



Update on activity of the CCPR-WG-SP TG9 OTDR (length) comparison

The main objective of TG9 is to address relevant topics related to OTDR calibration. It was agreed to concentrate on following tasks:

Discussion of CMC entries on Fibre Optics

Improved service categories for fibre optics have been prepared within the CCPR-WG-CMC-TG 4 and have been approved by the CCPR-WG-CMC and are listed in the "Classification of Services in Photometry and Radiometry document", Version No. 17. These service categories are now under integration in the BIPM KCDB CMC structure.

- Following entries were defined for OTDR distance scale calibration
 - 7.10.1 Location offset, OTDR: wavelength, pulse width, distance range, index of refraction, specification standard used
 - 7.10.2 Distance scale deviation, OTDR: wavelength, pulse width, distance range, index of refraction, specification standard used.

The calibration of the attenuation scale of OTDR is defined under

- 7.5.2 Loss, measuring instrument: *wavelengths or wavelength range*.

Realization of a series of Inter-comparisons to support the new entries

APMP.PR-S8 supplementary inter-comparison of optical fibre length calibration is still ongoing. Draft-B report was prepared by KRISS and was submitted to APMP.PR chair on March 2023.

The supplementary inter-comparison on OTDR calibration within AFRIMETS is still under preparation. The comparison will be piloted by NIS with technical support from NMISA and METAS.

A first draft of the technical document was prepared, jointly between NIS, NMISA and METAS.

- It was agreed to realize a very short preliminary test prior to the inter-comparison, especially to evaluate the opportunity of adding the calibration of the OTDR attenuation scale in the same inter-comparison. This test will be performed using an OTDR provided by NIS.

The preliminary measurements have been done at NIS, NMISA and METAS and are now complete. The evaluation of the results is ongoing.

- Next steps: to finalize the technical protocol for the supplementary inter-comparison and to define the definitive list of participants.

METAS has found an instrument manufacturer willing to make an OTDR available for this inter-comparison.

- Objective: to start a formal supplementary inter-comparison in 2024.