

Report from APMP Technical Committee for Acoustics, Ultrasound and Vibration (TCAUV)

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• TCAUV Member Economies

There are 11 member economies in TCAUV. The following table shows the member economies and the names of contact person.

Economy	NMI	Contact Person	E-mail Address
Australia	CSIRO	Dr. Suszanne Thwaites	suzanne.thwaites@tip.csiro.au
China	NIM	Mr. Chen Jianlin	lx@nim.ac.cn
Chinese Taipei	ITRI	Mr. Chen Liang-Hsing	SimonChen@itri.org.tw
Hong Kong	SCL	Mr. C. M. Lo	hkscl@id.gcn.gov.hk
India	NPL	Dr. V. Mohanan	vmohanan@csnpl.ren.nic.in
Indonesia		Dr. Husein A. Akil	husein@rocketmail.com
Japan	NMIJ	Dr. Sojun Sato	sojun.sato@aist.go.jp
Korea	KRISS	Dr. Sang Joon Suh	sjs@kriss.re.kr
Malaysia	SIRIM	Mr. Wan Aziz Wan Salleh	wan.aziz_wan.salleh@sirim.my
Singapore	PSB	Mr. Lee Shih Mean	smlee@psb.gov.sg
Thailand	NIMT	Mr. Virat Plangsangmas	nimt@nimt.or.th

• TCAUV Workshop and Meeting

The Technical Committee for Acoustics, Ultrasound and Vibration (TCAUV) in APMP was created by the 15th APMP General Assembly which was held at Hsinchu, Chinese Taipei in 1999

The 1st TCAUV Workshop and Meeting were held at Bangkok, Thailand on November 6, 2000. Eight delegates from five economies were participated. In the morning session, six NMIs or organizations were introduced and in the afternoon session, we discussed the next key comparison items in APMP. The LS1P microphones were chosen since the reference values will be available from the results of CCAUV.A-K1.

The 2nd TCAUV Workshop and Meeting were held at Tsukuba, Japan on November 5, 2001. Ten delegates from five economies were participated. Three technical papers on calibration techniques in AUV and two general introductory papers were presented in the morning session. We reviewed the technical protocol of TCAUV LS1P microphone key comparison in the afternoon session. NMIJ (Japan) will be the pilot laboratory and

Dr. Sojun Sato will be the coordinator. One of the big issues was that how the artefacts will be circulated. In practices, it is very difficult to transport the artefacts by hand for the TCAUV member economies except few ones. So we suggested to prepare a special box for the transportation of artifacts which will be prepared by NMIJ. The next problem was that the limited number of NMIs could participate the key comparison since some of NMIs were preparing the microphone reciprocity calibration facilities. Therefore, the start of the key comparison were postponed until they have finished their calibration system.

• APMP Key Comparisons

1. **APMP.AUV.V-K1:** The APMP Key Comparison on the Standard Accelerometer (B&K 8305) was done from February 1996 to September 1997. Eight laboratories participated, seven from APMP region: CMS/ITRI (Chinese Taipei)-pilot laboratory, NRLM (Japan), KRISS (Korea), CSIRO (Australia), PSB (Singapore), NPL (India), SIRIM (Malaysia) and one from EUROMET region: PTB (Germany) which was invited for a peer review and as a final check laboratory. PSB and NPL using the comparison method withdrew their measurement results. The other six laboratories used the laser interferometry-fringe counting, minimum point or sine approximation. The final report was published in October 2000.

2. **APMP-IC-2-96:** The APMP intercomparison on Acoustic Calibrators was done from November 1997 to January 1999. The artefacts were a pistonphone (B&K 4228) with nominal output of 124 dB at 250 Hz and an acoustic calibrator (B&K 4231) with a nominal output of 94 dB at 1 kHz. Seven NMIs participated: CMS/ITRI (Chinese Taipei), NPL (India), KRISS (Korea), SIRIM (Malaysia), TISTR (Thailand), ETL (Japan), and NML (Australia)-pilot laboratory. The Draft Report 1 was published in October 2000.

3. **Next APMP Key Comparison:** The tentative items for next APMP Regional Key Comparison were discussed at the 1st TCAUV Meeting on 6 November 2000 in Bangkok, Thailand. The tentative items were circulated to the member economies of TCAUV and surveyed the possibility of participation on each item. The following table shows the survey result.

Economy	NMI	LS1P	LS2P	Standard Accelerometer	Sound Calibrator
India	NPL	Y	Y	Y	Y
Japan	NMIJ	Y	Y	Y	Y
Korea	KRISS	Y	Y	Y	Y
Malaysia	SIRIM	Y	Y	Y	Y
Singapore	PSB	*	*	Y	*

* PSB was in the process of setting up the facilities for these calibrations.

Among these, key comparisons on Standard Accelerometer and Sound Calibrators were already done in APMP. The Key Comparison on LS1P Microphone in CCAUV was

finished early in 2001. Therefore, in relation with MRA and CMC Files, it will be important to offer a chance to the member economies in APMP to participate in LS1P Microphone, so finally LS1P Microphone were chosen as the next key comparison item in APMP. In accordance with this, a Draft of Technical Protocol was prepared which was almost the same as that of CCAUV.A-K1. NMIJ will be the pilot laboratory. At present, only a few number of NMIs can participate the key comparison because some NMIs are preparing the microphone reciprocity calibration. I hope that the key comparison on LS1P microphone in APMP will start in next year.