

## Report

### of the COOMET Technical Committee for „Acoustics. Ultrasound. Vibration” (TC AUV)

7th meeting of CCAUV, October 2010, Paris, France

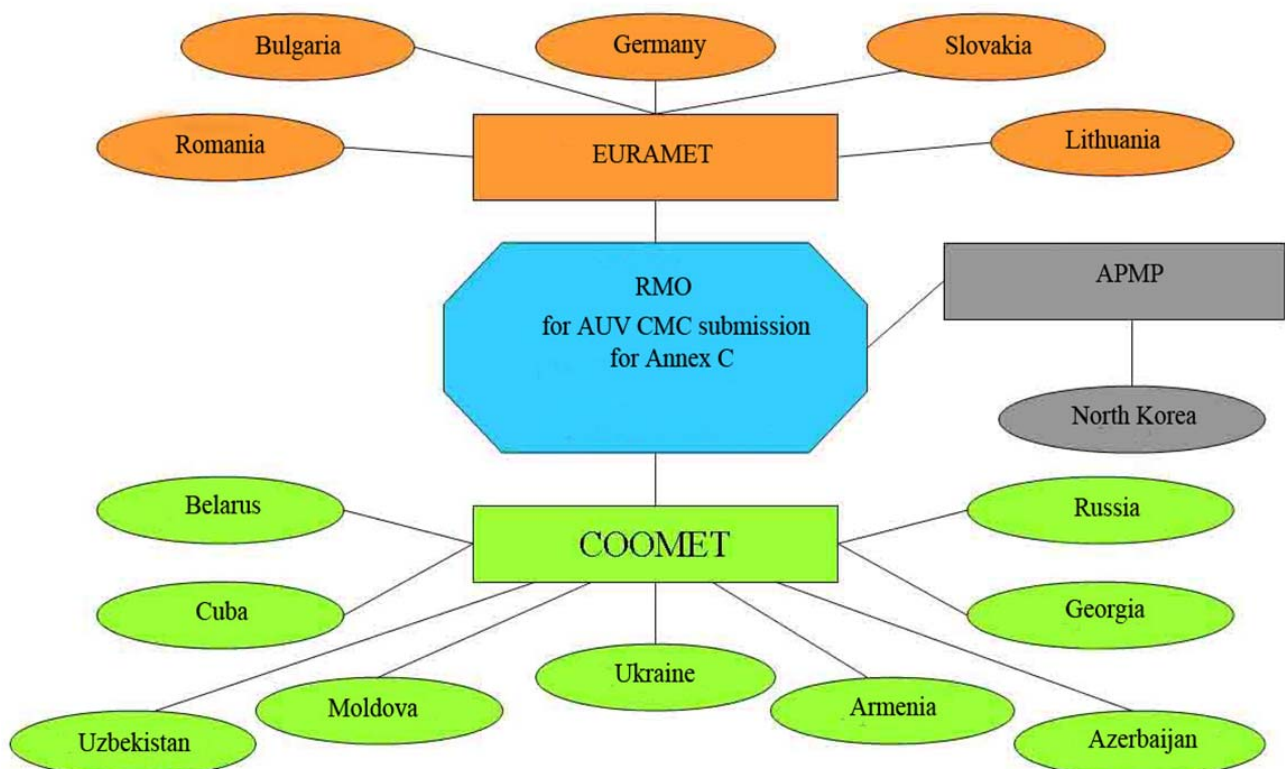
Mrs Valentina Pozdeeva, Chair of COOMET TC AUV

#### 1. Overview of cooperation in the above area

The COOMET Technical Committee for “Acoustics. Ultrasound. Vibration” was established in 2000.

As of today, the TC 1.2 "Acoustics. Ultrasound. Vibration" includes NMIs from 15 COOMET member countries.

The figure below shows the membership of TC 1.2 and RMOs through which COOMET member-countries submit CMCs of their NMIs.



## 2 TC meetings

Information about participants is given in table below

Meeting TC 1.2 COOMET	Lineup
2001 BelGUM, Belarus	Belarus, Russia, Slovakia, Ukraine
2003 VNIIFTRI, Russia	Belarus, Gemany, Denmark, Russia, Ukraine
2004 "Systema", Ukraine	Belarus, Great Britain, Germany, Denmark, Russia, Ukraine
2006 BelGUM, Belarus	Belarus, Russia, Ukraine
2008 VNIIM, Russia	Belarus, Denmark, Cuba, Russia, Ukraine
2010 "Systema", Ukraine	Belarus, Denmark, Poland, Russia, Slovakia, Ukraine

## 3 Participation in implementation of the Mutual Recognition Agreement for national standards

### 3.1 COOMET Projects in "AUV"

Project No	Description	KCDB code	Pilot of project	Status
234/BY-01	Establishment of a working group for COOMET participation in the AUV CMCs review		V. Pozdeeva, BelGIM, Belarus	Working Group of experts from COOMET NMIs is active in this field since January 2002
323/UA/04	Comparison for primary method of pressure calibration of laboratory standard microphones over the frequency range from 20 Hz to 20 kHz	COOMET. AUV.A-K3	Dr. K. Rasmussen, DPLA, Denmark	<b>Results published</b> <a href="#">Metrologia, 2007, 44, Tech. Suppl., 09002</a> Participants of comparison: Denmark, Ukraine, Russia, Poland, Romania
226/DE-01	Comparison of calibrations of laboratory standard microphones (63 Hz – 10 kHz)	COOMET. AUV.A-K1	Dr. T. Fedtke, PTB, Germany	<b>Results published</b> <a href="#">Metrologia, 2009, 46, Tech. Suppl., 09004</a> Participants of comparison: Ukraine, Russia, Germany, Poland, Turkey
316/UA/04	Bilateral comparison by calibration of microphones type LS1P	COOMET. AUV.A-K1.1	Dr. T. Fedtke, PTB, Germany	<b>Results published</b> <a href="#">Metrologia, 2009, 46, Tech. Suppl., 09005</a> Participants of comparison: Ukraine – Germany
308/UA/04	Key comparison of national standards for vibration parameters (in regard to sinusoidal acceleration) over the frequency range from 20 Hz to 5000 Hz	COOMET. AUV.V-K1	Dr. V. Smirnov, VNIIM, Russia	<b>Draft B is available</b> Participants of comparison: Russia, Belarus, Poland, Ukraine, Romania, Turkey

Project No	Description	KCDB code	Pilot of project	Status
337/BY/05	Bilateral comparison of national standards by pressure calibration of microphones type WS1 and WS2 using electrostatic actuator technique	Pilot	V. Pozdeeva, BelGIM, Belarus	<b>Completed in 2006</b> <b>Research report is available</b> Participants of comparison: Russia – Belarus
369/BY/06	Bilateral comparison of the national sound pressure standards	Pilot	V. Pozdeeva, BelGIM, Belarus	<b>Completed in 2006</b> <b>Research report is available</b> Participants of comparison: Russia – Belarus
434/BY/08	Comparison of national standards for sound pressure in air (Pa) using calibrations of working standard microphones	<b>COOMET. AUV.A-S1</b>	V. Pozdeeva, BelGIM, Belarus	<b>Draft A is under preparation</b> Participants of comparison: BelGIM, Belarus VNIIFTRI, Russia SMU Slovakia Systema, Ukraine
392/UA/07	Comparison of the national standards for sound pressure in air over the low frequency range from 2 Hz to 125 Hz	Pilot	Dr. V. Chaly "Systema", Ukraine	<b>Completed in 2008</b> <b>Draft B available</b> Participants of comparison: Ukraine, Russia
431/UA/08	Comparison of national standards for sound pressure in air over a low-frequency range	<b>COOMET. AUV.A-K2</b>	Dr. V. Chaly "Systema", Ukraine	<b>Draft B available</b> Systema, Ukraine VNIIFTRI, Russia
405/RU/07	Comparison of the national standards for sound pressure in water over infrasonic and low audio frequency range (2 Hz to 4 kHz)	Pilot	Dr. A. Isaev, VNIIFTRI, Russia	<b>Completed in 2008</b> <b>Draft B available</b> Participants of comparison: Ukraine, Russia
448/RU/08	Comparison of measurements of the velocity of longitudinal ultrasonic wave propagation in solid media	Pilot	Dr. V. Lugo-voi, Far East office of VNIIFTRI, Russia	<b>Draft B is under preparation</b> Participants of comparison: Russia (Far East office of VNIIFTRI), Belarus (BelGIM)
482/BY/09	Comparison of measurements of the velocity of longitudinal ultrasonic wave propagation in solid media by pulse method	Pilot	V. Pozdeeva, A. Dobrov BelGIM, Belarus	<b>Measurements in progress</b> Participants of comparison: BelGIM, Belarus «Ukrmetrstandart», Ukraine «Dneprstandartmetrologia», Ukraine
473/RU-a/09	Pilot comparison of the national standards for sound pressure in water (in regard to hydrophone calibration in free field) over the frequency range from 250 Hz – 200 kHz	Pilot	Dr. A. Isaev, VNIIFTRI, Russia	<b>Draft B available</b> Participants of comparison: VNIIFTRI, Russia HAARI, China

### 3.2 Status of the AUV CMCs of COOMET NMIs

The AUV CMCs of Russia (COOMET.AUV.1.2001 and COOMET.AUV.5.2009), Belarus (COOMET.AUV.2.2003) and Ukraine (COOMET.AUV.3.2005 and COOMET.AUV.4.2007) are published in BIPM KCDB.

The Belarusian and Ukrainian CMCs in vibration passed intra-RMO review. The COOMET key comparison in vibration identified in KCDB as COOMET.AUV.V-K1 will help to fulfil one of the basic conditions for publication of these CMCs in Appendix C.

At present, the revised Ukrainian CMCs (COOMET.AUV.6.2010) are under intra-RMO review.

The Belarusian CMCs will be revised on the basis of the results of supplementary comparison – COOMET.AUV.A-S1.

### 3.3 Status of NMI QMS

The Quality Management Systems of the Belarusian, Russian and Ukrainian National Metrological Institutes with AUV CMCs published in the International Database were subjected to external assessment according to the schedule of the COOMET Quality Forum.

As of today, COOMET QMS approvals were granted to the following NMIs

NMI	QMS status	Approval date	Next peer review date
VNIIM (Russia)	Approved	20.09.2005	09.2010
VNIIFTRI (Russia)	Approved	20.12.2005	09.2010
BelGIM (Belarus)	Approved	20.12.2005	12.2010
DP „NDI "Systema" (Ukraine)	Approved	30.03.2007	2012

## 4 COOMET participation in interregional review of CMCs

Over the period in question COOMET performed interregional review of EUROMET.AUV.8.2008, APMP.AUV.4.2008, APMP.AUV.5.2009, and APMP.AUV.6.2009.

At present, COOMET is involved in interregional review of CMC AFRIMET.AUV.2.2010, APMP.AUV.7.2010.

**October, 2010, BelGIM, Minsk, Belarus**