

JAHANGIR MOHAMMED

OPINION

Realize the promise of M2M – make it work out of the box

Based on revenue per user alone, the market for machine-to-machine (M2M) technologies may not seem viable. However, **when low churn and low acquisition costs** are taken into account, the potential of M2M is clear. The key metric that operators need to consider is margin. But first they must take some crucial steps.

DESPITE THE ECONOMIC downturn, the M2M market has remained buoyant. It is a market full of promise, with the ability to revitalize the global economy. The new generation of connected gadgets flooding the market – e-readers, automotive telematics, utilities/smart grid applications, gaming, mobile healthcare (M-health), and tracking devices – demonstrates the opportunities for vendors and operators. These devices are a testament to the accessibility of the M2M market.

Previously, because of high costs, only large organizations were able to afford to build and maintain their own dedicated data networks. But as business models have advanced and chipsets have become cheaper, we are witnessing widespread adoption, with an array of commercial and consumer devices emerging from manufacturers all over the world.

M2M connectivity began industrially, creating revenue growth for the enterprise market. M2M has since branched out, and these revenue streams have grown into a consumer market – opening the door for operators to monetize this opportunity on an unprecedented scale.

The demand for different applications and verticals varies across the globe, with the UK and the US markets witnessing growth in consumer electronics and M-health applications; Asia showing a sharp uptake of smart grid technology; Australia seeing an influx of mining and vending solutions; and Latin America favoring asset-tracking and point of sale (POS) systems.

Each vertical is different and has specific needs. However, from a network standpoint all devices are similar in their requirements: they need a module, connectivity, a management platform and a SIM card to connect to the network, and are therefore subject to the same challenges.

Ericsson has famously set out a vision of 50 billion connected devices worldwide in the next decade. In order to meet this goal, several factors have to be in place across the entire M2M ecosystem.

BUILD HIGH-QUALITY DEVICES QUICKLY AND EASILY

The next generation of connected devices is not being built by traditional handset manufacturers. Among others, the automotive, construction, machinery, consumer electronics and energy industries are now building wireless devices. But without the mobile expertise of companies such as Nokia, these companies often struggle to get wireless right the first time.

According to research we have conducted at Jasper Wireless, more than 60 percent of connected device launches are delayed because of application redesign needs, and up to 80 percent of device applications are “aggressive” or “abusive” when connected to the mobile network. Devices might exhibit aggressive behavior, for example, by constantly trying to connect to the mobile network. This results in an excessive signaling load on the mobile network, causing a deterioration in quality for the end user, who gets a fragmented service.

Mobile operators and ecosystem vendors must ensure they offer the

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technology and support necessary to power the development of these devices. Imagine a plug-and-play module, ready to connect out of the box: certainly not an easy concept, but one that would make a dramatic difference in reaching the 50 billion connected devices vision.

ENABLE ENTERPRISE CUSTOMERS TO BECOME SERVICE PROVIDERS

In the M2M market, mobile operators are witnessing a fundamental shift as the end-user relationship is transferred to the enterprise vendor. In most cases, the end user has no idea who is supplying the connectivity, as it is bundled in as part of a larger solution.

Let's take BMW as an example. As far as BMW owners are concerned, BMW is the service provider responsible for their connected Assist services. BMW manages all aspects of service delivery, technical support, subscription management, provisioning and more. The network operator is invisible to the end user.

What enables connected device manufacturers like BMW to be successful is the ability to run this aspect of their business as a service provider. And this requires very tight integration and support from their operator partners.

Operators, for their part, must have the solutions in place that enable their customers to become service providers. Eliminating this level of business complexity for device manufacturers allows for larger scale and faster time to market.

MAKE IT SIMPLE AND TRANSPARENT FOR THE END USER

User experience is typically discussed in the context of consumer devices. But even in the most industrial of cases, an excellent user experience is still a vital aspect of a solution's success.

For those of us in the mobile network business, M2M brings about a

► **JAHANGIR MOHAMMED** founded Jasper Wireless in 2004 and serves as the company's CEO. Prior to this, Jahangir founded and served as the CEO of Kineto Wireless. He has previously also worked at AT&T Bell Laboratories and Lucent. Jasper Wireless won the 2009 World Communications Award for its M2M platform, which enables mobile operators to connect and support a variety of emerging consumer electronic and business devices on their networks. Current operator partners include AT&T, Telefónica, América Móvil, VimpelCom, SingTel, KPN, Telstra and Rogers Communications.

fundamental shift in how we must think about the market. The phone, the laptop, the tablet – with these devices, getting connected is the point. It is the end game. When a laptop gets turned on, there is an explicit “connect” action to perform. In the M2M market, in almost all cases, there is no need for a discrete “connect” action on the part of the end user if, in fact, there is an end user at all.

That's because for most connected devices, the connectivity is an enabler of a larger, more important, component. For e-readers, the consumer buys books. For smart grids, the utilities manage energy consumption. For fleet companies, the result is real-time location of their assets. Mobile connectivity is not the primary goal – it is a means to an end.

These devices – energy meters, cars, e-readers, health monitors – simply need to perform what they are supposed to do without any additional effort by the end user, the installer or the clinician. Mobile connectivity should simply work out of the box.

To accomplish this, operators must have the platform and systems in place to eliminate the complexity of embedded mobile connectivity. ►

▶ This starts in the development phase by providing device manufacturers with the design tools to build a high-quality product. It continues by enabling companies to eliminate dead-on-arrival devices through network testing capabilities for use at the time of manufacture. Once at its final location, whether in the hands of an installer or a consumer, the wireless device should automatically function on first power-up – effectively enabling the device to simply work out of the box.

But great user experience doesn't end once the device is live and functional. Inevitably there will be instances where the device doesn't perform as expected. If consumers phone in with a problem, support technicians should have the information they need to resolve the issue quickly. This means putting key network diagnostics directly into the hands of the device manufacturer.

MAKE THE ECONOMICS WORK FOR ALL PARTIES

Much has been said about M2M being a low ARPU business for mobile operators. That is certainly true. In most markets, M2M ARPU is about 10 percent or less than that of a typical handset subscriber. On the basis of ARPU alone, M2M does not look viable. However, when low churn and acquisition costs are factored in, the market for M2M looks excellent.

The key metric that operators should consider is margin. Of course, the key to high margins in a low ARPU business is eliminating costs. Operators should therefore choose a highly automated M2M platform so as to reduce the costs of providing these services.

For enterprises looking to build a connected device business, the economics come down to the business model. For many industries, embedded connectivity is viewed purely as a cost. Finding a flexible business model that takes into account the unique usage profile of the devices across all demographics can help to optimize costs. The same is true for intelligent rate-plan management and sophisticated exception reporting. For some industries, such as consumer electronics, embedded connectivity is an additional revenue stream. Using a connected devices platform to employ advanced upselling and cross-selling techniques can yield significant revenue opportunities.

For module and chipset manufacturers, the economics come down to scale. Eliminating many of the cost and complexity barriers above will help fuel the market. Organic mass-market adoption drives volume – although finding opportunities to accelerate market adoption can, of course, go a long way to help.

By addressing each of the market factors above, the vision of 50 billion connected devices will surely become a reality. Each company in the ecosystem plays an important role. Through partnerships – such as those between operators and connected device platform providers entered into all over the world – this new ecosystem can come together and provide the technology and support necessary to power successful M2M devices. ●

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