The 10th meeting of TC 4 “Information and Training” was held on 22–23 October 2013 in vil. Novkhana, Azerbaijan.

24 persons from 7 countries, Chairpersons of Subcommittees and Members of TC 4 and their representatives participated in the meeting:

<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Status in COOMET, NMI</th>
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</thead>
<tbody>
<tr>
<td>AZERBAIJAN</td>
<td>1. Oktay ABBASOV</td>
<td>COOMET Committee Member, Chief of the State Metrology Service, “Azstandard” Committee</td>
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<tr>
<td></td>
<td>2. Yusif HASANOV</td>
<td>Deputy Head of Metrology Department, “Azstandard” Committee</td>
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<td>3. Sardar ASLANOV</td>
<td>Head of the Sector on Planning and Development of National Standards, “Azstandard” Committee</td>
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<td>4. Azer BAGIROV</td>
<td>National COOMET Secretariat in Azerbaijan, “Azstandard” Committee</td>
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<td></td>
<td>5. Rafig KAFARLI</td>
<td>Member of TC 4, SC 4.1, SC 4.2, SC 4.3, “Azstandard” Committee</td>
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<td></td>
<td>6. Elchin BABAYEV</td>
<td>Head of the Sector on National Standards of Power and Pressure, “Azstandard” Committee</td>
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<td>7. Emma NABIYeva</td>
<td>Head of the Sector on National Standards of Viscosity and Density, “Azstandard” Committee</td>
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<td>8. Nazim SATTARZADE</td>
<td>Head of the Sector on the Reference Standards of Gas Mixtures, “Azstandard” Committee</td>
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<td>9. Aliya KERIMOVA</td>
<td>Leading Specialist, “Azstandard” Committee</td>
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<td></td>
<td>10. Nadir FARZANE</td>
<td>Prof., Head of Department “Metrology, Standardization and Quality Management” of Azerbaijan Oil Academy</td>
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<tr>
<td>GERMANY</td>
<td>11. Annette KÖGLER</td>
<td>Chairperson of SC 4.1,Member of TC 4, National COOMET Secretariat in Germany, PTB</td>
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<td>12. Karl-Christian GOETHNER</td>
<td>PTB Consultant</td>
</tr>
<tr>
<td>Country</td>
<td>Name</td>
<td>Status in COOMET, NMI</td>
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<td>13. Julien BIERE</td>
<td>Communication Expert, PTB Consultant</td>
</tr>
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<td>14. Olga KRASOTA</td>
<td>National COOMET Secretariat in Germany, PTB</td>
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<tr>
<td>MOLDOVA</td>
<td>15. Ecaterina CHEMENCIJI</td>
<td>INM</td>
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<td>16. Constantin BORDIANU</td>
<td>INM</td>
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<tr>
<td>RUSSIA</td>
<td>17. Viktor IVANOV</td>
<td>Chairperson of SC 4.3, Member of TC 4, VNIIMS</td>
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<td>18. Vitaly BUGAEV</td>
<td>Chairperson of SC 4.2, Administrator of COOMET web-site, VNIIFTRI</td>
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<tr>
<td>TAJIKISTAN</td>
<td>19. Said MAVLONOV</td>
<td>Member of TC 4, SC 4.2, Tajikstandart</td>
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<tr>
<td>UZBEKISTAN</td>
<td>20. Ortagoli HAKIMOV</td>
<td>Coordinator of COOMET Projects, SRISMC</td>
</tr>
<tr>
<td>UKRAINE</td>
<td>21. Pavel NEYEZHAMAKOV</td>
<td>COOMET Vice-President, Chairperson of TC 4, NSC “Institute of Metrology”</td>
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<td></td>
<td>22. Yuliya BUNYAYEVA</td>
<td>Secretary of TC 4, Member of SC 4.1, 4.3, National COOMET Secretariat in Ukraine, NSC “Institute of Metrology”</td>
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<td>23. Elena RAMAZANOVA-STEPKINA</td>
<td>Director of International School of Technical Legislation and Quality Management</td>
</tr>
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<td>24. Volodymyr VELYCHKO</td>
<td>General Director of SE “Kharkivstandartmetrologiya”</td>
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The following AGENDA was approved:

1. Approval of the Minutes of the 9th TC 4 meeting
3. Information on the results of the 17th meeting of COOMET President’s Council and the 23rd meeting of COOMET Committee
5. Exchange of experiences on the practice of training and raising proficiency level of the specialist-metrologists in COOMET member-countries
   5.1 Presentations of COOMET member-countries
   5.2 Presentation of Andean School for Applied Metrology
   5.3 Discussion
6. Development of COOMET web-portal for the purposes of online learning
   6.1 Presentation of the online prototype of the new eLearning module (subject: ISO 17000 series)
   6.2 Discussion
7. Information Support of COOMET Program of Comparisons
8. Implementation of COOMET projects
   8.1 Development of the Procedure of forming and publishing at COOMET web-resources informational data about calibration and measurement service of NMI laboratories of COOMET member-countries
   8.2 Current state and directions for further work on the COOMET web-portal
   8.3 Finding out the needs of COOMET member-countries in training and probations (including the work with proficient metrologists)
   8.4 Training of specialists of measuring, calibration and testing laboratories. Module approach in training specialists of calibration and testing laboratories: problems and ways out
   8.5 Development of recommendations on the content of training programs and practices of specialists within COOMET
   8.6 Development and administration the database of COOMET RM
   8.7 Development of competencies and qualifications within COOMET for specialists and metrologists of measurement, calibration and testing laboratories on the basis of the modular approach
   8.8 Development of recommendations for preparing documents certifying results of training, study course or upgrade of qualification within COOMET
9. About activities of Subcommittees in TC 4. Reports of SC Chairpersons
   9.1 SC 4.1 “Support in Developing the Basic Metrological Infrastructure of COOMET Member Countries”
   9.2 SC 4.2 “COOMET Informational Resources”
   9.3 SC 4.3 “Raising Proficiency Level and Work with Young Metrologists”
10 About the results of V International Competition “Best Young Metrologist of COOMET – 2013” (11–13 June 2013, Braunschweig, Germany)
11 Forming the plan of further works within TC 4
12 Miscellaneous
13 Date and venue of the next meeting
14 Adoption of resolutions
RESULTS OF THE MEETING

1. Approval of the minutes of the 9th TC 4 meeting

TC 4 Chairperson P. Neyezhmakov informed that the minutes of the 9th meeting of TC 4 were approved by the members of TC 4 and participants of the previous meeting via electronic voting.

Decisions and actions:
- to approve the Minutes of the 9th TC 4 meeting.


TC 4 Chairperson P. Neyezhmakov informed on the main areas of the TC activity and decisions made by the COOMET Committee and President’s Council. In the reporting period the activity within the TC was performed based on the TC 4 Program of Work for 2012–2014 in three subcommittees:
- SC 4.1 “Support in Developing the Basic Metrological Infrastructure of COOMET Member Countries”;
- SC 4.2 “COOMET Informational Resources”;
- SC 4.3 “Raising Proficiency Level and Work with Young Metrologists”.

3. Information on the results of the 17th COOMET President’s Council meeting and the 23rd COOMET Committee meeting

TC 4 Chairperson P. Neyezhmakov informed shortly the participants of the meeting about the results of 17th COOMET President’s Council meeting and 23rd COOMET Committee meeting.


TC 4 Chairperson P. Neyezhmakov informed shortly the participants of the meeting about the results of realisation of TC 4 Work Program for 2012–2014.

5. Exchange of experiences on the practice of training and raising proficiency level of the specialist-metrologists in COOMET member-countries

5.1 Presentations of COOMET member-countries

5.2 Presentation of Andean School for Applied Metrology

5.3 Discussion

Participants of the meeting exchanged information about progress and practice in the raising proficiency level of the specialist-metrologists in COOMET member-countries.

PTB Consultant K.-Ch. Goethner made a Presentation of Andean School of Applied Metrology for participants of the meeting.

Among the participants of the meeting a lively discussion took place, and they exchanged opinions about the practice of training in their countries and opportunity of using the experience in other RMO in the practice of training and raising proficiency level in holding training workshops within COOMET.

It was renoted that the first step for the organization of training workshops should be the identification of specific training topics within technical committees.
Decisions and actions:

- to prepare Draft letter to the National Metrology Body concerned COOMET member-countries and in PTB, Germany, about the importance of allocating funds to equip the training of laboratory facilities in order to create a center of raising proficiency level of the specialist-metrologists and discuss it on 18\textsuperscript{th} COOMET President’s Council meeting.

6. Development of COOMET web-portal for the purposes of online learning

6.1 Presentation of the online prototype of the new eLearning module (subject: ISO 17000 series)

6.2 Discussion

Communication Expert J. Biere presented the online prototype of the new eLearning module on subject ISO 17000 series.

The study course on ISO 17025 will show the benefits of online learning in the area of metrology and hopefully stimulate the elaboration of further online courses. The courses will be based on the same content management system like the COOMET webportal (Typo 3). I.e., the online editors are familiar with this system. It is planned to encompass the first building block (ISO 17025 eLearning environment) with audio or video lectures, online chats and video tutorials.

Among the participants of the meeting a lively discussion took place.

Decisions and actions:

- to support the development of the online learning courses on behalf of TC4 and respective other TCs of COOMET;
- V. Bugaev and P. Neyerzhmakov proposed that Julien Biere should produce a set of video tutorials covering the editing steps which COOMET online editors should know when creating or updating webpages;
- A. Kögler will explore the options for implementing this request in 2014.

7. Information Support of COOMET Program of Comparisons

SC 4.2 Chairperson, Administrator of COOMET web-site V. Bugaev presented the question of information support of COOMET Program of Comparisons.

For the expired period (from April 2012 to October 2013) JCMS and members of different TC worked to bring the comparisons in the database “Projects of COOMET Program of Comparisons” in line with their actual status (updated status and condition of the projects carried out in the registration of comparisons KCDB, a number of projects excluded from consideration, etc.). However, questions related to bringing the project in proper condition, remain.

Thus, Recommendation COOMET R/GM/12:2007 “Rules of maintaining of COOMET Program of Comparisons” requires a lot of adjustments. Since the formation of the Program of Comparisons involved not only affects JCMS, but TC 4, which provides information services to the procedure, the JCMS is offered in conjunction with TC 4 to open the project for the development and implementation of a new version of Recommendation COOMET R/GM/12:2007.

V. Bugaev and J. Biere discussed the options for integrating coomet.org and coomet.net content for the benefit of all users: V. Bugaev will link particular coomet.org pages to specific coomet.net pages, in order to facilitate this. The layout of the inner pages of coomet.net will be modified, i.e., graphic design elements will be leading to a synopsis of all the projects controlled by the respective Technical Committee, showing the total of all projects, of proposed, agreed, completed and excluded projects. This synoptic table is fully automatically generated on the coomet.org server.
Decisions and actions:
- to ask the Chairperson of the JCMS COOMET to open a new COOMET Project for the updating and implementation of the new edition of Recommendation COOMET R/GM/12:2007 “Rules of maintaining of COOMET Program of Comparisons” with the TC 4 representatives until **25 December 2013**.

8. Implementation of COOMET projects

8.1 Development of the Procedure of forming and publishing at COOMET web-resources informational data about calibration and measurement service of NMI laboratories of COOMET member-countries (COOMET 404/RU/07)

Coordinator V. Ivanov and V. Bugaev outlined the progress of work within 404/RU/07 and presented a modified version of the Draft Recommendation “Procedure of organization and publishing the data about calibration and measuring services of COOMET national metrological institute laboratories on COOMET web resources”.

Participants of the meeting approved the proposed version of the Draft Recommendation.

Decisions and actions:
- to approve the developed Draft Recommendation “Procedure of organization and publishing the data about calibration and measuring services of COOMET NMI laboratories on COOMET web resources” within Project 404/RU/07;
- to recommend for approval at the 18th COOMET President’s Council meeting and adoption at the 24th COOMET Committee meeting the Recommendation “Procedure of organization and publishing the data about calibration and measuring services of COOMET national metrological institute laboratories on COOMET web resources”.

8.2 Current state and directions for further work on the COOMET web-portal (COOMET 478/UA/09)

SC 4.2 Chairperson V. Bugaev informed the participants of the meeting about current state and directions of following work on COOMET Web-portal.

8.3 Finding out the needs of COOMET member-countries in training and probations (COOMET 510/KZ/10)

TC 4 Chairperson P. Neyezhmakov informed the participants of the meeting about state of work within 510/KZ/10 and presented the Draft Plan of Workshops for young metrologists of NMI of COOMET member-countries.

Decisions and actions:
- to ask the coordinators of Project 510/KZ/10 to prepare the final version of Plan of Workshops for young metrologists of NMI of COOMET member-countries based on information received from COOMET member-countries.

8.4 Training of specialists of measuring, calibration and testing laboratories. Module approach in training the specialists of calibration and testing laboratories: problems and ways out (COOMET 518/UZ/11)

Coordinators of the project O. Hakimov and E. Ramazanova-Stopkina presented to participants their module approach for training specialists of calibration and test laboratories.
8.5 Development of recommendations on the content of training programs and practices of specialists within COOMET (COOMET 541/RU/11)

Coordinator of COOMET Project 541/RU/11 V. Ivanov presented finalized Draft Recommendation on the content of training programs and practices of specialists within COOMET.

The participants of the meeting approved the presented version of Draft Recommendation.

Decisions and actions:
- to approve the developed Draft Recommendation “Educational programs and practical training programs of experts of National Metrological Institutes cooperating in COOMET” within Project 541/RU/11 subject to editorial revisions on the results of the discussion;
- to recommend for approval at the 18th COOMET President’s Council meeting and adoption at the 24th COOMET Committee meeting the Recommendation “Educational programs and practical training programs of experts of National Metrological Institutes cooperating in COOMET”.

8.6 Development and administration the database of COOMET RM (COOMET 543/AM/11)

Coordinator of COOMET Project 543/AM/11 V. Bugaev presented to the participants of the meeting the developed database of COOMET RM.

Decisions and actions:
- to recognize as appropriate the formation of DB of COOMET RM and providing access to the Internet for COOMET information resources;
- to take as a working filling information form on RM proposed under the Project 543/AM/11.

8.7 The development of competencies and qualifications within COOMET for specialists and metrologists of measurement, calibration and testing laboratories on the basis of the modular approach (COOMET 553/UZ/12)

Coordinators of the project O. Hakimov and E. Ramazanova-Stopkina presented to participants the information about the development of competencies and qualifications within COOMET for specialists and metrologists of measurement, calibration and testing laboratories on the basis of the modular approach.

Decisions and actions:
- to ask the coordinator of the Project O. Hakimov, Uzbekistan, to prepare a Form of Agreed Project 553/UZ/12 and send it to COOMET Secretariat to transfer procedure to the rank of a Agreed Project;
- to request the TC 4 Chairperson to start a project on the development of COOMET Document on the procedure of using the COOMET logo.
8.8 Development of recommendations for preparing documents certifying results of training, study course or upgrade of qualification within COOMET (COOMET 597/BY/13)

TC 4 Chairperson P. Neyezhmakov presented developed Draft Recommendation “Procedure for preparing certificates of training, study visits and up-skilling within the framework of COOMET” within Project 597/BY/13.

Decisions and actions:
- to request the TC 4 Secretariat to send Draft Recommendation “Procedure for preparing certificates of training, study visits and up-skilling within the framework of COOMET” to TC 4 Members for discussion.

9. About activities of Subcommittees in TC 4. Reports of SC Chairpersons

9.1 SC 4.1 “Support in Developing the Basic Metrological Infrastructure of COOMET Member Countries”
9.2 SC 4.2 “COOMET Informational Resources”
9.3 SC 4.3 “Raising Proficiency Level and Work with Young Metrologists”

SC 4.1 Chairperson A. Kögler, SC 4.2 Chairperson V. Bugaev and SC 4.3 Chairperson V. Ivanov informed the participants about activity of TC 4 Subcommittees.

10 About the results of V International Competition “Best Young Metrologist of COOMET – 2013” (11–13 June 2013, Braunschweig, Germany)

TC 4 Chairperson P. Neyezhmakov and SC 4.1 Chairperson A. Kögler informed the participants of the meeting the information about the results of V International Competition “Best Young Metrologist of COOMET – 2013”.

Decisions and actions:
- to ask TC 4 Secretariat to send letters to COOMET Committee Members about the possibility of holding VI International Competition “Best Young Metrologist of COOMET” in their own countries in 2015.

11 Forming the plan of further works within TC 4

TC 4 Chairperson P. Neyezhmakov presented to the participants the actualized version of TC 4 Work Program for 2012–2014.

Decisions and actions:
- to ask the TC 4 Secretariat to send the actualized version of TC 4 Work Program for 2012–2014 to TC 4 members for approval by the 25 December 2013.

12 Miscellaneous

The participants of the meeting discussed several current and organizational items of TC 4.

SC 4.1 Chairperson A. Kögler informed the participants of meeting about the training workshop for technical administrators of the COOMET portal on 3-4 December 2013 at PTB Braunschweig, Germany.

At the meeting was discussed the question of COOMET registration as a legal entity. It was suggested that this question is appropriate to discuss at the 18th COOMET President's Council meeting.
13 Date and venue of the next meeting

TC 4 Chairperson P. Neyezhmakov presented a letter of COOMET Committee Member from Armenia V. Sahakyan about an agreement to hold the 11th meeting of TC 4 in Yerevan, Armenia, in September–October 2014.

The participants agreed with the proposed resolutions. It was decided to coordinate the exact date of the meeting in working order.

Decisions and actions:
- to hold the 11th meeting of TC 4 “Information and training” in September–October 2014 in Yerevan, Armenia.

14 Adoption of resolutions

The participants of the meeting exchanged with opinions on the proposed resolutions.

Decisions and actions:
- to approve the final versions of resolutions by electronic mail while considering the Draft Minutes of the 10th meeting of TC 4 “Information and Training” by the 15 December 2013.

TC 4 Chairperson

Pavel Neyezhmakov

TC 4 Secretary

Yuliya Bunyayeva