

## M2M Innovation: Communication is the Easy Part

By Ivan Chochlekov

For service providers who want to make M2M a profitable reality, the devil is in the details. Connectivity is now only a component of the product, not the entire product, and that single distinction changes everything.

M2M isn't even really a product, it's more of an organism--devices, connectivity, IT, applications, and data--all operating seamlessly in real time. Any business willing to bet their supply chain, product lifecycle, and customer experience on the ability of devices to communicate will insist that it all works all the time. For M2M offerings to succeed, the qualities built into the network--scalability, reliability, availability, performance, and quality--must be built into the M2M ecosystem. Network and IT infrastructure, management systems, applications, cloud services, customer portals, care centers, retail outlets, remote locations, and devices must seamlessly interact without fail or the organism dies.

M2M is a disruptive concept with the potential to impact every aspect of a business. That requires organizational change and responsibility, but it also represents an opportunity to redefine business processes and integrate diverse aspects of the operation as well as partners and suppliers. M2M presents a chance to reinvent processes and transform operations by becoming an intelligent user of technology rather than falling victim to it. Business reliance on IT and networks is becoming absolute--like power, water or transportation. The sustainability of the entire organization is just as dependent on software, computing, and network infrastructure as it is on people and product.

The revenue promise of M2M relies on the ability of service providers to automate everything and implement a simple, seamless, repeatable lifecycle. "One-touch" provisioning cannot rely on six people and four systems to activate a device. For service providers to profitably deliver reliable M2M services on-demand to its customers, all the back office triage that is used today for customer management, provisioning, monitoring, and billing must become genuinely seamless; not buried in a tangle of integration, APIs, and manual intervention.



### Differentiation is in the Details

On the surface, applying the processes associated with fulfillment, assurance, and billing to M2M offerings wouldn't seem to be much different than what service providers do today for any other communication service. But where today's services are becoming customized to each user and every order is unique; M2M requires a single, customized lifecycle that can be repeatedly and consistently executed hundreds, thousands, or millions of times without error or change. When a tag is scanned or a device is turned on, the order automatically executes and updates a few key data points such as device ID, location, an assignment to a customer or account. The remainder of the lifecycle runs in the background but those background tasks must be fully automated and the systems carefully orchestrated.

Many M2M devices are turned on or off on-demand so a customized self-care portal that enables each customer to order, activate, and monitor their own devices is essential. First-use activation places the burden on the device. When a device is powered on, it finds the right network and activation is completed behind-the-scenes. M2M customers require visibility into their connectivity and notification of any faults that might affect their service. Given the volume of devices and the tight revenue margins that providers are committing to, anything but complete end-to-end automation jeopardizes profit. The sustainability of today's business is just as dependent on software and infrastructure as it is on people and product. To that end, M2M lifecycle strategies must be inclusive of requirements for security, scalability, reliability, availability, interoperability, and cost that are designed in from the start.

The lifespan of a M2M device can be short or infinite, but the need to capture, correlate, and

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deliver data to individual applications and users at the right time in the right form is the fundamental reason for deploying M2M. To make that experience automated and profitable requires a lot of work on the part of both provider and customer. M2M must fit snugly into the IT architecture that will host and maintain it for the long haul and that means seamless compatibility with both the network operator and the business.

### **Taking the Plunge**

The thought of delivering M2M services to businesses and consumers worldwide makes service providers absolutely giddy with the revenue possibilities. But delivering M2M isn't as easy as it looks. M2M offerings are industry- and business-specific, not scaled-down consumer offerings. There are a lot of ways this can go wrong and very few ways to get it right, but waiting isn't an option. Perhaps some businesses can adopt a wait-and-see attitude to M2M, but many more are chomping at the bit for viable applications that improve productivity, generate revenue, and reduce costs. Coming up with those applications takes industry expertise and good listening skills, which is why many service providers are assembling consulting groups with subject matter experts gleaned from targeted industries.

Service providers that are getting serious about M2M are functionally separating the M2M business from the network and capacity business. Ecosystems are being built that include multiple partners and providers from component and device manufacturers to cloud applications and development environments. Service providers bring connectivity, hosting, storage, and--most important--management, support, and a guarantee of interoperability. Service providers recognize that they can't do it all, and they don't want to. What they want is to be the go-to source for M2M in whatever form it takes in any business vertical. That means that not only will they have to engage the ecosystem, they have to nurture each organism. Anything less than seamless, automated, multi-tenant solutions that ensure every transaction from every device is detected, delivered, and secure won't cut it.

M2M is a precarious combination of fully automated off-the-shelf capabilities that ensure profitability and industry-specific applications that deliver unique functionality. M2M core technology needs to be consistent, common and easy to maintain and upgrade while M2M applications must be purpose-built to deliver differentiation to business users. Service providers spend a lot of time and money to support the volume of traffic, devices, users, and applications in today's networks and the explosion in mobile data only hints at the challenges that will be

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magnified by M2M. Still, no business is better suited than a communications service provider to establish global alliances, deploy, activate, operate, manage, and bill for millions of connections worldwide and do it reliably for the next 20 years. So let's get to it.