WHITEPAPER

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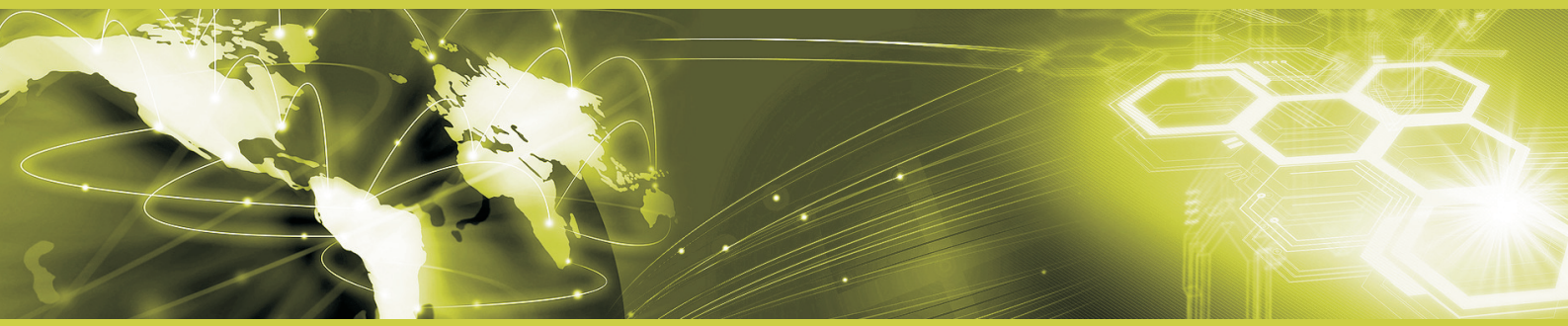
M2M ~ Connecting the devices

This whitepaper is an extract from:

M2M & Embedded Strategies
Telematics, CE, mHealth, Metering & Smart Buildings
2011-2016



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M2M~Connecting the Devices

1. Introduction

Operators including Vodafone, O2, Telefonica, Verizon, AT&T and Sprint are putting significant resources into developing M2M (Machine to Machine) business units. There is an increasing sophistication in how the market is viewed by all stakeholders, with after-market installation being replaced by embedded mobile strategies and SMART (Self-Monitoring, Analysis, and Reporting Technology) systems.

Meanwhile, several specialist companies including Jasper Wireless, Sierra Wireless and Numerex have made significant inroads in developing the M2M ecosystem through partnerships with the operator community in the last year. While this bodes well for the M2M market in the long-term, in the immediate term, uptake of M2M is still relatively modest in most industries for several reasons, including market fragmentation, high costs relative to ARPU[1] and lack of buy-in from potential stakeholders.

It is also important to note that some M2M use cases are more dependent on revenue from pure connectivity than others. In the case of stolen vehicle recovery for instance, the M2M business case relies more on "connectivity readiness" than on-going connectivity.

In other cases, revenues from pure network capacity are not split out at all, though there is inevitably a cost associated with this traffic. This brings to light an important point: much of the potential within the business case of the M2M specialist relies on connectivity enablement and features which might be described as "enhanced connectivity," that is, managing the connections once in place and allowing new devices to be added to an existing roll out in a seamless manner.

2. The M2M Market Place

At its simplest, "M2M" refers to machine to machine or machine to mobile communications, that is the use of networks to transfer data from machines rather than individuals. In practice, implicit in the M2M concept is the idea that such communication allows for analysis of data which passes through the M2M network providing a significant "value-add".

Thus, the pure connectivity facilitated by M2M allows for SMART technologies, such as the "SMART grid" where, for example, connected electricity meters are able to inform their users, and the companies that use them of data such as electricity usage trends. According to the mobile operator Orange, "M2M refers

[1] While ARPU is traditionally known as Average revenue per User In the case of M2M it stands for Average revenue per Unit, since it is objects and devices that are being connected, not individuals.

to the capacity for machines, assets or objects, to exchange data with other machines, people or information systems".

While M2M can be put to use in virtually any industry there are six main vertical segments that are considered to be the most promising for M2M roll out:

- Consumer and Commercial Vehicular Telematics[2]
- Smart Metering
- POS, Retail and Banking
- Consumer Electronics
- Healthcare and Remote Patient Monitoring
- Smart Buildings and Security

3. The M2M Business Case

Two pillars support the business case for M2M from the "end user" perspective: increased efficiency, on one hand, and cost savings on the other. The operator community, meanwhile, has embraced M2M in the last couple of years, with operators such as Vodafone and Verizon creating their own M2M units and several operators forming alliances to extend their M2M reach. Nevertheless, M2M continues to be hampered by the complex nature of M2M roll outs, long lead times and low ARPU. In addition, M2M needs to be considered as a business which is related, but not identical to, the standard cellular business of connecting subscribers.

According to Jahangir Mohammed, CEO of M2M enabler Jasper Wireless, "the key metric that operators should consider is margin. Of course, the key to high margins in a low ARPU business is eliminating costs. Operators should therefore choose a highly automated M2M platform so as to reduce the costs of providing these services."[3]

4. M2M Stakeholders

The stakeholders within the M2M value chain vary from SIM and module manufacturers to operators and service providers and encompass a variety of companies offering different degrees of service along the way. Hardware aside, there is an increasing realisation that the complexities of deploying long lasting M2M projects across multiple different industries call for a level of attention that operators themselves may not be able to or want to offer. Within the M2M value chain, therefore, there is room for M2M "enablers", specialists which bridge the gap between the connectivity and the provision of a complex M2M service using that connectivity.

5. M2M Forecasts

Juniper Research forecasts that M2M will support industry revenues of over $35 billion in 2016, the final year of the report's forecasts. While revenues directly attributable to M2M connectivity and enablement

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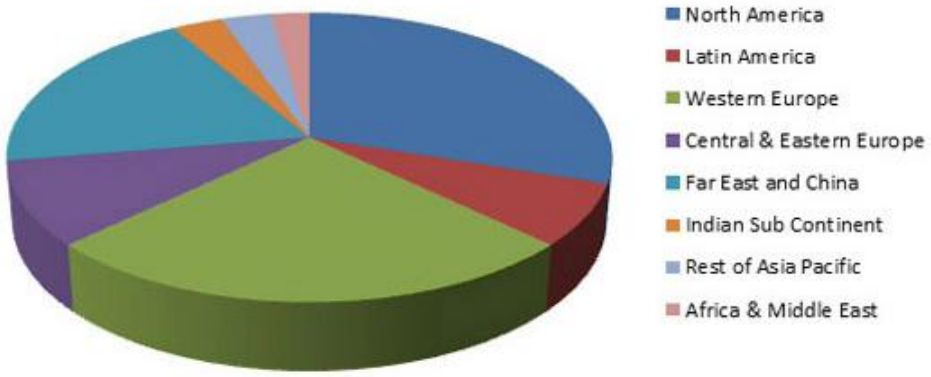
[2] Please note that for the purposes of the forecasts within the full report Consumer and Commercial Telematics are dealt with separately.

[3] Source: Sony Ericsson Opinion piece: http://www.ericsson.com/ericsson/corpinfo/publications/ericsson_business_review/pdf/310/310_opinion_realize_the_promise_of_m2m.pdf

will be a relatively small proportion of this amount, there is nevertheless a fertile business opportunity for specialists to offer services surrounding connectivity to both operators and industry participants.

Figure 4: M2M Service Revenues, % Split by 8 Key Regions, 2016



Source: Juniper Research

As can be seen in the chart above, the developing markets of North America, Western Europe and parts of Asia (notably Japan and South Korea) will dominate the M2M market in the year 2016.

Order Full Report

M2M & Embedded Strategies: Telematics, CE, mHealth, Metering & Smart Buildings 2011-2016

This briefing was taken from the M2M & Embedded Strategies report which looks at the entire M2M market. This highly anticipated second edition Machine-to-Machine report explores in detail the opportunities for key markets within the M2M industry, providing valuable forecasts and strategic analysis for the prospects of M2M and embedded devices in several industries, notably Consumer Electronics, Healthcare, Telematics, Metering & Connected Buildings.

The extensive forecasting suite calculates data points for each sector, sizing the market for service revenues generated by M2M, revenues achievable from connectivity enablement & management as well as providing estimates for the value of network traffic, each by eight regions, for five years.

Key Questions the Report Answers:

- Which areas of the M2M market will be responsible for the greatest number of connected devices?
- Which areas within the M2M market will hold the greatest revenue potential?
- What different strategies can operators employ when addressing the M2M market?
- What drivers and inhibitors exist within the industry verticals covered in the report?
- How are operators addressing the cellular M2M market?
- How will government initiatives and regulation spur specific market verticals within the cellular M2M industry?
- How are the prospects for embedded devices in emerging areas such as healthcare and consumer electronics developing?

For more details on this report visit the website http://www.juniperresearch.com or phone +44 (0)1256 830001.

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