Cable companies and set-top box service providers will deliver the smart, automated home

Cees Links, CEO of GreenPeak Technologies (http://www.greenpeak.com)

Many technology watchers have predicted that the arrival of automated smart home – that home owners will seek out and install the latest, coolest gizmos that will make a house truly smart. Well, it isn’tgoing to happen that way.

It is the cable companies of the world who are launching the new smart homes centered around the ubiquitous set-top box – not the TV makers, not the home after market or security device providers.

Instead, powered by ZigBee RF4CE – alow power, low data rate version of Wi-Fi, this new network is the choice of the world’s cable companies and service providers as the way to introduce new services and applications to the home. Cable companies have realized that is not enough to provide high quality video and web connectivity – they have the total infra-structure in place to provide a wide range of other services, if they want to engage their customers and keep them excited as subscribers in a web connected world.

At CES 2012, Comcast, one of the largest service providers in the world said it is moving to ZigBee RF4CE with their new Xfinity and Xcalibur set-top boxes and remotes.

“We are moving to support ZigBee RF4CE standards-based remote controls and set-tops because they improve the user experience for navigating all our services in the home, while allowing us to make the transition to RF technology in a very cost effective way,” said Ted Grauch, Vice President, Video Premise Equipment for Comcast.

Many other service providers in the world are also moving to RF4CE for their set-top boxes and remotes. In addition, several of the world’s leading consumer electronics and home entertainment manufacturers are planning on using RF4CE. In Japan, Sony is already using RF4CE in their televisions and remote controls to enable viewers to easily purchase items they see on their TVs.

Figure 1. GreenPeak powered ZigBee RF4CE remote controls support motion sensing and interactivity, can operate on a single battery for ten years or more, and can monitor& control devices from almost anywhere in a home.

The first roll-outs of ZigBee RF4CE powered remote controls and set-top boxes will provide benefits for the consumer as well as for the cable company. Consumer benefits include the ability to control the TV set and set-top box from anywhere in the house. As ZigBee RF4CE uses 2.4 GHz radio waves, you will no longer need to aim and shoot your remote control at a small infrared (IR)target sensor on your TV setor set-top box. RF signals penetrate walls, cabinets, floors and even people who choose to stand between you and your TV set!

In addition to providing exciting usability features forconsumers, RF4CE offers numerous cost saving benefits for the service provider. For example, oneof the common customer service complaints that cable companies receive is regarding problems with the remote control. Answering and resolving the calls is very expensive for cable companies.

As RF4CE is an extreme low power technology, future remotes will no longer require replaceable or rechargeable batteries to operate. Tests have demonstrated that a RF4CE remote using GreenPeak Technology's ultra low power radios can operate for over 10 years, at over 500 clicks a day, all on single tiny 3032 coin cell battery. This means no more out of power remotes or remotes with broken battery compartment lids – another source of numerous end user cable subscriber complaints.

Also, RF4CE makes it much easier to program the remote to control other systems in the home as well as new products that come onto the market. As RF4CE supports interactivity, cable companies can easily download the codes for new entertainment devices into the set top box which then sends the new codes to the remote. Result – the end user is happy and fewer customer service calls for the cable companies.

Another cool feature is the "find me" function. Because RF4CE is interactive, it is possible to add a simple button on the TV or set-top box that makes the missing remote start beeping and flashing. This is a godsend for those with children who keep misplacing the remote.

As RF4CE set-top boxes and remotes continue to rollout, more features can be introduced. These include interactive messaging delivered from the set top box to the remote for programming notifications, advertising, bill payment and product purchases.

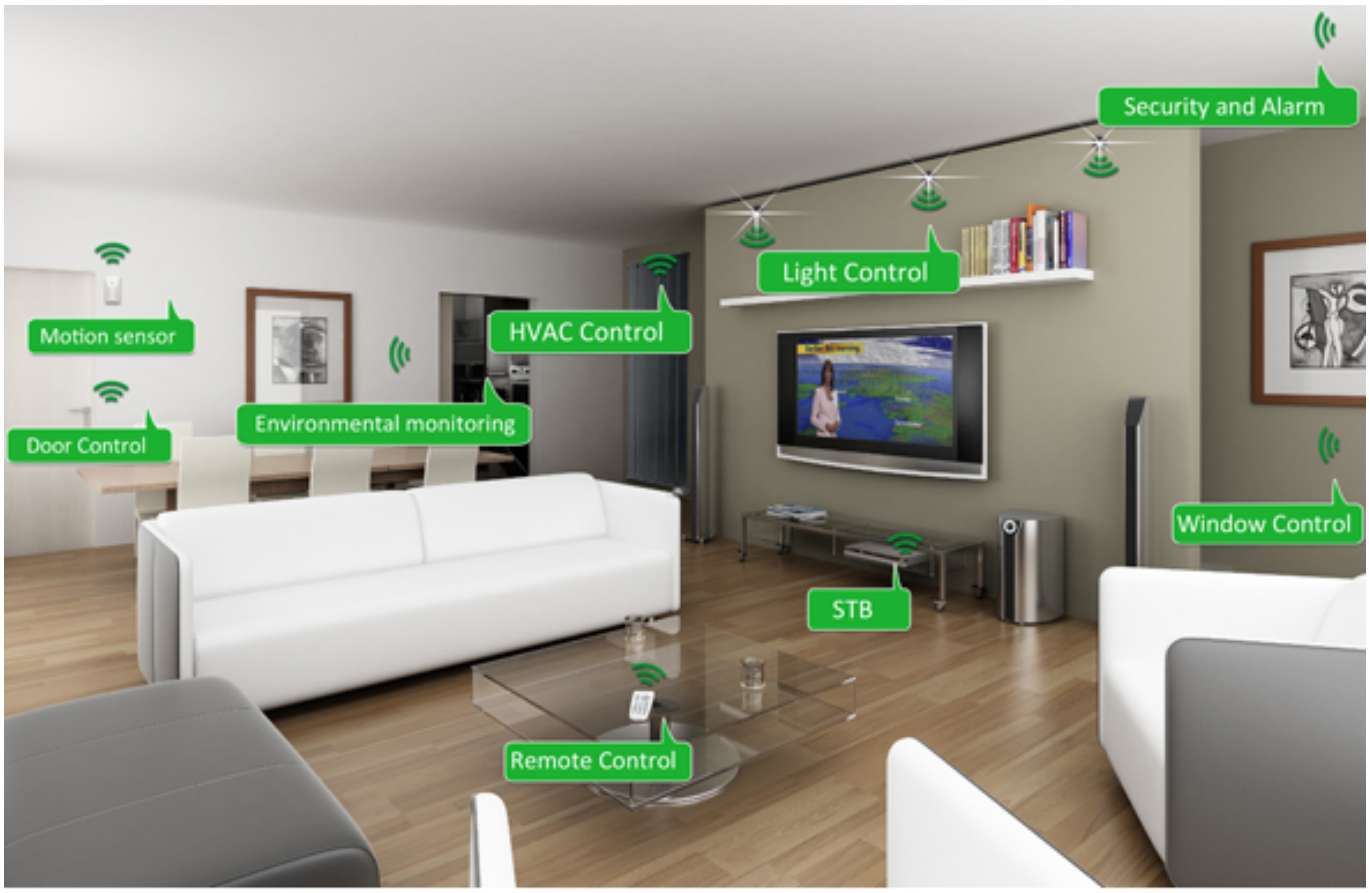

Figure 2. By using RF4CE as the communications technology, the new "Smart Home" is based around a set-top box connected to various entertainment, security and environmental monitoring services.

In addition, an entire portfolio of “Smart Home” servicessuch home security, energy monitoring andmanagement, solar panel controls, health monitoring, etc., all controlled through the set top box, can now be offered by service providers and cable companies. These various services can all communicate to the set top box via RF4CE and then can be controlled either by the remote control or via a mobile device over the Internet. As part of the home entertainment package, cable companies will be able to market, supply and install temperature and home environment sensors, security systems,energy management, etc.

No longer just an entertainment supplier, the cable company of tomorrow can become the one stop source for all the home’s smart features and services.

Cees [“case”] Links is a pioneer of the wireless data industry, a visionary leader bringing the world of mobile computing and continuous networking together. Under his responsibility, the first wireless LANs were developed which ultimately became house-hold technology integrated into the PCs and notebooks we are all familiar with. He also pioneered the development of access points, home networking routers and hotspot base stations, all widely used today.

Cees was involved in the establishment of the IEEE 802.11 standardization committee and the Wi-Fi Alliance. He was also instrumental in helping to establish the IEEE 802.15 standardization committee to become the basis for the ZigBee sense and control networking technology and standardization.

GreenPeak Technologies is a fabless semiconductor company and is a leader in highly integrated IEEE 802.15.4/RF4CE silicon solutions for consumer electronics.GreenPeak is headquartered in Utrecht, The Netherlands and has offices in Belgium, Japan and Korea.GreenPeak is backed by venture capitalists: Gimv (Belgium), DFJ Esprit (UK), Robert Bosch Venture Capital (Germany) and Allegro Investment Fund (Belgium).For more information, please visit www.greenpeak.com [1]

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