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John Schwartz, technology strategist, Digi International

Graham Pitcher finds out from a communications specialist that M2M is slowly gaining market acceptance.



Many technologies first saw the light of day well in advance of market uptake. One such technology is M2M – or machine to machine – communications, which first appeared in the mid 1990s. Since its inception, the approach has been an archetypal 'slow burner'. But emerging consumer applications, such as smart energy, combined with growing demand from industry, are suggesting that M2M may be about to break into the big time.

John Schwartz is technology strategist with Digi International, which describes itself as the leader in commercial grade device networking and an innovator of wireless M2M device networking. He said: "The main change over the last couple of years is not so much about the technology, it's more about how it's being applied." He said that most people are now familiar with wireless technology moving from 2G to 3G and now to 4G. "That's all understood. What's changed is that mobile operators now see opportunities in data services."

That's not to say that M2M isn't a significant business already; Schwartz said it's a 'large part' of Digi's business. "It's getting there, but it's still a slow process," he noted.

Partly, the uptake of M2M is linked to the success of the internet and of mobile phones. "People are now used to the benefits of wireless. And security perceptions have changed. A decade ago, people hadn't done banking or shopping online. Now, most people do and we're not getting the same pushback against M2M that we used to."

Another reason is that installing wired networks is costly. "It hasn't got any cheaper to run wires," Schwartz continued, "and that's a cost which doesn't get figured in."

In Schwartz' opinion, the hardest part of M2M is bringing together a solution. "We have mobile communications, we have local communications. It's now about hooking things up to a sensor or a similar device and the system has to be low cost. M2M is now an integration business."

And he believes integration isn't something the end user is always good at. "Partly, it's about our expertise," he continued. "It's a lot of pieces to put together and it's tough for engineers to be experts in this. People don't want to hire new engineers, so that's why M2M is now about integration; not only how the system is developed, but also about how it's maintained."

Schwartz highlighted two expanding business areas: energy networks and energy monitoring. "There are two parts to the energy networks sector," he pointed out. "Users, who are monitoring their consumption in order to conserve energy, and the generation side, which is looking at applying M2M in small turbines and solar panels. You need to monitor these devices and if you have 1000 turbines, it's a big communications network."

He believes M2M technology will be equally applicable in domestic turbines, where consumers will want to monitor power output and temperatures, for example.

The other sector is attracting energy conscious users and is adopting solutions broadly based on IEEE802.15.4, including ZigBee. "ZigBee has been successful in the energy market," Schwartz noted, "but not so much in Central Europe, where wireless M-Bus is more popular. Before we talk with users about a ZigBee solution, they think it won't work; it's a perception problem. But there is real interest from the embedded world, where range is important."

Despite the industry not wholeheartedly adopting ZigBee, Schwartz said the technology has high potential in industrial applications. "There's no question," he said. "Certicom has issued 16million Smart Energy Device certificates; that's what's out there and deployed."

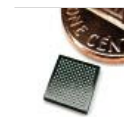
He doesn't see the market going away, even with competition from technologies such as Wi-Fi. "The problem with Wi-Fi is that companies don't own it and there are passwords and so on. That's the problem with embedded devices; it's not a problem with laptops, but thermostats don't have a user interface through which you can enter an access point name and an SSID. So you have to go through the web.

"If you have to do that for 20 devices in the home, it will be a barrier to adoption, so companies have to develop a better way to do things and ZigBee makes sense."

Digi itself goes back to 1985, when it started out making serial port expansion products for industrial control applications. Now, says Schwartz, many things are going wireless and the sector now generates 40% of the company's revenues. One of the latest ventures is iDigi, a cloud based service.

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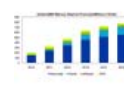
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