RF remote controls will wipe out IR

When times are tough and the economical crisis continues, it is only the truly exciting differentiators that can be offered at no extra cost that will be adopted by consumer electronics manufacturers and integrated in their products.

The new generation of RF remote controls for TVs, DVDs and set-top boxes offer just that by providing a radically different and improved end user experience. In addition, GreenPeak has been able to persuade consumer electronics manufacturers and MSOs to add RF to their remote controls by offering a low cost solution in combination with short development cycles: this complete package of advantages are so compelling that the RF offering can no longer be refused.

RF remote controls have been around for a couple of years, but have not been picked up by the market so far. Why is that? The long list of benefits should make the choice obvious enough.

The first advantage of RF over IR is in the improved user experience and much better range.

RF does not require the typical IR point-and-shoot action anymore. You can walk anywhere in the house and use the remote. You no longer have to be in the same room as your electronics in order to carefully take aim at the remote IR receiver.

The RF remote control can transmit its signal through walls, doors and furniture, which makes it possible to install the set top box in a closed cabinet or a closet. With a stylish flat panel TV mounted on a wall, people prefer to hide the set top box in an equally stylish but closed cabinet, or even in another room. Since one set top box could service multiple screens in the house, one can imagine watching a movie in the living room, pausing to go upstairs and continue the view on the TV in the bedroom, controlling the set top box which is in the hallway, all via a single or multiple RF remote controls.

Another benefit of RF over IR is that RF allows two-way communication and enables a status display on the remote. With screens getting larger and viewers being further away from the TV, it becomes more useful to view the remote functionality (e.g. channel selection or audio volumes) on the remote control's display.

Because of the new interactivity capabilities, it is now possible for users to use the remote control's screen and controls to browse and select entertainment content, play games, vote on TV shows, and even view and buy products. This direct interaction with the end-user will allow the service provider to send messages to the remote control display.

The combination of non line-of-sight operation and bi-directional communications also enables one of the most nerve soothing features of RF remote controls - a simple yet efficient "find-me" function.

We all know the experience of getting comfortable in front of the television, popcorn at hand and ready for your favorite program when all of a sudden, you realize that you cannot find the remote! Your favorite show is about to start and you cannot find the remote! It is kick off time and you cannot find the game! The new "find me" features enables you to simply press a button on your TV set and your hidden remote

will buzz and blink, alerting you to its location and preserving domestic tranquility in your home.

So here is the big question.
If RF remote controls offer so many advantages over IR, what has kept it from a quick market adoption? Standards and costs.

One reason has been a lack of industry standard to allow worldwide compatibility and interoperability between different manufacturer's solutions. In June 2009, The ZigBee Alliance has announced the RF4CE standard for radio based remote controls for consumer electronics. It was originally developed by the RF4CE Alliance founded by Panasonic, Philips, Samsung and Sony.

The ZigBee RF4CE specification is designed for a wide range of products, including home entertainment devices, garage door openers, keyless entry systems and many more. In any application, it transforms the consumer experience, enabling advanced features such as non line-of-sight operation and bi-directional communications. The ZigBee RF4CE standard will dominate this market. Remote controls for AV will be the entrance point and consumer electronics products like HDTV, home theater equipment, set-top boxes and other audio equipment will be the first to benefit from the advanced functionality offered by ZigBee.

A second argument limiting market adoption lies in the cost concern. Until now, RF remotes have been assumed too expensive to integrate in mainstream consumer products; it was only used in high-end (expensive) TV sets and home entertainment systems. GreenPeak is the first company to offer a total solution BOM (bill of material) below $1.8 (including plastics). In other words, GreenPeak enables consumer electronics manufacturers to provide sophisticated RF capabilities at the same cost of IR remote controls.

With the same low cost for RF remote control as IR remote control, the technology choice for RF remote controls has finally become a no-brainer and will soon become available for all kinds of remote controls.

The Green Remote Control – No More Batteries
An additional and exclusive GreenPeak benefit is the ultra low power requirement. Remote controls with the GreenPeak Emerald GP500 communications controller inside can operate on a single low cost coin cell battery for over 15 years, which is longer than the average CE device's lifetime.

The unique chip architecture provides an ultra low power operation and allows remote controls to become essentially maintenance free. End users no longer need to replace dead batteries. Instead of changing batteries every six months or once a year, a single battery will last the lifetime of the device. This could reduce the number of batteries used by remote controls by 90% or more.

In addition, as batteries are full of toxic chemical and heavy metals, this spectacular reduction in battery use presents an environmentally positive "green" solution and a very positive impact on the carbon footprint of remote controls.

In short, RF remote control is by far the superior alternative to the traditional infrared control. With the RF4CE standard in place and the low cost solution now available, RF will soon be in every remote control.

RF is on the fast track to enter millions of homes around the world. In combination with the RF4CE standard, a platform can be created to control lighting, temperature, fans, curtains and windows, garage doors and address home security. The digital home will finally become a reality.

Do you have comments or suggestions? I appreciate your feedback!
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