

## **M2M will do chores so people can work**

*Machine-to-machine networking - 'the most profound technological disruption in the history of humanity' - will make life a breeze for everyone*

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David Wilson (Technopedia Column)

Wireless technology often plays the part of a butler or slave. Removing the boredom from our lives, it routinely enacts minor but yawn-inducing chores such as opening garage doors, unlocking cars and changing TV channels.

But it has one key limitation: it requires the input of you and your remote control.

Enter machine-to-machine networking (M2M), which promises to cut out you, the middleman, and the slim black box you are forced to fiddle around with. M2M means linking machines via wireless transmitters so they can talk to each other without human input.

The emerging technology is quite important, judging by a report produced by San Francisco-based consultancy Harbor Research, which portrays M2M as the force that will drive that much-vaunted future monstrosity "the pervasive internet".

"We are now feeling the first tremors of the most profound technological disruption in the history of humanity: networked, embedded intelligence in the most ordinary objects of the manufactured world - even objects implanted in the human body itself," the report says.

Ultimately, it continues, "this phenomenon will change civilisation more than electricity, the telephone, the train, the automobile, the airplane, and the World Wide Web all put together. In fact, the effects of this phenomenon will so completely permeate human affairs that calling it 'technological' is misleading. It will manifest itself not as technology per se (which will be largely invisible), but as social, cultural and economic transformation."

Phew! The tone of the report makes a welcome change from the standard M2M blah about how it will enable electricity and gas readers to be fitted with mobile transmitters so that information on your energy bill is wirelessly transmitted to the utility provider.

But its claims sound hard to credit. Technopedia asked Steve Pazol, founder and chief executive of Chicago-based M2M solution provider nPhase, what concrete progress M2M had made.

Echoing the report, Mr Pazol said: "The thing about M2M is that its applications are truly pervasive. I think of it as the internet for machines - there are few domains where it couldn't be applicable."

Present uses ranged from monitoring vehicles (telematics) to freight tracking.

Harbor Research senior analyst Marc Kriessmann said: "There are hundreds of M2M applications that monitor, track and report data from devices that range from vending machines to 'smart dust' on the battlefield."

Other applications include bridge transport, where "express tags" let you cross without you having to fumble for change at a tollbooth, vending machines that report when they are empty, and swimming pool monitoring. An underwater sensor reads the acidity and chemical levels and sends the information over a wireless phone network to a central database which monitors the readings from pools in the network.

When the acidity at one of the pools climbs too high, the central database sends a text message to the cellphone of the maintenance man. If he fails to respond, the database sends a message to his boss and the process escalates up the management chain until somebody does something. The technology supposedly saves each pool thousands of dollars a year in maintenance costs.

An understanding of M2M's potential was growing even as the cost, branded prohibitive by some critics, was falling, Mr Pazol said.

"Cellular modems are costing less, microprocessors are cheaper and more pervasive [and] the cost of wireless has dropped."

He said M2M's scope was essentially restricted to business, but falling prices would see the technology moving to the mass consumer market over the next five years.

Mr Kriessmann was equally bullish: "Except in the least developed countries, where there may still be infrastructure issues, there is no place on earth where a connected product cannot be deployed to the advantage of its manufacturer and its users."

Ian Barkin, managing director of M2M innovation consultancy The FocalPoint, described the applications now as "just the beginning".

So expect a world where chores take care of themselves, leaving you free to do more work.