

Metrology sans Frontières: Measurements in the Global Village

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Abstract

The earliest measurements were made in communities for the purposes of building, local trade in staple goods and religious ceremonies. As long as these activities were limited to an individual village, simple, arbitrary standards were sufficient but early regulations focussed on the need for agreements to underpin trade between communities that might have different standards and to ensure the fair collection of taxes and tolls. Governments were quick to recognise the importance of metrology and references to the need for national standards were included in the UK's Magna Carta and subsequently in countless laws and regulations.

In the global village of the 21st century, it has been accepted for some time that the enormous volume and huge value of international trade require universal measurement standards and consistently traceable measurements. Increasingly, however, the most demanding requirements for better measurements come from precision manufacturing and the demands of society for a safer, less polluted environment. To meet these demands, governments are continuing to develop national measurement systems, participating in regional metrology cooperations and supporting international agreements to ensure general acceptance of measurement results. It has been a long journey from the standard bushel to world-wide standards for radiotherapy and nanotechnology but the message remains the same: everyone in the (global) village must have confidence in the results!