All-in-one controller would talk to myriad appliances

PITTSBURGH (AP) — It's the one remote control you wouldn't want to lose. That's because it's the ONLY remote you'd have.

Researchers are hard at work trying to create an all-in-one controller that would choreograph not just home entertainment systems but also intelligent appliances all around the house: microwave ovens, clothes dryers, air conditioners, you name it.

"You want to turn on the room and not the devices," said Peter Lucas, founder and chief executive of Maya Designs Inc., which in concert with Carnegie Mellon University researchers has created a prototype based on a Compaq iPAQ.

The prototype handheld has so far been used to control two lamps, a fan and a stereo with a five-CD changer.

Anyone who regularly juggles multiple remotes — the Consumer Electronics Association estimates the average U.S. household has at least four — can understand why the industry considers a universal remote something of a Holy Grail.

But considerable work, and the thorny business of obtaining industry cooperation on a standard, lies ahead before consumers can even think of shelving all but one of their various remotes.

The current crop of remotes talk to electronics or other appliances via a series of infrared pulses. Each function, like volume and power, has a different set of pulses. What's more, no two appliances respond to the same pulses.

Anyone who has ever toyed with the current crop of multi-machine remotes knows how confusing it can be to program them to direct a typical den's worth of home electronics.

"We have managed to take the worst of the PC industry and transplant it into home electronics," said Michael Gartenberg, research director at Jupiter Research, a New York-based new media consulting firm. "There is a reason they call it programming a remote control. Consumers give up."

And so the next generation of remotes seeks to break away from the traditional design — and depend more on intelligence being programmed into the appliances with which they interact.

The devices use wireless technology and interfaces similar to Web browsers to communicate automatically with "smart" appliances. In turn, those appliances are capable not just of taking orders from the remote — but also of automatically communicating with one another.

The actual remote could be a cell phone or handheld computer.

"For the first time everybody in the house would be able to make something work instead of getting the kids," said Gregg Vanderheiden, head of the Trace Research and Development Center at the University of Wisconsin, which is also developing a next-generation remote.

Although the current crop of multi-machine remotes have become easier on eyes and thumbs, they're still mentally tiring and shunned by many consumers.

This will only get worse as manufacturers add more capabilities to home electronics, says Lucas. "It's getting to be a joke for the consumers," many of whom still can't program the clocks on their VCRs.

That's where the new remotes would come in.

Maya and Carnegie Mellon claim people using their Personal Universal Controller, or PUC, could operate a stereo twice as fast and with half the errors that are made in running it manually — without taking days to learn how.

New devices leave us in
total control

W ith an increasing array of household appliances that can be operated remotely comes stockpiles of handheld controls. But a movement is underway to reduce the coffee-table clutter to one handy, do-it-all device.

Thermostat

Television and VCR
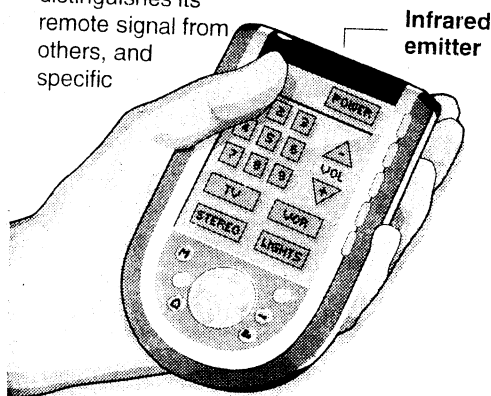
Lights and fans

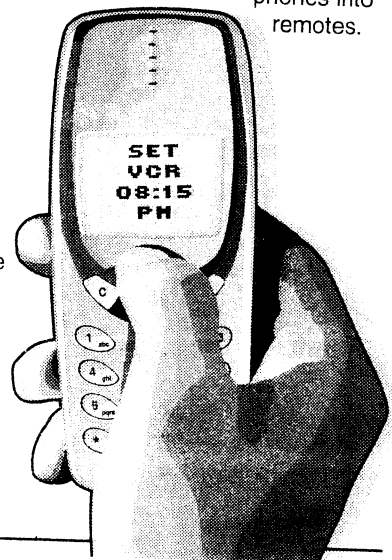**Stereo**
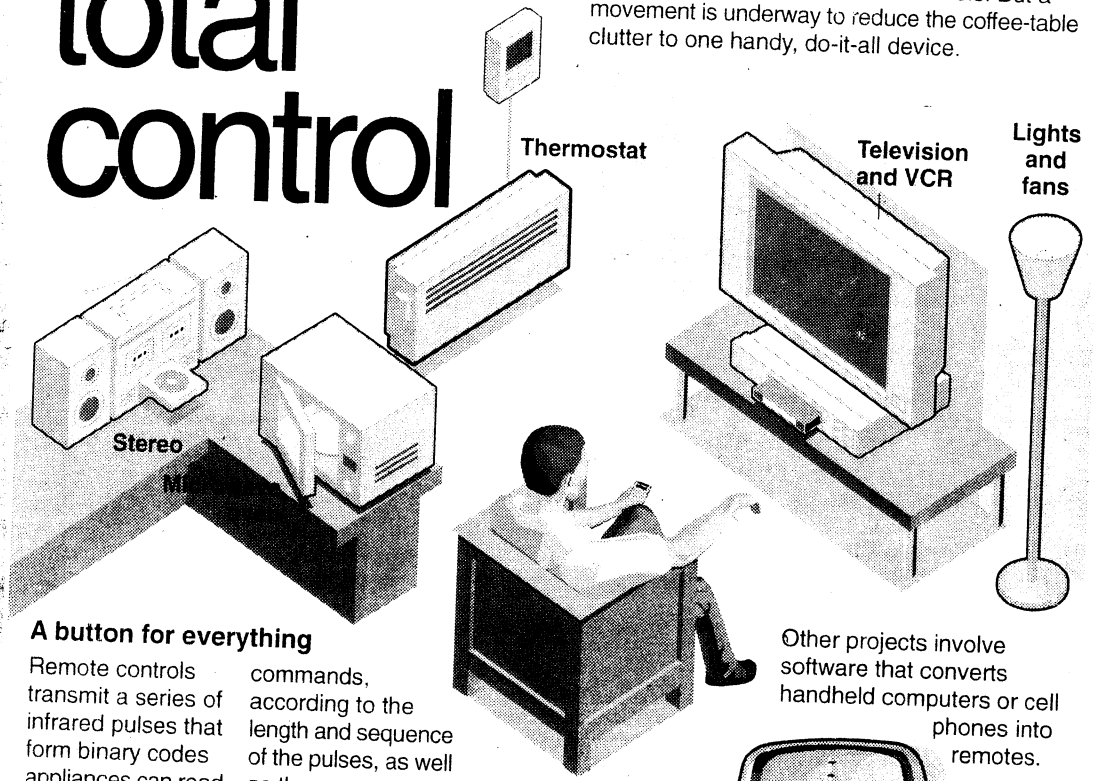
A button for everything

Remote controls transmit a series of infrared pulses that form binary codes appliances can read. A receiver distinguishes its remote signal from others, and specific commands, according to the length and sequence of the pulses, as well as the spaces between them.

Infrared emitter

Some universal remotes are designed to pick up and acquire signals from remotes that come with appliances.

Other projects involve software that converts handheld computers or cell phones into remotes.

SET
VCR
08:15
PM