Visonic, a provider of wireless residential alarm systems, is laying the foundation to ring in the New Year with quite a marketing bang.

I spoke this week with Avi Barir, Visonic President and CEO, who explained the company will introduce five alarm systems based on a new wireless technology during the first half of 2011 in North America.

The company calls the underlying technology PowerG and it will now be used for all new Visonic intrusion alarm systems, replacing PowerCode, which the company first introduced in 2000.

"PowerG sets a new standard in the alarm system market because it's not only going to replace existing wireless solutions, but it targets markets that are currently using hardwired solutions," Barir says.

Similar to other wireless alarm systems, PowerG provides the communication between peripherals and the control panel installed on the premise. Alarm transmission from the premise to the central station will continue to be done via POTS, cellular or broadband.

"The revolution is within the premises. Internal communication between the different alarm system devices and the control panel will be done over PowerG. The new panel will be equipped with the PowerG transmitter and receiver to communicate with the devices," Barir says.

And what is the driver behind PowerG? Two-way low-power frequency hopping spread spectrum (FHSS) technology, which has its roots in military communication systems.

As Barir explained to me, frequency hopping is achieved using an encrypted pseudo-random sequence known only to the devices enrolled in the alarm panel. The network continuously hops between multiple frequencies spread over the entire assigned frequency band. This ensures that each transmission arrives uninterrupted at its destination.

Here's more techie info from Visonic: Similar to the GSM cellular network, PowerG employs full two-way synchronized Time Division Multiple Access (TDMA) communication technology. Each device in the PowerG network is allocated unique timeslots for full two-way data transmission with the panel, streamlining communication and increasing channel efficiency.

With FHSS and TDMA technologies together, Barir says the PowerG network successfully overcomes intentional and unintentional interferences, jamming and other communications hitches. As a result, you guessed it, robustness and reliability of the wireless network increases dramatically.

Now that we have a technical overview of PowerG out the way, let's talk products. Well, not so fast. Barir is holding specific product information close to the vest; you'll have to wait for the first of those five residential product roll outs till sometime in January.

You may know that Visonic is a player in the personal emergency response system (PERS) market as well. While PERS will not be among the initial product introductions, Barir says, "later in the year, we will introduce variances of [PERS] products based on PowerG."
With PowerG, Visonic is focused on growing market share in the residential space, sure, but it looks to fry much bigger fish and compete among the industry’s largest commercial alarm system providers as well. Look for PowerG commercial applications after the residential products have been released first.

“Wireless alarm systems up until today serve only the residential market because the capabilities for wireless alarms do not address the stringent demands of the commercial market,” Barir says. "PowerG changes the rules of the game in this field. Up until today the commercial market was a marginal market for us. With PowerG we have an opportunity to turn it into a main market.

Rodney Bosch