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Home automation: a Luddite view

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A brave new world is on it's way. My toaster could have an email address. I will be able to buy a kettle with more on-board computing power than Apollo nine. A brave new frontier in home networking promises to link all my cherished appliances together in one seamless ZigFiTooth utopia of communication.

At the risk of being labelled a 'luddite', may I quietly ask "why ?"

Low power radio systems have a very long, and distinguished, pedigree. Their use in the home has seen application as diverse as the iconic, if frivolous 'garage door opener' right through to life saving fire alarms and 'nurse call applications. With the increased availability of 2.4GHz radio solutions from major silicon vendors these roles have expanded to include wireless internet access, high quality wireless audio transmission, and even video re-broadcast.

In all these cases, I can see the need for the product, but 'home automation' is a different case entirely.

At first glance, the idea seems attractive. Implement a wireless communication network between all the electrical products and services in your home, to extend the convenience you associate with operating (for example) your video by it's remote control to all the other functions previously worked by 'local' controls.

It has undeniable benefits: a temperature sensor network can monitor room temperature, and remotely control heating settings for each radiator accordingly. Infra red sensors can monitor room occupancy and turn off unused lighting, as well as having secondary intruder alarm and fire detector roles.

But the degree of sophistication suggested by some of the gurus in this field makes me deeply suspicious: networking all a home's control functions through the same central processor sounds clumsy at best, and hazardously unreliable at worst, while programming 'everything' through one convenient hand held terminal (normally described as a PDA or an advanced phone) becomes a nightmare when the terminal is misplaced, left at work, or when more than one person lives in the home (enough jokes are made against men who 'hog' the television remote: now imagine if the same remote programs the heating, the patio lights and the coffee maker too).

And at the extreme end of this spectrum are the suggestions of systems which (for instance) allow the control of your stove from your cell phone, and where appliances can detect a shortage of a product, and either send messages advising I purchase more, or can place on-line orders to make up the deficit themselves.

So, as I drive home from the airport, I can turn on the oven (containing a roast that's been decaying in there all weekend). Assuming my inbox isn't full of messages from my fridge.

There is an engineering aspect to this trend. Without the allocation of significant segments of new bandwidth (at frequencies low enough to achieve significant penetration of internal walls) and the negotiation of new communication usage standards, the proliferation of these unnecessary

communication links will, sooner or later, over-use the available bandwidth allocated to existing wireless products. In high density residential areas this could rapidly result in a form of radio 'grid lock'.

And there is another detail: It's only recently being advertised extensively, but consumer white goods use a significant amount of energy in their 'standby' states. Adding an extra layer of wireless transceivers, and extending them to include every light switch, radiator and utensil, could easily cancel out any savings made by improved, intelligent control of heating and lighting.

I think I'll get up off the couch, and turn the kitchen light off. By hand.

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