

Claudine THOMAS
Coordinator of the BIPM key comparison database
cthomas@bipm.org

10 September 2004

KCDB REPORT AS ON 10 SEPTEMBER 2004

The BIPM key comparison database Website is available at <http://www.bipm.org/kcdb>. We describe here the evolution of the KCDB since the 12th JCRB meeting.

1. Appendix C

Appendix C content

On 10 September 2004 the Appendix C of the KCDB contained a total of 15079 CMCs distributed as follows:

- 1230 CMCs in the field of Ionizing Radiation,
- 11171 CMCs in the fields of Acoustics, Ultrasound and Vibration, Electricity and Magnetism, Length, Mass and related quantities, Photometry and Radiometry, and Thermometry, and
- 2678 in the field of Chemistry.

Since the 12th JCRB meeting, it has been enriched by the publication of first sets of CMCs in Thermometry and of additional CMCs in Neutron Measurements (Ionizing Radiation). Published CMCs are also regularly updated.

Though the total number of CMCs (about 15000) has decreased by about 2000 since last JCRB meeting, the effective number of uncertainty values published via the Appendix C is estimated to be over 30000. This is the consequence of the implementation of “uncertainty tables”, which may be used to describe the range of uncertainty values that characterizes one given CMC. The column and row headings of the table contain the values taken by two physical quantities (or parameters) involved in the CMC. This facility, which makes it possible to deliver much more precise information, is largely used in the field of Electricity.

There are not yet any CMCs in Time and Frequency included in the Appendix C database. We are expecting additional CMCs in Chemistry and in Ionizing Radiation in the near future (they are currently under review).

Recent progress in the development of the Appendix C system

Several improvements were recently introduced into the KCDB system in order to respond to users' requirements.

- The “**uncertainty tables**” facility (see above) allows a better description of the declared uncertainties.
- The **approval dates** are shown for CMCs published after 24 May 2004.

- The html pages resulting from a selection among the items proposed by the Appendix C search engines have been attributed an **absolute URL address** since 7 June 2004. This allows the user to copy the address window in the Web browser and save it or send it so that the same search does not have to be repeated every time.
- A new part of the restricted-access JCRB Web page is now open under the heading “**Get published CMCs**”. It contains the CMCs EXCEL files as effectively imported into the Appendix C. These files should be used by the RMO Technical Chairs as the basis for further updates and additions according to the procedure described in document JCRB-8/10.

2. Appendix B

Appendix B content

The number of CIPM and RMO key and supplementary comparisons recorded in the Appendix B database still increases continuously: on 10 September 2004, the Appendix B contained a total of 580 CIPM and RMO key and supplementary comparisons (to be compared with 533 at the time of the 12th JCRB meeting, and 516 at the time of the 11th JCRB meeting), among which 474 are key comparisons. It is now displaying the results of some 150 comparisons.

88 key comparisons correspond to exercises prior to the implementation of the CIPM MRA, and were chosen as “Approved for provisional equivalence”. They may be archived as soon as other exercises carried out following the guidelines for key comparisons are available.

BIPM key comparisons have their results continuously updated with new measurements, and 8 EUROMET key comparisons and 8 APMP key comparisons had their results linked to those of the corresponding CC or BIPM key comparisons on 10 September 2004.

Appendix B design

No further change in the design of the Appendix B (database and Web system) has taken place since the launch onto the Web of our new Website on 04 March 2003.

3. Visits, publicity

Visits to the KCDB

No significant change was observed in the trend of the visits to the KCDB Web site over the last few months: the monthly number of external connections to the KCDB Website remains stable (about 6000 visits a month, among which 1500 relate to Appendix B).

Users access to the information on CMCs either by using the criteria search engines of the Appendix C or, to a larger extent, by downloading the .PDF files giving the full list of services declared by countries.

Regarding the Appendix B, users tend to consult the results of key comparisons directly from the html pages of the KCDB Web site and, also, from the “summary results” proposed as

.PDF files. The Final Reports of key and supplementary comparisons are also largely downloaded.

The KCDB visitors come from National Measurement Institutes, other ministry and governmental bodies, universities, entities dealing with promotion of technologies, and also industries. It was possible to identify some companies, and 2 accreditation bodies, having visited the KCDB Web site (see the list in Appendix). Even if the rate of their visits is still low, it is interesting to see that they did visit the KCDB on a regular basis over the past few months.

Publicising the KCDB

Since the last JCRB meeting, the KCDB Web site was demonstrated live on the NRC stand at the NCSLI conference in July 2004. We are grateful to NRC for their hospitality.

We also try to publicise the KCDB as often as we can through, for example, the publication of papers in Newsletters, the presentation of posters at congresses and the wide distribution of the KCDB leaflet.

KCDB Newsletter

We issued the 1st issue of the KCDB Newsletter on 16 June 2004. It was sent to about 1000 e-mail addresses and was made available from the KCDB Website. We got very little feedback, but we observe that we got an additional 20 subscribers in July and August 2004. The 2nd issue is scheduled for mid-December 2004.

Appendix: List of industrial companies and accreditation bodies identified
among the visitors of the KCDB from April to July 2004

3M Company
Abbott Laboratories
Agilent Technologies
Air Liquide SA
Air Parif
Astra AB
DuPont
F.Hoffmann-La Roche AG
Fluke Corporation
Getinge AB
Hewlett-Packard
IBM Corporation
Lockheed-Martin Corporation
Micro Tel Technologies
Air Products
NEC Corporation
Nokia Corporation
Novis Telecom S.A
Raute Precision Oy
Raytheon Company
Reliance Infocom Ltd
Bosch GMBH
SONY Corporation
BOEING
Volvo Information Technology AB

Malaysian Accreditation Body: Badan Standarisasi Nasional

China Accreditation Body: National Bureau of Standards and Inspection