The New Smart Home is the Really Smart Home

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The new Smart Home is much more than just the connected home – it is about a truly smart home that combines the best of the connected home, the new Internet of Things, as well as the Internet of Tiny Things, with the marketing and business platform provided by the world's leading entertainment and service providers. This includes the classic cable TV operators, satellite TV providers as well as those companies that previously offered just internet access to the home either by fiber, cable, satellite or via cellular.

In addition to providing the existing Four Plays: TV and entertainment, internet access, phone service (VoIP), and cell phone services, operators will be adding the Fifth Play – smart home services for monitoring energy usage, home health, security, climate control, etc.

The set-top box will evolve into the "Home Control Box". Where the set-top box was just responsible for distributing content through the home, the Home Control Box makes it possible for consumers to control all kind of applications in their homes over the internet, with smart phone apps.

The Path to the Fifth Play

The move to the Fifth Play has already started but it will take a while to fully mature. We see it arriving in three phases.

1. The first phase of Smart Home devices and services are currently available as standalone devices that connect to something in the home. These first phase devices are usually purchased and installed by a home security or entertainment system integrator, an early innovator or an inspired DIYer. (Do It Yourself). Using a variety of communication technologies, they usually don't talk to each other but only to their controllers.

2. The second phase is internet connectivity – either independently talking to web via a cellular radio or using a central router or set-top box as a connection to the web. Once connected to the web, they can be controlled via a Smart Phone or a net connected mobile device.

Various cable companies – I.E. Comcast – are already starting to roll these out. The system and the devices are installed, managed, maintained and monitored by the service provider. No longer does it take a technical wizard to install and use these Smart Home devices. By operating on a standardized connecting technology like ZigBee, it is much simpler and financially advantageous for the service provider to install, maintain and monitor.

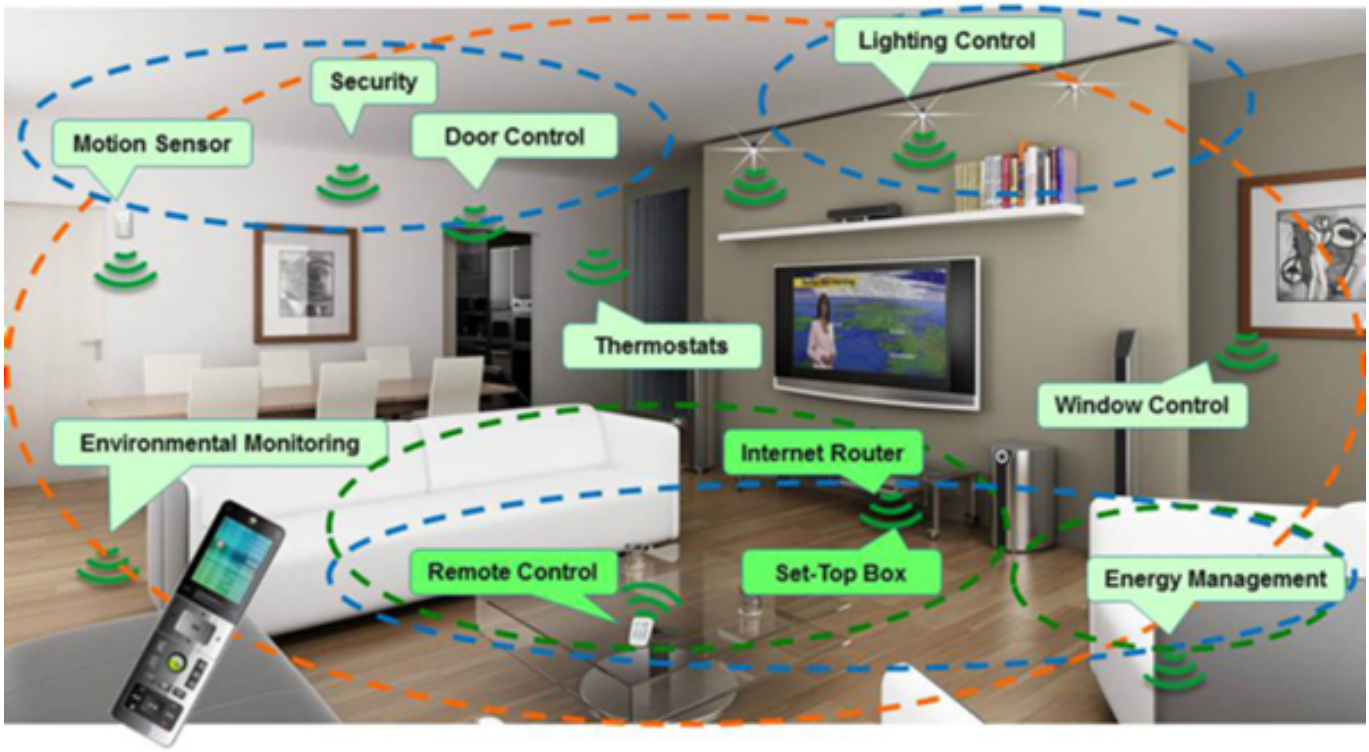
3. The third phase is when these applications – smart and intelligent, start talking to

and exchanging information with each other – without the need for constant human intervention.

This is the new definition of the Smart Home - The house actually makes smart decisions.

For example, the smart home will know if there is anyone in the home and where in the house they are and then adjust heating or air conditioning accordingly. If everyone is in the den watching TV, why waste energy heating the bedrooms?

The House makes decisions. This intelligence can live in the local set-top box or in the cloud – programmed by the homeowner and/or the service provider.



CAPTION: The Smart Home ecosystem will use a standardized technology such as ZigBee to communicate via the set-top box to local controllers as well as smartphones and mobile devices over the web.

The Truly Smart Home

The smart home ecosystem will combine a variety of applications, with the set-top box acting as a centralized home hub. Not only will the set top box handle the entertainment such as television, movies, gaming and remote purchasing, it will also be the entry point for the home's phone, internet, telecommunications and Smart Home services.

Of course, what we know call the set top box will evolve as well. It does not need to actually sit on the TV or even be directly connected to the TV via cables. Instead, it can be located anywhere in the home, in a closet or a cabinet, and then use either ZigBee to connect to the various low power, low data sensors, device controllers,

and remote controls located throughout the home, or by using Wi-Fi, transmit high data rate, high quality video and audio signals to the home's various entertainment devices. Wi-Fi can also be used to connect the wireless VoIP handsets to the set-top box as well.

The development of smart home services may generate the emergence of many business models, providing a diverse range of what may become essential components for the smart home ecosystem. These can include:

- A security breach in the home can immediately send a text message to the home owner and/or a response company.

- Water leaks can be immediately identified and alerted – saving money and preventing damage.

- Elderly people can be monitored by their children and medical staff via smart phone and alerts.

- Medicine consumption can be automatically monitored.

- Air-conditioning turns off when windows get opened.

- Lights are switched off in rooms where are no people.

- Roof top solar panels can be monitored and controlled to ensure optimal operating efficiency.

The new Smart Home is on the way.

Driven by the cable TV and internet providers, this new paradigm for total home control is enabled by the emergence of reliable low power wireless technologies like ZigBee and the need for internet access and entertainment providers to explore and exploit new markets in order to survive. In parallel to this Smart Home – Fifth Play evolution, new businesses will emerge that will create and feed devices and solutions to the operators.

The big challenge to the Smart and Connected Home was the plethora of devices already on the market that – because they were not using a standardized communications protocol – did not talk or interact with each other. With the growing acceptance of ZigBee by many of the leading device makers, operators and service providers, this impediment is becoming overcome. Another challenge- the technical difficulty and cost of installing and maintaining these systems will be taken from the home owner and instead be put on the shoulders of the service providers will also be handling the monitoring and reporting for these in home systems.

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