Water meters:
OIML, ISO and CEN harmonization

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OIML History

- Water meters
  - R 49 produced in 1977
  - Major revision: 2000
  - Minor revision: 2003
- Hot water meters
  - R 72 produced in 1985
- Cold potable water and hot water
  - R 49: 2006 (incorporating combination meters)

Parallel history

- OIML
  - Water meters: R 49 produced in 1977, rev. 2000 and 2003
  - Hot water meters: R 72 produced in 1985
  - Cold potable water and hot water*: R 49: 2006
- ISO
  - Water meters: ISO 4064 produced in 1993
  - Combination meters: ISO 7858 produced in 1998
  - Hot water: ISO 10385 produced in 2000
  - Cold potable water and hot water*: ISO 4064: 2005
- CEN
  - Cold potable water and hot water*: EN 14154: 2005

* incorporating combination meters

OIML/ISO/CEN

- Developed largely by the same people
  - Meetings followed each other in the same location
- Differences are largely due to timing issues
- There are inconveniences in having small variants
  - Multiple documents for users
  - Time wasted by experts
  - OIML and CEN routes to meet the MID
  - Impropriety of European countries voting on ISO documents they cannot use

Harmonization

- ISO and CEN are following the Vienna Agreement
- There is one joint Working Group to develop a set of harmonized documents
  - Metrological items in Parts 1-3: Jointly Developed OIML/ISO Documents (Part 3 might be OIML only)
  - Non-metrological items in Parts 4 and 5: ISO only
- All three SCs (CEN TC) met in Ottawa last month
- OIML TC8/SC5 resolved that the publications should be maintained in parallel in the future by OIML/TC 8/SC 5 and ISO/TC 30/SC 7 (ISO had a similar resolution).
- 1st CD due in October

Possible wider harmonization

- ISO/TC 23/SC 18 Irrigation would like a joint standard.
- At the moment our harmonization process is limited to
  - OIML/ISO/CEN harmonization
  - Correction of any errors
  - Clarity improvements
  - Essential changes

Smart meters

- R 49 covers the primary meter reading.
- So most smart meter activity is outside R 49.
- Is this sufficient?

Smart meters: water v energy

- Countries tend to be undertaking smart metering for energy meters first: for both energy and water meters smart meters provide:
  - Remote meter reading, where not already available
  - Customer awareness of use of energy/water
    - Saving of energy/water
  - Differentiated tariffs (time of day)
  - Totals over a defined period of time

Smart meters: water v energy

- Water metering has some differences from energy metering:
  - Smart metering could show whether there are leaks
  - By spreading demand through differentiated tariffs smart metering could enable pressure (and thus leaks) to be reduced
  - Water meters may be in pits on the property boundary
    - Information in the house is particularly useful
    - They are usually battery- (i.e. low-) powered
  - Particularly for water, if thieves were to get hold of the smart meter output it would probably show if the house were empty

The way forward

- Complete harmonization
- Determine what, if any, changes need to be made to include smart meters
- Work with gas meters (and electricity meters) to avoid duplication and discrepancies