

SMART METERING

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Orange gets smart
with utilities



M2M IN THE CLOUD

ETSI's progress heralds M2M integration with mainstream business

IPv6 ROCKS!

We show how it will take connection to a new level

EXPERT OPINION

Flexibility is the key to smart energy billing

MOBILE COMMERCE

Only 16% of retailers are ready for consumers demanding m-commerce: SURVEY INSIDE!

◀ WIRELESS PLATFORMS

Beer, Golf, Good Food, Better Health... Need any more reasons to use them?

ALSO INSIDE!

MERGERS & Acquisitions in Focus • REVIEW: Where is M2M on everyone's lips? EVENT DIARY: What's On Globally in M2M • GOOD TIMES, Bad Times in M2M PRODUCT, PEOPLE & MARKET NEWS: See Inside or go to www.m2mnow.biz

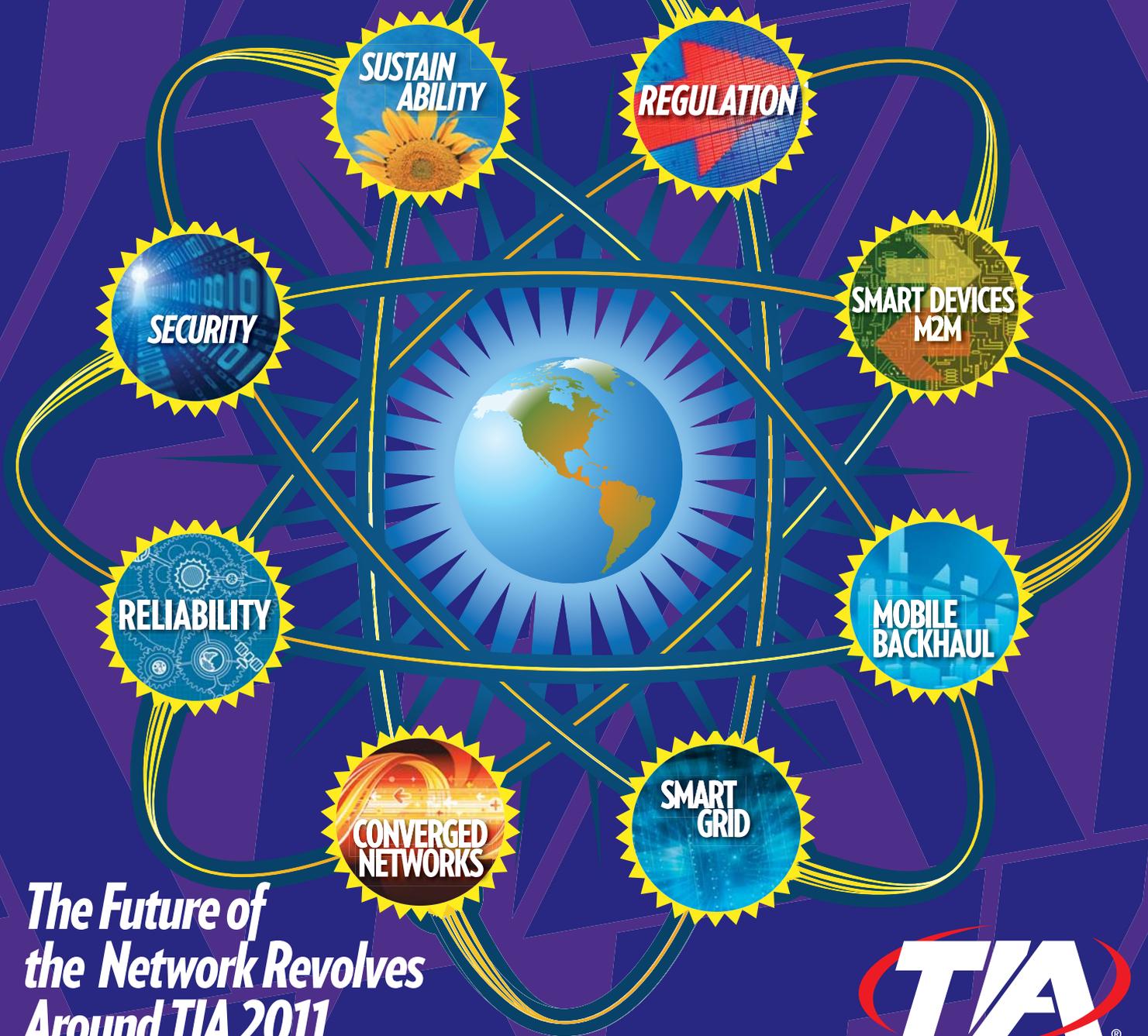


M2M NOW'S ▼ CEO INTERVIEW

Telit buys Motorola's M2M product line and boosts R&D



Your Future Revolves Around The Network



The Future of the Network Revolves Around TIA 2011

As the next billion users come online, the complex web of technologies that make up the global network will face critical issues that must be addressed to keep everything spinning.

Keeping up with the exponential need for bandwidth, the demands of users for a 100% reliable always-up network that is protected from disruption, and keeping their information secure is a big job. Success depends on innovation and cooperation within the industry. *TIA 2011—Inside the Network* is the start of finding solutions for the most important information communication technology issues we will face in the coming years. Join your peers and industry leaders at the most important conference you may ever attend.

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Cover Photo: Lyndon Douglas
Photography for Richard Elliott.
www.lyndondouglas.com



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M2M just got even more interesting



Jeremy Cowan

First, a simple thank you from all of the team here to our thousands of new readers worldwide, and to clients and partners who have made the launch of **M2M Now** magazine and portal a success. The response has been overwhelming and we will be working hard to meet your information and networking needs.

Meanwhile, the market is digesting news of some fascinating corporate mergers and acquisitions (see our new M&A column on page 6). It's fair to say that **Ericsson's** purchase of **Telenor Connexion's** M2M platform has stirred things up. Yiru Zhong, an analyst at **Frost & Sullivan**, says: "Ericsson's acquisition provides service providers – and not only telecoms players – with an alternative way to achieve faster time to market with regards to deployment of M2M communication services. We see a potential for Ericsson to disrupt traditional M2M players by opening up possibilities for new types of service providers."

Jasper Wireless, who enable operators worldwide to offer turn-key M2M solutions for enterprises, sees it differently. Macario Namie, Senior Director of Marketing, says: "There is nobody that questions Ericsson's ability to sell networking equipment in a managed service environment. However, we believe the reason why an operator seeks to partner with us ... is about bringing a deep understanding of the Enterprise OEM that is seeking to build and scale a connected device business across many operators and countries. This comprehensive knowledge ... is what sets Jasper apart. We have not seen that any telecommunications infrastructure provider has this level of experience or expertise today," he adds bluntly.

Either way, such high profile corporate acquisitions are promoting interest in M2M services among new customers, previously unwilling to deploy M2M applications despite the potential for cost-savings and enhanced industrial and service controls. In this issue we report on a growing range of business and consumer applications ranging from locating your nearest vehicle service stations or a lost dog (page 7), home or city-wide energy management (pages 9-11), to food safety control in global restaurant franchises (page 26), and accessing localised weather reports (page 30). Clearly, the best is yet to come. 🌱

J Cowan

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M2M by numbers

67 million

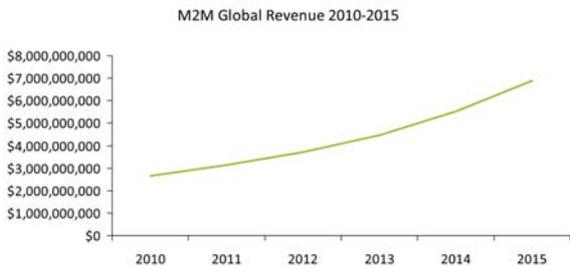
Overall connections in Asia-Pacific countries will grow to 67 million - a compound annual growth rate (CAGR) of 30% - led by strong growth in China, South Korea and Japan. So says an M2M Data Snapshot issued by Yankee Group recently, which goes on to say that Asian markets will significantly close the gap on other regions by 2015.

Enterprises seeking to cut costs will drive steady growth in fleet management and ATM, vending and point-of-sale applications. Applications that cut fuel costs, curtail menial

tasks and improve work force efficiency will resonate with enterprises. Yankee Group predicts a CAGR of 17% in these segments.

Connected energy and mHealth represent massive potential markets over the long term, says the company. As utilities increase co-operation with carriers, the use of cellular technology for smart grid and smart metering projects will increase more dramatically in 2014 and 2015. While mHealth has generated substantial buzz in recent months, a shortage of business models and substantial regulatory hurdles may hamper the short-term proliferation of stand-alone cellular devices.

M2M Global Connectivity Revenue 2010-2015



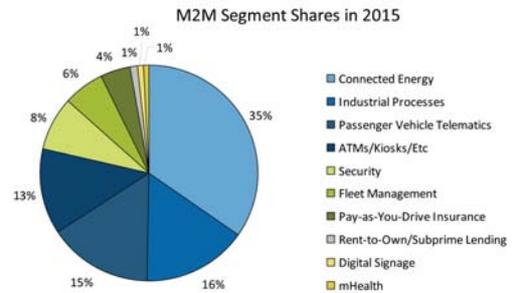
Source: Yankee Group Global ConnectedView, March 2011



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M2M Segment Shares in 2015



Source: Yankee Group Global ConnectedView, March 2011



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1 billion

A report from the UMTS Forum predicts the global existence of one billion consumer electronics (CE) devices connected to mobile broadband networks by 2016.

Two Worlds Connected: Consumer Electronics Meets Mobile Broadband, authored by Strategy Analytics, argues that while the market for connected devices is embryonic, CE device connectivity will outstrip overall wireless market growth in five years. This trend is signalled by a wave of

device categories – from e-book readers to personal satellite navigation devices – that already need access to cellular data networks.

“The collision between mobile broadband networks and connected devices – from digital cameras to personal health monitors – will see as many as a billion additional connections by 2016,” comments UMTS Forum Chairman, Jean-Pierre Bienaimé. “The CE industry must connect or perish,” adds Bienaimé.

12%

The European machine-to-machine market is recovering well from the economic crisis of 2008-2009. Growth rates will exceed 12% over the 2010-2015 period, according to research from International Data Corporation. IDC argues that the convergence of device networking, M2M communication and the internet has brought us several steps closer to a “smart world,” with an “internet of things” enabled by an intelligent infrastructure linking objects, processes, information and people.

“In 2010 we have seen a solid turnaround driven by price reductions but also a tighter integration of M2M solutions across what is still a fragmented eco-system,” says IDC Research Director, Nicholas McQuire. Although the market has a way to go, improvements in standards are also helping (see pages 12-13).”

M2M 2011 Forecast Update gives a forecast update for 2009-2015 for Western Europe across M2M connectivity, modules, and services, plus a forecast for RFIDs.



Mergers & Acquisitions

April 2011

Ericsson to buy Telenor Connexion's M2M platform

Ericsson is buying Telenor Connexion's M2M technology platform for an undisclosed sum. Technology and 11 employees will be transferred as part of the deal. The platform provides telecoms operators with a way to set up tailored M2M services for enterprise customers and is brought to market with a software-as-a-service business model, for a low initial investment in technology and a fast time to market.

Telenor Connexion is wholly owned by Telenor Group, a mobile operator with 203 million mobile subscribers. Telenor Connexion also becomes the first customer for Ericsson on its device connection platform, a service launched during the Mobile World Congress in February.

March 2011

Telit acquires Motorola's M2M division

Telit Wireless Solutions confirms that the transfer of Motorola's M2M division to Telit has been finalised. A Telit spokesperson says: "The acquisition adds valuable human resources, core disciplines and product lines to Telit. It will enable Telit to strengthen its global market position and boost our possibilities to support clients worldwide technically and logistically."

February 2011

Antenna Software buys mobile internet specialist Volantis

New Jersey-based Antenna Software, Inc, has acquired mobile internet software company, Volantis Systems Ltd, of the UK. The combination of Antenna's mobile apps technology with the ability to harness the mobile internet, positions the company as an end-to-end mobile solutions provider for enterprises and carriers. The combined company will operate under the Antenna brand.

Tollgrade Communications sails under Golden Gate Capital for \$137m

Tollgrade Communications, Inc. of Pittsburgh agreed to be acquired by an affiliate of Golden Gate Capital in an all-cash transaction valued at approximately US\$137 million. Tollgrade provides network service assurance solutions for telecoms operators in the USA and Europe. Golden Gate Capital is a San Francisco-based private equity firm with more than \$9 billion of capital under management.

January 2011

M2M Communications bought by EnerNOC

Boston's EnerNOC, Inc (NASDAQ: ENOC) has acquired M2M Communications of Boise, Idaho, a provider of wireless systems for managing energy and demand response. EnerNOC helps utility and commercial, institutional and industrial customers to increase energy efficiency and mitigate emissions. Its Network Operations Centre (NOC) works with over 100 utilities and grid operators globally.

HomeGrid Forum and ZigBee Alliance team up for wired and wireless smart home applications

The HomeGrid Forum (HGF) and the ZigBee® Alliance are extending their collaboration on the ZigBee Smart Energy™ standard development. This work will pave the way for consumers and utilities to use ZigBee Smart Energy 2.0 wireless or wired networks to advance smart grid programmes and deliver new energy, financial and environmental savings.

The organisations will collaborate to ensure that ZigBee Smart Energy version 2 and HomeGrid Forum's ITU-T G.hn and G.hnem standards can be utilised in a variety of smart grid models. When finalised, applications such as AMI (Advanced Metering Infrastructure), Demand Response (DR), Plug-in Electric Vehicles (PEV) and any other smart grid application or service that needs a reliable Home Area Network (HAN) or distribution/access network will benefit.

"Working with HomeGrid will give energy service providers, utilities and consumers another wired choice when implementing either wired or wireless home area networks or utility links to smart meters," said Bob Heile, Chairman of the ZigBee Alliance.

"Through the inclusion of G.hn's high-speed data networking and G.hnem's lower-speed smart energy applications, network designers, appliance manufacturers and consumers have the tools available to build robust, 'service anywhere' networks," commented Matt Theall, President of HomeGrid Forum.



Matt Theall: 'Service anywhere' networks

Telit adds HSPA-BGA modules to global portfolio

Telit Wireless Solutions, a specialist in wireless machine-to-machine (M2M) technology, has launched the Telit HE863, the first in a new series of modules. The HE863 is said to be a powerful, low-cost HSPA (high speed packet access) M2M module in a ball grid array (BGA) form factor with embedded GPS receiver.

The module is intended for devices requiring high throughput and long-term data transmission, even after 2G networks have been switched off. This might include applications such as smart metering, healthcare, surveillance and tracking.

Smart metering devices such as electricity and water meters have been in use for several years.

For this reason, many manufacturers are already using 3G data transmission to future-proof their products against non-availability of the 2G network.

Previously, Telit only offered 3G technology in connectorised products. To complete the product range, the HE series now includes 3G modules with BGA technology for the first time.



Telit aims to offer a wide spectrum of mobile communication and assembly technologies to meet the needs of all market segments. The HE863 measures a compact 31.4 x 41.4 x 2.9 mm



Global Connected Vehicle Services launched for Nissan LEAF by Airbiquity and Hitachi

Seattle-based Airbiquity, Inc. and Hitachi Automotive Systems of Tokyo have announced that the first commercial implementation of their connected services platform for electric vehicles (EVs) is now available in the Nissan LEAF.

The jointly-developed system provides the infrastructure for Nissan's Information and Communication Technology (ICT) for the Nissan LEAF. With the ICT system, Nissan LEAF owners are connected at all times to the data

and information they need to optimise their EV experience.

Nissan LEAF owners and drivers will be able to track battery charging and use, activate remote services and locate charging stations, among other activities. The system can be accessed in the vehicle, by a dedicated website for Nissan LEAF owners, or via mobile phones and smartphones to manage energy usage.



Among other services Nissan LEAF drivers will be able to track battery usage and locate charging stations

Stream offers 'simple, secure access' to remote devices

Stream Communications, an M2M-focused mobile network operator, has introduced what it describes as a "quick and secure way to access remote devices". Removing the need for software installation and network configuration, DINA is a secure alternative to fixed public IP address.

The Direct Inbound Network Access, or DINA, platform is built upon Stream's APN (Access Point Name) architecture. DINA also takes advantage of the operator's multiple points of presence to give users a resilient and robust

connection to their remote devices.

"Through the provision of thousands of SIM cards for secure, robust communication it has become clear that there is a need for a less complex alternative to VPNs and the shortcomings of fixed public IP," said Nigel Chadwick, Founding Director of Stream.

"Standard fixed public IP addressing just does not provide the security and resilience needed for modern M2M solutions. Unsolicited traffic to a fixed

public IP address is a particular problem because it is billed to the SIM, which can lead to substantial, unexpected data charges," Chadwick added.

DINA works by creating an association between a user's IP address, a Stream SIM card and a public IP address. The device can then only be accessed from the IP address specified in the association. This association can only be made by an authenticated user, either through a simple web interface, or a web API allowing access to be built into consumer solutions.

NEWS IN BRIEF | NEWS IN BRIEF



Retrieva sniffs out Wireless Logic

Dog tracking and anti-theft specialist Retrieva UK is working with a European roaming SIM from Telenor, provided by Wireless Logic. To date, Retrieva collars have connected via GPRS over a single UK network. Meeting with Jon Smith, Wireless Logic's Business Development Manager, Jon Bryan was introduced to the Telenor global SIM, with coverage in 196 countries.

Under its founders Andy Stuart and Jon Bryan, Retrieva UK has developed an

advanced tracking collar for dogs. As the frustrated owners of dogs who would continually runaway from their masters, the ex-City of London bankers realised that integrating GPS, GPRS and RF technology could deliver a canine tracking solution directly to an owner's mobile phone. Coupled with this, they have developed an automated anti-tamper and anti-theft collar design with alert.

'Instant' video monetisation for TVs, PCs, tablets and smartphones

Global Takeoff, Inc., a provider of converged digital entertainment and advertising systems, has launched YCast.TV, an over-the-top (OTT) service that delivers live TV and video-on-demand to TVs, PCs, smartphones and internet tablets within minutes of setup. Now broadcasters and content owners have a solution for monetising video that eliminates long delays associated with video content distribution.

Content owners are scrambling to expand their reach by leveraging OTT internet technologies, while consumers often expect to have all TV and video content delivered to any internet-enabled screen, worldwide.

"With YCast.TV, video content owners of all sizes can now tap into the global reach of the internet and monetise their content everywhere," said Uday Reddy, Founder and CEO of Global Takeoff. YCast.TV enables content owners to acquire the source signal, encode and stream video to more than a billion internet-enabled devices.



Ann Hatchell,
Bridgewater
Systems



Marie-Paule
Odini, HP
CMS

Three new Advisory Board members for M2M Now

M2M Now is pleased to welcome several new members to its Editorial Advisory Board. They are: Ann Hatchell, Director, Solution & Channel Marketing at **Bridgewater Systems**; Marie-Paule Odini, Chief Technologist at **HP CMS**; and John Aalbers, CEO of **Volubill**.

Ann joined Bridgewater in 2005 and over the last 20 years has held senior posts in high tech companies and her own consulting practice which included clients in real-time operating systems, security and enterprise IP solutions.

Marie Paule Odini is responsible for HP CMS's future directions and interactions with customers on innovation. She previously managed worldwide IMS SDP Solutions, VoIP and Wireless LAN programs for HP and brings years of telecom experience including voice and data.



John Aalbers,
Volubill

Prior to joining Volubill in 2006, John Aalbers spent five years at Intec Telecom Systems (acquired recently by CSG Systems) where he was the VP of Charging and Billing Products. Under John's direction, Volubill has grown its client base to over 75 customers around the globe.

The full board can be found at:
www.m2mnow.biz/category/contributors/editorial-advisory-board/

BSQUARE expands its European operations and appoints Iversen



Morten Dahl
Iversen,
BSQUARE

Bellevue, Washington-based **BSQUARE Corporation** (NASDAQ: BSQR), an enabler of smart, connected devices, has expanded its European operations and hired a new regional vice president.

This expansion builds on enhanced sales, support and development services in the Asia Pacific region announced in December 2010.

The company's new Vice President and General Manager, Europe, Morten Dahl Iversen, is responsible for accelerating BSQUARE sales. Iversen joins the company from FORCE Technology and brings more than 16 years of experience in the embedded software industry. Before joining FORCE Technology, Iversen was the founder of TTPCom Danmark, a company later acquired by Motorola. He has also held senior posts at RTX Telecom, Siemens and Bosch Telecom.

Additional sales and support staff will be hired in Germany and the UK in 2011.

M2M platform company Axeda takes on new CEO

Jack Sweeney has joined **Axeda Corporation** of Foxboro, Massachusetts as Chief Executive Officer. Axeda is a cloud platform and applications company for connected products. Sweeney's brief is to shape Axeda's strategic business operations to scale and fully capitalise on the rapidly expanding M2M market opportunity.

Sweeney brings over 20 years of experience as a technology entrepreneur and investor. He served as President and CEO of Apparent Networks before his promotion to Executive Chairman. Previously, he held executive roles at EMC and Network Intelligence.

Brocade finds Jewell for UK & Ireland

Brocade® (NASDAQ: BRCD) has appointed Marcus Jewell as Country Manager for the UK and Ireland. His responsibilities will include managing and driving the sales and services teams, delivering aggressive growth targets in Brocade's Ethernet/IP business, and determining Brocade's partner and channel strategies in the market. Jewell



Marcus Jewell,
Brocad

has over 15 years of experience in the networking business, starting at Xerox before joining MiTech Europe, where he became Managing Director of MiSpace Ltd, a managed ICT services company.

By 2012, the EMEA enterprise networking market is expected to be nearly US\$15 billion a year (Source: IDC, Feb 2011), an increase of more than 28% from 2010, with the UK accounting for 16% of this total.

"I am delighted to have Marcus join us at this exciting time for Brocade. Our UK business has seen strong performance in the last couple of years, reflected in the expansion of our UK team by almost 15 percent in the past 12 months, and the move of our UK operations to a new, larger facility in Bracknell during February" said Albert Soto, Vice President EMEA at Brocade, to whom Jewell will report.

Send your News to the Editor:
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Orange gets smart with M2M metering

Smart metering of utility services is already delivering many environmental and business benefits for power companies, government, businesses and home owners, argues Rodolphe Frugès of Orange Business Services.

Conventional utility service meters use mechanical, electro-mechanical or electronic counters to measure consumption. They are generally located in places that are hard to access and provide the customer with only the most basic information on their usage.

A new generation of smart meters could change all that. By relaying meter readings over fixed or mobile data connections, they can provide detailed, real-time information to the consumer and the utility company.

Users are considered more likely to reduce consumption when they are aware of exactly how much they are spending on electricity and/or gas at any given time, while those who produce electricity via solar panels or wind turbines can see how much extra power they are generating and selling back into the national grid.

The smart grid

A smart grid, or intelligent networked grid that encompasses smart meter, can measure consumption data and send this information to approved external third parties; send and receive commands from these third parties; and act on these commands to adjust the operating regime of equipment or appliances linked to the Home Area Network (HAN). →

“When one of the largest combination natural gas and electric utilities in the US introduced smart metering its data volumes increased 300-fold.”
- Orange Business Services



Image: Lyndon Douglas Photography
for Richard Elliott.
www.lyndondouglas.com



The author, Rodolphe Frugès, is Vice President of Internet of Things and M2M at Orange Business Services

“The worldwide installed base of smart electricity meters will grow at 30% CAGR between 2009 and 2015 to reach over 300 million smart meters.”
- Berg Insight

A smart network would also be able to import and export electricity generated via micro-generation; monitor the load at any moment to be able to recommend export or import behaviour to the end consumer; and exert control at all levels of utility production and transmission infrastructure, allowing real time adjustment to market demand and supply.

Smart metering is, therefore, a prerequisite to providing some measure of control over equipment and appliances linked to the Home Area Network. There cannot be a smart grid that influences equipment linked to the HAN without a smart meter infrastructure.

With M2M smart meters, energy producers could manage demand more effectively through banded tariff structures to encourage consumers to spread their use more evenly, thus reducing spikes in demand. Suppliers would expect to have to handle fewer phone calls from customers with meter-related enquiries thus reducing their customer service costs.

Smart meters could also reduce the need for sending out staff to read meters, as the data will automatically be transmitted back to the supplier.

Barriers steadily removed

The major challenge for utilities deploying smart meters is collecting readings and managing the massive volume of data generated by these devices. The adoption of interface standards is vital to the commercial roll-out of smart metering projects and there are a number of initiatives between standards bodies, governmental organisations and industry players to meet these ends.

The ITU has collated these initiatives in *Activities in Smart Grid Standardization*. Other standardisation bodies are also actively contributing to have this standardisation progress, such as ETSI, CEN and CENELEC in Europe or NIST in the USA. While the debate over the communications technologies (powerline, cellular, DSL, mesh radio or PSTN) that will connect the outdoor meter to the utility company continues, ZigBee is in a strong position to be the standard for in-the-home wireless links.

The ZigBee Smart Energy public application profile, which will be used to provide the communications links between utility meters and household devices, such as smart thermostats and appliances, is the first open standard to be endorsed by **ESMIG** (the European Smart Metering Industry Group). It is a significant step towards the development of networked home appliances whose operation could be controlled by the smart meter, which could suspend their operation at times of peak energy demand.

Once the information has been gathered, utility firms will face the challenge of ensuring their back office applications can handle the massive increase in data generated. When one of the largest combination natural gas and electric utilities in the US introduced smart metering its data volumes increased 300-fold. A number of leading technology companies have come together to form the **Smart Energy Alliance** in an attempt to maximise the commercial opportunities created by this convergence of information technology, communications and energy systems.

A market set to boom

According to analyst firm **Berg Insight**, the worldwide installed base of smart electricity meters will grow at 30% CAGR between 2009 and 2015 to reach over 300 million smart meters. By mid-decade, the majority of all electricity meters shipped in the world's leading economies is expected to have advanced functionalities and networking capabilities. Berg Insight anticipates that growth will continue in the second half of this decade, with many markets approaching 100% penetration by 2020.

Europe will be the leading region for smart metering with Berg Insight predicting that they will be installed in 111 million European homes by 2015, providing consumers with detailed information about their electricity consumption and incentives for using less energy or reducing their bills by using power during off-peak periods.

This activity in smart metering is driven in part by the efforts of the European Parliament to drive down energy consumption. The 2009 Electricity Directive, which defines market liberalisation and renewable energy targets, expects the full deployment of smart metering by 2022 at the latest.

In addition, the European Parliament has voted to expedite implementation by requiring that all new buildings and buildings undergoing renovation be equipped with smart meters. However, no target has been set yet for water or gas smart meters.

Water conservation

While smart grid activities to date have focused on energy efficiency, increasingly utilities are looking to smart metering to improve water efficiency. This has been identified as a key issue by the UN, following the *UN World Water Development Report* which predicted that if present levels of consumption continue, two-thirds of the global population will live in areas of water stress by 2025. Water metering is proven to reduce demand, and also help identify areas of loss within the delivery infrastructure. According to **Pike Research**, global investment in smart water meters is predicted to reach US\$4.2 billion by 2016, with almost 32 million units installed. The industry consultancy →



estimates that using water meters to bill customers on their exact consumption cuts water use by 15% or more. When water suppliers add meter reading automation to the mix, the conservation impact is even more significant.

This is an area where a joint venture, set up by water utility **Veolia Eau** and **Orange**, is helping to drive smart water metering forward in France. The "m2o city" project combines smart water meter reading technology for end users with

environmental sensors to detect water leaks and pollution in the delivery infrastructure.

To collect the data from the meters and environmental sensors, "m2o city" is developing a new ultra-low energy radio network which it will operate on behalf of civic authorities. Networks similar to this one could eventually be deployed to simultaneously collate data from many different types of meters and sensors, for example electricity, gas, and environmental sensors. 

Singapore implements Phase I of EMA's Intelligent Energy System pilot project

Accenture has accepted Clarity and its partner ST Electronics (Info-Comm Systems) Pte Ltd to implement Phase 1 of the Intelligent Energy System (IES), a pilot project that is being spearheaded by Singapore's Energy Market Authority (EMA). The IES is an important step towards a smarter power grid, which will provide its consumers with more information, choice and control over their electricity usage.

Phase 1 of the IES pilot project will involve around 4,500 customers in residential, commercial and industrial settings, including the Nanyang Technological University (NTU) campus, the CleanTech Park at Jalan Bahar and the Punggol Eco-Precinct. This is taking place during 2010-12 with an emphasis on establishing the smart metering communication protocols and standards. The focus will be on implementing the

advanced metering infrastructure and communication system.

Clarity, a provider of unified solutions designed to simplify operations across utilities and telecoms, will be working with ST Electronics (Info-Comm Systems) and Accenture to deliver a unified operational management system to centralise the collection and processing of data from multiple last mile technologies. Initially this will include RF mesh and PLC, to monitor the performance of the last mile solution and manage the distribution of data to other operational systems such as the Meter Data Management System (MDMS).

Bob Darwin, Vice President Global Utilities at Clarity, commented: "Singapore's IES Pilot will help provide customers with greater reliability, choice and control over their electricity consumption. This flexibility will enable other global markets and jurisdictions ... to deal with the many new and significant real-time, two-way challenges that lie ahead on the journey towards smarter networks, including having a standard-based solution to manage the communications between customers' homes and appliances and utility grids across any last mile solution".



Bob Darwin, Clarity: A unified, standards-based head-end solution to support multiple meter vendors and last mile technologies





M2M's change of direction

M2M has been and continues to be a success story. Shipments of modules increased during the economic recession and growth could be higher than 20% this year. So why should the industry inflect — change direction? As Bob Emmerson writes, growth is healthy, but the solutions are not standards-based, which means that they stand apart from the regular ICT environment.



The author is Bob Emmerson, a freelance writer focusing on Information and Communications Technology

The applications run on proprietary “middleware” platforms: middleware is needed to replicate the functionality of cellular networks, for example activating the SIMs. You can think of middleware as the glue that binds everything together.

This indicates that there is a big gap to bridge when enterprises want to bring M2M in from the cold and enable the applications to be an integral part of the environment. It can be done: engineers are clever people, but it's not easy so it costs and up till now the investment could only be justified in a relatively limited number of cases.

‘When’ was italicized here because that development is needed in the current timeframe and now it can be realised. ETSI has made significant progress on the standards front and there is industry-wide agreement on a high-level M2M architecture and service capabilities (see figure 1).

“So what happens to the MVNOs: the vendors of those proprietary platforms?”

The enterprise environment

Mainstream processes like CRM and ERP were originally created as silo-type solutions that ran on dedicated servers. In recent years they have been distributed across multiple servers in centralised data centres.

This development involved a decomposition process whereby the applications were divided into components. It was done in order to obtain more efficient use of computing resources and to facilitate the development of new applications. Cloud computing is the popular term for this development.

M2M solutions also run in stand-alone silos that reflect the needs of various industry sectors. This vertical structure is inefficient because the same wheel is reinvented for different pipes. And it's a barrier because now those business processes employ a horizontal model, which has a common system architecture that enables component sharing. This means that it will be even harder to bring M2M into the mainstream environment, hence the need to change the model.

The inflection point

The inflection point will come when the new architecture is implemented. The timetable is uncertain: it always is with significant ICT developments, but it's going to happen because of the developments that are taking place in the enterprise space.

Without standards M2M will never realise its full potential. But this will take time because the value chain is fragmented and a typical solution will involve four or five vendors and every link in the chain has an agenda. In addition, M2M represents an industry that is broad and deep, which makes it hard to determine which standards are applicable without any delimitation.

“The need for a middleware layer in the M2M market is vital for the continued rapid development of the market and for the emergence of a truly useful Internet of Things,” says Robin Duke-Woolley, CEO of Beecham Research, a UK-based analyst firm specialising in M2M markets worldwide. →



"As the market moves forward, interoperability between M2M service enablement platforms will become increasingly necessary. At the same time, these platforms themselves will be required in order to adequately manage the huge number of connected devices there will be in the installed base," he says.

The new M2M environment

The M2M silo model is not an efficient way to communicate and it's also a barrier to further development. Integration is also required because enterprises are mobilising the employee side of their business processes, for example enabling access to back office databases via smartphones. When M2M applications are integrated, when the applications become part of the ICT environment, databases are automatically updated with real-time information coming from the sector-specific applications, thereby complementing the manual process and leveraging your investments.

As shown here, the new high-level architecture, which is based on the existing communications standards of flat, all-IP next-gen networks, has extended M2M capabilities in the core networks as well as a separate device domain. The M2M service capabilities provide: functions that can be shared by different applications (the cloud model); exposure of functionality via open interfaces; use of core network functionality; and simplified, optimised application development and deployment.

The new environment will, therefore, allow M2M applications to migrate from the current vertical model and adopt the horizontal cloud-computing model of today's enterprise environment, thereby facilitating integration with mainstream business processes. When that happens we can start talking about a new M2M environment that will dovetail with that of cloud computing.

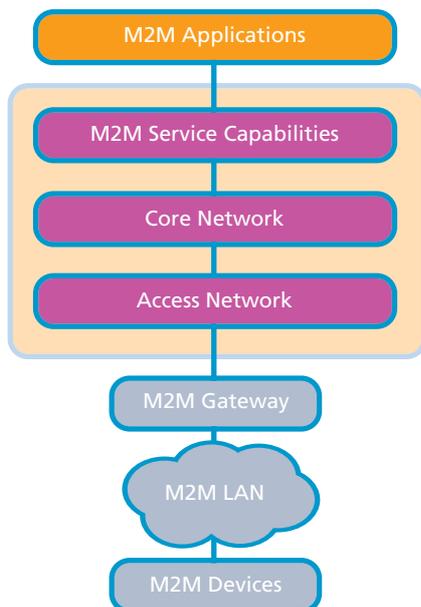


Figure 1. New M2M architecture is based on ETSI standards

Impact on the value chain

That was a very quick take on tomorrow's, integrated environment. Quick because the really interesting development that will accelerate M2M's momentum is the new device domain.

The devices can connect directly to the network domain and they continue to perform procedures such as registration and authentication, but they can also employ the service capabilities of the network. Alternatively, the devices can connect to the network via the gateway, which provides the same procedures on behalf of the devices. The gateway is, therefore, a standards-based M2M platform and eventually it will replace today's proprietary middleware products.

This development will allow application developers to leverage the functionality of intelligent wireless modules, in other words their ability to process data at the device level, and in turn this will accelerate the deployment of applications that run in the device domain over a local M2M area network. In this scenario the wide area core network would only be used to transmit information to a central facility so that it could be displayed, such as on a web portal.

Winners and losers

The device domain is particularly good news for module vendors. The gateway concept is able to unleash the power of advanced processors such as the quad-band ARM9, which is embedded in **Telit's** GE863-PRO3 wireless module.

More local processing equates to less network traffic, but the telcos will respond. Via alliances and acquisitions they have moved up the value chain, moved on from being a bit pipe. Implementing the new architecture should be relatively easy since it is similar to that of next-generation cellular networks.

In April this year **Ericsson** acquired **Telenor Connexion's** M2M platform. Under the terms of the deal, 11 employees will transfer to Ericsson to work on its Device Connection Platform, which was designed to help mobile network operators offer M2M services to their enterprise customers.

This is a 'wheels within wheels' development, but the take-home message is the enhanced ability of the leading NEP (network equipment provider) to facilitate the deployment of M2M functionality in cellular networks. Telenor will be the first customer on this platform.

Robert Brunbäck, Telenor's Head of Product and Market Strategy: "This is a strategic move for us, allowing larger economies of scale for the basic connectivity services and increased focus on new value-adding and customised services for our global customers."

So what happens to the MVNOs: the vendors of those proprietary platforms? Hard to say, but they were a major player in the creation of the market, which means that they have a lot of experience, partners and customers. One would assume that they would migrate to the new architecture. What counts are the applications. 2

M2M Jargon Buster

CRM: Customer Relationship Management

ERP: Enterprise Resource Planning

ICT: Information & Communication Technology

SIM: Subscriber Identity Module



Meters get smarter across the globe

When considering critical drivers of the movement toward a connected world, it's unlikely that most people would identify electric, water, and gas meters as important devices. As Mark Ritorto writes, homeowners rarely interact with their meters, while managers of large facilities usually review the devices infrequently, being mainly focused on analysing usage data.



The author, Mark Ritorto, is President and Founder of Infinite Research, a US-based technology market research firm that covers M2M and connected devices. Their clients include global companies interested in understanding the shift to an internet-connected world.

Despite their low profile, meters are set to become a core facilitator of the machine-to-machine (M2M) revolution. Meters of yesteryear, capable of only reporting limited statistics, are now being replaced with smart meters that enable two-way communication, real-time data collection, and power quality monitoring.

Smart meters will also promote a new era of energy management services. According to the **European Smart Metering Alliance**, "smart metering is designed to provide utility customers information on a real-time basis about their domestic energy consumption. This information includes data on how much gas and electricity they are consuming, how much it is costing them and what impact their consumption is having on greenhouse gas emissions." The ability to package this information with energy management services will allow customers to significantly cut their energy use.

US leads smart meter growth

The smart metering phenomenon is global in scale, but is progressing regionally at varying rates. Activity in North America has moved quickly, buoyed by US\$3.4 billion in stimulus funds introduced by the United States government in 2009. Nearly 61 million electricity meter contracts totaling \$4.0 billion have been announced in the US, 75% of which have come from the 50 largest utilities. In coming years, smart metering activity in the US will shift to smaller investor-owned utilities and cooperatives. Overall, an additional 75 million American homes and buildings will require meter

upgrades over the next 10 years.

Going forward, the majority of smart metering activity will take place outside the US. From 2011-2013, Europe will be a hotbed for smart meter contract awards as countries and utilities seek to comply with the 20/20/20 initiatives. France will look to install 40 million gas and electric smart meters. For Spain, the UK, and Germany, this figure will be 25, 26, and 31 million respectively. In total, it's expected that over \$8.1 billion in smart meter contracts will be awarded in Europe by 2015.

New global markets

Developing countries are also implementing smart metering initiatives. In October of 2009, Brazil announced a 10-year timeline to deploy 63 million smart meters. China, meanwhile, plans to deploy 326 million meters of the automatic meter reading (AMR) variety, and has suggested that smart meters may be installed to take advantage of synergies with the country's upcoming smart grid.

Looking to the future, the installation of smart meters and smart grid infrastructure will play a crucial role in the deployment of energy management services. With the proper guidelines and programmes in place, services like Demand Response could evolve from a roughly \$1.0 billion market to an industry that generates tens of billions yearly by 2025. Beyond the financial opportunities, the combination of smart meters, smart grids, and energy management services may finally be enough to realise the vision of "intelligent energy use" globally.

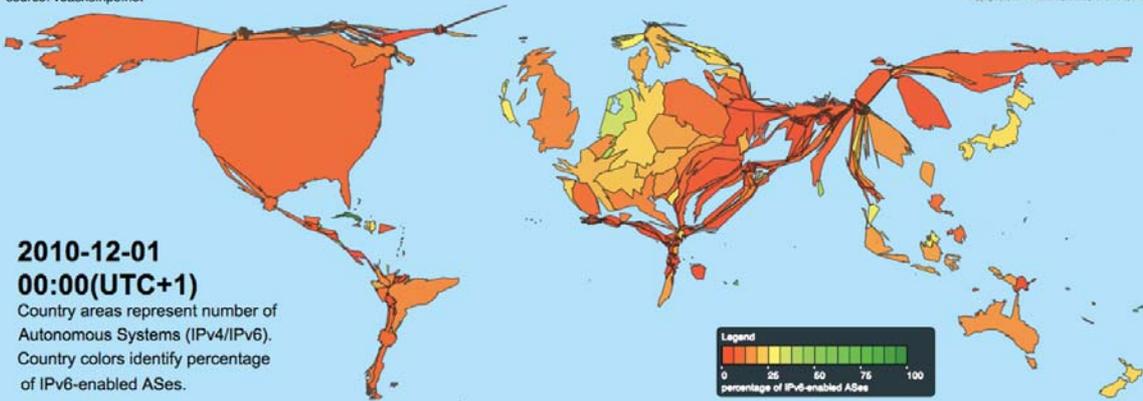
M2M Jargon Buster

AMR = Automatic Meter Reader

"...over \$8.1 billion in smart meter contracts will be awarded in Europe by 2015."



Number of Networks and Percentage of IPv6 enabled Networks per Country
source: v6asns.ripe.net



Caidagram
Copyright (C) 2011 Claudio Speranza, RIPE NCC, CAIDA

M2M: How IPv6 will take connection to a new level

Every device or piece of equipment that communicates via the internet requires an individual numerical label, an Internet Protocol (IP) address. IP addresses are available in two versions, IPv4 and IPv6. To date, the majority of devices have been connected to the internet using an IPv4 address. In future new devices will need to connect to the network using IPv6.

On 3 February 2011, the Internet Assigned Numbers Agency (IANA) announced the allocation of the remaining five blocks of IPv4 addresses to each regional internet registry (RIR). The RIRs are responsible for the registration and assignment of IP addresses in their region.

IANA's announcement meant that the world's IPv4 resource had reached 0% and that once these addresses are allocated to the RIRs' members, only IPv6 addresses will be available. This raises a potential problem for the M2M industry, which is reliant on the availability of IP addresses to connect devices to the network.

There are around 4.2 billion (or 2^{32}) IPv4 addresses in existence; in comparison the number of IPv6 addresses available is 2^{128} , a number so large it is hoped we will never face exhaustion again. The issue everyone faces is that IPv4 and IPv6 are not compatible. Therefore, it will be necessary to dual stack, running IPv4 and IPv6 at the same time, to ensure that users can access all content and devices on the internet.

The aim should now be to drive the adoption of native IPv6 networks, allowing a host of new benefits and a wide range of future applications to service providers and users. These include:

- Ubiquitous access enabling better remote monitoring
- Improved security via packet encryption which is vital for transfer of sensitive data
- Cheaper and more reliable real-time applications

- Plug and play provision to be included as part of standard specifications, which will improve consumer adoption of IPv6 devices.

IPv6 also opens up a whole range of applications to the M2M industry a lot sooner than expected. Devices that before would not have been deemed necessary to have an IP address, due to limited resource, can be allocated with one with little consideration. Compatible devices will range from the work PC to the home refrigerator, and from security systems to automotive vehicles.

IPv6 implementation should be a focus for all businesses, especially in the communications industry where service offerings rely on a stable and secure internet. There has been a reluctance to adopt IPv6 due to the perceived cost of deployment. However, the cost of waiting will be far higher. The key steps to IPv6 adoption are:

- Carry out an audit of equipment/software to see how it supports IP addresses and how it will support IPv6 in the future
- Upgrade equipment
- Provide full staff training before going live
- Rewrite any of your own applications that store IP addresses to be IPv6 compatible
- Organise IPv6 connectivity and address space
- Ensure that your current ISP supports IPv6. If not you will need to get a new supplier.

Only once all of these things are in place can IPv6 be implemented. The opportunities that IPv6 brings to M2M communications will help drive the industry into the future, the challenge now is to make sure you're not left behind. 🔍



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Based in Amsterdam, the RIPE NCC is an independent, not-for-profit membership organisation that supports the internet's infrastructure through technical co-ordination in its service region. It is the Regional Internet Registry (RIR) providing its members with global internet resources and related services (IPv4, IPv6 and AS Number resources).



EXPERT OPINION

Flexibility is the key to smart energy billing

Energy providers are facing numerous billing and charging challenges. In increasingly competitive energy markets, providers need to offer pre-paid and post-paid billing, timed tariffs, and load-sensitive pricing (for example, in cold weather). Variable energy supplies from renewable sources also add some uncertainty to energy pricing, and providers (as well as consumers) can make the most of fluctuating markets if they can offer variable pricing. How well are today's energy providers meeting these challenges?

Dynamic Energy Billing allows for new personalised offers and service bundles

The times when energy suppliers could attract customers by offering just one tariff or a tariff with two different options are long gone. As the energy market becomes more and more competitive, suppliers need to offer attractive, new services and tariffs. To enable these offerings, real-time charging and billing is needed. Now, as Orga Systems writes, flexible tariff configuration can be achieved in real time by a centralised rating engine.

Dynamic energy billing enhances energy efficiency and helps reducing CO₂ emissions. With real-time based energy billing solutions, energy providers can efficiently cope with the challenges that renewable energies from volatile sources bring into the business.

Flexible tariff configuration allows them to offer pre-paid, time-of-use or critical-peak pricing. These configuration and simulation features have to provide easy to use means to launch new offers and service bundles – a key benefit also for the consumer, who can constantly monitor and therefore easily lower the energy consumption to save money.

One interesting aspect of machine-to-machine (M2M) communication is smart metering of multi-utilities. Taking into account that leading analysts predict strong growth for M2M connections, the topic becomes even more attractive. Some predict that wireless M2M connections will reach 294.1 million in 2015 (Source: *Berg Insight, February 2011*). This would represent 4% of total cellular connections worldwide. Furthermore, the number of M2M connections may rise to 2.1 billion in

2020. Taking these impressive figures into account, operators face major challenges in sales, marketing and converging OSS/BSS (operations & business support systems) for M2M services.

Automation and large scale are key for profitable business

Many operators have realised the revenue opportunities for M2M business. Taking a look at today's margins for this business, it becomes obvious that it will be a tough task to realise profitable margins for these M2M services.

To act profitably, operators need to offer connections on a high volume basis bundled with dedicated managed service offerings. Moreover, they need to dramatically reduce their costs for enabling these M2M services. Orga Systems enables MNOs to optimize their service innovation or diversification, based on its real-time convergent charging and billing solutions.

Operators need to automate device support for customers in markets like smart grids, energy, transportation telematics or healthcare. This is the only way to reduce provisioning as well as customer support costs and enable profitable M2M business. While monthly revenues for dedicated transportation telematics services are not that low, areas with the highest growth rates like smart metering generate extremely low average revenues per user (ARPU). Real-time capabilities are the common basis to promote profitable M2M business. For the utility market, an easy integration into existing meter data management and utility CIS systems based on standard interfaces needs to be ensured. →

“E.Cockpit ... reflects current consumption values, energy costs and prices on request.”



Enhance energy efficiency by dynamic billing

Using configurable projection time and considering external events such as weather forecasts (wind/sunshine) make personalised tariffs match perfectly. This is designed to change the consumers' usage behaviour and to enable intelligent home automation services. As the energy sector is becoming more and more competitive, energy retailers need to offer attractive new tariffs and services. Orga Systems' flexible tariff configuration and simulation features provide easy to use means to launch these offers and service bundles. The support of standard interfaces allows for easy integration into existing meter data management and utility CIS (customer information systems).

By dynamically adjusting the tariff to the consumer, consumption can be stimulated. This can avoid negative pricing or grid congestion in high throughput periods when using energy from volatile renewable energy sources. Demand-side energy management will become an easy task while also meeting regulatory requirements.

Real-time processing of load and price signals between multiple providers, users and devices is required to ensure accurate prices. Orga Systems

enables dynamic pricing for volatile renewable energy, which is configurable by a centralised rating engine.

Dynamic pricing and integration of value added services for satisfied customers

Special requirements have to be met in order to cope with the increasing percentage of renewable energy from volatile sources. Demand can be stimulated by lowering the current selling price to avoid negative pricing or grid congestion in phases of high throughput. This can trigger the storage of energy or temporarily activate variable loads in the household.

A key benefit of Orga Systems' Dynamic Energy Billing solution is the flexible configuration of tariffs, reflecting time-of-use or critical-peak pricing. For energy customers a new mobile application "E.Cockpit" is offered. The application reflects current consumption values, energy costs and prices on request.

In addition to consumption and cost projections, monthly billing and pre-paid energy are supported by the solution. This means consumers can constantly monitor and, therefore, easily lower their consumption while the energy provider is able to attract new customers by innovative tariff plans. \$



To offer attractive, new services and tariffs real-time charging and billing is needed



Stefan Engelhardt, SAP: Customers will demand personalised billing contracts

Flexibility in smart utility billing

Rising competition in the energy sector means that utility companies are looking to offer more flexibility in tariff innovation and increase the levels of customer interaction and consumption control. M2M Now investigates some of the issues and opportunities regarding flexibility in smart energy billing.



Eva Heumann, Orga Systems: Challenge of integrating dynamic energy billing



The author, Georgina Elrington, is an independent telecoms writer

“The changes to the energy industry are like none we have ever seen before, and the demands on utility billing systems will be enormous. Not only will utilities be faced with dealing with massive amounts of data, but customers will start to demand personalised billing contracts, not only on when they use energy, but what type of energy

they subscribe to,” says Stefan Engelhardt, Head of the Utilities Industry Business Unit (IBU) at **SAP**.

Eva Heumann, Head of Corporate Communication Global at **Orga Systems** in Germany, believes that one of the greatest challenges faced by the utility companies is the integration of dynamic energy billing into their current models. She states that the support of standard interfaces has to allow for easy assimilation with both existing meter data management and utility customer information systems (CIS). For billing providers, the challenge is to address the processing of load and price signals – between the multiple providers, users and devices required to ensure accurate pricing – if they are to be able to cope with dynamic energy billing effectively, all in real time.

Flexibility can help retain 15% of customers

In highly competitive markets, such as Ireland or the UK, utilities which don't take steps to adjust their pricing mechanisms and introduce more creative billing may lose up to 15% of their customers to competitors that are. SEDC is a representative industry group dedicated to promoting the requirements of demand-side programmes in the European electricity markets. Speaking with *M2M Now* from Helsinki, Jessica Strömbäck, Executive Director of **Smart Energy Demand Coalition** (SEDC) says: “Perhaps one off-putting element is the learning curve that the utilities will need to go through in terms of



Jessica Strömbäck, SEDC: Utilities must go through an implementation learning curve



Andy Corkhill, Convergys: Smart metering is not an overnight revolution



implementation, delivery and customer service. Yet, in time, this cost will not only level out, it will decrease and bring profitability.”

The most industrious markets on a global scale regarding smart energy billing and consumption are: California, which has been the most active for a while on the residential front; followed by the UK; Texas and New York, which are making waves through demand-response for the commercial and industrial sectors; Queensland and Victoria in Australia; and South Korea, which has a vast budget to roll out its smart grid. The UK is currently the most active market in Europe where the government has regulated that utilities must not only use end consumer offerings to lower consumption, they must prove that they are doing so, providing the perfect storm for billing suppliers.

Interactive customer control isn't an overnight switch

Andy Corkhill, Director EMEA, Utilities Market Strategy & Business Development at **Convergys**, says that smart metering is not an overnight revolution but that it will unfold in stages – not at the flick of a switch – and perhaps in ways that few anticipate. Companies must identify, develop and nurture a smart metering strategy that will provide the flexibility to adapt to whatever the future may hold and provide consumers with an improved experience and access to key information.

According to Martin Pollock, Director, **Siemens Metering Services**: “Presently, there is no means →

“Most existing utility legacy billing systems are not flexible enough to allow for the provision of new products, or cross-utility discounts.”



for a utility to send any kind of signal to its customers to advise them on how to use energy more wisely. The feedback loop between consumption and billing is far too long for any sensible action to be taken, no matter how well bills are itemised. Smart metering can tighten this up so that consumers can get more or less immediate feedback to relate behaviour to cost.”

“Utility companies need to find ways of communicating with customers, helping them visualise and understand a household’s energy consumption. They should be encouraging their consumers to interact with this data, remotely monitoring and controlling consumption, allowing them to feel that the control is in their hands, rather than in the hands of their service providers. Ultimately, providing quick and cost-efficient ways for the average family to begin assessing their lifestyle choices can have a huge impact on their long-term energy use and annual bills, as well as their long-term engagement with such a system,” says David Rimmer, Business Development Manager, **Intamac Systems Ltd.**

Krzysztof Kwiatkowski, BSS Product Manager at **Comarch SA**, indicates that flexible billing, as a part of smart metering, may enable utilities to introduce dynamic pricing for differentiated

peak/off-peak or weekend/week- or weather-related price plans, as well as bundles with cross-utility discounts including electricity, water and gas.

He also suggests that after deregulation, the utility landscape may become more similar to the telco world and says; “If we see dynamic pricing in telecoms as an interesting trend in some regions (prices depend on the cell load), why not have similar pricing in electricity?”

However, most existing utility legacy billing systems are not currently flexible enough to allow for the provision of new products, or for providing such cross-utility discounts, and this is why many utility companies are now looking at billing providers with experience in telecoms as potential suppliers.

Yet while a telecoms billing system for utilities may be able to deliver a required level of flexibility, it may not be able to provide enough support for utility-specific business models, as it requires experience in a rather different domain. Kwiatkowski also believes that integration with legacy ERP systems can be challenging from the technical and political perspective.

Doug Zone, Chief Technology Officer at **MetraTech Corp** says that for the customer, control (especially while interacting with dynamic prices) is one of the cornerstones of smart billing. He also identifies other options that utility companies could offer to make billing more flexible, namely:

- **Transparency**, the ability to see exactly how, when and for how much energy is being used;
- **Real-time information**, allowing users to react to higher prices; and
- **Two-sided information**, allowing bills to manage money going both ways as suppliers and users interchange, which will become a dominant theme as the alternative energy market evolves.

He adds: “Smart metering re-empowers the service provider with more creative price structures; and the consumer with the ability to design how they consume and what they can sell back into the grid.

“With power comes the perception that it may be abused or need to be controlled. To this extent regulation may become more evident than ever before. Nevertheless, with smart billing, there are more possibilities to create an open market for energy and, as such, the chance to direct regulation away from managing utilities to ensuring that it really runs like a market,” concludes Zone. **§**



Martin Pollock, Siemens Metering Services: No way to advise customers on using energy more wisely



David Rimmer, Intamac Systems: Help customers understand their energy consumption



Krzysztof Kwiatkowski, Comarch: Differentiated off-peak, weekend or weather-related pricing



Doug Zone, MetraTech: Smart metering re-empowers the service provider



Oozi Cats, CEO of Telit Wireless Solutions

Oozi Cats founded the high level communications engineering and distribution company Dai Telecom Ltd in Israel in 2000. In 2002 his company took over Telit in Italy to establish a worldwide acting organisation. His experiences as CEO and management knowledge have helped to turn Telit into a global player in the M2M market. Headed by Mr. Cats as CEO, Telit was listed in the London Stock Exchange in April 2005.

'A perfect match'

Oozi Cats, CEO of Telit Wireless Solutions, tells Robin Duke-Woolley about the acquisition of Motorola's M2M business.

"Continuity of product availability is the most important factor in customer retention in the M2M market."

Q: Mr. Cats, recent acquisitions in the M2M market have been different from your purchase of the Motorola M2M product line in March. What issues are you seeking to address with this move, and how does your acquisition change the position of Telit in the M2M market?

A: A common pattern of many acquisitions is that large companies take over smaller firms in order to build up a new business segment. Telit's acquisition of the Motorola M2M product line is different since we are not establishing a new business segment, but are staying focused on the ones we already have.

The deal will increase our resources and will enable us to grow and improve our market position.

In addition, it will have a very positive effect on our revenue and accelerates our quest to become market leader. With the integration of Motorola's M2M product line we will strengthen our position as a serious and competitive player in the market.

This step fits perfectly in our long-term market leadership approach. We combine strong organic growth with strategic acquisitions which align our portfolio, strengthen our R&D power, generate financial synergies and have positive impact on our customer relations.

Q: Machine-to-machine communication is one mega trend of the 21st century. In particular, such fast growing markets need a high level of R&D (research & development). Does this deal enhance your R&D capacities and if so, how?

A: That is true. M2M is a mega trend and customers are always searching for the best and most innovative solutions for their devices. In order to fulfil our customers' needs and to be up-to-date or even ahead of time R&D has always been a cornerstone of our company.

Telit already has a high level of expertise in its R&D centres in Trieste, Sardinia and Seoul as well as in the

short range centre in Sophia Antipolis in France. Moreover, the recent acquisition enables us to double our R&D efforts in Israel. Meanwhile, 80 people are working in the office there and it is becoming our fifth R&D centre.

We will continuously increase our R&D efforts in Israel and in all our other research centres. Telit feels well prepared to support and accelerate the rapid growth in the M2M market by delivering the cutting-edge technology and premium support needed to create innovative solutions.

Q: What about the Motorola staff joining Telit?

A: In the past, we were already looking out for qualified experts to join Telit. But it was hard to find exactly the expertise that we needed. With the acquisition we are more than happy to welcome about 40 employees from Motorola to our Telit family and I'm seriously impressed about their significant skills, high motivation and great spirit – this is what we were looking for.

On the sales and marketing side we also have great experts in Europe, the Americas and in the Far East joining our team. It is our ambition to make this change as easy for them as we can. After visiting our new employees in most places in the world, I can say that they already feel comfortable at the Telit organisation. I'm sure within the next weeks we will grow together perfectly. In my eyes the acquisition was also on the human resource side, a perfect match. That is quite promising for the future.

Q: Another important aspect is the handling of the Motorola clients and products. Will Telit continue with the Motorola products and will you provide the sort of support the Motorola clients need?

A: Telit will support all previous Motorola customers from its local offices worldwide. We guarantee excellent technical, sales and other →



we also have the potential for future deals. We will probably show significant improving in our net cash position. Right after this deal, all things considered, our EBIT and EBITA numbers will increase respectively. I think all together in every parameter, this deal is a great step for Telit.



Robin Duke-Woolley
CEO of Beecham Research
Founder and CEO of Beecham Research Ltd, a technology analyst and consulting firm based in London and Cambridge, UK and also located in Boston, MA and Bonn, Germany. Beecham Research specialises in the M2M market worldwide covering both business and consumer related applications and services in nine key sectors - Buildings, Energy/Utilities, Consumer/Home, Healthcare, Industrial, Transportation, Retail, Security/Public Safety and IT/Networks.

supports. The focus on service for all our customers is one of our company's foundations and this is something we hold on to.

Another keystone, and one of Telit's unique selling points (USPs) since its inception, is in a way the never-ending life of our products. We are aware that the continuity of product availability is the most important factor in customer retention in the M2M market.

Compatibility, family concept, pin-to-pin and easy migration are our keywords. Therefore, all existing Motorola and Telit products will be maintained and available as originally planned by the separate entities. We have been very successful with our USP in the past and have no intention to change this successful strategy now, which helped us to become the third largest company in the M2M market.

Q: When do you expect the Motorola deal to be earnings-enhancing for Telit? And what impact will the acquisition have on Telit's financial position?

A: Well, the deal was made in a very correct manner. Therefore, I'm sure it will be enhancing in terms of our Earnings Per Share in the first year of the ownership. We expect to cross the US\$200 million threshold this year.

Overall, we have raised enough money to support this deal and thanks to our 20% market share now,

Q: It seems that the recent acquisition will strengthen Telit's position within the highly competitive M2M market. What are your ambitions for the business for the coming years?

A: In 2010 we announced that our revenue showed 48% organic growth, and this is an impressive number compared to the growth of the whole M2M market which is less than 20%. We keep gaining market share, we keep growing. That already shows our strong position in the market. And I'm confident that in 2011 we will be able to reach the same results in the organic side of the business.

Telit is an extremely focused player that already has the capacity to provide wireless technologies for M2M activities such as cellular GSM/GPRS, EDGE, UMTS/WEDGE/ HSDPA, CDMA, and short range ZigBee, wireless M-Bus and other Short-Range RF M2M modules for all its customers.

The Motorola acquisition is a perfect match for Telit and our expanding strategy. With that we received a good, stable product portfolio as well as great customers, some of them leaders in their market. This enables us to enhance the Telit product line and to offer our overall service to our new customers. With the great workforce that joined Telit as well, we will be able to power up our R&D, sales and marketing business once more. We are on our way to become the M2M market leader in the near future and this is what we are aiming for. \$



Event Diary

Don't forget to add the following events to your organiser. As *M2M Now* is Official Media Partner for most of these events, we look forward to seeing you there.

Grid Week, Washington D.C.

M2M Forum

5 May, 2011
NH Fiera Hotel, Milan, Italy
www.b2match.eu/m2m2011

Smart Metering

Central & Eastern Europe
17-18 May, 2011
Warsaw Marriott Hotel, Poland
www.smartmetering.eu/cee/

TIA 2011

17-20 May, 2011
Gaylord Texan Hotel, Grapevine, Texas, USA
www.tia2011.org

Connectivity Week

23-26 May, 2011
Santa Clara Convention Center, California, USA
www.connectivityweek.com

Connected Home Global Summit

24-26 May, 2011
Jumeriah Carlton Tower, London, UK
www.avrenevents.com

Smart Metering, London

2-3 June, 2011
Millennium Gloucester Hotel, London, UK
www.smartmetering.eu/uk

M2M Forum Europe

6-9 June, 2011
Chelsea Football Club, London, UK
www.m2mforumeurope.com

Mobile Health Summit

6-9 June, 2011
Cape Town, South Africa
www.mobilehealthsummit.com

IPv6 World Congress

14-15 June, 2011
The Thistle Hotel, Marble Arch, London, UK
www.ipv6event.com/

SIMposium

28-29 June, 2011
Maritim Pro Arte Hotel, Berlin, Germany
www.simpodiumglobal.com

Grid Week

12-15 September, 2011
Walter E Washington Convention Center,
Washington DC, USA
www.gridweek.com/2011

M2M Evolution Conference

13-15 September, 2011
Austin Convention Center, Texas, USA
www.m2m.tmcnet.com/conference

Smart Homes

4-6 October, 2011
Amsterdam RAI International Exhibition Center,
Netherlands
www.bvents.com/event/394089-smart-home

Metering Europe

4-6 October, 2011
Amsterdam RAI International Exhibition Center,
Netherlands
www.bvents.com/event/394088-metering-billing-cru-europe

M2M Zone at CTIA

11-13 October, 2011
San Diego Convention Center, California, USA
www.ctiashow.com

Connected Home USA 2011

15-16 November, 2011
www.avrenevents.com



M2M on everyone's lips in Barcelona

Plenty of research stats were issued at Mobile World Congress in Barcelona to support the idea that we are at a tipping point in the global growth of machine-to-machine (M2M) data services. With 60,000 visitors and exhibitors making this the largest ever GSMA Congress, Jeremy Cowan found that all kinds of companies were eager to stress their M2M and smart, connected devices credentials.

If **ABI Research's** findings are correct (that the market will grow to 225 million connected devices by 2014), then fixed and wireless operators are going to have to adapt their networks to a new scale of user demands. They will need new measures of security, flexibility and scale.

Bridgewater Systems announced in Barcelona that since 2010 its systems are now managing more than 10 million connected devices offering a range of machine-to-machine (M2M) applications. The US-based software vendor securely manages M2M connections on 3G and 4G networks using intelligent broadband controls such as device service control, dynamic policy control, and device identity management. In the coming months the company particularly expects to see new opportunities in areas such as smart grid services, automotive, retail, telemetry and public safety.

According to Shira Levine, Directing Analyst, Next Gen OSS and Policy, **Infonetics Research**, M2M transaction growth, "... will drive investment in solutions that can support the high volume micro transactions associated with M2M traffic. Intelligent, real-time policy control solutions that are capable of

supporting that transaction volume will become increasingly important, as will subscriber and device identity management capabilities that allow the operator to identify and track the data sent between devices."

So, what are the industry metrics that guide **Jasper Wireless**, whose platform has been enabling network operators to service the M2M market since 2004?

Based in Sunnyvale, California, Jasper Wireless has been working with operators worldwide whose customers demand traditional M2M applications like fleet management, vehicle telematics, smart grid and asset monitoring. Today, as Macario Namie, the company's Senior Director of Marketing, told *M2M Now*: "There's much analysis of metering and industrial automation, but no analysts are covering M2M in consumer electronics. Our own metrics say that this might reach 90 million devices in 2013, with 40 million in traditional M2M.

"The market is starting in the US and there are big opportunities in healthcare. In Europe, the addressable market is 250 million people who could use cardiac monitoring, or a system for diabetic care. It could really help hospitals and we've seen initiatives in →



Thad Dupper,
Evolving
Systems: Service
providers must
act now



**Ann Hatchell of
Bridgewater:**
Unique
requirements of
M2M services



**Macario Namie,
Jasper Wireless:**
Opportunities in
healthcare

“Intelligent, real-time policy control solutions ... will become increasingly important, as will subscriber and device identity management capabilities.”
- Shira Levine,
Infonetics Research



**Philippe
Bessaguet,
iQsim: Virtual
SIM
management
platform**

Europe as well as the US, for example with **Philips** in the Netherlands and Germany. The challenge is to embed connectivity in the device itself – it’s not good for the elderly to rely on Bluetooth as has been the case,” said Namie.

Bursty or thirsty?

As Ann Hatchell, Bridgewater’s Director of Solutions & Channel Marketing, says: “From a control plane perspective, M2M services and devices have unique requirements and therefore pose a whole host of new challenges for operators. Some devices are ‘bursty’: they transmit large amounts of data intermittently and often require their bandwidth to be given top priority, as in the case of many public safety applications.

“Others are ‘thirsty’: they transmit small amounts of data continuously and typically require the volume of data transmitted to be metered, as in the case of smart meters transmitting status data,” says Hatchell. The software vendor believes that M2M service providers need to:

- **Create extensive security** – service providers must be able to match device ID with associated network credentials, plus detect and report on misbehaving devices
- **Limit control to active devices** – providers need dynamic policies that maintain network integrity by creating rolling transmissions based on time of day, day of week rules. Examples range from low-priority maintenance data flows depending on the time of day, through to high-priority bandwidth with SLAs to meet public safety demands.
- **Offer flexible billing models** (see separate articles, pages 16-19) – offer plans based on data usage, the number of connections or different bandwidth requirements
- **Manage scale and performance** – to meet the forecast growth in M2M demand for millions of connected devices.

To help the market swallow all the new information emerging on M2M, Bridgewater has created an

Intelligent Broadband Controls Cookbook. This suggests six ingredients for an M2M recipe:

- **Service controller:** For complex, multi-level, multi-factor device authentication to protect device identity
- **Proxy engine:** This authenticates and authorises requests to third party servers and device management platforms
- **Comprehensive accounting:** Detailed records enable flexible billing models for multiple devices and bandwidths, and provide a revenue audit trail
- **Policy controller (PCRF):** To provide real-time bandwidth prioritisation and metering of network resource usage per device
- **Subscriber data broker:** This models device entitlements including security keys and certificates
- **Transaction support:** Bridgewater’s scalable system already supports millions of M2M transactions.

Smart services

Scalability is also behind the introduction of **Ericsson’s** new Smart Services Router (SSR). It scales in several ways, offering: multi-application processing (video caching, mobile gateway, business & residential services); scalability in subscribers, signalling and the number of applications; and upgradable capacity (a 16 Tbps system with 400 Gbps full-duplex slots).

The idea is that operators deploying the SSR will find new revenue opportunities through rapid deployment, value-added services and user experience optimisation. They can also cut operational costs through consolidating functions, unifying management, and low energy consumption.

SIM storage and allocation

France-based **iQsim** launched its Smart SIM Rack in Barcelona. This is a Virtual SIM Management platform designed for network QoS testing and M2M deployment validation. On a single ‘ready-to-go’ unit the Smart SIM Rack offers SIM storage, SIM allocation control and an advanced API to integrate with third party applications.

iQsim’s Virtual SIM technology enables mobile terminals to be deployed SIM-less anywhere, while SIM cards remain centrally stored in SIM racks. Any SIM card can be allocated on-demand to mobile terminals as if the SIM was locally inserted in the terminal.

iQsim’s CEO, Philippe Bessaguet, says: “Our Smart SIM Rack includes a complete API which enables mobile network operators to properly integrate Virtual SIM Management with their test servers. Our API offers device management, SIM allocation and price plan control: these functionalities are key for an MNO to perform appropriate tests with appropriate SIM cards and then guarantee QoS (quality of service) to their customers.”

The Smart SIM Rack stores and centralises SIM cards. With the IRON technology included, it can also manage SIM control and allocation manually, automatically or through the XML API. →



"With the Smart SIM Rack, we go one step further by providing the capability to publish SIM management and device management to upper application layers," Bessaguet adds. The configuration is done through an intuitive web interface. The Smart SIM Rack can be packaged with iQsim SIM Flex in order to bring Virtual SIM capabilities to any GSM devices such as sensors or probes.

"The Smart SIM Rack is tailored to QoS and test markets. With our advanced API, we aim to develop partnerships with ISVs in order to bring an end-to-end test solution to mobile operators," says Laurent Lhermitte, VP Sales & Marketing.

Of course, they're not alone in this sector. Jasper Wireless's Namie said: "We've provided dynamic SIM activation for a year; through this we can profile the SIM provisioning. So, for example, if SIMs are made in Asia they're tested there and shipped to Europe and the vendor can activate them when they're used for the first time. It's a better customer experience, no training is needed for the call centre, and users don't have to wait for the service to be delivered."

Secure connection

M2M Now reported extensively in the January issue on **Evolving Systems'** Dynamic SIM Allocation™ product (read the digital edition at www.m2mnow.biz). Now Evolving Systems has launched its Intelligent M2M Controller™. Instead of provisioning M2M devices in the traditional way and permanently tying up resources, the Intelligent M2M Controller allows devices to securely connect to the network and send data only when required. The solution allows operators to reduce costs, protect their networks, and grasp the growing opportunity in the M2M space.

"The M2M market is expected to ultimately be counted in billions, or even trillions, of M2M devices and connections," says Thad Dupper, Chief Executive Officer at Evolving Systems. "And with rapid growth being forecast, service providers must act now to give themselves the best chance of maximising profits and achieving significant market share."

The rise in M2M devices using wireless networks also presents service providers with a range of challenges. Existing systems and processes cannot efficiently handle these devices, known as infrequent transmitters, which are low-powered and inexpensive, only sending small amounts of data, and connecting to the network intermittently.

In addition, the market is fragmented into a variety of industries, business models, devices and connectivity requirements – so any solution needs to support a wide array of use cases and applications.

Innovation award for M2M

Sierra Wireless, established in 1993, enjoyed a bumper year in 2010. Turnover rose 24% to US\$650 million, on which they achieved a \$22 million profit, says CTO, Philippe Guillemette.

But the good news went further, with **EDMI** and

Sierra Wireless being awarded the GSMA's Global Mobile Award for Best Mobile Innovation for Utilities at the 2011 Congress.

The EWM100 is an industrial-grade, M2M communications system designed specifically for smart metering applications. It aims to provide robust GSM/GPRS connectivity between a utility's operations centre and individual power meters in the field. With secure, real-time communications, utilities can manage grids more efficiently, remotely control services, and support in-home energy management applications that empower consumers to change their consumption behaviour and lower their costs.

The award, judged by an independent panel of industry experts, chose EDMI's EWM100 modem for smart metering applications, which uses Sierra Wireless AirPrime embedded modules to provide cellular communications. The jury described it as, "a fantastic product concentrating on solving the issues presented to utilities in gathering meter data using wireless technology."

As energy suppliers worldwide expand their investments in smart metering technologies, systems are needed to enhance energy distribution and optimise legacy grids. By enabling end-to-end, two-way communications down to the individual power meter, utilities can enhance electricity generation and distribution, reduce peak consumption by shifting demand loads and, ultimately, create a 'greener' power grid serving more customers with less energy supply.

Graeme Lees, EDMI's Chief Operating Officer, says: "Cellular connectivity offers a compelling option for smart metering communications infrastructures, enabling energy suppliers to radically reduce installation costs and implementation times."

SaaS success

The M2M business has also been transformed for Jasper Wireless over the last two years following the introduction of their Software as a Service (SaaS) business model. "Before that," says Macario Namie, "our business model was offering end-to-end solutions for business customers. We also offered coverage and SIM cards. We believe that operators need to keep relations with the OEMs and communication service providers.

"We might have competitors with parts of the platform, such as the billing engine or SIM provisioning, but there's more competition at operator level, for example with **Telenor** building their own platform to serve M2M in 2009. Operators know they need specific tools. They couldn't spend lots of time and money developing them." He continues, "They are looking for a global solution and a strong sales channel."

"We offer a full set of features to help operators entice their customers to use self-care." Namie concludes, "It reduces operational costs and enables customers (M2M service providers) to deploy quickly using the same platform in different regions."

"If we accept 50 billion connected devices (Ericsson's 2010 forecast) then many will not be connecting regularly. We need 'smartware' to manage the priority of data to be sent. For a house alarm you want immediate transmission, but some energy billing data can go tomorrow."

- Philippe Guillemette,
Sierra Wireless

M2M Jargon Buster

API = Application Programme Interface

ISV = Independent Software Vendor

MNO/MVNO = Mobile (Virtual) Network Operator

QoS = Quality of Service

SIM = Subscriber Identity Module

SLA = Service Level Agreement

Beer, golf, good food – Need any more reasons to value wireless platforms?

One way of getting over Mobile World Congress in Barcelona, as Jeremy Cowan found, is to turn around and head straight out to Nice for Digi Europe's Wireless Congress. M2M Now was the only English-language publication invited to attend an event aimed at Digi International's European partners and users. We report from the Cote d'Azur on a busy two-day schedule.

With a turnover in 2010 of US\$180 million and staff now totalling around 650 people worldwide, Minnesota-based **Digi International** (NASDAQ: DGII) has come a long way since its inception in 1985. The company, previously known as Digiboard, was initially focused on long serial cables and ports connecting big servers, but became Ethernet- and internet-based producing embedded modules.

But it's real transformation, according to Joel K Young, Senior Vice President of R&D and Chief Technology Officer, came in 2004/5 when the company began to transfer its activities into the wireless arena. Today, approaching 40 % of sales are wireless and the company has grown its revenues 20% per year even in the tough times. The networks Digi supports now range from micromesh to cellular to satellite, but they have one thing in common; users need to control their status.

"Devices may be remote or have no power, but this is a good opportunity for us. You can't always call someone to re-boot the doo-hickey, so we needed to create a platform to manage and control it. This is why we've added iDigi," says Young.

Inexpensive?

iDigi™ was launched over a year ago in the US, but is now being promoted hard in Europe. It now supports over 1 million devices, which means 2,000 posts per second – to put it in context, Twitter handles 600

posts per second and Facebook about 700 per second.

It's designed to be an inexpensive platform that you can pay as you grow, using the company's tools and software kits. How inexpensive, exactly? Well, 'transactions' can be made for as little as US\$0.15 per 1000.

The company's key push, says SVP of Sales and Marketing, Larry Kraft, is in the energy sector where they have noticed a lot of investment. But key verticals include tank monitoring (for example in breweries), smart grids, irrigation control (for both golf and agriculture), industrial automation, medicine (managing care quality, equipment assets, tracing patients, and checking drug libraries for usage, location and history), and managing the product lines in a well-known fast food restaurant chain (that we've been asked not to name) to ensure food quality.

According to iDigi Solutions Architect, Jordan Husney, the platform provides connectivity, management, integration and scalability of gateways and devices. "It's not in the cloud, nor a complete solution for an industry vertical, and it's not a server host."

Three capabilities

CTO, Joel Young described iDigi as "an M2M management cloud service platform, with three capabilities. Connectivity for Digi and third party gateways over all network types; centralised management of gateways and end devices; and a web services protocol for app integration."

And the company have clear development objectives for it. Its scalability has already been tested to 4 million connected devices, but there are plans to take this to 10 million. Similarly there are plans to double the current total of 1 million connected gateways, and to treble the throughput of 3 billion messages per month.

But Digi are clear that to do that they will need to continue to enhance delivery reliability, cutting unplanned downtime from 100 to 10 minutes/year, and raising availability from 0.999 to 0.9995. →

Full energy management system created for Europe's utilities by GEO and Digi International

Speaking at the Congress in Nice, Patrick Caiger-Smith, CEO of Green Energy Options (GEO) of Cambridge, UK and Berlin, Germany, drew attention to current energy experience in the UK: "Average UK income is £14,500 (€16,750) and the average annual energy bill has risen 50% in the last three years to £1,200 (€1,387) or 8% of average income." So, perhaps it's not surprising that he says over 90% of UK consumers have said they're concerned about their energy consumption.

"But householders don't know what to do. There are good initiatives that mean smart meters are going into every UK home by 2020." This has only happened, said Caiger-Smith, because of the carbon agenda, reducing consumption, not just cost. "We predict that in the next 2-5 years any failure (by utilities) to supply home energy monitoring equipment will cause customer churn."

Now Digi International and their partners, GEO are developing a real-time, web-based energy management system for European utilities. The new energy consumption information and control system is based on the iDigi platform and Digi X-Grid solution, a system for extending the power grid beyond the meter.

GEO designs and manufactures energy monitoring systems for use in both the commercial and domestic environment, with more than 1.2 million energy displays currently in the European market. GEO has collaborated with Digi before, notably during the development of npower's micro-generation solution – part of npower's smart energy trials. In 2010, GEO used Digi's embedded modules again, this time as part of the pioneering Inov Grid project with EDP in Portugal. The project is testing

GEO's Solo in-home displays, which have been integrated with the Energy Box smart meter to provide real-time information and consumption awareness for the consumer.

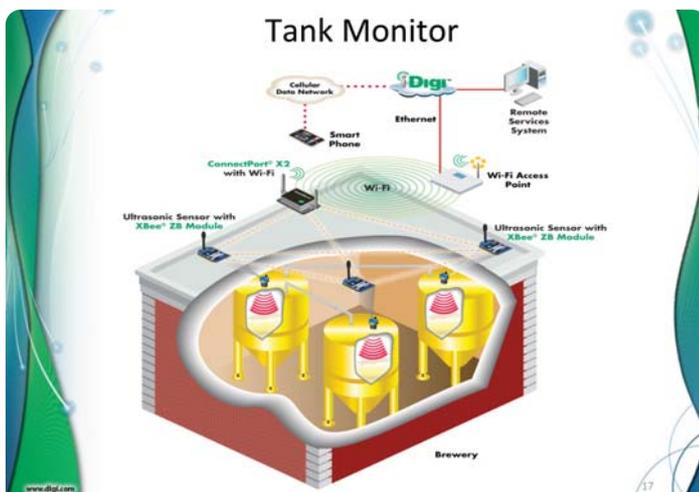
Now GEO is partnering again with Digi in the European smart metering market. GEO will have the support of the Digi X-Grid solution – a development package that includes Digi's Smart Energy gateways, XBee ZigBee modules and adaptors, and the iDigi Platform to provide secure, real-time access to devices within an extended grid infrastructure.

Patrick Caiger-Smith said: "Digi's expertise in the field of ZigBee wireless communications and its investment into their web-based application framework, iDigi, make Digi our ideal partner in the energy management space."

Daniele Cognolato, Digi's Smart Grid Business Development Manager, added: "We are excited to be working with GEO who are already an established leader in the European energy management market. Digi's X-Grid platform will enable GEO to move from visual display devices to complete visualisation and control systems – a revolution in their aim of making energy visible." 



"We predict that in the next 2-5 years any failure (by utilities) to supply home energy monitoring equipment will cause customer churn."
- Patrick Caiger-Smith, GEO



How iDigi might be used in tank monitoring, for example in a brewery.

To see a recent small scale M2M Case Study go to <http://stpaulcheese shop.appspot.com>

For the latest News and Blogs on the connected world bookmark www.m2mnow.biz

Turn to page 30 to find out how M2M will improve your golf



Survey shows just 16% of retailers are ready for consumer demand for mobile commerce

Kony Solutions, a California-based mobile application provider with big expansion plans in Europe, has announced the results of a study into the driving factors behind current mobile commerce trends, and the likely impacts on users of connected devices. The study revealed that 87% of retailers believe mobile commerce will impact shopping in the next two years, yet just 16% have a mobile strategy in place.



David Eads:
Deal with AT&T
to re-sell Kony
platform

A survey conducted by **Vanson Bourne*** analysed the attitudes of 1,000 UK consumers and 100 marketing and IT directors at UK retail businesses towards mobile shopping, as well as the impact that mobile devices are having on traditional shopping methods. The research showed that consumers would welcome the convenience and potential cost savings of mobile commerce.

From the retailers' viewpoint, 42% believe mobile commerce is already affecting shopping behaviour at physical retail locations, while 89% believe m-commerce will be as popular as e-commerce. However, despite this, fewer than one in five of the retailers surveyed reported having a mobile strategy fully in place, and almost a third have no plans to implement one at all.

Gulf between demand and delivery

"The aim of this study was to assess the preparedness of UK retailers for mobile in relation to consumer expectations and demands," said David Eads, Vice President of product marketing at Kony. "The results show a significant discrepancy between retailers' anticipations of the impact of mobile and the strategies that they currently have in place to facilitate this demand. It is clear that mobile is already affecting shopping habits and has the potential to overtake e-commerce in the next few years."

The shift towards mobile is happening in diverse ways and across a number of different channels, with retailers currently placing different emphasis on each area – 45% of retailers identified native mobile applications as the most critical mobile commerce channel to their business, while 40% believe mobile web is more important. SMS is clearly waning with just 10% naming it as the most important channel. On average, retailers expect to spend 21% of their budget on the development and implementation of a mobile strategy, but one in 10 retailers are already investing 40-50% of their budget into mobile.

The research also demonstrated how the rapid fragmentation of the mobile market is leading to increasingly varied consumer preferences and demands. The consumers surveyed expressed a clear preference for mobile during the decision making process, with 60% claiming to use mobile internet to make decisions in a store or while shopping online. Similarly, 40% use mobile applications to make shopping decisions and 37% use a mixture of the two. While almost three quarters (74%) of retailers have a presence on the iPhone, 58% of consumers prefer to shop and browse on other platforms, meaning that by developing for just the iPhone, retailers are ignoring a significant portion of their customer base.

"The discrepancy between what retailers know they should do and what they are actually doing demonstrates how difficult it is to deliver mobile applications across the wide variety of phones, tablets, and browsers," continued Eads. "Companies need a partner to manage the mobile chaos so they can focus on growing their business."

"Retailers are limiting themselves by only serving customers in a few channels. If retailers don't serve their customers, they will go somewhere else. The data clearly shows some retailers are investing significantly in this channel to win those customers. They will attract those customers. The only way to leapfrog the competition and ensure the success of any mobile strategy is to provide customers with a comprehensive offering with those must-have mobile features and functions," Eads added.

According to Mark Blowers, Practice Leader at **Ovum**, "As customer experience differentiation grows more important in the competitive retail environment, retailers should look at mobile, not only as a sales channel but also as a vital tool for customer interaction in a complete multi-channel retail operation. When developing mobile application strategies, retailers must not think of mobile as a silo but from the outset, integrate the channel into the existing operation." →



NFC's potential

Finally, the survey also explored the development of Near Field Communication (NFC) technology, consumer attitudes towards mobile payments, and how retailers plan to implement the technology within their stores. A total of 57% of retailers surveyed are considering NFC technology as part of their overall mobile strategy, citing competitive pressures and customer demand as key drivers for this decision. A quarter of shoppers already want to use their mobiles to pay for items in-store, as opposed to using cards or cash, despite low consumer awareness of NFC technology.

Consumers cite convenience (59%) as the reason for using mobile payments. Security concerns (39%) remain a key reason why consumers say they don't want to pay with mobile, suggesting a real opportunity for retailers to significantly increase interest in mobile payments by addressing these concerns and this lack of education since NFC provides significant security advantages. NFC, said Eads, shares a password with the check-out reader for only 3-5 seconds, and the device has to be within 6cm of the Point of Sale (POS) reader, making it hard for the transaction password to be intercepted.

Asked by *M2M Now* if Kony was adopting a partnership model to speed the roll-out of m-commerce systems, Eads replied: "Absolutely. We've signed a deal with **AT&T** to re-sell our platform, and have recently hired a new vice president of Partnerships & Alliances."

Write Once, Run Everywhere

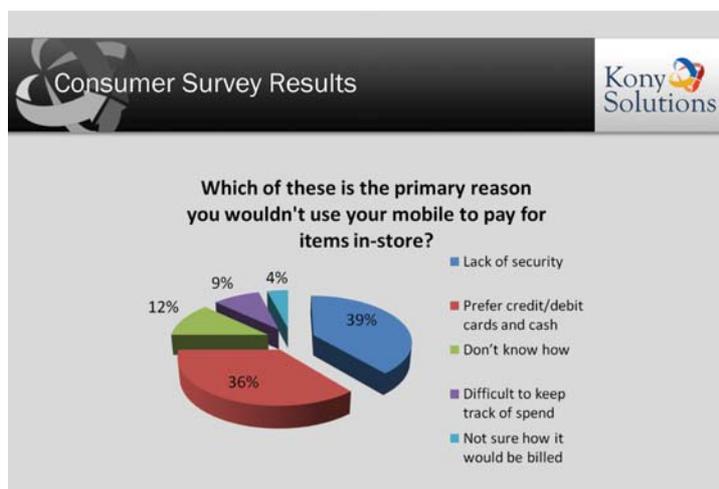
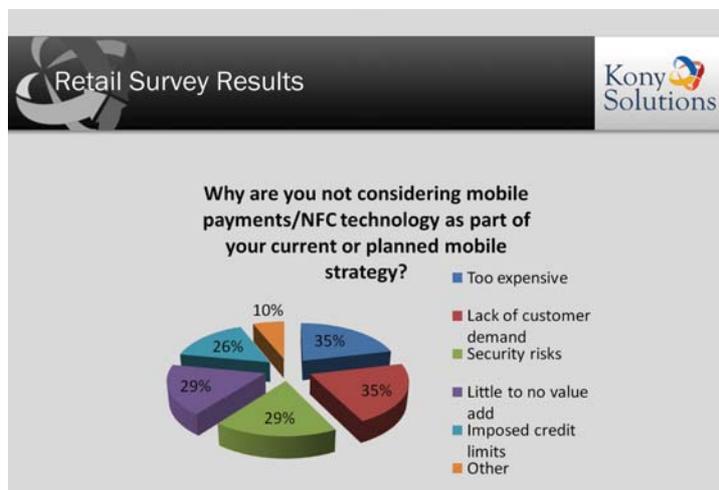
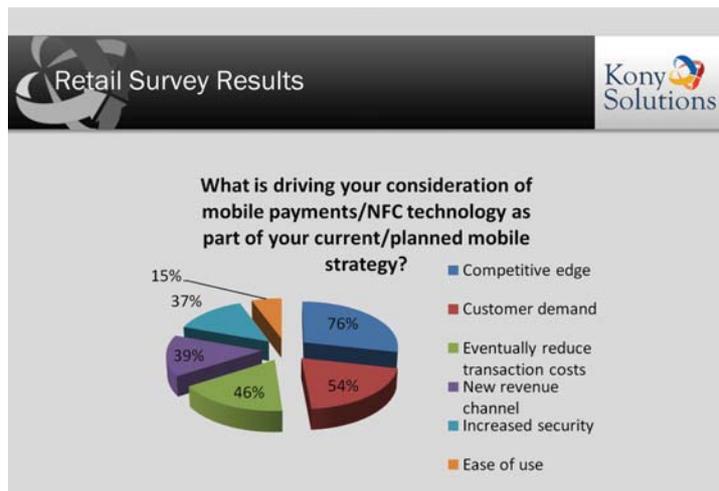
The Kony Platform reportedly enables companies to offer consumers and employees feature-rich mobile applications in less time and at lower costs than any other solution. Leveraging a "Write Once, Run Everywhere" definition, applications are designed and developed just once, in a device-agnostic manner. Applications can then be deployed across multiple channels, including native applications, device-optimised mobile web, SMS, web gadgets, kiosks, and tablets.

Kony claims that its platform thereby makes a company's mobile investment future-proof as it enables apps to be changed once for all channels, ensuring faster adoption of new operating systems and standards as they are introduced, while eliminating maintenance, upgrade and future development costs. Applications on its platform reportedly run across all mobile systems on the market today, including native apps for iPad, iPhone, Android, BlackBerry, Symbian, J2ME, Windows Phone 7, and Palm devices.

The company's customers in Europe already include **AXA Insurance**, **ABN bank**, and an unnamed major bank in the UK. It also lists 35 Fortune 500

companies on its client roster, including **United Airlines** and **Toyota** plus hotel and auto rental companies.

* The Kony survey was conducted by Vanson Bourne in March 2011





GOOD TIMES FOR... Faster, better golf

Golfers could soon find a round is more enjoyable if their club invests in a Course Management Unit (CMU) using radio communications, GPS tracking, web-based reporting and digital screens to track and monitor players on the course.

Using **Wood & Douglas's** CMU, golfers carry a wireless token the size of a key fob, giving location updates on players, buggies or staff. The information is beamed live to the web, displaying the data on any internet-connected screen.

Clubs using the CMU can tackle slow play, offer relevant weather reports, and course information for guest players. Golfers can play when occupancy is low, cut delayed starts, and accurately calculate the longest drive or nearest the pin measurements.



BAD TIMES FOR ... IPv4 and fuel metaphors

The last IPv4 allocations have been given to regional registries by Europe's IP address body. "Internet engineers have been talking about transitioning from IPv4 to IPv6 for over 10 years now," explains Sebastien Lahtinen, Co-founder of thinkbroadband.com, "but this is truly the beginning of the end for IPv4."

Regional internet registries are now allocating their last IPv4 blocks to network operators, and eventually the shortage of IPv4 addresses will trickle down to end users. "If you think of IPv4 addresses in terms of fuel for your car; then we've now exhausted the under-sea oil reserves and the refineries will soon

produce their last barrels. Eventually the petrol station forecourts will start to run dry."

He says the good news is that most users won't really notice any difference immediately because unlike fuel for your car, you don't generally need new IP addresses to keep using your internet connection working. So, maybe that's not the best metaphor then.

Anyway, the shortage of addresses will start to force service providers to implement IPv6 in order to help grow their business. "However, like electric cars," he said, doggedly pursuing the imagery, "it takes time for the support infrastructure to be in place before widespread adoption will ensue. There are still many legacy devices that don't support IPv6," concludes Lahtinen.



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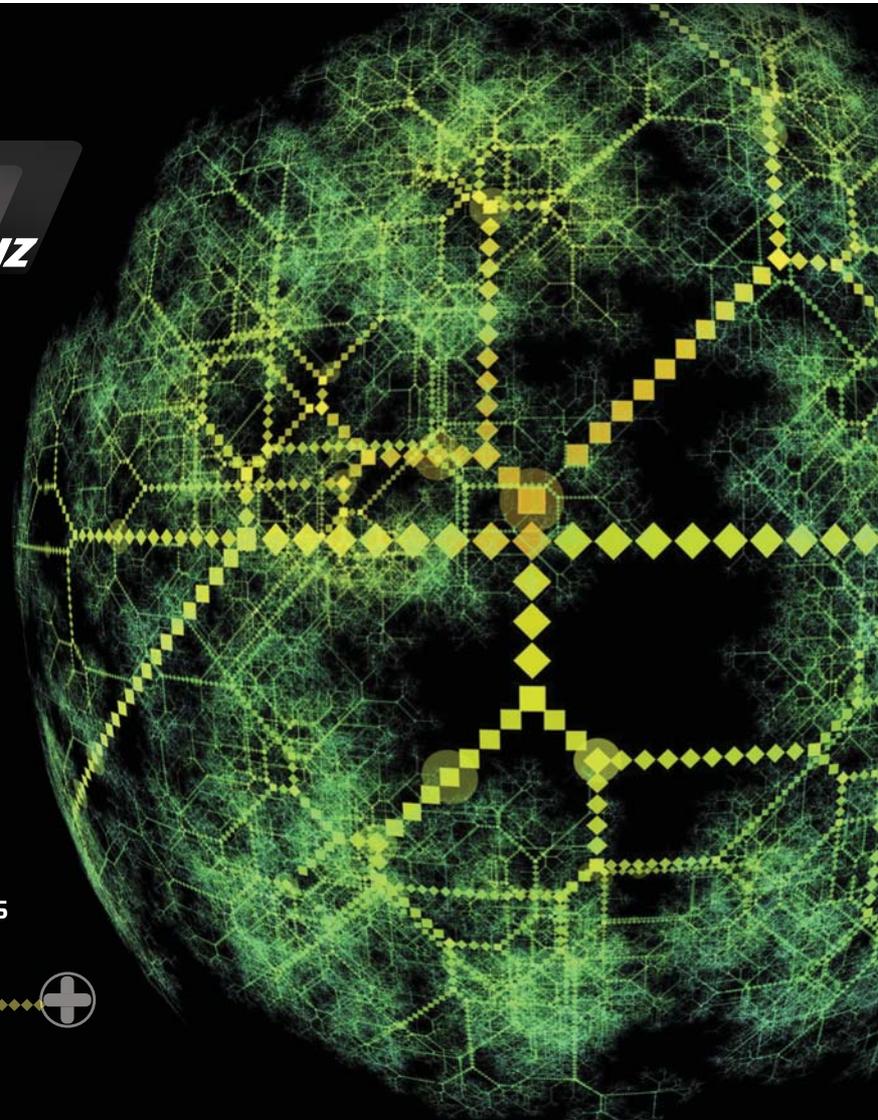


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THE SMALLEST THINGS AROUND THE WORLD.

Indonesia



Smallest fish

7,9 mm

Cuba



Smallest frog

8 mm

Madagascar



Smallest chameleon

10 mm

Germany



Smallest grass

20-30 mm

West Thailand



Smallest bat

30 mm

North Asia



Smallest tree

50 mm

North America



Smallest mouse

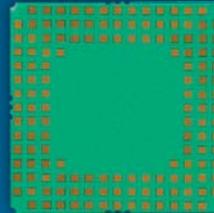
38 mm

WORLDWIDE



World's first and smallest LGA m2m module featuring 5-band HSPA+

28.2 mm



28.2 mm

28.2 mm

THE HE910 – TELIT'S NEW AND MARKET'S SMALLEST LGA M2M MODULE FEATURING 5-BAND HSPA+.

Wherever you go in the world you will always find another "smallest thing". But for an m2m module, from now on you only need to look here: Telit's HE910 – the world's smallest LGA m2m module featuring 5-band HSPA+. The new powerful 3,75G penta-band module can be used in any 3G network worldwide with no need for regional variants. So it is perfect for all planning to market solutions worldwide – and for users whose portable connected devices require worldwide coverage. That is how innovation power leads to industry unmatched high-value benefits. **Telit – the fastest growing m2m company worldwide.**



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