

## Does M2M need to make new friends?

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### Quocirca Comment

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Every year or two, M2M (machine to machine), based applications rise up the media agenda and a new age of super connected applications appears to dawn. They run along the lines of vending machines that dial in to say they're feeling sick and in need of a service engineer, smart fridges that broadcast they are running low on milk, or a vehicle complaining that its wheels are about to fall off.

The ideas generally go down well in a world that is starting to believe that Sci-fi and fantasy tales, films and TV series might be true, but for someone brought up on the yet unachieved images of a 21<sup>st</sup> century future projected by Tomorrow's World and Popular Mechanics, it is clear that in reality we have a long way to go, even if the vision is worthwhile.

The problem is that the most worthy and achievable M2M applications are not sexy, big news or actually easy to achieve, especially in a world more focussed on more social aspects of communications as 'friends' instantly tweet messages to each other (and everyone else).

Several technology advances have made M2M applications possible. These include the ability to make low cost, tiny footprint communications hardware using a variety of connection options – Bluetooth, Wi-Fi or cellular – to fit into pretty much any type of device. Processing power likewise has also continued along a Moore's Law path of doubling the number of transistors in a given area every 12-18 months, leading to a doubling of CPU power for a given size, or a halving of size for a given power requirement.

The amount of information that can be stored in memory or transmitted through networks has likewise soared, and even battery power has improved (although nowhere near the same levels as other technologies).

So why does M2M seem to struggle to deliver on over-inflated expectations?

Despite some adoption of software platforms designed to support M2M deployments, there are still issues with technical inconsistencies, some related to mobile operators. Coverage has historically been based around population centres, places of work and travel routes, and makes assumptions about belonging to one region and only occasionally 'roaming' to other ones. M2M requires broader coverage and a more consistent view of tariffs independent of location so that applications are not arbitrarily constrained by geography.

There are also challenges associated with the speed of change in mobile networks and their underlying technologies, and this will become evident again as they evolve to fourth generation wireless networks. While the industry generally embraces rigorous standards to ensure core interoperability, there have been problems, especially as communications needs have headed 'up the stack' away from basic 'plumbing' towards integrated applications. The early experiences of the multimedia messaging service (MMS) were good examples of mobile application interoperability issues. M2M projects also expect technology to remain consistent and interoperable over a much longer timeframe than the short term upgrade and replace consumer mentality.

The business case for M2M is also challenging. Successful projects with significant impact are likely to be wide ranging and realised over a longer term than many in decision making roles can justify. No longer is it sufficient for a manager to deliver a return on investment on their 'watch' (ie before changing roles), they may also need to deliver on objectives inside a much shorter timeframe. Commercially worthwhile M2M solutions are more likely to be more evenly spread over multiple areas or aspects of a business.

However M2M also suffers a similar challenge to Unified Communications (UC), in that despite all the convergence of technologies and standards in the transport and 'plumbing' and some coming

together in the infrastructure services layer, the end points do not talk nicely. For UC it is a matter of encouraging people to collaborate and trying to get business organisations and processes to support working together when too often they are 'fighting corners', sitting in silos and building empires. For M2M the end components are not so wilfully uncommunicative, but interoperability at the application and services level remains a real challenge. Thanks to standards 'things' can talk internet protocols over Bluetooth, Wi-Fi and cellular networks, but what should they really say to each other?

There have been many attempts at trying to get hardware and software objects to talk intelligently over networks over the last couple of decades – from object request brokers to the Java inspired Jini. But none have really gained sufficient traction across what is a diverse community of consumer electronics and industrial hardware manufacturers, or IT and software companies.

UC's basic entry point into providing a linkage at the people and process level is the 'buddy' orientation of presence. The idea being that if individuals can see the status of their colleagues, they might communicate more effectively with them. It is a start, but needs more encouragement to fit effectively with the way corporate processes work. However with social media now becoming a major force in the consumer world, the more sophisticated social models of friends, followers, ad hoc publishers and subscribers are looking very promising for building communities for collaboration for business.

A similar process could take place in M2M. Not so much a Facebook, but an 'Interface-book'. Machines might not need to make friends, but they do need to prod, poke, understand, tweet, lead and follow each other. M2M needs more volume and momentum and needs to solve the integration and interoperability hurdles to grow beyond technically quite interesting into a major business transformer for commercial gain.

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Through researching perceptions, Quocirca uncovers the real hurdles to technology adoption – the personal and political aspects of an organisation's environment and the pressures of the need for demonstrable business value in any implementation. This capability to uncover and report back on the end-user perceptions in the market enables Quocirca to advise on the realities of technology adoption, not the promises.

Quocirca research is always pragmatic, business orientated and conducted in the context of the bigger picture. ITC has the ability to transform businesses and the processes that drive them, but often fails to do so. Quocirca's mission is to help organisations improve their success rate in process enablement through better levels of understanding and the adoption of the correct technologies at the correct time.

Quocirca has a pro-active primary research programme, regularly surveying users, purchasers and resellers of ITC products and services on emerging, evolving and maturing technologies. Over time, Quocirca has built a picture of long term investment trends, providing invaluable information for the whole of the ITC community.

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