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Home Automation Roundup

By Lee Distad

2009 may have been a smaller, lower-key year for CEDIA Expo than in the past, but in some ways, it was positively enormous. The home automation category this year was absolutely chock full with vendors, including some new ones, that showed off not only new hardware, but exciting new trends and opportunities for their dealers.

The latter two are what is really driving the custom channel today. Product is all well and good, but ultimately, it's what the vendor and the installing dealer are capable of accomplishing that matter most of all. To that end, the focus of this story is more on innovation in trends and technology than on individual pieces of new gear.

The two biggest trends this year that look to shape the face of the custom channel are greater interest in energy saving, "green" technology, and an increasing demand for retrofit installations. In the case of the former, given that energy costs are slowly climbing, and global concern about both the costs and consequences of our lifestyles are growing, vendors are building energy management systems that allow homeowners to not only review their energy consumption, but manage it, and make use of their home control systems to reduce their energy footprint.

Regarding the latter, as new home construction in North America has declined, and as consumers have seen their spending power eroded, custom channel dealers have reported growth in the retrofit installation business. After all, if clients are going to remain in the home that they're in, they're going to look at installing the creature comforts they would have specified in a new home, from networking, to A/V and control.

On the technology side, the biggest stories were new advances in the distribution of digital media via HDMI, and the growing competition for entry-level automation, with new offerings in budget control hardware. In addition, there's

NuVo's Steve Horton demonstrates the highly-anticipated Renovia retrofit system that's based on HomePlug Power Line Carrier (PLC) technology, and centralizes all audio sources, then provides up to 12 listening zones in the home.

more interoperability between brands, growing alliances of A/V vendors and control vendors, and even between control vendors and one another. Finally, the iPhone continues to stake out a place at the automation table.

Riding the Crest of Home Automation

DigitalMedia For HDMI Management:

I was at the press briefing in Denver at CEDIA Expo 2008 when automation giant Crestron first bowed digital media technology, which moves to build a bridge over the rocky waters that lie between end-users' video sources and their displays. Everyone knows that HDMI for single-room jobs has been tricky; and for multi-room distribution, it's maybe not impossible, but certainly aggravating.

Crestron DigitalMedia is a hub for accepting and distributing all analog audio and video, high-res computer content; with connectivity for HDMI, DVI, DisplayPort, Ethernet and USB keyboard/mouse control. What sets DigitalMedia apart is that it actively monitors and manages the embedded data (including HDCP, EDID and CEC content), which installers often think of as the Three Horsemen of HDMI Woe. Built-in software tools display and manage the flow of these signals between sources and display, in order to actually integrate them.

The card-based DM-MD8x8 and DM-MD16x16 matrix switchers allow integrators to completely customize the boxes based on the end user's requirements. But more important than the physical specs is what goes on in the back end. What Crestron brands as its QuickSwitch HD creates fast and uninterrupted HDMI switching (imagine that!) by actively managing the HDCP keys and maintaining a constant handshake

between sources and displays.

Additionally, the EDID (Extended Display Identification Data) is processed to identify and automatically send the best resolution to the display, eliminating the need to manually configure the output resolution each display receives. It's an often-noted and lamented facet of HDMI's CEC (Consumer Electronics Control) that everything works right only if every device in the chain is of the same brand. Once multiple brands are inserted in the signal path, things go downhill quickly, with apparently random or contradictory commands, all of which spell disaster for large projects. Since the CE industry hasn't managed to make CEC work, DigitalMedia squelches the devices that have it built in, giving integrators one less thing to stress about.

Prodigy Enters the Price Point Automation Fray

For as long as there has been an automation industry, the goal has been true to the entrepreneur's axiom: "Sell to the rich, live with the masses. Sell to the masses, live with the rich." However, for the longest time, price point automation has been much like the weather: everyone talked about it, but few were actually trying to do anything about it.

Well, all that has been changing over the past year. The slow crawl of entry-level automation has suddenly picked up the pace. New competitors, new projects, and with the global economy taking a nose-dive, perhaps the realization that automation firms need to find new customers: ones who aren't necessarily able to spend six- or seven-figures on a system.

By all accounts, the action in the entry-level automation market has heated up to the point that it might even be called a

battleground. The Adagio systems that first bowed three years ago, were only mildly scaled-down versions of Crestron's full automation controllers. Thus, while many dealers had great success with them in mid-price projects, there was still a definite price factor to them. The new Prodigy system is Crestron's contender in the trenches; and unlike Adagio, it's a control system built from scratch to be simple to install, easy to use, and affordable enough to automate home theatre, audio distribution, lighting and climate control in extremely budget-sensitive jobs.

It's important to note that Prodigy is completely distinct from the main Crestron line. An integrator can't tack a 2-series controller at a later date. However, Prodigy is scalable in its own product family, so the system can be expanded easily. The point being that budget clients seldom splash out and get everything done at once. They often prefer to upgrade in installments. This way, dealers can install Prodigy with a simple home theatre; then add whole-house audio, lighting, climate control; even remote control from laptops and mobile devices. Available control interfaces also include touch-panels, handheld remotes, and wireless keypads.

Central to mass-market home automation is the need for simple set-up, and full Crestron programming is certainly not cheap. Eschewing the need for massive programming time, the Prodigy Composer software guides the installer through a few simple steps using basic drop-down menus and check boxes. The software provides all the logic, and creates touchscreen interfaces automatically in the background. The wizard is intuitive, so dealers can get a system up and running in minutes, instead of days.

Improved Wireless Control: The growth of wireless control has been a huge boon to dealers, allowing them to



Appealing to a more budget-conscious client is Crestron's easily-installable Prodigy system, which affords basic home automation, audio distribution, and lighting and climate control.



Building on the success of its ROSIE Apple-based home automation and control system, Savant introduced Protégé, a fully iPhone-based control system that affords remote control of AV equipment, lighting, security, HVAC, and motorized window coverings.

AV distribution. AMX's new UTPPro series is designed to meet both requirements. In addition to an 8x8 matrix switcher for HDCP-compliant HDMI, the UTPPro line punts 1080p video over an Unshielded Twisted Pair cable. Thus, installers only need to run network cable. The aforementioned HDCP compliance is achieved using AMX's InstaGate technology, which authenticates the connected devices for interruption-free delivery of HDMI content

Big News from Nuvo

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Carrying with the theme of retrofit-friendly systems, **NuVo** Technologies released more details of its much-talked-about Renovia system.

Intended to provide NuVo dealers with the opportunity to grow business far beyond the new construction market, Renovia is based on HomePlug Power Line Carrier (PLC) technology. Built along the lines of NuVo's Grand Concerto and Essentia E6 systems, Renovia, like NuVo's other systems, centralizes all audio sources (save for any NuVoDock iPod docks placed around the house).

The Renovia Source Hub (NV-RVM) accepts six sources, including NuVo's terrestrial and satellite radio tuners (including a built-in AM/FM/SIRIUS-ready dual tuner), NuVoDock iPod docks, NuVo's new Music Port Server, and legacy devices like CD players. The Renovia Source Hub provides a maximum of 12 listening zones in a home.

Unlike NuVo's Grand Concerto and Essentia E6G hubs, from which CAT5 and speaker wire must be run to each zone, the Source Hub simply plugs into an AC outlet. From there, using Home Plug PLC technology, audio and metadata is transmitted to each zone over the home's electrical wiring. In each zone, the Renovia audio and metadata is received and adapted by a NuVo Zone Amplifier (NV-RVZA50S), which fits in a split-design dual-gang wall box and consists of two components: a power supply and an amplifier. An electrician is required to complete the AC connection on the power supply. The Zone Amplifier connects to architectural or freestanding speakers in the room using speaker wire, providing 50 watts of output.

Renovia has been anxiously awaited by both dealers and industry watchers. Earlier attempts at PLC automation and distribution, such as X10 had only modest success, and produced a fair amount of aggravation. More recently, vendors like SmartHome have managed to make PLC work, and Renovia promises dealers

an extremely cost-effective solution to retrofits.

Sophistication from Russound

Russound is a venerable brand that's been around almost as long as the CI channel itself. Beginning with simple audio distribution, Russound has evolved over time with its dealers, and now sports some sophisticated offerings. Their announcements at this year's Expo were especially high-tech, with new control options, and new advanced hardware.

Control Options For Pronto & iPhone:

Russound now offers modules for the Philips Pronto TSU9400, TSU9600, and TSU9800 Control Panels that give the client control and two-way feedback for Russound's legacy CAV6.6, CAM6.6, and CAA66, systems, as well as the newer C-Series and E-Series multi-room systems.

Two-way feedback is now a virtual necessity with systems that have multiple sources and outputs; and when installed on a Philips Pronto remote, these modules provide a user complete control of his Russound multi-room controller amplifier system from any zone in the system. A Pronto remote that is so equipped will display scrolling system information, such as custom source and zone names, metadata from Russound Smart Sources, Radio Data System (RDS) information from C-Series and E-Series internal tuners, and status feedback such as volume level, bass, treble, balance, shared sources, party mode, do not disturb; and all on-and-all off. In addition to controlling any Russound system zone, the module for the TSU 9400 allows for control of other devices in the home such as HVAC, security or lighting control devices.

In addition, Russound's RNET Touchpoint box allows for direct access and remote control of a multi-room audio system from an Apple iPhone or iPod touch. The Touchpoint provides two-way Radio Frequency remote control of any zone in a Russound RNET-enabled multi-room audio system with two-way metadata feedback.

The Touchpoint Station connects a Russound CAA66, CAM6.6, CAV6.6, MCA-C5 or ACA-E5 multi-room controller amplifier to an 802.11 b or g wireless router to serve the Touchpoint software interface that is accessible by an iPhone or iPod touch. This interface on the iPhone duplicates the functionality of the Russound UNO-S2 keypad with the addition of being able to control any system zone from anywhere within range of

the home's WiFi.

In addition to control of any zone, from anywhere in the range of the wireless LAN, the RNET Touchpoint displays real-time information on the iPhone or iPod touch screen, including name of zone, name of source, zone volume level, and source metadata such as playlist, channel, artist, song title, genre and more when used with Russound RNET Smart Sources.

Collage Delivers Power Line Carrier Tech For Retro Jobs:

Russound's Collage Media and Intercom System uses Powerline Carrier (PLC) technology to distribute audio and intercom throughout the home. What's unique about Collage is that unlike other PLC systems that require a hub, with Collage there is no central controller, making its expansion linear, and allowing zones and sources to be placed anywhere in the home.

This decentralized design allows Collage to be a low-cost investment for consumers who want to begin with two or three zones before expanding to additional areas at a later date. Collage features an intuitive interface that displays all the features that the system offers. System updates are sent via the Internet and

uploaded through the home's network.

As an added hook, Russound is offering a free six-month subscription to Rhapsody as a way of introducing consumers to online media services, as well as enticing buyers in Russound's favour.

The Nirv of Speakercraft

Even weeks before Expo, there was an enormous amount of buzz surrounding Speakercraft's new Nirv system, and the interest continued to pick up steam through the event. More than one pundit (myself included) found it hard to resist saying that "Speakercraft has struck a Nirv."

The hoopla surrounding Nirv has run a broad spectrum, from whisperings that other automation vendors have been nervously eyeballing this upstart system, to a rumour attributed to an American CE journalist who posited that Nirv was nothing more than a rebadged NetStreams system (a charge which Speakercraft bluntly denies, and which rumours Speakercraft has been vigorously stamping out).

Given that I spoke for hours about Nirv's backbone with Jason Craze, Speakercraft's Director of Engineering for the story on automation interfaces that appeared in the August issue of *Marketnews*, and the level of detail that he provided on Nirv's architecture, I'm inclined to side with Speakercraft, and confirm its claim that Nirv is distinctly not a NetStreams box.

For a start, Nirv uses an idiosyncratic mix of standards and specialized IP protocols to manage the flow of HD video, audio, and control signals. As a result, Nirv requires its own network of Ethernet cable, completely distinct from the rest of the home's network. Without that, it wouldn't be able to reliably pass 1080p video and still manage audio and control. Nirv uses dynamic bandwidth allocation in order to manage its control of bandwidth and throttling of multiple streams of data. Sharing the network with other devices like printers and such would have made the task of reliably delivering HD video much more difficult, if not impossible.

On the front end, Nirv is one of a new generation of control systems that boasts ridiculously simple programming. Nirv's programming can be done from any of its



Feisal Hurzook, ON-based arcx Prosumer (left) and Zigbee's Bill Chase pose by the organization's booth. The Zigbee Alliance encompasses a group of companies that are working toward creating an open global standard for wireless control products.