SPECIFICATIONS OF A COMMON RESULT FORMAT FOR EXCHANGE OF MEASUREMENT RESULTS

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Abstract

Compared to other fields of activities, metrology did not take full advantage of the communication revolution. Despite the consistency of the SI unit system, the coherence of measured parameters, all described by a dimensional equation, there is no common results format allowing universal data exchanges between members of the metrology community.
More recent techniques were able to create such communication standards like RTF (Rich Text Format), for the exchange of word processor files and TIFF (Tagged Image File Format) for the transfer of images between applications.
Most measurement report data are archived to provide evidence to quality auditors therefore customers are challenging the need to spend so much money on calibration just for that.
This paper, results of shared ideas between a specialist of calibration software platform development and a metrologist purpose is to define the ideal specification of a common result format standard. This data structure should facilitate the usage of error correction techniques, uncertainty improvement and statistical analysis. This is the first step for a real value added calibration process.