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Machine-to-Machine Communication Innovation

By Comarch

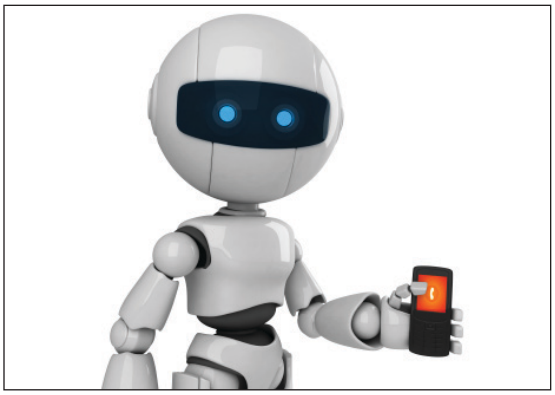
Introduction

M2M as a technology has been utilized for many years. It has even been used by various industries long before the term "Machine-to-Machine" was created.

Today the concept as well as its maturity differs from one country to another, and various industries are using it for various reasons. For example smart metering, which also uses M2M technology, is in different stages of development in different countries.

eHealth is something that many vendors and providers already have in their labs or even in their catalogs, however it is still blocked by some regulations or institutions and is not broadly used commercially.

The race for a share of the M2M revenue pie is happening now.



But in some cases consumers are using M2M technology in their everyday life and don't even think about it (e.g. when buying a ticket on a train or purchasing products from a vending machine). Such machines are very often equipped with dedicated M2M SIM cards and devices which are part of a complex information exchange chain.

One very promising market – not yet affected by regulators – is consumer electronics. According to a research report from Berg Insight, The Global Wireless M2M Market - 3rd Edition, AT&T will become the first mobile operator to reach 10 million M2M subscribers at the beginning of this year. Everything thanks to customers in consumer electronics.

Differences between traditional and M2M subscribers

The difference in characteristics of traditional and M2M subscribers is significant, Just as the differences between smart phone users and connected devices is huge.

The traffic generated from M2M is generally not as big as from smart phones, however for some types of services it can be still quite significant – e.g. CCTV requires permanent video transmitting sessions. But the average cost of network usage per M2M subscription is 0.60$, compared to 5$ for a traditional subscription (according to Current Analysis, Best Practices in M2M: The Operator Perspective report, published in 2010).

Of course, differences in ARPU are significant. According to Current Analysis, this is $50 for wireless services and $3 for M2M. The profit per subscriber is $24 and $1.50 respectively. The margin for M2M services can reach 50%, while wireless services reach 44%.

The conclusion from such analysis is obviously not one where operators should stop thinking about traditional subscribers and focus on M2M. However, looking at the presented figures, it seems that it is possible to achieve quite a good margin on M2M services. Adding current trends to the observation – the saturated mobile market and the growing M2M market – the potential of the latter seems to be very attractive for operators.

If we look at the exact potential of M2M, as it is presented in some analyses and predictions, we find that only in Europe will the market grow from less than 6,000,000,000 EUR to 12,000,000,000 EUR in 2014 (Source: IDATE, The Machine-to-Machine Market 2010-2014 report, published in 2010).

The question is, who will get the biggest share of the revenue pie?

Many devices and gadgets, such as an e-reader, digital camera, or printer, may come with an embedded SIM card providing connectivity for various purposes. Each one of us has more than one of these devices. Estimates say that the possible number of devices which can be connected is five times greater than the amount of humans (source: European Tele-communications Standards Institute [ETSI]). And this vision sounds quite realistic.

It's safe to say that the real development of M2M technology and its market is still to come. But the race for a share of the M2M revenue pie is happening now.

Great Things are Done by a Series of Small Things brought Together

Only some of the industries using M2M technology have been mentioned. During various M2M events there have been a lot of discussions among small and medium companies using M2M for running quite interesting niche businesses, often very successfully. Such companies are also important drivers of M2M business. For them, M2M technology is mainly a source of information that is delivered to them using certain devices. They don't want to think about continuous interactions with a mobile operator, managing SIM cards, devices, etc.

A company selling niche "pay-as-you-drive" insurance, where a special device is installed in the car and insurance is calculated based on various measures received from this device, would not like to think too much about SIM cards in cars, but rather to focus on the aspect of a new source of information, which allows them to calculate the risks and price of the insurance in a better way.

Even if such companies have to manage M2M SIM

After reaching the M2M market maturity, profits from pure connectivity will radically decline.

Now is the time for operators to make such strategic decisions to protect their position on the M2M market.

cards, they would like to have a simple way of activating or deactivating services, monitoring their status, controlling the usage of particular SIM cards and have full control over it, together with the possibility to set limits for usage or location.

The conclusion is that from the mobile operator's point of view, it is very important to provide such services, which allow potential customers to focus on their core business. It is important that they not think about details of M2M technology and that the operator provides appropriate automation of interaction with M2M partners.

Know the Players at the Table

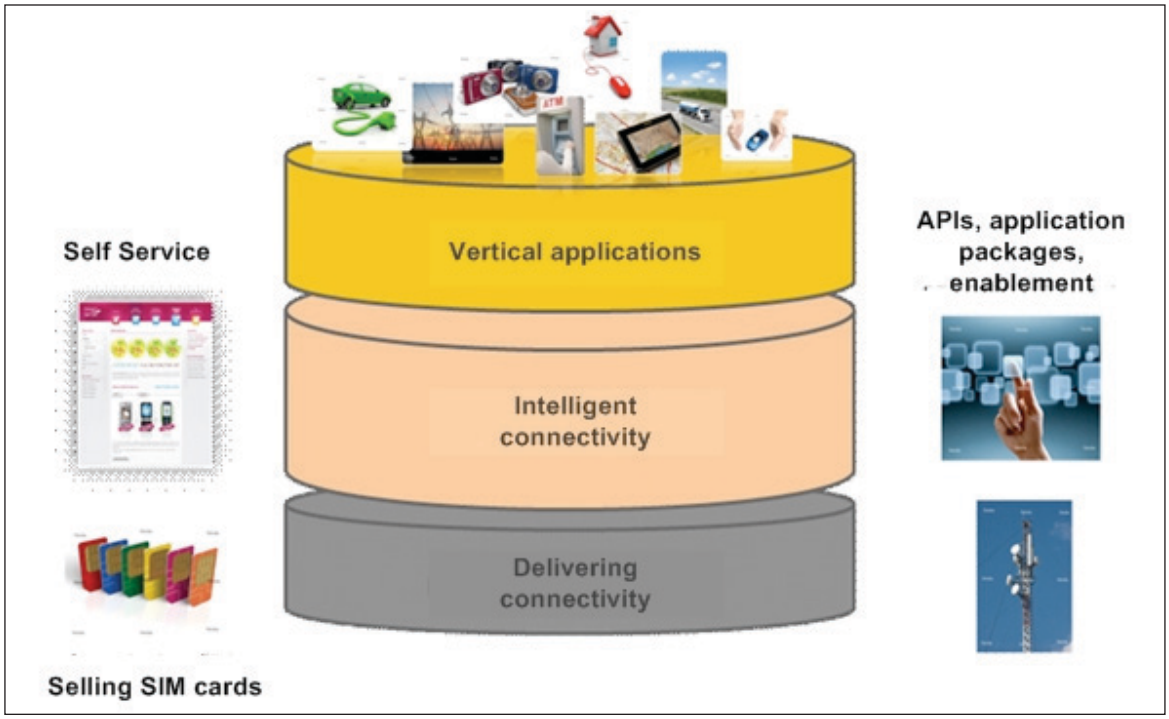
Connectivity does not have to be delivered only by mobile operators. Not every device using M2M technology will contain a SIM card. Apart from concentrators used to aggregate connections between various devices, there are also other networks used, such as WiMAX or ADSL. But it's still M2M.

Regulators are also playing an important role in M2M because they regulate the energy market or the automotive industry, thus affecting smart metering or bCall/eCall business areas. Regulators may boost the development of some M2M services and block other ones.

M2M aggregators or enablers also play an important role, as they aggregate connectivity services from various operators to build an offer for customers using a revenue sharing model. Depending on the business model, they may focus on connectivity or also on providing additional support for selected verticals.

Device manufacturers are another important player on this market, especially because the price of a single unit (one that is attached to a connected machine and contains necessary communication capabilities such as SMS/GPRS) is a key factor in market development. Currently the average price of an M2M module is around 20 EUR, which seems to be inexpensive enough to be used with increased frequency.

Yet the most important players are operators' customers - verticals that use M2M technology to provide services



to end users. Such verticals include smart metering, surveillance, automotive consumer electronics and many others. In most cases, end users do not interact directly with the operator. However, the opposite does happen.

While looking at forecasts we ask ourselves how will revenues from M2M be divided between all players? From an operator's perspective the question is how can he get a bigger share?

The Role of the Operator in the M2M Chain

Of course the role of the operator in the M2M chain starts purely from delivering connectivity, which means selling SIM cards dedicated to M2M. But it doesn't have to be so limited. As was mentioned at the beginning of the article, companies using M2M technology would like to receive stronger support from operators. At Comarch we call this more advanced connectivity service "intelligent connectivity" and see it as a combination of managed connectivity, a self care portal and application package, that is an "enabler" for verticals. The APIs and applications are very generic, starting from activation/ deactivation through dedicated support for device management to specialized applications for a particular vertical.

Such "intelligent connectivity" makes it easier for companies to forget about the complexity of M2M technology and focus on core business, which in turn may boost the development of the M2M market.

The next step of great importance is connected to activities related to selecting strategic verticals. This can include direct support or cooperation with partners which offer bundled and comprehensive services to end users. This is one of the most exciting aspects of the M2M future and also a very promising one for operators.

Looking at trends on the market and seeking analogies in other markets (e.g. traditional telecom businesses) we can say that offering pure M2M connectivity may prove to be profitable in the long term, but only for some verticals. In general, after reaching the M2M market maturity, profits from pure connectivity will radically decline.

"Intelligent connectivity" may still secure revenues by providing much better support for customers and allow easier establishment of partnerships. But entering selected verticals may provide much more profit even compared to the "intelligent connectivity" offering, as we can now see in the case of some leading M2M operators.

The differences in revenue for operators from pure connectivity, "intelligent connectivity" and verticals are not yet visible. However, we may start observing these differences in no more than two years.

Conclusion

The M2M market is growing and it is certain that its potential for operators is high. It is still difficult to say exactly how profits will be shared between various players, but there are important choices to be made by operators. Now is a good time for operators to make such strategic decisions to protect their position on the M2M market.