KHB → Draft
Feb 1993

EUROMET PROJECT
~~PROGRESS~~/FINAL REPORT*)

1. Ref No.: 251	2. Field: Length
3. Type of collaboration: Workshop	
4. Partners: FR, DE, IT, ES, CH and GB	
5. Subject: EUROMET Workshop : Artefact for calibration and performance assessment of co-ordinate measuring machines	

6. Progress:

After the presentation of 3 tutorials, the different countries presented their activities in the field of calibration and performance assessment of co-ordinate measuring machines. The group established some recommendations to the National Calibration Services. It was proposed that the most appropriate way of diseminating this information was via WECC, Two other recommendations was made that could interest BCR : the organisation of a conference on the calibration and performance assessment of CMMs and (2) organisation of an intercomparison of different calibration software.

Recommendation to WECC :

* The group considers that the document WECC "The Certification of Co-ordinate measuring Machines"is a very suitable basis for subsequent work.
* The approaches defined as "Calibrations based on comparator principles" are interesting for reasons of economy, simplicity and reliability.
* For the calibration based on the estimation of the component errors of a CMM, the group proposes the following points :
  - The use of artefacts is recommended
  - In the present state of the art, only the CMMs which one can describe by the 18 functions model should be calibrated. A simple procedure to test this ability must be defined.
  - The software used to extract the errors from the set of data obtained during the calibration with an artefact must be evaluated and certified.
  - The software used to simulate the behaviour of the machine and estimate the measuring uncertainty on the position of one point or a distance must be evaluated and certified.
  - The software used to simulate the bahaviour of the machine and estimate the uncertainty of the result of a measuring task must be evaluated and certified. The simulation shall include effects due to a uncorreted systematic errors, changes of systematic errors, as well as random errors. This yields for the 18 functions describing the idealized kinematic structure and for the probing errors.

7 Coordinator`s name: Marc PRIEL Address: 1, rue G. Boissier - 75015 PARIS Telephone: + 33 1 40 43 38 24 Telefax: + 33 1 40 43 37 37	8. Completion date: June 3rd and 4th 1992
9. Coordinator`s signature:	10. Date: September 1992

Notes for the completion of the form overleaf

*) Delete as appropriate