

UNIVERSAL METERING INTERFACE

... now that's smart



The world is facing climate change and energy security challenges. As a result, all European member states have signed up to meet the EU triple 20 energy targets by 2020, pledging to reduce energy consumption and greenhouse gas emissions by 20% compared to 1990.

There are many changes needed to infrastructure and behaviour to achieve this and, if designed right, smart metering will play a key role. Consequently the EU requires member states to replace old standalone domestic meters for electricity and gas with networked devices that communicate with other meters, appliances and utility suppliers' central computers.

These new smart meters will be installed in the same dusty old broom cupboards as the old meters, but they will have RF capabilities, sitting at the centre of a Home Area Network (HAN) of other devices that can be accessed easily by the user, allowing them to monitor consumption and adopt more efficient practices.

However, many of us will have neither the time nor inclination to make full use of the information available, and so it is equally important that appliances use the information themselves to make more intelligent energy decisions. For example, a washing machine started at night and programmed to finish by 7am, would then 'negotiate' with the HAN as to the best time to run, relative to other demands, price and peak-demand information.

So inter-operability is the key to making smart metering successful. The question is, which communications standard should be adopted? Despite all the talking and grandstanding, this is still an issue, with the requirements varying from one country to another and from year to year. The lack of agreement on HAN and WAN (Wide Area Network) communications and security standards is the key issue holding up smart meter roll-out in many countries.

This is why we developed the Universal Metering Interface (UMI), an open standard, ultra-low power, wired interface that enables an approved meter to be used with different UMI communications modules in different countries. For example, a Wireless M-Bus UMI module can be used in Germany and the Netherlands, whereas a ZigBee UMI module can be used in the UK. UMI's flexibility is also useful to manufacturers of gateways, displays, appliances, and other smart metering products in all regions worldwide. In fact, UMI also enables the development and installation of 'smart-ready' meters, featuring a UMI port into which a HAN communications module can be fitted when the standard is agreed.

The specifications for UK smart metering are due to be agreed by DECC and Ofgem by summer 2012, enabling the full roll-out to 26M homes between 2013-2020. This is a huge task and will require 70,000 installations per week if all smart metering devices are installed in each home in a single visit. Of course, many other countries face similar roll-out challenges, making the need for a universal solution ever more pressing. The challenge is great, but the flexibility that UMI brings to these products will enable us to start the installations sooner. We hope that this will increase our chance of meeting the various worldwide smart metering target dates that are needed to make a significant contribution to energy reduction and climate change.



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