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Opening Doors to an USD 1 Trillion Market

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The Machine-to-machine (M2M) industry worldwide is projected to grow at 23 percent annually over the next decade, breaking the USD 1 trillion business barrier by 2020 and continuing to grow further. At present, the industry is said to be worth USD 120 million, but this growth potential assessment is impressive driven by the increasing use of smart mobile phone devices that now carry out tasks assigned with an unmatched success rate of 99.99 percent. In 2011, the number of connections used for M2M grew by 37 percent to 108 million. A strongest growth was witnessed in the Asia-Pacific region, with Europe claiming the biggest market share, estimated to have 3.5 billion M2M connections by 2020.

For example, if a mobile, a smart tablet, or a device that reads the expiry date on food packs stored in the refrigerator and sends the user an SMS alert ahead of the expiry date, how much food can the user save from going into the trash and how much money can the user save from being wasted?

Though the example may sound simple, imagine the possibilities -- policing, road-rail-air traffic, health services, civic amenities, public distribution, banking, retail chains, bills payment, and what not. M2M will touch every aspect of human lives today and in the unknown future. Civilization growth itself will drive this industry forward and the potential for the M2M business is all encompassing. M2M will not only improve lives, but also provide enormous economic benefits. It is the future, as more machines are interfaced with the Internet. From a human-machine interface, the trend now is a machine-to-machine interaction.

Potential for M2M lies in energy, transportation, built infrastructure, agriculture, and such key sectors. It is assessed that M2M could facilitate to adopt smart grid technologies in the energy sector that could improve production, transmission, and reduce consumption and emissions by facilitating renewable energy. In the transportation sector, it could enable optimization of routes of buses, trains, airplanes, trucks, and cargo ships to ensure people and goods are moved efficiently. In the built infrastructures, it could help increase energy efficiency of buildings such as heating, cooling, ventilation, lighting, electrical and electronic appliances, and security systems. In agriculture, it would assist in reducing deforestation, managing livestock, and increasing production. All of these would lead to cost efficiency and better lives.

M2M communication is on the rise. There will be more machines connected to the Internet than human beings in the next decade. M2M technologies transfer data on the condition of physical assets and devices to a remote central location for effective monitoring and control, according to TeleDNA's white paper released earlier this year.

"While M2M concepts and technologies have been in use for quite some time, the changing business scenarios and new use cases are acting as growth stimulants. Greater demand for M2M solutions is primarily being triggered by the widespread adoption and proliferation of affordable wireless communication," the white paper noted.

Nearly 30 percent of Information Technology decision makers today agree that smart cities would be the most beneficial outcome of deployment of M2M technologies in the future.

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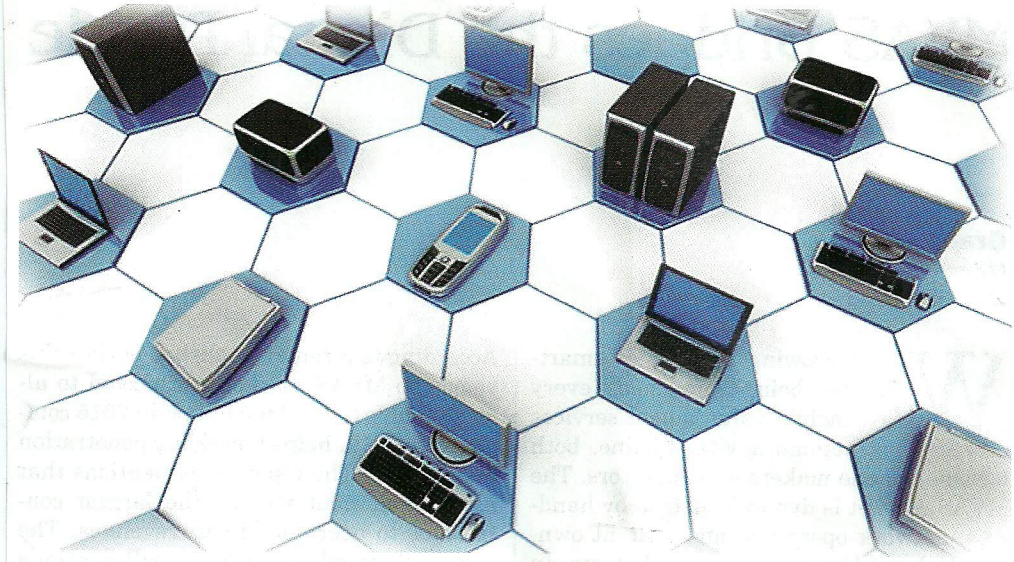

Highly intelligent cities, with systems capable of collecting and analyzing large amounts of data from smart, connected devices (some say it could be about 50 billion things by 2020, with the highest in China and India) and online activities of its citizens in real time will contribute vastly in better and better urban and even rural life in the years to come.

The cellular M2M segment, in particular, is forecast to produce record growth, with many M2M deployments making use of short-range or proprietary radio links. Buoyed by easy installation and provisioning processes, cellular M2M solutions would be preferred when the mobility factor comes into play, or where high volumes of data need to be analyzed or transferred.

The uniqueness of M2M ecosystem is the partnerships required from five or more stakeholders, with each of them performing a designated task to provide a comprehensive, complete solution. These tasks would include platform, connectivity, software development, integration services, consultations, deployment, activation and often many more, based on market demands. The reason for these M2M cooperatives is the level of complexity involved in consumer services.

Hence strategic alliances among different stake holders in providing M2M services would be the challenge, and once overcome would provide greate business opportunities.

M2M service providers too have to face challenges in the form of information glut and the means to monetize the data. Smart pricing system needs to be worked out to make the services beneficial to the consumer and profitable to the industry.

Some of the key challenges include universal standardization of M2M applications and hardware, significant upfront investments, sales models, and long sales life cycles.

SMS Gateway facilitates ease of communication between external SMS based application and SMSC for delivering value added service to mobile users. SMS Gateway provides *Push* and *Pull* services for mobile users. Mobile originated short messages are routed by SMS Gateway to appropriate external SMS-based applications. Application originated short messages are routed by SMS Gateway to an appropriate SMSC.

To efficiently use multiple SMSCs deployed in the network, operators are using SMSRouter. SMSRouter give the flexibility to the operator to configure only single *Service Center Address* for their subscriber. SMSRouter distributes the MO-SMS short message across multiple SMSCs based on the defined routing hierarchy. ■

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