Deals and Prospects in Internet of Things

Trends and Innovation in Technology and Information

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In 2016, we have witnessed an acceleration in a trend that is likely to mark the next twenty years in technology and information. The wave of digitization of the real world through a web of interconnected devices with the scope of gathering, processing and leveraging massive data is unquestionably becoming more of a certainty rather than the stuttering movement it was only a few of years ago.

The potential for increasing revenues or creating completely new business models is convincing an increasing number of companies to research, test and invest in the Internet of Things or IoT.
As this wave of connectivity develops, major efforts continue to be dedicated toward security issues. Dealing with security problems is one of the elements that has so far slowed down the rate of adoption of IoT. However, as it becomes clearer that connectivity and related data analysis can truly transform commercial and production entities and not just improve operational maintenance, it seems that management resistance is morphing into exuberant acceptance. Such change in management's attitude results in increased resources dedicated toward curbing possible security breaches in the growing network of connected devices. Additionally, from a macro perspective, it is also leading toward a growing interest in the acquisition of companies or platforms specialized in IoT security.

Another favorable tail wind for a faster adoption of IoT comes from increasing pressure toward regulatory standards in many different industries. Regardless of newly elected President Trump's pledge to reduce the regulatory burden on US companies, it is undeniable that a more responsive and auto-learning technology could immensely help companies reduce the cost of current and future regulatory compliance.

Along these lines, we can also envision multiple situations where increased adoption of IoT based data gathering and processing could improve the environmental record of many companies in different businesses. Furthermore, what is making industrial and consumer analytics more and more

interesting is the shift toward more complex and more valuable types of data. As a study from research firm IOT Analytics reports, the industry is witnessing a move from descriptive data to real time analytics geared for predictive and prescriptive action. This is a huge development that opens the door not only to improved management but also to new business services and a proactive approach to changes in the market place.
This is made possible thanks to enhanced processes in machine learning dynamics. Machine learning goes as far back as the 1950s and it did have a previous peak of popularity in the 1990s with the advent of neural networks. Neural networks, among other uses, became popular tools for trading and economic forecasting until they developed into the backbone of today's financial markets via execution algorithms and analytical platforms.

Artificial intelligence (AI) based on sophisticated auto-learning algorithms is not only confined to optimization of industrial processes or financial market architecture but it is now getting wide acceptance at the consumer level as well. From recommendation engines for e-commerce entities to entertainment streaming platforms, AI is the key to a better experience for the end user and increased revenues for the service provider.

The future prospects of smart connectivity in conjuncture with a serious fragmentation of platforms, protocols and devices is creating the conditions for a sustained period of mergers and acquisitions. The numbers of deals announced seems to be increasing in frequency and size as well.
In 2016, we saw an escalation of the size of deals which topped with the announced acquisition by Qualcomm of chipmaker NXP Semiconductors for $47 billion (this deal has not closed yet and there is still an open tender offer by QCOM). Before the QCOM/NXPI deal, the market witnessed the very quick and somewhat unexpected purchase of ARM Holdings by Softbank for $32 billion at an approximate 40% premium. Not all the M&A action was in the mega size category and much activity was registered in the $1 billion range as well. TDK bid $1.3 billion for Invensense, Cisco paid $1.4 billion for Jasper and General Motors acquired Cruise Automation Inc. for exactly $1 billion.
From a deal perspective, tech consultancy firm Hampleton, breaks the IoT space in four sub-sectors:

- Monitoring (i.e. smart homes, health monitoring, wearable tech)
- Telematics (i.e. automated driving, fleet management)
- Platforms (i.e. analytics software, mobile interface, system development)
- Semiconductors (i.e. wireless components, sensors)

In the Monitoring sub-sector, Hampleton reports a deal volume from the first half of 2014 to the first half of 2016 of 79 transactions, while in the Platform space we note 42 transactions in the same

period. In Telematics, 53 transactions were recorded and in Semiconductors we tallied 43 deals (this does not include the ARMH and NXPI deals).

In summary, since the first half of 2014 to the first half of 2016, 211 deals were recorded at a median revenue multiple (EV/S) of 3.5x and a peak of 4.0x in the second half of 2015.
It is reasonable to believe that this trend toward consolidation in an effort to gain enough clout to enforce standards and protocols will continue for quite some time. Consultancy giant McKinsey quotes some very supportive numbers in term of expected market size, predicting up to $11 trillion in value generated by the IoT technology with the two predominant areas indicated as predictive and prescriptive maintenance of machines and marketing related analytics. 2017 could be a pivotal year for IoT as hype and repositioning could finally turn into concrete development of the significant potential of digital connectivity.

Sources:
IOT Analytics, “Industrial Analytics 2016/2017,” December 2016
Hampleton, “Internet of Things, M&A Overview 2H 2016”