

Report of the third meeting of the JCRB held on Thursday 15 July 1999 at the Convention Centre Charlotte, North Carolina, USA

Those present:

T. Quinn	BIPM (chairman)
R. Kaarls	CIPM (secretary)
K. Gebbie	CIPM
H. Ugur	MENAMET
S. Carpenter	MENAMET
M. Frota	SIM
A. Robertson	SIM
H. Semerjian	SIM
R. Watters	SIM
Q. L. Mussio	SIM
H. Mitani	SIM
I. Castelazo	SIM
B. Inglis	APMP
H. Imai	APMP
K. Seta	APMP
Lam	APMP
F. Hengstberger	SADCMET
L. Erard	EUROMET
W. Schwitz	EUROMET
A. Wallard	EUROMET

1. After having welcomed the representatives the chairman opened the meeting. The draft agenda was approved while adding point 6.4: provisional data for Appendix C.
R. Kaarls was asked to act as secretary to the meeting.
 2. Dr H. Ugur, the representative from a new region in the Middle East and Northern African area, MENAMET, was warmly welcomed.
As far as was known discussions were in progress to establish possibly two other regions:
 - BBCC-Met in the Balkan and the near Asia area
 - CIS-Met by the CIS-countries, Russia and Ukraine
1. The report of the second meeting of the JCRB was approved.
 2. The chairman introduced the MRA by giving a brief summary of the development of this document. An earlier draft of the MRA had been initiated by the directors of the NMIs during their meeting on 23 - 25 February 1998. After this meeting further discussions took place, a few changes were made and in April 1999 the printed version was distributed to directors. Since then more comments and requests for modification had been received, in particular from the NIST and the PTB. As a result of very recent discussions some further modifications were now proposed. These do not change the sense of the document and none of them should put in question permission already received by directors from the government or other official authorities in their country to sign the April text. The chairman outlined the proposed changes. These were:
 - to replace "Agreement" by "Arrangement" throughout the whole MRA document (Note: the French foreign ministry has no problems with this change, since they recognize the French word "Arrangement" as well and the important point is the content not the title of the document).
 - to replace "Commitment" by "Engagement"
 - to replace "approving by the JCRB" by "analysing and reviewing by the JCRB"
 - to replace "a suitable quality system" by "a suitable way of assuring quality".

Further editorial improvements have simplified and strengthened the text of the MRA. Some clarifying notes would be added.

After the initial period of four years the agreement might be modified, if needed, again with the approval of the government or other official authority concerned. In order to be flexible it was left open whether modifications needed to be accepted by unanimous vote or by one or another majority voting.

Where in the “Technical supplement to the agreement” the text was amended to conform with the MRA text.

In paragraph T3 a phrase was added that in exceptional cases it might not be possible to establish a reference value.

The chairman would consider whether in paragraph T7 reference should be made to the fact that in general the uncertainty in calibration and measurement certificates is stated on the basis of $k=2$, which approximates in general a nominal 95% level of confidence.

In the “Glossary of terms used in this agreement” all the mathematics would be deleted.

The Guidelines for CIPM key comparisons were no longer to be an appendix to the MRA in order to allow flexibility for this technical document to evolve.

The members of the JCRB considered the proposed modifications as acceptable and were of the opinion that the MRA was consistent and clear. The chairman would update the MRA and send it to directors of all NMIs of the Metre Convention, accompanied by a letter explaining why the modifications had been made (copies enclosed with this report).

5. The Rules of Procedure of the JCRB were reviewed. The text in the different paragraphs would be brought into line with the text in the MRA.

It was noted that the text of paragraph 3 “Procedures at a JCRB meeting” might be re-examined in the future when more experience had been gathered with the whole process of reviewing the ways of assuring quality implemented by participating NMIs and their RMOs.

For the time being paragraphs 3.1 and 3.2 would stay as they are, noting that peer-review visits might also be carried out in cases where the NMI had been accredited by an accreditation body, being a signatory to the ILAC-MRA.

(Remark: the ILAC MRA is expected to be signed early in 2000).

- 6.1 Dr Castelazo introduced the proposals for the format on submission to Appendix C (see Documents JCRB 3/13 and JCRB 3/14)

It was confirmed that the nomenclature used for the RMO key comparisons would follow the nomenclature as used by the CCs for the CIPM key comparisons, but that the RMOs would have their own system of consecutive numbering.

Every comparison would have its own number sequence; the same number would be used again only if the same key comparison were repeated in exactly the same way some years later, although and this was considered unlikely.

Further it was concluded that:

- key comparisons carried out by the BIPM would be re-numbered to avoid duplication with CC key comparisons
- supplementary comparisons would not be coordinated by the BIPM; every region would register its own supplementary comparisons according to the agreed nomenclature
- inter-regional supplementary comparisons would have a unique number; the coordination would be done by the RMOs involved or by the JCRB.

With respect to the format of Appendix C it was agreed that there would be two levels of format:

- a) a more extensive format including all the columns as presented in Doc. JCRB 3/12; this document is intended for use within the JCRB and the RMOs; it can however be shown to authorities who are interested, for example the traceability routes.
- b) A simplified version only having the columns:
 - Calibration or measurement service
 - Measurand level or range
 - Independent variable

- Expanded uncertainty

This simplified version would be published as Annex C and would be publicly accessible via the Web. The claimed best calibration and measurement capabilities would be subdivided in sub-measurement ranges in such a way that the claimed CMC is applicable over the whole sub-range. It was also possible to state an uncertainty range which increased linearly up with quoted sub-measurement range. In other cases it may be possible to state the uncertainty in the form of a formula. Also special calibration and measurement points could be stated with their specific uncertainties.

Dr Castelazo in cooperation with Dr Watters would adapt the formats taking into account the results of the discussion and the remarks and suggestions received from the RMOs. Also the names of the headings would be reconsidered, avoiding misunderstandings as traceability to an NMI instead of to the SI.

The definitive format would be sent to the RMOs before the end of July 1999. This format would be used for all fields of metrology with the exception of the chemical field. The RMOs would distribute the format to their member NMIs.

- 6.2 The proposals of the RMOs would be taken into account as indicated in 6.11. Separate sheets should be used for each subject field. It was agreed that the database would be in the English language.

The database would be maintained for the first years jointly by the NIST and the BIPM, after which it would be held and maintained on a permanent basis by the BIPM.

The NMIs were free to produce hard copies of Appendix C translated in their own language. The costs of this would be assumed by the NMIs themselves.

Dr Semerjian introduced a special format for Appendix C to be used for calibration and measurement services in the chemical field. Since metrology in chemistry was new, it was decided that Dr Semerjian would adapt the draft format, taking into account the discussion with respect to the format in the physical field, and then send it out for consideration by the RMOs and the CCQM. Comments would have to be returned to Dr Semerjian before mid-September 1999.

- 6.3 The RMOs presented their process and criteria for the evaluation of the different quality systems or ways of assuring quality used by their member NMIs.

It was clear that in particular for the case of long-standing RMOs a great deal of information was already known about each other's quality systems as implemented by the different member NMIs. Nevertheless, the RMOs made clear that they would like the opportunity to consider some of the aspects of the application in more detail.

Three documents were presented, from Euromet (JCRB 3/1), APMP document (JCRB 3/6) and SIM (JCRB 3/7). A general discussion took place on these three documents and it was concluded that a good level of agreement existed between the procedure envisaged by the three RMOs. The JCRB invited the three RMOs to finalize their documents in consultation with each other with a view to presenting final versions at the next meeting.

The JCRB recommended that peers from other regions attend assessment review meetings of the RMOs.

The other regions were also invited to present their proposals at the next meeting of the JCRB.

- 6.4 The chairman then proposed that a set of provisional data for Appendix C be prepared as soon as possible. These provisional data would be based on existing results of comparisons and other available knowledge and experience.

The JCRB agreed that available provisional data should be sent by the RMOs to the BIPM before 31 December 1999. This should be done either in electronic form or in paper format. According to the rules of procedure of the JCRB the BIPM will send the gathered information in electronic form to the RMOs for comment.

At a meeting of the JCRB on 20 - 21 March 2000 the provisional data would be analysed and reviewed by the JCRB for inclusion in Appendix C.

It should then be possible to have the first Appendix C data available on the Web in the Summer of 2000.

7. The list of key and supplementary comparisons as updated by the BIPM is now available at the BIPM and on the Web.
8. Dr Watters informed the JCRB about the latest phase of development of the BIPM database. The JCRB expressed its greatest appreciation for the enormous amount of work done by the NIST and Dr Watters in creating the database.
9. No other business was left open.
10. The next meeting of the JCRB will be held, in connection with the PittCon conference in the USA (12 - 17 March 2000), at NIST - Gaithersburg on 20 and 21 March 2000.

Dr Carpenter would confirm these dates with Dr Quinn.

Dr Quinn closed the meeting and thanked everyone for their contribution.

Third meeting of the Joint Committee of the Regional Metrology Organizations and the BIPM (JCRB)

List of Documents

- JCRB3/1 EUROMET PROJECT 512 - DRAFT FINAL REPORT
Title: Implementation of the BIPM's MRA for EUROMET member countries
- JCRB3/2 The COOMET activity in the period between its meetings and tasks relating to increase of
cooperation effectiveness
- JCRB3/3 SADCMET
1) Uncorrected minutes of the third meeting of the SADCMET Committee
2) NML, CSIR (South Africa): Proposed Schedule of accreditation
- JCRB3/4 NORAMET:
1) Mass mutual recognition agreements.
2) Appendix C Format for the CIPM MRA - NORAMETproposal
- JCRB3/5 Establishment of MENAMET
- JCRB3/6 APMP: Minimum Requirements for Evaluating Quality Systems of NMIs
- JCRB3/7 SIM: Proposal for minimum basic criteria to meet requirements of paragraph 7.3(b) of the
CIPM MRA
- JCRB3/8 EUROMET: NPL example for Annex C
- JCRB3/9 EUROMET: PTB example for Annex C
- JCRB3/10 EUROMET: DFM example for Annex C
- JCRB3/11 NIST: Proposed draft format for chemical metrology declarations
- JCRB3/12 NIST: Relationships and lay-out database
- JCRB3/13 SIM: Appendix C format for the CIPM MRA
- JCRB3/14 SIM: Proposal for Nomenclature of SIM comparisons