.

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0. Present

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Dr. William Anderson	SIM
Dr. Vladimir I Belotserkovskiy	COOMET
Prof. Matey Bily	COOMET
Dr. Stephen Carpenter	SIM
Dr. Ismael Castelazo	BIPM
Dr. Christine de Groot	SIM
Mr. Paul Hetherington	EUROMET
Dr. Hidetaka Imai	APMP
Dr. Robert Kaarls	CIPM
Prof. Dr Michael Kühne	EUROMET
Mr. Lam Kong Hong	APMP
Ing. Quím. Luis Mussio	SIM
Dr. Attilio Sacconi	EUROMET
Dr. Takashi Usuda	APMP
Prof. Andrew Wallard	BIPM (Chairman)
Dr. Nikolai Zhagora	COOMET

Additionally, 10 observers were present. A complete list of delegates, with their affiliations and contact data, as well as the names of observers, is given in [Document JCRB-12/01](#)

1. Opening and welcome by the Chairman
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The Chairman opened the meeting and invited attendees to introduce themselves. Subsequently, he asked for comments on the meeting Agenda, which were noted and are reflected in the table of contents for this report, as well as in [Document JCRB-12/00](#).

2. Matters arising from the report of the 11 th meeting held at the BIPM

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The Chairman asked for comments on the 11th JCRB meeting Report and reviewed [Document JCRB.12/02](#) ("Action items from the 11th JCRB"). Action items that required further discussion had been already included in the agenda for this meeting. The 11th meeting Report was approved.

3. Report by the Chairman on progress since the 11 th meeting
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The Chairman reported that there has been a slow but steady increase in the number of CMCs published in Appendix C. He noted that there had been some disagreements among technical experts in the areas of Thermometry, Time and Frequency and Flow. However, recent progress indicated that those problems would be solved and we would see CMCs published in the near future.

Prof. Wallard asked all RMO Representatives to let him know if there is any problem with the inter-regional CMC review, which, at the moment, seems to be proceeding without problems. He commented that he holds a regular management meeting with Dr. Claudine Thomas, Head of the KCDB Office at the BIPM, and with the Executive Secretary of the JCRB. A document on BIPM Interventions will be presented for approval by the JCRB on point 6.3 of the Agenda.

He expressed his satisfaction with the smooth transition that has taken place from Dr. Angela Samuel, former Executive Secretary of the JCRB, to Dr. Ismael Castelazo.

The Chairman indicated that the BIPM maintains a quality system for its measurement services, which is compliant with the ISO/IEC 17025 standard. While some administrative processes are yet to be incorporated, the QS is already showing its value with the identification of some areas where the BIPM could improve its efficiency.

Prof. Wallard reported that the number of signatories to the CIPM MRA is increasing. Of particular interest is the application of CARICOM, the economic union of fifteen Caribbean countries, to join as an Associate of the CGPM.

He reported that the BIPM/CIPM is reviewing all MRA-related documents to look for inconsistencies and provide clarifications where needed. **He**

stressed that there is not any intention to rewrite the MRA but that in some cases the language needed to be clarified.

The Chairman informed the JCRB that a Directors' meeting will complement the next JCRB meeting, in October. The Directors' meeting will be specifically aimed at the MRA.

4. Report on the present status of the KCDB

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Dr. Ismael Castelazo presented the KCDB report ([Document JCRB-12/03](#)) submitted by Dr. Claudine Thomas, Head of the KCDB Office. He summarized the current statistics on the KCDB and informed the JCRB that the number of visits is slowly but steadily increasing. Additionally, it has been noted that the quality of the visits has improved significantly with more searches of the database. Since the last report, Belarus, Chile, Chinese Taipei, Malaysia and Slovenia have been added to the list of economies with CMCs published in Appendix C.

The total number of CMCs in Appendix C will soon be reduced due to the use of tables of uncertainty by the area of Electricity and Magnetism. This is an improvement that will facilitate the identification of services by the users.

Two new features will be added to the database:

1. The final Excel files used to upload the CMCs will be available to the TC/WG Chairs, who may use them when revising or updating the capabilities of an NMI. These files differ from the ones in the CMC review web page in that they will be ordered by country and area and will include all format corrections normally done at the KCDB Office.
2. Absolute URL addresses will be available after a search in Appendix C. This will allow users to send a link to parties interested in specific capabilities of an NMI, without asking them to perform the search themselves.

Both facilities will be released before the next meeting of the JCRB.

A copy of the KCDB leaflet ([Document 12-03a](#)) was presented. It had been widely distributed at the PITTCON 2004.

Dr. Castelazo then presented tables with statistics on participation in CIPM key comparisons ([Document 12-03b](#)) and published CMCs ([Document 12-03c](#)), both presented by economy and by NMI.

It was remarked that in order to be clear and transparent to the user, it is essential that the (designated) institute, which is really carrying out the calibration and measurement services, is properly identified by its own

name and acronym in the KCDB and is not hidden behind the name of an administrative coordinator in the country concerned.

5. Reports by RMO representatives to the JCRB

5.1. APMP

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Mr. Lam Kong Hong tabled [Document JCRB-12/05\(1\)](#) and informed the JCRB that Dr. Imai had handed over the APMP Chairmanship to him at their last General Assembly. The APMP Secretariat, nevertheless, will continue to be provided by NMIJ.

He mentioned that the 19th General Assembly had elected two new members from Korea and Chinese Taipei to the APMP Executive Committee. It was decided that the 20th General Assembly will be held on 18-22 October, 2004, in Beijing, and the 21st GA, in 2005, will be hosted by KRISS, in Korea.

The APMP Chairman reported that the APMP-SIM Workshop in Kuala Lumpur had been very successful. Templates for calibration and measurement procedures as well as a quality manual were developed, with the intention of helping NMIs with less experience develop their quality systems. These documents will be soon published in the APMP web page.

Mr. Lam informed the meeting that the quality system information reported by APMP NMIs has been reviewed and accepted by the Technical Committee on Quality Systems. Other Technical Committees in the various metrology fields are in the process of reviewing the competence of the technical experts who carried out the peer-reviews and whether all the published CMCs are covered by the quality systems.

Responding to a question from Dr. Zhagora, Mr. Lam indicated that the Democratic People's Republic of Korea (North Korea) is a full member of APMP, although it has not yet submitted any CMCs.

5.2. COOMET

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Dr. Vladimir Belotserkovskiy tabled document [JCRB-12/05\(2\)](#), which included the COOMET report and seven appendices. He explained that five COOMET members (Bulgaria, Germany, Lithuania, Romania and Slovakia) have submitted their CMCs through EUROMET and that is the reason why only Russian CMCs had been submitted through COOMET. However, Belarus and Ukraine signed the MRA early this year. Their CMCs, along with those of Cuba, have been submitted through COOMET and are currently undergoing inter-regional review.

Dr. Belotserkovskiy thanked the Executive Secretary for following up on the delays encountered during the inter-regional review of the Byelorussian CMCs in AUV, which were recently published. A summary of all CMCs from COOMET members is available at their web site (see Appendices 2 and 3).

Continuing with his presentation, Dr. Belotserkovskiy noted that many COOMET comparisons carried out in the past did not follow the CIPM Guidelines for Key Comparisons. Therefore, COOMET has initiated the "COOMET Program of Comparisons and Calibrations" where RMO Guidelines on comparisons will be developed in line with the CIPM documents. It is expected that these documents will be approved at the next COOMET Committee meeting in Varna, Bulgaria, later this month.

Another important problem in COOMET is the presence of certain calibration certificates that are common in certain COOMET countries and which do not meet the requirements of ISO/IEC 17025. A project aimed at solving this problem has also been started, with the objective of finding a common form of calibration certificates, compliant with this standard.

Prof Wallard inquired if the project of comparisons was related to the CIPM MRA. Dr. Zhagora responded that it was precisely aimed at making sure that COOMET comparisons could be used to support CMCs from its members.

Prof Wallard also asked about the significance of the calibration certificates reported by Dr. Belotserkovskiy. Dr. Zhagora answered that this project is trying to unify the format of all calibration certificates issued by NMIs. Dr. Kaarls added that in some COOMET countries there were legal requirements that specified the contents of calibration certificates and these were generally not in accordance with the specifications of ISO/IEC 17025. He asked if those certificates were issued only to local customers or also to foreign ones. Dr. Zhagora explained that most COOMET countries have now changed their legislation to make it compatible with most European countries and that the same certificates were issued for local or foreign customers.

Prof Bily added that an EU "New Approach" project had been started to help solving the problem of calibration certificates but COOMET had expressed certain concerns and, as a result, the project had been cancelled. He opined that this is a complex economic problem that will not be solved solely by a legislative change.

5.3. EUROMET

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Mr. Hetherington tabled [Document JCRB-12/05\(3\)](#). He indicated that Martin de Groot has resigned as Chair of the EUROMET TC on

Thermometry. Jovan Bojkovsky, from Slovenia, has taken his place and will chair this committee until 2005.

The Chairman of EUROMET informed the JCRB that NMIs from EU countries are automatically admitted as full members of EUROMET. Therefore, with the acceptance on 1 May of ten new countries into the EU, Cyprus, Estonia, Lithuania and Malta are now entitled to become full members of EUROMET (pending signing the MoU), bringing the total potential membership to 31.

Mr. Hetherington pointed out that EUROMET CMCs in flow have been published in Appendix C and over 3000 CMCs in electricity are progressing well in the inter-regional review.

Dr. Sacconi then presented a summary of activities in the Quality System Forum. He reported that Romania, Croatia and the IRMM-IM Unit presented their QS for the first time. Eleven other NMIs presented their final implementation reports. Dr. Sacconi also commented that EUROMET contributed to the definition of the JCRB format for reporting the RMO reviews of quality systems in NMIs.

Prof. Wallard asked Mr. Hetherington about the extent of the metrology infrastructure in Cyprus. Mr Hetherington replied that it is still very limited, covering only some legal metrology areas.

5.4. SADC MET

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In the absence of the SADC MET representative, the JCRB Chairman tabled [Document JCRB-12/05\(4\)](#), and asked those present if there were any comments. No comments were voiced and the Chairman commented that the SADC MET representative would be invited to make a presentation if he arrived at a later time.

Note: Later in the meeting, an e-mail from Mr. Musarurwa was received, explaining that he was unable to fly to Mexico due to problems with his US visa.

5.5. SIM

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Ing. Luis Mussio tabled [Document JCRB-12/05\(5\)](#). He confirmed Mr. Lam's report that the APMP - SIM Workshop on Quality Systems for Developing Countries, held in Kuala Lumpur, on 13-15 April, 2004, had been a success. The documents developed cover aspects of quality systems that are important for NMIs but are not properly covered in ISO/IEC 17025.

Ing. Mussio informed the JCRB that this year SIM will organize three awareness seminars, to be held in St. Lucia, Bolivia and Paraguay, respectively. Prof. Wallard inquired if these seminars covered also standards and accreditation or only metrology, to which Ing. Mussio responded that only legal and scientific metrology was included.

6. Status of CMC reviews

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The Chairman tabled [Document JCRB-12/06](#) (CMC Review Status) and [Document JCRB-12/06a](#) (Flowchart of the CMC review process). He asked the JCRB representatives for comments on these documents.

Dr. Usuda and Mr. Hetherington commented that the Excel file on the CMC Review Status has been very useful and supported its distribution on a regular basis. The Executive Secretary informed the JCRB that this report will be available on the web page in a few months. In the mean time, he will continue distributing it by e-mail once a month.

Action 12/ 1 The Executive Secretary to draft and distribute an Excel file on the status of CMC reviews every month until this report is available on line.

Ing. Mussio pointed out that the flow chart required an additional decision block to verify if at least one NMI has forwarded comments on a CMC submission. Mr. Hetherington noted that the box on "Review by CMC Working Groups" referred mistakenly to the Inter-regional review as "*Intra-regional*" review. The Chairman asked the Executive Secretary to modify the flow chart according to this discussion.

The Chairman then asked the JCRB if they approved the CMC-review flow chart with the modifications discussed above, to which all members agreed.

Action 12/ 2 The Executive Secretary to modify the Flow Chart of the CMC Review Process, according to the discussion at the 12th JCRB meeting, and post it in the open section of the JCRB web page.

The Executive Secretary mentioned that the CMC review process seems to proceed more efficiently now that technical contacts receive copies of all correspondence related to CMC submissions. He asked RMO representatives if they thought it would be feasible to empower TC/WG Chairs to make some decisions directly instead of going through their RMO representatives. Ing. Mussio suggested that they be allowed to decide whether a CMC file would be reviewed or not and to provide the deadline for sending comments, because in the present state of affairs he only relays whatever information they give him and adds an unnecessary delay

to the process. Prof Bily was of a different opinion and expressed his concern that the official communication channels should be maintained. Mr. Hetherington pointed out that it was very important that the TC/WG Chairs keep the RMO representatives informed of all communications with the BIPM. Then, the JCRB Chairman suggested that each RMO should instruct the Executive Secretary if they would like to delegate more functions in the TC/WG Chairs.

Action 12/ 3 RMO representatives to inform the Executive Secretary if they wish to authorize TC/WG Chairs to communicate directly any RMO decision concerning CMC reviews.

Action 12/ 4 The Executive Secretary to send a reminder to all TC/WG Chairs that they should keep RMO representatives informed of all actions concerning CMC reviews.

6.1. Progress in the areas of temperature, time and flow

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Prof. Wallard reported that the main key comparison in time and frequency is UTC (Universal Coordinate Time), maintained at the BIPM, and that this is now a registered as an official key comparison with the name CCTF-K2001.UTC. This has allowed the intra-regional review of CMCs in time and frequency to proceed normally. Dr. Kaarls pointed out that this comparison was useful for the dissemination of time scales but that more comparisons were needed for other calibration services. These are, in fact, also being discussed within the CCTF.

As it was reported at the last meeting of the JCRB, the Chairman needed to intervene to solve an impasse in the definition of the classification of services for the area of flow. Prof. Wallard reported that CMCs in this area are now published and asked the JCRB whether there were any comments or concerns. None were expressed.

The Chairman also commented that, after a year-long discussion, experts at the CCT have finally agreed on technical details that were impeding progress in the inter-regional review of CMCs in thermometry. The Executive Secretary informed that the previous Friday he had received the files approved by the CCT working group on CMCs. He proceeded to post them in the CMC-review web page for approval but, considering that they had not been received through the official channels, he invited RMO representatives to contact him should they have any concerns.

Mr. Hetherington asked about the status of the previous submissions in thermometry that were posted in the JCRB web page. The Executive Secretary responded that they have been substituted by the latest files

but that the web page currently does not have the capability of canceling a CMC. The JCRB Chairman then instructed the Executive Secretary to make sure that old files are saved with a different status.

Action 12/ 5 The Executive Secretary to request a modification of the CMC review web page, in order to allow the definition of a different status for old CMC submissions whose inter-regional review has been abandoned.

6.2. CMC specification procedure

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The Chairman tabled [Document JCRB-12/6\(2\)](#) and asked the Executive Secretary to comment on it. Dr. Castelazo pointed out that this document was motivated by the identification of a few CMCs that had been approved for publication but contained an uncertainty statement of "less than" (<) a stated number. While acceptable uncertainty statements had been specified in the third meeting of the JCRB (see [Activities of the JCRB: 1999-2003](#)) this report had not been widely circulated and it was not known by most technical contacts. The document presented for approval at this meeting clarifies the different types of uncertainty statements that may be used to specify the scope of a CMC.

Dr. Castelazo commented that a thorough search of the KCDB indicated that only one set of CMCs in flow from EUROMET are currently published with an uncertainty of "less than" a number. Mr. Hetherington indicated that he had requested a clarification from the issuing NMI and a response will be available by the middle of May. The Executive Secretary also mentioned that a second case was detected during an inter-regional review in the area of E&M. The issuing NMI was contacted and agreed to eliminate the "less than" sign from its uncertainty statements.

Dr. Kaarls indicated that in the area of chemistry it may not be possible to comply with the requirement that linear interpolation may be used when a range is specified in an uncertainty statement. The JCRB Chairman pointed out that this document should be used as a guideline but that individual areas may adapt it to their needs.

The document was then approved and will be posted in the open section of the JCRB web page.

Action 12/ 6 The Executive Secretary to post Document JCRB-12/06(2) in the open section of the JCRB web page.

6.3. BIPM Interventions

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The Chairman tabled [Document JCRB-12/06\(3\)](#) and asked the Executive Secretary to explain its contents to the JCRB. Dr. Castelazo described the kinds of possible interventions the BIPM may need to perform on CMC files. He indicated that these interventions may be related to 1) format specifications; 2) range and uncertainty declarations and 3) status of designated NMIs. In the first case files are corrected without consultation with the issuing NMI, unless it is necessary. The second case will be monitored by the Executive Secretary and the Head of the KCDB Office, in accordance with [Document JCRB-12/06\(2\)](#). For the third case, the KCDB Office monitors whether the issuing organisation has been officially designated by the appropriate authority in the country. If this is not the case, the CMCs are not published until such designation occurs.

The JCRB approved the document on BIPM interventions and asked the Executive Secretary to post it in the open section of the JCRB web page.

Action 12/ 7 The Executive Secretary to post Document JCRB-12/06(3) in the open section of the JCRB web page.

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| 7. Report on the frequency of special calibrations with uncertainties lower than those published in Appendix C |
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7.1. Report from RMOs

7.2. Report from ILAC

No official reports were received from ILAC.

The Chairman commented that ILAC is still convinced that these certificates exist. Mr. Hetherington reported that 40% of EUROMET NMIs, including the largest ones, responded to his survey and the conclusion is that there does not seem to be a problem in Europe. One accredited NMI reported that there was an inconsistency between its BMCs (accredited) and its CMCs (published in Appendix C) but they were taking steps to normalize both sets. Another reported having issued a single certificate at a lower uncertainty than that which had been approved by the JCRB but indicated that it will not happen again. Finally, Mr Hetherington reported that an NMI which improved its JCRB-approved capabilities started issuing certificates with the lower uncertainty right away because the CMC review process is very long. Prof. Wallard asked how a user could tell when this was happening, to which Mr. Hetherington responded that the NMI concerned was not using the MRA statement on these particular certificates.

Ing. Mussio reported that only NIST responded to his query and they qualified the frequency of this happening from "extremely rare to none."

Dr. Takashi informed that he asked APMP NMIs by e-mail if they issued this type of certificates. This question was restated at the APMP General

Assembly and in both cases the answer was that this does not occur in APMP NMIs.

Dr. Zhagora reported that COOMET NMIs responding to his question indicated that they never issue certificates with uncertainties lower than those published in Appendix C.

The Chairman commented that the problem is apparently not a serious one but asked Drs. Anderson and Bruce if they knew if there was a mechanism at NIST to inform the clients about those extremely rare cases. They responded that they did not know but that the issue would have to be raised.

Then Prof. Wallard asked the JCRB members if they knew of any NMI that was using the MRA statement on its certificates. Dr. Kühne responded that PTB was using it consistently. Dr. Anderson pointed out that NIST probably will not use it but that they will make it clear in their web page and other publications that they will be consistent with the CIPM MRA.

A discussion ensued on the different ways in which the JCRB could promote the consistent use of the MRA statement in certificates issued under the CIPM MRA. Dr. Carpenter suggested that NMIs should submit ALL their CMCs for review. The Chairman recommended promoting the use of the statement because it would be very useful for regulators. Dr. Kaarls pointed out the need to develop a "fast track" approval process to reduce any delays which might hold up the issuing of certificates with smaller uncertainties. Prof. Wallard also commented that NMIs should have a good idea that they are planning to purchase an important piece of equipment or improve their procedures in a way that would allow them to reduce their uncertainties. This could be announced in advance to RMO TC/WG so as to alert them to the proposed changes and so speed up the RMO review process. Dr. Castelazo commented that CENAM does not use the statement because their clients do not ask for it, administrative resources are needed to implement it and it is difficult to explain to customers that while some services do not bear the statement they are not necessarily "second class" services (i.e. temperature). The Chairman replied that although he understood the problem he did not think it should be a major issue.

Considering that EUROMET and SIM had indicated that they needed to consult with their TC/WG Chairs on the possibility of a "fast track" approval process for the improvement of published CMCs, Prof. Wallard asked them to report to the JCRB on their findings within the next six weeks.

Action 12/ 8 EUROMET and SIM to report to the JCRB Chairman on their TC/WG Chairs proposals for a "fast track" approval process, for the improvement of published CMCs within the following six weeks (June 18, 2004).

The Chairman finished the discussion reiterating his request that the JCRB and RMO members should encourage the use of the JCRB statement.

8. Report from the Working Group to develop recommended criteria for the selection of peer-reviewers for NMIs

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Mr. Lam tabled [Document JCRB-12/08](#). He commented that, while he had received some comments that suggested it focused too much on accreditation requirements, he thought it was still useful to bring it to the table for discussion.

Dr. Kühne pointed out that [Document JCRB-12/08](#) contained a statement saying that the process of assessing the CMCs from an NMI **required** an on site visit by peers, which is in conflict with the text of the MRA. He quoted point 7.3 of the CIPM MRA where it is stated that "Declaration of competence and capability **may** require visits and examination of procedures by an NMI and/or by peers selected by the local RMO." He explained that EUROMET believes that the CMC review process includes two separate issues: the technical competence, examined by the technical committee; and the quality system, assessed at the Quality System Forum. On-site visits are required only if agreed on by the technical committee. He asked the JCRB to consider the proposal from PTB and endorsed by EUROMET, tabled as [Document JCRB-12/08a](#).

Ing. Mussio agreed with Dr. Kühne's assertion that CMCs are always peer-reviewed in a technical sense but only in some cases is this review performed **on-site**.

Prof. Bily expressed his support for Mr. Lam's paper. He indicated that the JCRB should not develop its own review procedures but should rather adopt internationally recognized documents like those issued by ISO or EA. He stated that he understood that some NMIs can not afford to go through an accreditation process. Therefore, he suggested that those NMIs instead request an on-site peer review by qualified experts.

Dr. Imai recalled that an original objective of the Joint Committee for Guides in Metrology was to adapt ISO Guide 25 for the special requirements of NMIs. This recognition that NMIs are different from secondary laboratories supports the idea of different types of reviews as is the case of EUROMET's Quality System Forum. However, he did not think the same process could be used in APMP where there is a wide range of established and developing economies. He asked Dr. Sacconi whether the QSF was still available for newcomers. Dr. Sacconi replied that this was true but that political pressures forced them for the moment to give preference to the new EU members.

In response to Prof. Bily's comments in support of recommending on-site peer-reviews in all cases, Dr. Sacconi indicated that if the accreditation

path would be the complete and sufficient solution, there would be no need of all the demanding work (KCs and SCs, CMCs and QS) established with the MRA. Furthermore, he considered that it was very important to follow a transparent process which, in the case of the IMGc (all costs included), had been more expensive than accreditation.

Mr. Lam expressed his intention to align the language of [Document JCRB-12/08](#) with the text of the MRA. He stated that APMP recognizes that accreditation is not the only way to prove technical competence and that other activities like research and publications are also important.

Mr. Hetherington recalled that the original remit of the working group was simply to suggest qualifications for peer-reviewers, not to discuss the broader topic of quality system or CMC reviews. Mr. Lam, thanked Mr. Hetherington for his comment and reiterated his intention to redraft his paper.

Prof. Bily pointed out that the EU directive for measuring equipment requires verification only by notified bodies. He said he could not understand how anybody could accept capabilities without a visit. As an example, he commented that it would be hard to verify the claims made by QS managers without an on-site visit. Dr. Kühne replied that the MRA clearly states that self-declaration is equivalent to accreditation and that, contrary to Prof. Bily's remark, his paper explains ways in which this could be done practically. He stressed that the group should not try to rewrite the MRA.

The Chairman commented that the group has learned a great deal about the ways in which different RMOs review quality systems of NMIs. At this meeting, the difference between peer-reviews and **on-site** peer-reviews would now be clarified. It should be noted that the JCRB recommends that reports from on-site peer-reviews should be made available to TC/WG and to the appropriate QS review group, during the inter-regional review process.

Dr. Kühne insisted that the qualifications for assessors should be different when the on-site review is done by invitation of the NMI than when it is recommended by the technical committee. Dr. Kaarls expressed his opinion that the requirements given in Mr. Lam's paper should apply to all cases: "the right person in the right place for each application." Dr. Kühne replied that that is exactly the reason why he is making this recommendation.

Mr. Lam indicated that he understood the comments he received as meaning that some form of on-site evaluation was necessary. Dr. Kühne replied that the MRA is not trying to mimic third-party accreditation and that the JCRB system is much more thorough than accreditation because we review CMCs at the regional and inter-regional levels. On the other hand, some Accreditors may approve a secondary laboratory without requiring any comparison, he continued.

Dr. Kaarls expressed his opinion that on-site visits should be required if an NMI is new or if it is entering a new area.

The Chairman asked Mr. Lam if it was the official position of APMP that an on-site visit was necessary, to which Mr. Lam responded in the affirmative. Dr. Sacconi then commented that we should not try to extend criteria used in one RMO to the others. Mr. Lam agreed but added that they had difficulties of confidence if they did not completely understand the review process used in other RMOs. Prof. Wallard concluded by asking Mr. Lam to continue his work and proposing that at the next JCRB meeting, half of the time be spent on this issue and the other half on RMO presentations of their QS review processes. He asked Mr. Lam and Dr. Kühne to jointly draft a new document on the "reviewer criteria for on site visits by peers" based the documents JCRB-12/08 and JCRB-12/08a and on the discussion during the 12th JCRB meeting.

Action 12/ 9 Mr. Lam to redraft his document on QS reviews according to the discussion in this meeting, and present it at the 13th meeting of the JCRB.

9. RMO reports on the status of Quality System implementations
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9.1. APMP

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Dr. Usuda tabled [Document JCRB-12/09\(1\)](#). He explained that the APMP review process focuses on whether or not all CMCs are covered by the quality system. All necessary information, such as calibration certificates, scope of CMCs and names of reviewers are gathered by the Secretary and distributed to all Technical Committees for review. The TCs decide if the quality system complies with ISO/IEC 17025 (or an equivalent standard) and assess the acceptability of peer reviewers as well as whether all CMCs are effectively covered by the QS. Dr Usuda pointed out that APMP did not have time to finish this thorough review and, consequently, some columns in the reports are blank. On the other hand, the names of reviewers were included.

Prof. Wallard commented that the credibility of the MRA would be hurt if this process took more than a year. Dr. Kaarls asked Dr. Usuda what they verified in order to fill the column on "All CMCs covered by QS." Dr Usuda replied that they checked if they were all included in the accreditation certificate.

9.2. COOMET

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Prof. Bily tabled [Document JCRB-12/09\(2\)](#). He indicated that some members of COOMET are also members of EUROMET and have had their quality systems reviewed by that organization. COOMET has reviewed and approved the quality system implementations in twelve designated laboratories in Russia, Ukraine and Belarus. Cuba and Moldava will present their QS during a meeting in June.

Prof. Bily commented that COOMET requires an on-site peer review and is asking all laboratories to present their quality systems at a meeting. Prof. Wallard asked if accreditation organizations in COOMET countries are signatories to the ILAC MRA. Prof. Bily answered that, for the moment, this is true only for the Slovakian accreditation body.

Dr. Sacconi remarked that most COOMET laboratories report all their CMCs to be covered by their quality systems. He pointed out that EUROMET has declared that many CMCs are not yet covered. Prof. Bily replied that most COOMET laboratories have participated in comparisons, except for Cuba which is presenting its quality system at the next meeting.

Dr. Kaarls commented that he was aware of the thorough nature of QS reviews in COOMET, which is encouraged by a strong competition for markets among its members.

Dr. Zhagora indicated that one of the Byelorussian laboratories is accredited under ISO/IEC 17025 and the other certified under ISO-9000.

9.3. EUROMET

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Dr. Sacconi tabled Documents [JCRB-12/09\(3\)](#) and [JCRB-12/09\(3a\)](#). The first document is a collection of QS templates for 29 countries. There is an error in the template from France as there are still actions to be done for the areas of photometry and radiometry as well as AUV. Dr. Sacconi also clarified that in the template for Poland [page 48 of document [JCRB-12/09\(3\)](#)] the abbreviation "AS" had been used for the area of chemistry, while "MC" was used in all the other forms.

Dr. Sacconi informed the JCRB that EUROMET is presenting, in document [JCRB-12/09\(3a\)](#), the process used by EUROMET to review quality systems and he hoped that would clarify the questions that had been presented before.

Prof. Wallard asked why Appendix 2 (Information on QS Assessment Team) had not been completed for some countries, like Belgium. Dr. Sacconi answered that Appendix 2 had been presented only for accredited laboratories.

9.4. SADC MET

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The Chairman tabled [Document JCRB-12/09\(4\)](#). In the absence of the SADC MET representative, the JCRB received it for information and subsequent consideration.

9.5. SIM

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Ing. Mussio tabled [Document JCRB-12/09\(5\)](#). He explained that the information presented had not yet been reviewed by the QS Task Force and is submitted as received from each NMI. He commented that SIM found it useful to add a column to specify sub-fields in each area and recommended that in the future more use is made of Excel spreadsheets instead of Word tables.

Dr. Anderson indicated that SIM had borrowed the format proposed by EUROMET and that is what they would use in their meeting the following day. He remarked that the Task Force had a considerable amount of work to be done in their upcoming meeting and in the next one in November, but that they would meet the deadline of a complete set of reviews by the end of December 2004.

Noting that some NMIs would not fully meet the JCRB requirements by the end of the year, Prof. Wallard invited the JCRB to decide on the actions to be taken after that deadline. Dr. Sacconi was of the opinion that the credibility of the MRA would be compromised if the JCRB approved a long extension. Prof. Bily agreed and suggested a period of no more than three months to allow NMIs to correct minor points. Mr. Lam supported the December, 2004 deadline but pointed out that some laboratories (including his own) might not finish and would need some flexibility. Dr. Zhagora commented that COOMET only presented NMIs that are compliant with the requirements but that he understands that it takes time to be ready and some NMIs might need flexibility.

Prof. Wallard proposed that a three-month extension be allowed only when there is still a need for an RMO meeting to review the quality systems which should be in place by 31 December, 2004 for all CMCs submitted to the JCRB. Dr. Kühne agreed and added that this would give time to complete the process before the first JCRB meeting in 2005. The Chairman then proposed that if at that time there are still some CMCs not covered by a fully compliant quality system they would be deleted from the KCDB. The JCRB agreed.

Ing. Mussio asked if cancelled CMCs would have to return to the full inter-regional process once the quality system is in place. Prof. Wallard responded that that would not be necessary provided there had been no changes.

Mr. Hetherington asked the Chairman to clarify if the lack of a quality system prevented the submission of CMCs for inter-regional review or if they could be reviewed but not published. Prof Wallard responded that those CMCs could be reviewed but would not be published until there is evidence that a quality system is in place. Dr. Castelazo reminded the JCRB that the BIPM can not at this point tell whether the quality system review has taken place. Dr. Kühne suggested that intra-regional reviews be allowed to proceed before the quality system is implemented but that it should be a requirement for inter-regional reviews. Dr. Usuda suggested that the CMC Review Flow Chart be modified to require that RMOs confirm the presence of a quality system before submitting CMCs for inter-regional review. This suggestion was accepted by all delegates.

Action 12/ 10 The Executive Secretary to modify the CMC Review Flowchart to indicate that RMOs should review the presence of a fully-compliant quality system before submitting CMCs for inter-regional review.

10. Designated Laboratories

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Note: The following three points were discussed as a single agenda item.

- 10.1. Primary standards and/or calibration services
 - 10.2. Participation of private companies
 - 10.3. Involvement of potential designated institutes in CC/BIPM pilot studies
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Dr. Kaarls said that a document is being prepared to clarify the designation process, and that it should be ready for presentation to the next JCRB meeting. This document will include a discussion on the participation of private companies as designated institutes. In his opinion each government can decide whether to designate a private company but it was important to be aware of the consequences of interfering with a level economic playing field.

Regarding the participation of potential institutes in CIPM pilot studies, Dr. Kaarls commented that, considering the cost of comparisons and the number of rounds required, it was important to make an effort to invite laboratories that would probably become designated in the near future. Otherwise, they might miss the opportunity to participate in important comparisons for a long time. Currently, this applies only to pilot studies, in particular those organized by the CCQM, and not to key comparisons.

Dr. Kühne inquired how a laboratory attains the status of “potentially designated institute” and, consequently, the right to participate in these pilot studies. Prof. Wallard commented that they are competent laboratories but that their results are not considered when computing a key comparison reference value. Mr. Hetherington asked whether it would not be more convenient to ask these laboratories to participate first in RMO pilot studies. Dr. Kaarls responded that, in the case of the CCQM, samples could be sent to many additional laboratories without affecting the work of the members. Prof. Wallard added that this practice was especially important in new areas like medicine and food, where many governments have yet to designate laboratories for participation in the MRA.

Ing. Mussio pointed out that it was important not to invite a laboratory to participate without the consent of the appropriate authority in the country. Dr. Kaarls agreed. Then, Ing. Mussio asked the Chairman how often a country needed to designate an institute to maintain its status in the MRA. Prof. Wallard responded that, according to the text of the MRA, a designated institute retains its status until its government revokes it. There is no need to renew designations.

Dr. Carpenter asked if the CMCs from any laboratory which had had its designation is revoked would be removed from the KCDB. Prof. Wallard also commented that the MRA does not allow for publication of CMCs from two laboratories in the same country.

Dr. Carpenter asked how the authority responsible for designating institutes is identified. Dr. Kaarls responded that this is done at the time of the signature. He recommended that RMOs verify this point because they are closer to the NMIs.

The Chairman asked the delegates to send him or Dr. Kaarls an e-mail should they have any suggestion on the practical aspects of participation of designated institutes in CC pilot studies, so that these suggestions would be included in the paper they are writing. Dr. Carpenter suggested that this document should not dictate to NMIs how to proceed in this area. Prof. Wallard responded that their intention was to say that the primary responsibility lies within the government, not necessarily the NMI, and that it is to the country’s advantage to have the participation of the appropriate laboratories.

11. Additional CIPM MRA Documents

11.1. Subcontracting

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Dr. Kaarls tabled [Document JCRB-12/11\(1\)](#). He explained that subcontracting is an important issue in many areas. As an example, in

chemical metrology, NMIs send samples to *collaborating institutes* to obtain values that are important as a *verification* of the results obtained by an NMI but are not used to certify the reference materials. He proposed that the JCRB decides whether subcontracting should be allowed and, in such a case, what the requirements would be.

He also pointed out that it was not possible for NMIs to meet the requirements of ISO/IEC 17025 on this issue because the standard requires the laboratory to inform the customer in advance when subcontracting will be used.

Dr. Kühne agreed with the idea of subcontracting because, in his opinion, it is impossible for an NMI to own all the facilities or equipment needed to do its work. He added that he would like to show this document to the technical staff at PTB before presenting a formal opinion.

Dr. Kaarls pointed out that the main idea in the paper is that NMIs should not subcontract work if they do not have experience in the field. As an example, Dr. Kühne mentioned that the PTB would like to take advantage of a 2 m length comparator being set up by a private company in Germany, which will have a greater capacity than that of any NMI in the world.

In a subsequent discussion, JCRB delegates presented differing opinions on the meaning of the word "subcontracting" as used in ISO/IEC 17025. For some, the standard allows a laboratory to subcontract only work for which it has capabilities. For others, this was not accurate. Others expressed a preference for the alternative phrase "use of external facilities".

Dr. Imai asked if this concept would be applied to the dissemination of the Avogadro constant and requested time to consult with APMP experts. Dr. Kaarls confirmed that dissemination of the Avogadro constant is an example where subcontracting would apply.

Dr. Sacconi supported a proposal from Dr. Imai to clarify first what we understand by the terms used in the paper. All agreed that the concept is useful and that it is necessary to establish the rules.

11.2. Criteria for CRMs to be mentioned in Appendix C

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Dr. Kaarls tabled document [**JCRB-12/11\(2\)**](#). He explained that in the past some laboratories had "certified" reference materials using the results of round robins where some of the participants were not national or designated laboratories. The purpose of this paper is to clarify the conditions under which a CRM can be listed in Appendix C. He pointed out that he received comments on the paragraph about designated

laboratories and he will move that to the document he is preparing on the subject.

Dr. Sacconi suggested it was necessary to clarify the meaning of "signatory" and "designated institute". Dr. Kaarls responded that the document presented in the previous agenda item will clarify this issue.

Several delegates indicated that they would need to consult with their technical contacts in the chemistry area and requested the latest version of the documents.

Action 12/ 11 The Executive Secretary to coordinate with Dr. Kaarls and circulate the latest versions of documents JCRB-12/11(1) and JCRB-12/11(2).

Prof. Wallard asked the JCRB members to provide their comments on both documents by the end of July.

Action 12/ 12 JCRB Representatives to provide comments on documents JCRB-12/11(1) and JCRB-12/11(2) by the end of July.

11.3. Requirements for quality systems based on ISO Guide 34, to be maintained by institutes claiming customer services in Appendix C via CRM's

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Dr. Kaarls pointed out that the requirements of ISO/IEC 17025 are not sufficient to assure confidence in CRMs. He asked the JCRB to agree that ISO Guide 34 should also be required for CRM producers before publishing their CMCs in Appendix C. He added that this Guide is widely accepted in the chemical field and that the CIPM MRA is being criticized for not having included it in its text.

Dr. Imai remarked that it was necessary to explain why Guide 34 was needed in addition to ISO/IEC 17025 and asked Mr. Hetherington if he knew how Guide 34 was introduced in EUROMET. Mr. Hetherington responded that he did not know the details. Dr. Kaarls added that he knew for a fact that Guide 34 is widely accepted in Europe.

Dr. Carpenter suggested the use of flexible language in order to avoid the need of further modifications. Mr. Hetherington asked if a different standard would be needed when CMCs in the clinical area are to be published. Dr. Kaarls responded that for the moment ISO/IEC 17025 and ISO Guide 34 are all the documents that need to be mentioned.

12. Update on SIM MRA

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Ing. Mussio explained the status of the planned SIM MRA. The intention is to facilitate trade in the Americas but also to allow new NMIs to participate in the CMC review process and encourage them to become Members of the Metre Convention or Associates and sign the CIPM MRA. The text has not yet been drafted but it is expected that it will be considered at their next General Assembly.

Dr. Kaarls asked why the same can not be done within the CIPM MRA if the review criteria will be the same. Dr. Carpenter replied that it is done to reduce the cost for Associates.

Dr. Kühne expressed his opinion that regionalizing the MRA is a dangerous development that could be confusing for ILAC for regulators and for other users.

Prof. Wallard asked if products from countries that participate in the CIPM MRA would be accepted. Dr. Carpenter confirmed that the CIPM MRA will be referenced in the SIM MRA. Actual acceptance of products is up to each country.

Dr. Kühne asked if SIM will stop participating in inter-regional reviews of quality systems and CMCs. Ing. Mussio responded that no change is foreseen for SIM signatories of the CIPM MRA. This will affect only non-signatories. Dr. Kühne asked if it would be possible for CIPM MRA signatories to publish CMCs not approved for publication in Appendix C. Ing. Mussio answered that that case had not been discussed yet but it was unlikely. The intention was to put a link to the KCDB when referring to CMCs from signatories to the CIPM MRA.

Mr. Lam commented that in his opinion the SIM MRA would create a technical barrier to trade, which is precisely what the CIPM MRA is trying to avoid. Dr. Carpenter responded that the cost involved in signing the CIPM MRA amounted to discrimination against developing countries, which have to join a number of international organizations at great expense.

Dr. Kühne pointed out that it was difficult to understand how any country could not pay 4500 euros and expressed his opinion that this effort is intended to create a technical barrier to trade. Ing. Mussio noted that, in the case of Uruguay, one of the reasons for joining an eventual SIM MRA was that only 5% of their foreign trade is done outside of the Americas.

Dr. Zhagora recalled that twelve republics of the former Soviet Union signed a similar agreement after the USSR ceased to exist. At that time it involved a database with capabilities in calibration verification and type approval, which was very different from the CIPM MRA. He expressed his understanding of the SIM effort and indicated that COOMET is working to set up a similar database for their region.

Prof. Wallard explained that the purpose of this point was not to get involved in a political discussion but simply to obtain information and

asked Ing. Mussio when he thought the MRA would be signed. Ing. Mussio responded that it would probably be signed in two years.

13. Progress on JCDCMAS

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The Chairman gave the background to the organization and pointed out that there has not been a great deal of progress, in part because the group is looking for a number of regional events where MAS (metrology, accreditation and standards) can be promoted. A non-prescriptive background document is being developed to explain the basic elements of an MAS system. Also a 20-slide Power Point presentation will be developed, which could be used by any of the members in MAS-related events. The OIML General Assembly is a possible venue where this material could be presented at a proposed seminar for developing countries.

The World Bank and the World Trade Organization are being explored as possible partners in this effort. Dr. Castelazo commented that UNIDO made an attempt to organize a JCDCMAS event during its past General Assembly, in December, 2003, but the result was a meeting oriented to issues of particular interest to UNIDO. Dr. Carpenter confirmed this view. Prof. Wallard pointed out that while it is sometimes difficult to align our interests with ISO and UNIDO, cooperation with ILAC and OIML is proceeding very well.

Dr. Kühne recalled the earlier discussion on the financial problems of developing countries and asked if it would be possible to find support for their participation in the CIPM MRA. Prof. Wallard commented that the JCDCMAS does not have funds. If this was considered a priority the JCDCMAS could contact some aid agencies but they normally support time-limited projects.

14. BIPM/ILAC Report on joint initiatives

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Prof. Wallard informed the JCRB that the BIPM/CIPM holds regular annual meetings with ILAC and OIML. The time spent with ILAC has been expanded this year because of common interests on infrastructure and traceability.

The Chairman added that ILAC and the BIPM/CIPM have realized that the objectives of both organizations are best served if the national metrology systems, in particular NMIs and accredited laboratories, assume some shared responsibilities. The intention is that both organizations will collaborate on a joint statement on responsibilities that apply to both communities. However, recognizing that this document will set policy which is the responsibility of the NMIs, a draft statement will be presented shortly to the NMI Directors and the CIPM in order to obtain their views.

Another issue discussed with ILAC has been the possibility of linking key comparisons with proficiency testing, which is a matter of significant concern for regional accreditation organizations.

Prof. Wallard commented that ILAC was interested in learning about how quality systems are reviewed in the framework of the CIPM MRA. Dr. Kühne, who participated in this meeting, explained how this works in Europe and conveyed to the ILAC administration the message that a high level of confidence is achieved with a combination of key comparison results plus assessment of quality systems.

The Chairman added that ILAC continues to be interested in receiving the names of capable assessors for accreditation of NMIs. He asked the JCRB delegates to provide the names of assessors and request NMIs to agree to make public the names of experts who have participated in on-site peer-reviews of their laboratories.

The BIPM/CIPM has increasingly close views with ILAC on ISO standards 17001 and 17011, which deal with issues that are the responsibility of both organizations. Prof. Wallard stressed the importance of reacting to proposed standards at an early stage and asked RMOs to inform the BIPM when they identify issues of relevance. Dr. Kaarls added that there was still an opportunity to make editorial changes to FDIS 17011 and that NMIs should contact their ISO representatives to encourage them to propose changes to the definition of calibration as part of conformity assessment. He said that discussions on the impartiality issue in 17001 are going better and that he will participate in a small working group that will meet in June to redraft this proposed standard.

The Chairman concluded his summary informing the JCRB that, in order to facilitate the comparison of scopes of NMIs and accredited laboratories, ILAC has agreed to promote the use of the term **Calibration and Measurement Capabilities** (CMCs) as opposed to **Best Measurement Capabilities** (BMCs). However, they recognize that they do not have the power to impose this term and that changing an old practice in the accreditation community will take some time.

Dr. Imai pointed out that only one year ago ILAC supported the term BMC (Best Measurement Capabilities). However, if their position has changed, he supported taking to the JCGM the proposal to add the term CMC to the third version of the VIM.

Mr. Hetherington commented he was pleased to hear about the BIPM/CIPM/ILAC joint statement because in the past there had been disagreements between EUROMET and EA. He also recalled that EUROMET and EA had tried to link comparisons with proficiency tests and found it was not possible at this stage until there is a clear policy in place by Accreditation Bodies nationally. He added that the calibration guidance

documents formerly published by EA will now be the responsibility of EUROMET and they will shortly be available in their web page.

In response to one of Mr. Hetherington's remarks, Dr. Kaarls pointed out that the IMEP program, run by IRMM in Europe, has been successful in linking over 100 laboratories in a proficiency test with CCQM key comparisons.

Dr. Kühne and Mr. Lam expressed their support for the good relationship being developed between the BIPM/CIPM and ILAC.

15. Progress on JCTLM

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Dr. Kaarls informed the JCRB that there has been a significant progress in the work of the JCTLM. BIPM, ILAC and IFCC signed an agreement at the end of 2003 with the support of the WHO, which can not yet sign due to legal restrictions. The main driving force is the EU directive on in-vitro diagnostics and participants include industry associations, regulators in different parts of the world, as well as standardization and quality assurance organizations.

The three signatories and the WHO as an observer have formed an Executive Committee, Chaired by Prof. Thijssen, with the Secretariat provided by the BIPM. Two Working Groups have been set up. WG 1, jointly chaired by Dr. May and Dr. Schimmel, is charged with drafting a list of accepted reference materials of higher order. WG 2 is chaired by Dr. Siekmann and is involved with developing a system of reference laboratories which will be the nucleus of a wider network of clinical laboratories. WG 1 subdivided its work into ten subgroups, each one looking at different categories like hormones, coagulation factors and others that are important for the clinical community.

Two lines of traceability have been identified. Whenever this is possible, traceability to the SI should be established. For biological activity traceability is established to WHO international units, which are not ideal because they are not stable. Therefore, this will continue to be a matter for scientific development.

The first list will be published by the BIPM but there will be a meeting to discuss the second list because there is not yet an agreement on the matter. Other issues being discussed are quality systems and the organization of comparisons.

Dr. Ignacio Hernandez, as an observer from CENAM, inquired if the JCTLM minutes were publicly available. Prof. Wallard responded that some may not be but that this will need to be verified with the partner organizations.

Action 12/ 13 Prof. Wallard to ask JCTLM partner organizations if meeting minutes can be openly distributed.

16. Progress on JCGM

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Prof. Wallard informed the JCRB on the work of the two JCGM working groups on the GUM and on the VIM.

The GUM is not being revised but it will be supplemented by separate documents. Participating organizations are currently asking their constituencies to comment on these new supplements. The BIPM is taking the view that these documents are not copyrighted by ISO and it is its intention to make them available in its web page.

The VIM is being revised with the intention of making a minimal number of changes. The new document will include concept diagrams aimed at showing the interrelationships between the terms.

Dr. Imai commented that JCGM-WG1 (GUM) is preparing six supplemental documents. One of them will be an introductory guide for engineers in industry and young scientists in NMIs, which will be based on a document developed by NPL. Another supplement will deal with the issue of modelling for estimating uncertainty.

NOTE: Dr Imai reported after the meeting that the first Draft Supplement for the GUM, "Numerical methods for propagating probability distributions", has been edited in WG1 and will soon be distributed to JCGM-member organizations and NMI directors to collect their comments.

17. Other JCRB business

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17.1. Promotion of the CIPM MRA to regulators; use of logo and statement
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The Chairman stated that the MRA has reached a state where it can begin to be promoted with regulators. The MRA has attracted the attention of regulators in Europe. At a recent meeting with US regulators organized by NIST, several agencies, including those responsible for electrical standards, expressed their interest in the use of accredited laboratories and in international MRAs such as the ILAC Arrangement and the CIPM MRA, while others, like the FDA, seemed to be less aware of its importance.

Dr. Usuda tabled [Document JCRB-12/17\(1\)](#) where NMIJ expresses its concern over the design of the logo proposed by the BIPM. According to the Director of NMIJ, the design suggests that it is the BIPM which issues or recognizes the certificate. Therefore, he proposes an alternative design

that includes the names of the five RMOs currently represented in the JCRB.

Mr. Hetherington commented that the RMO names would not help to change this image and that it was necessary to come up with a simpler and clear design. Dr. Sacconi asked why we did not use the logo of the Meter Convention. Prof. Wallard responded that it is a very complex design that requires a large amount of computer memory in order to be correctly displayed. Mr. Lam suggested that it was necessary to decide if the logo could also be used in correspondence.

Dr. Hector Nava, Director of CENAM and an observer at this meeting, pointed out that smaller NMIs cannot afford to have two kinds of certificates because it is difficult to explain to their stakeholders and asked if the logo would be only a recommendation. Prof. Wallard responded that the use of the logo will indeed be only a recommendation.

The Chairman then asked the JCRB members to prepare their recommendations on the design and possible uses of the logo.

Action 12/ 14 RMO Representatives to prepare for the next meeting proposals on the design and possible uses of the CIPM MRA logo.

17.2. MERA: A presentation and status report from EUROMET

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Mr. Hetherington made a presentation on the MERA project, an initiative by EUROMET to coordinate its national metrology infrastructures. This presentation is available as [Document JCRB-12/17\(2\)](#).

17.3. Topics for the next JCRB

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The Chairman proposed a the following topics:

- a presentation of the QS review processes in RMOs
- a presentation of the QS of the BIPM
- subcontracting, etc.
- progress on the relationship with ILAC

18. <u>Date and place of next meeting</u>

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The 13th JCRB meeting will be held at the BIPM on 29 September, all day, and half of 30 September, 2004. A Directors meeting will start in the

afternoon of 30 September and will continue on 1 October, all day. Associates to the CGPM will be invited to this second meeting.

The 14th meeting of the JCRB will take place in Minsk, Belarus, on 11-12 May, 2005.

19. Close of meeting

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The Chairman thanked all attendees and especially Dr. Nava Jaimes for his kind invitation to host the meeting in CENAM.

20. Summary of action items

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- [Action 12/ 1](#) [The Executive Secretary to draft and distribute an Excel file on the status of CMC reviews every month until this report is available on line.](#)
- [Action 12/ 2](#) [The Executive Secretary to modify the Flow Chart of the CMC Review Process, according to the discussion at the 12th JCRB meeting, and post it in the open section of the JCRB web page.](#)
- [Action 12/ 3](#) [RMO representatives to inform the Executive Secretary if they wish to authorize TC/WG Chairs to communicate directly any RMO decision concerning CMC reviews.](#)
- [Action 12/ 4](#) [The Executive Secretary to send a reminder to all TC/WG Chairs that they should keep RMO representatives informed of all actions concerning CMC reviews.](#)
- [Action 12/ 5](#) [The Executive Secretary to request a modification of the CMC review web page, in order to allow the definition of a different status for old CMC submissions whose inter-regional review has been abandoned.](#)
- [Action 12/ 6](#) [The Executive Secretary to post Document JCRB-12/06\(2\) in the open section of the JCRB web page.](#)
- [Action 12/ 7](#) [The Executive Secretary to post Document JCRB-12/06\(3\) in the open section of the JCRB web page.](#)
- [Action 12/ 8](#) [EUROMET and SIM to report to the JCRB Chairman on their TC/WG Chairs proposals for a "fast track" approval process, for the improvement of published CMCs within the following six weeks \(June 18, 2004\).](#)
- [Action 12/ 9](#) [Mr. Lam to redraft his document on QS reviews according to the discussion in this meeting, and present it at the 13th meeting of the JCRB.](#)
- [Action 12/ 10](#) [The Executive Secretary to modify the CMC Review Flowchart to indicate that RMOs should review the presence of a fully-compliant quality system before submitting CMCs for inter-regional review.](#)
- [Action 12/ 11](#) [The Executive Secretary to coordinate with Dr. Kaarls and circulate the latest versions of documents JCRB-12/11\(1\) and JCRB-12/11\(2\).](#)
- [Action 12/ 12](#) [JCRB Representatives to provide comments on documents JCRB-12/11\(1\) and JCRB-12/11\(2\) by the end of July.](#)
- [Action 12/ 13](#) [Prof. Wallard to ask JCTLM partner organizations if meeting minutes can be openly distributed.](#)
- [Action 12/ 14](#) [RMO Representatives to prepare for the next meeting proposals on the design and possible uses of the CIPM MRA logo.](#)

