

# Inter instruments comparisons

## Les comparaisons inter-instruments

<sup>1</sup>Pascal COQUET, <sup>2</sup>Jean-Michel POU

<sup>1</sup>L.A. Métrologie, <sup>2</sup>Delta Mu

France

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The purpose of this conference is to present a draft standard that will be considered at the Standardization Committee on the 11th of February 2015. This project had been debated at length. From now on, it meets comments (that have been made) and it is quite likely that works will be initiated.

This project, called C2I (inter instruments comparisons) can be seen as a complementary method for calibration to justify the connection of the measuring instruments.

The calibration of a measuring instrument or a measuring chain can bring difficulties to an industrialist (dismantling, downtime, risk of deterioration, division of the measuring chain...). Inspired by inter laboratory comparisons, the C2I makes it possible, by measuring the same object with various instruments of the same type, to statistically determine and under conditions if one of them (or several) is drifting. C2I can come in between calibrations: thus, periodicities can gain in time and drawbacks can be limited. The method is based on the idea that there is statistically no reason for a group of instruments to drift the same way and in the same proportion. Obviously, this proposal only makes sense if the conditions of applications are well defined, in particular the hypotheses of independence (as an example, we will avoid using C2I to compare thermocouples from the same coil since those have all the chances to present similar drifts).

The conference will present the basic hypotheses, the validity conditions of the method (number and selection of instruments, types...), the method itself and the tools allowing to detect the drift of an instrument and the first standardization discussions if the project is approved.