The home automation market-place currently growing at around 15-20% CAGR is set to grow further in near future as companies are aggressively working towards the development of products for budget consumers as well.

No lifestyle project is complete without a home automation system. It is becoming a standard offering for high end projects. There are several technologies and platforms available in the market. There are Chinese and local products also available and then there are some products of questionable sources masquerading as a European or American product. The builder must be careful in selection of the technology as well as the vendor.

Every home requires ELV systems like Cable TV, Satellite TV, Internet, WiFi, Telephone land lines, security systems etc. Usually it is recommended that the builder provides only lighting and curtain controls and Smart wires the home for expansion, based on personal requirement design, style and taste. This means that the installed product should be easily upgradable without chiselling of walls or breaking of ceiling. So if a buyer wants to add his AC and Audio Video system to the home automation controls, it should be easily possible. In case, the project is not Smart wired, the Smart Home Box allows for easy management of smart wiring and future expansion or changes. This is a new introduction and can be utilized by developers for their projects.

Automation for residential buildings

While commercial buildings install sophisticated BMS systems that are manned by trained technical manpower, residential buildings have a very different requirement. Unlike commercial buildings, there is no centralised HVAC system in residential complexes. Also, residential buildings require automation systems that are economical and easy to maintain by semi-literate security personnel.

Moreover, developers though are incorporating home automation solutions in high-end residential buildings, many don’t take this very seriously. Automation and energy saving techniques, if not built into the design results in higher running costs and dependency on security manpower further reduces efficiency and adds to running costs leading to complaints from residents.

The Secured Automated Building (SAB) system consisting of a distributed network of systems addresses these concerns. It provides smooth flow of information & alarms to the Central Monitoring station (CMS) and the interface is simple to use for semi-skilled personnel. The SAB system manages, including but not limited to CCTV, Visitor Tracking system, Access Control system, Video & Audio door phone system, Sensors, Alarms, Intercom, Energy saving etc. The CMS controls & monitors all functions including message management and alarm management.

- Access Control – To begin with, the entry gate is equipped with a boom barrier or a motorized gate. A long-range reader reads the car tag and opens the boom barrier for the resident’s vehicle. All transactions are stored away in the computer of the CMS. Visitors are screened at the main gate and guided to the resident’s vehicle.

The home automation solutions have gained popularity among luxury property developers who are now providing automation like automatic gates, surveillance system and automated switches as value added proposition. The user has the option of scaling it based on his further requirement and desire.

Rakesh Sachdev, Founder Acetech Technologies Pvt Ltd, an electronic security and home automation expert works closely with architects and builders to design building management and home automation systems. He gives an insight of the latest technologies and the future & challenges facing home automation segment.

Potential of Indian home automation market

The home automation market in India rests on two factors: lifestyle and functionality, with each playing upon the other or coming together in different markets. In metro cities like Delhi or Mumbai, the home automation market is driven by an affluent lifestyle whereas, in a market like Bangalore, it is driven by the functional aspects of the solution. Tier II and Tier III cities in India like Surat, Vadodara, Jaipur, Surat, Kochi, Coimbatore, and Indore which have a high percolation of HNIs too are witnessing demand for lifestyle automation products.

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Companies such as Apple, Samsung and Google will take over the home automation space fuelled by IoT. Philips has already launched HUE that consists of Wi-Fi LED bulbs, a bridge and an app.

The Internet of Things (IoT)

British entrepreneur Kevin Ashton first coined the term in 1999 while working at the Auto-ID Labs. Typically, IoT is expected to offer advanced connectivity of devices, systems, and services that goes beyond machine-to-machine communications (M2M) and covers a variety of protocols, domains, and applications. The interconnection of these embedded devices (including smart objects), is expected to let home automation in nearly all fields, while also enabling advanced applications like a Smart Grid and expanding to the areas such as smart homes and smart cities.

“Things,” in the IoT sense, can refer to a wide variety of devices such as heart monitoring implants, bioshop transponders on farm animals, electric clamps in coastal waters, automobiles with built-in sensors, or field operation devices that assist firefighters in search and rescue operations. These devices collect useful data with the help of various existing technologies and then autonomously flow the data between other devices. Current market examples include smart thermostat systems and washer/dryers that use Wi-Fi for remote monitoring.

Home automation is an appealing context for the Internet of Things (IoT). We envisage future home environments with self-configured embedded sensors and actuators (e.g., in consumer electronic products and systems) that can be controlled remotely through the Internet, enabling a variety of monitoring and control applications. Manufacturers will produce their own IP gateways so that proprietary domestic systems can be interfaced with an IPv4 enabled Ethernet socket. By connecting the IP gateway directly to the Internet or through a home/residential gateway, the domestic system can be managed remotely using a PC, Smartphone or Tablet.

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