

28 May 2015

1. General Aspects

EURAMET TC-PR has currently representatives from 22 EURAMET members NMIs and two associate designated institutes.

Members of Technical committee have been very active in European Metrology Research Programme having formed 6 stable Joint research project consortia since 2009 till 2013. They have been dealing with more than twelve research projects, ranging from SI broader scope topics through to metrology research for Environment and Earth observation, metrology support for emerging technologies of Quantum optics and Quantum based secure communication and the metrology for Industry and Innovations and sustainable production and use of Energy.

Three TCPR related SRTs were approved for funding within the EMPIR Call 2014, one of them with horizontal subjects with significant contribution from TCPR.

2. Projects

There are currently 27 active projects running in TC-PR.

Along with 16 active Traceability and 9 Comparison types of projects there is presently one active Consultation project - PR1101: "Strategic Planning in Radiometry and Photometry" where are investigated the and formulated the long term strategic targets for EURAMET in our field of expertise. Beside it there is one Cooperation (research) project active- project 1048: "Cryogenic Solar Absolute Radiometer – re-placing World Radiation Reference by SI based standards".

The number of active projects and their structures has remained almost stable or with very few changes over past five years, although in the longer term perspective - over the past ten years - it has shown a clear trend of increasing number of traceability projects and comparison projects. It demonstrates the systematic change of metrology landscape in the field of photometry and radiometry towards stronger links between individual NMIs in EURAMET and as well reflects the efficient implementation of MRA through the need of CMC's supporting evidence.

The latest progress reports of all TC-PR projects can be found at the TC-PR webpages. The previous reports are stored in the restricted part of the TC-PR webpages.

Number of agreed or proposed TC-PR projects	2004	2015
Traceability	7	16
Comparison	6	9
Cooperation	3	1
Consultation	3	1

3. Comparisons

Very positive results have been achieved in last two years period in the process of running RMO key comparison in TC-PR..The long term effort was crowned by successful completing (and publishing of the results in KCDB) of eventually four EURAMET Key comparisons in the second half of the year 2014. Thanks to focussed drive of all members of Technical committee for Photometry and Radiometry and thanks to a rigorous measures applied in last three years period the status of EURAMET key comparisons has been significantly consolidated.

Thus six out of total number of seven key comparisons of the 1st round of EURAMET KCs are completed and their Final protocols are already published giving the supporting evidence of existing CMCs or supporting the publication of extended CMC files of EURAMET NMIs.

The only exception is EURAMET key comparison on spectral responsivity of optical detectors in near infrared spectral range 900 nm – 1600 nm, EURAMET.PR-K2.a, where the late start of our RMO KC in 2012 was caused by significant delay in progress of relevant CCPR key comparison. Although even here are all measurements completed and the Draft A of Final protocol is expected in May 2015.

Moreover EURAMET TC-PR has already started preparation for second round of Key comparisons in the year 2014. KC of regular spectral transmittance in spectral range 380 nm to 1000 nm, EURAMET.PR-K6.2014, has started by opening the call for participants.

4. CMCs

During the year 2014 four EURAMET NMIs submitted changes in their CMC files mostly reflecting current developments of their calibrations services and the results of the monitoring of impact of completed CCPR and EURAMET key comparisons. These CMC updates were reviewed both by EURAMET intra-RMO review and inter-RMO review by SIM and COOMET and were published in KCDB in January 2015. Immediately TCPR opened new call for CMC update with the outlook of completing all review process before the end of the year 2015.

Beside it several EURAMET NMIs submitted new CMCs files with minor changes and editorial corrections only, which didn't need to go through intra-EURAMET neither inter-RMO review process. They had been published in KCDB as they were submitted during the whole year's period.

EURAMET TC-PR reviewed CMC updates submitted by SIM, the batch SIM.PR.7.2014 since last EURAMET GA.

5. Activities of the Sub-Committees

TC-PR has presently no Sub-Committee.

6. EMRP/EMPIR

TCPR has been achieving growing success in EMRP programme.

Members of Technical committee have been very active in European Metrology Research Programme having formed 6 stable Joint research project consortia since 2009 till 2013, these have been dealing with more than twelve research projects, ranging from SI broader scope research through to metrology research for Environment, Quantum optics for quantum based secure communication and the metrology for Industry and Innovations and sustainable production and use of Energy.

Three TCPR related SRTs were approved for funding in the EMPIR Call 2014, one of them with horizontal subjects with significant contribution from TCPR.

This development pointed out the marks of sustainable change of the landscape of European metrology in the field of Optical radiometry and photometry towards the smart specialisation and efficient integration and sharing of research capacities and capabilities.

7. Meetings

The last meeting of the EURAMET TC-PR was held in Delft, the Netherlands hosted by VSL in January 28-29, 2015. It was attended by 20 participants and 9 guests.

Traditionally, in the day before the meeting itself, January 27 2015 TC-PR organised the one day Expert symposium - "Workshop on TCPR related Metrology research for Climate and Earth observation". This very successful workshop attracted more than 40 participants from European NMIs and DIs. More than 10 presented talks clearly demonstrated the growing need of TC-PR related research for the meteorology and generally and its relevance for climate monitoring and earth observation both from space and terrestrial.

Beside the other regular topics the significant part of the meetings has been dedicated to discussion about current and future calls of European Metrology Programme for Innovation and Research (EMPIR). Together with discussion on planes for already clearly profiled segments of TC-PR research as like Quantum optics, research of new primary standards and research for Environment monitoring, there were broadly discussed the further planes on how can TC-PR contribute into pre-normative oriented EMPIR activities.

The next TC-PR meeting will be held in February 2016 in Warsaw, Poland, hosted by GUM.

8. Issues

The main emphasis is current being put on the topic of building stronger links between EURAMET TC-PR and main European stakeholders. Thus TC-PR wants to increase the impact of our activities into European community.

As well, strong accent will be put to strengthening our pre-normative initiatives and contributions. It will be achieved mostly via the cooperation with CIE Division 2 and through it directly with CEN and ISO.

9. Strategic planning

All EURAMET TC-PR Strategic planning activities are provided within the project: PR1101 "Strategic Planning in Radiometry and Photometry". This project is coordinated by TC-PR Chairman and deals with all aspects of strategic planning in our metrology area.

There are established six dedicated working groups inside the strategic planning project focussed on two horizontal topics of Grant challenges:

- Environment
- Energy,

and four topic reflecting particular challenges in our field of metrology in:

- Development of SI ,
- Fundamental metrology (in our field mainly Quantum optics) and
- Pre-normative. Each
- Innovation (in our field mainly Innovation for Appearance measurement)

Each working group is led by elected Convenor.

TC-PR is currently running the thorough discussion on the SRA on the board of this Project

9. Outlook for 2015/2016

The major focus will be put on building stronger links between TCPR and main European stakeholders. Beside it, the necessary effort will be devoted to preparing JRP proposals for the EMPIR call 2015 and to strategic planning and contribution to completing of SRA document.

Marek Smid,
Chair of EURAMET TC-PR
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