

## FEATURE ARTICLE

### The Home Automation Industry's Own Trade show

The computer industry has Comdex, the construction industry has the NAHB show, and now the home automation industry has Habitech. Check out some offerings that were at this year's show.

**Ken Davidson**



As anyone who is involved in or closely follows the home automation

industry knows, Habitech is virtually the only industry trade show designed specifically for the home automation arena. Only in its second year, Habitech94 (held April 13-16) was a resounding success. Tricia Parks of Parks Associates makes it her business to know the home automation industry, so it's only natural that her firm would sponsor the show. I represented Circuit Cellar Inc. and the *Computer Applications Journal* at both shows, so let me give you a taste of this year's shindig and what new products the players had to offer.

#### BIGGER AND BETTER

Experience is a great teacher, and judging by the improvements over last year's show, Parks is a quick learner. Last year the exhibits ran four full days and the seminars overlapped the exhibit hours. Exhibitors chained to their booths ended up missing the talks and classes, plus the show floor was deathly quiet during much of the show. This year, though, the seminars ran primarily in the morning during four days, while the exhibits were confined to just the afternoon and to just three days.

One other key difference was that last year, two of the show days were for trade only while the other two were for consumers as well. It's rather difficult to tailor show material to both trade and consumers, so this year the show was confined to just trade.

Held at Dallas's Infomart (spectacular in and of itself), the show floor

this year was twice the size of last year's, and the displays were bigger and better than ever.

#### CEBUS

One of the big marketing points of the show was the promise of a CEBus pavilion, replete with companies offering CEBus-compatible products. I'll cut right to the chase and start with the pavilion.

In the center of the pavilion was a small house mockup, including a front door, living room, bedroom, and utility room. Packed with equipment from several different and independent companies, a rather fake-sounding narrator (wielding cue cards) guided the showgoers through an average day in the CEBus house. It wasn't quite as complete as the Bright Home (see "Take a Tour of the Bright Home," issue 25), but effective just the same. A key point of the exhibit was that the devices being shown were produced by different companies, were using real CEBus interfaces, and all talked with one another.

Surrounding the house were booths for the companies showing products in the pavilion, including Panasonic (TV, VCR, laserdisc, CD player, receiver), Ademco (security system), LiteTouch (lighting control system), Trane (HVAC), and US Tec (wiring and wall plates). Other companies with CEBus-related products included Intellon (power line and RF

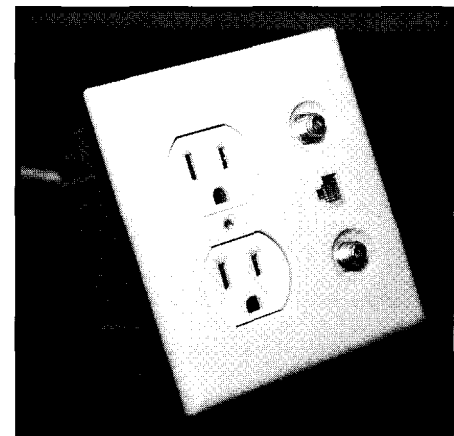


Photo I-cabling and wall plate offerings from US Tec are ideal for CEBus prewire installations. The wire bundle includes two coax cables and four Level 3 twisted pairs. The wall plate accommodates a standard AC outlet, the two coax cables, and an RJ-45 connector.

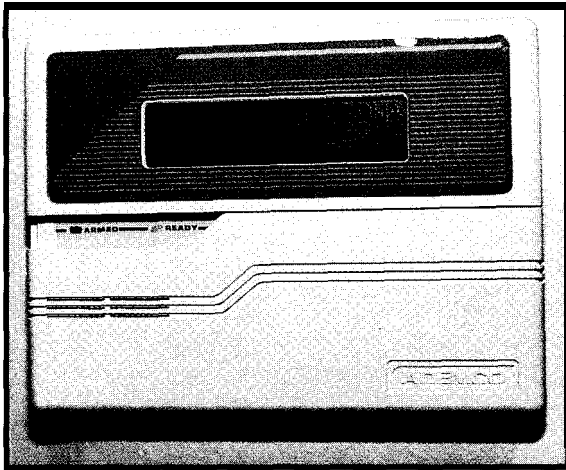


Photo 2—The Ademco security system in the CEBus pavilion used CEBus to talk directly to lights, drapes, and other devices in the house without having to resort to custom or special interfaces.

interface products), The Training Department (offering CEBus classes), Diablo Research (custom development services), and the CEBus Industry Council (charged with publicity and conformance testing). General Electric also had a service entrance meter set up, but it wasn't talking to the rest of the pavilion.

Intellon was showing Decora-style CEBus wall switches that should appear shortly at a price well under \$100 and within a year should be

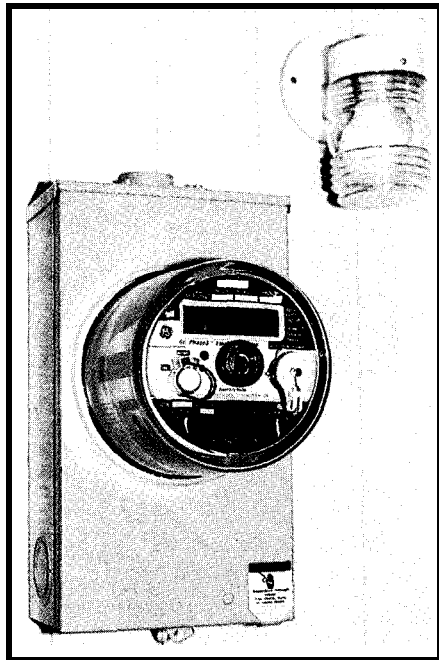


Photo 3—Power line communications is being pursued very actively by the utility companies as a way to effect load shedding during times of peak power usage plus do automated remote meter reading. With their CEBus utility meter, General Electric was one of the first to incorporate a CEBus interface in a production device.

competitive with Leviton's X-10 wall switches. My own guess was that such switches would initially show up at around \$150, so I was pleasantly surprised. They also had companion plug-in control modules that can be used in a manner similar to X-10 modules.

All the companies showing products except Panasonic are either in production right now or will be shortly. Panasonic, unfortunately, was only testing the waters with

prototypes and has no plans right now for production units. Apparently those in a position to give the green light need to see some evidence of high-volume potential, so, at least for the short term, it's an up-hill battle.

Things are finally looking up for a CEBus home, though we still have a wait before we see lots of products that are reasonably priced. At least some products are finally into production.

## LONWORKS

While we're talking about communications systems, we have to include Echelon's LONWORKS, the prime contender facing off against CEBus for the home's communications backbone. Sporting a rather impressive carpentry and paint job, the Echelon "pavilion" included individual kiosks displaying the wares of 14 companies that have incorporated LONWORKS in their products.

Schlumberger showed a LONWORKS utility meter; Leviton had lights, switches, and motion detectors; Residential Control Systems (RCS) makes thermostats; Thomson Consumer Electronics showed a television; Silverthorn showed a voice annunciator; and Toshiba and Motorola were showing their neuron chips, which are the core of any LONWORKS design.

While most of the products were talking to each other, there was no orchestrated demo for the masses passing through, so unless you were "fortunate" enough to be personally ushered through, it was difficult to see how things worked together.

## SMART HOUSE

While SMART HOUSE may have hit the ground running, and its development has been active longer than CEBus or LONWORKS, it certainly wasn't well represented. AMP had a full-size truck trailer tucked in one corner of the exhibition hall containing some SMART HOUSE equipment, but you had to be lucky enough to time your visit just right to be brought through the trailer by a tour guide The

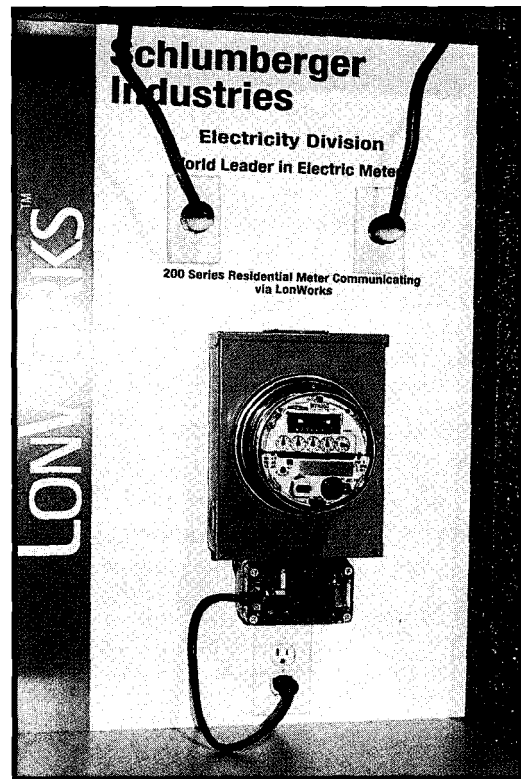


Photo 4—Similar to the GE meter in Photo 3, Schlumberger also makes a utility meter with a power line communications interface, though they chose to use LONWORKS rather than CEBus.

casual passerby didn't have much to look at. Our booth was just down the aisle from the trailer, yet I couldn't seem to happen by at the right time during any of the three days the show floor was open to get inside the behemoth.

Lennox, the HVAC people, were also showing a SMART HOUSE-

compatible environmental control system. No other SMART HOUSE manufacturers were at the show, however.

## PERSONAL ASSESSMENT

The natural question out of everybody's mouth is, "Which standard is going to 'win'!" I tend to agree with the sentiments of one of the seminar leaders. I don't think you'll see a clear winner of the battle between CEBus and LONWORKS. Rather than a VHS/Betamax faceoff, I think you'll see an Apple/IBM coexistence. LONWORKS is fantastic at doing purely control tasks in an industrial setting. However, its biggest downfall is its lack of provision to allow information distribution throughout the house. Here, since it was designed specifically for home control, CEBus has the edge. Any audio or video device made by one manufacturer can send data to a device made by another because the standard covers data channels in addition to control. Echelon's answer to the data question was that you could come up with your own scheme, but that doesn't help the interoperability issue.

Some of the larger companies aren't jumping in bed with one or the other, either. While in the Echelon booth, I was shown a diagram detailing a system developed by Honeywell and FPN (First Pacific Networks) to allow utilities to communicate with devices in the house for energy management purposes. The Echelon rep was only too happy to point out the use of LONWORKS in the setup. A little later, while at the Intellon booth in the CEBus pavilion, I saw exactly the same diagram, though now all the LONWORKS references were replaced by CEBus.

Apparently, the

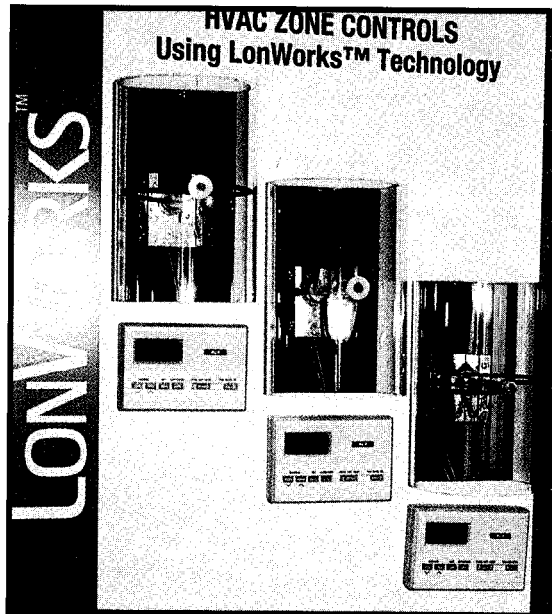


Photo 5-A thermostat is a natural for a more intelligent communications interface. RCS makes a LONWORKS thermostat that not only calls for heat or cooling at the proper times, but also allows a central controller to query for the current temperature and setpoints and to change those setpoints.

companies decided they didn't want to be involved in a battle of the standards, so developed the same product twice, once using each standard. They leave it up to the utilities who will be buying the system to decide which they want to use. Free enterprise in action.

As I've always contended, SMART HOUSE is fine for new construction in a limited number of circumstances, but for the average homeowner, it's

just too expensive and, in the long run, won't be supported by enough manufacturers.

## PRODUCTS FOR THE REST OF US

Communications standards may be fine for some high-end products just starting to hit the market, but what about the rest of us who want to automate now? There was no lack of products being shown to fill the bill.

Starting at the high end, AMX, Interior Systems Design, and a few others were showing their custom whole-house solutions aimed primarily at houses in the \$1+ million range. While their displays were quite impressive, and it's always fun to dream, these systems just aren't for the common man. Each

company custom configures the system for each client (or provides extensive training for installers), so they aren't aimed at end user installations by any means.

One step down in price is the Honeywell TotalHome system. While not new, they are continually working on adding new options to the system. Since Honeywell already has a whole network of sales representatives, they rely on that network for sales and

installation support.

Again, not the system for the do-it-yourselfer.

Rounding out the whole-house control systems and bringing up the lower end include offerings from Home Automation Inc., whose somewhat dated system concentrates mostly on security functions but can also do some home control; the Integrated Control System (ICS) from Off The Shelf, which tries to integrate separate subsystems located throughout the house (though they will sell only to dealers); a new offering from an

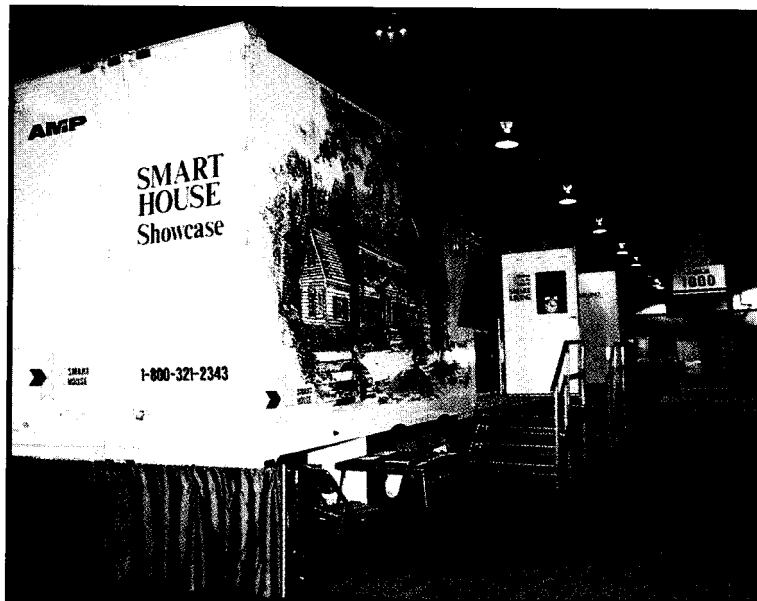


Photo 6—AMP makes spreading the SMART HOUSE gospel easier with their portable show house. Their approach certainly makes setup and breakdown much faster than with a typical exhibit.

Australian company called Jeeves, which handles direct inputs, direct outputs, analog, optional X-IO, and a PC interface; and finally Circuit Cellar's SpectraSense 2000, which consists of the original HCS II core components combined onto a single board and packaged in a steel enclosure for the dealer/installer market. The main controller includes 24 digital inputs, 24 digital outputs, 8 analog inputs with selectable gain, two-way X-10 interface, telephone interface, expansion connectors, plus support for all the HCS in-house network modules and the XPRESS programming language.

## PARTIAL SOLUTIONS

Most of the rest of the exhibitors were showing independent subsystems designed to perform a specific kind of control in the house. The audio/video guys were present in force, sporting all kinds of methods for distributing A/V signals and their companion controls throughout the house for the ultimate in home entertainment. A booming stereo demo wasn't far away no matter where you were on the show floor.

For those intent on having complete control over their home's lighting, there were several whole-house lighting control systems that relied on hardwiring all the lights to central controllers. Obviously, such a system is only feasible in new construction.

Security systems were also well represented, as were HVAC systems, window covering (drapes, shades, etc.) controls, and window controls.

The main problem with all these independent subsystems is they can't talk to one another or to a central controller. Products shown in the CEBus pavilion and by Echelon are taking steps in the right direction to solve the interoperability problem, and is why the adoption of some communications standard is so important for the future of the industry.

## NEXT YEAR?

As I've already said, Habitech is getting better with age, both because the organizers are learning from their mistakes and the industry is slowly

maturing. There is still a long way to go, though, so future Habitech shows should continue to be events not to be missed. ☒

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## IRS

410 Very Useful  
411 Moderately Useful  
412 Not Useful