



The Business Case for Structured Cabling in the Home

The UK market

More and more builders and developers are starting to offer some form of automation within their builds.

The initial price for the whole-house installation of structured wiring is low. The cost of the A/V, lighting, security system and other technology that can then be fitted into a property is itself getting more attractive by the day.

Consumer interest in custom install, especially in the areas of home cinema and multi-room audio, is growing in tandem with the rising use of broadband, digital systems and wireless communications technology.

As expectations rise, technology will be required to deliver - factors which will continue to put pressure on house builders.

The US market

Fully-structured wiring, home networking of computers, home cinema, multi-room audio and TV distribution are commonplace in mid to high end homes in the US with entry-level homes wired with Cat5 cabling as standard.

Part of the driving force behind this development is the fact that large companies like Microsoft and Cisco, together with major retailers see an opportunity to drive new services and sales directly into people's homes sales, but only if the cabling infrastructure is there.

Initially US house builders saw incorporating technology as an irritation, however they then saw it as a necessity because they did not want to be out-marketed by other developers. Finally, they saw it as an opportunity to make money through selling optional products and extras on the back of a structured wiring system.

Opportunity to make money

In the UK infrastructure wiring installations are not only being taken up by niche builders but are now being installed as standard by forward-thinking national developers who have the foresight to see the wiring as a benefit, and therefore an increase to the property value.

The demands of today's techno-savvy homeowner mean that an increasing number of newly built, modestly priced houses are coming fitted with whole house entertainment.

The UK's leading housing developers, such as Barratt, Octagon, Laing and The Berkley Group are finding that whole-house entertainment systems have supplemented the luxury fitted kitchen and ensuite bathroom as the bait needed to lure new buyers.

Protecting the Environment - Caring for the Elderly

With such conveniences as self-opening windows and electronically locking doors, the disabled will be among the biggest winners in the home automation revolution. Many other social housing projects in the near future will have elements of intelligence built into them. The environment will be another beneficiary. Energy efficiency and home automation go hand in hand.

One of the things that strikes most visitors to intelligent homes is the high level of green awareness in the form of everything from insulation, to the heat exchanger in the loft that sucks out the residual warmth from stale air and feeds it back to the hot water tank, to ultra-thoughtful use of water, with such concepts as bathwater automatically being recycled for irrigation for the lawn.

Greenness is both the value-added ingredient of home intelligence and its new intellectual strength. The intelligent home has been recruited as part of the struggle to save the planet, and from that new moral high ground, has gone on to become an agent for social good. Energy conservation is an ethical duty for the rich, but also saves cash for the poor. If a house can be wired to motorise the chandeliers for cleaning, or provide hi-fi from hidden speakers in every room, the same wires can power aids for the disabled or the means for the family to keep an eye via a video link with a bedridden family member, or someone on kidney dialysis, upstairs.

A future-proofed home with spare audio, video, TV and data capacity

One of the basic concepts of the intelligent home is that, once the all-important wiring is installed and the space is there for more in future years, the building is, to a large extent, effectively future-proofed.

Whatever technology might emerge in the foreseeable future, it will need wiring of some kind. The wiring that was in a child's bedroom for its computer for example, can be used when a disabled grandparent moves in so that they can control the room temperature, see who is at the door or alter the angle of their bed.

The recent The Alliance and Leicester 'Homeowner 2025' survey cites 'technology' as the key to future house price appreciation with installed home 'entertainment' regarded one of the most important future lifestyle trends.

The Berkeley Group, for example, is introducing multi-room audio in properties priced over £200,000 (50% of their new properties). Likewise, owners of Laing Homes valued over £250,000 (75% of their new properties) will be offered the installation.

As well as wanting a high technology home, house buyers are looking to make an investment. In buying a pre-wired, hardware-equipped property; buyers can be confident that their home will resell well.

Unlike fitted wardrobes or breakfast bars, high technology, or more accurately, the embedded potential for including high technology, is something that will stay fashionable forever.

Increasingly, homebuyers know that, by purchasing a properly designed and installed communications infrastructure from their homebuilder, many "smart" home technologies can be added at a future date as the homebuyer becomes more comfortable with the system and sees the need for additional capabilities as new technologies and services become available

These demands go a long way to explaining why developers are willing to fit systems as standard. These are typically not custom-built systems, but 'off-the-shelf solutions' that put them within the budget of a much wider audience. The manufacturers of more refined intelligent home components are rightly beginning to see these off-the-shelf options as a means to secure future sales from a captive audience.

As the UK market expands, the variety of multi-room systems is also growing. At one end are the simple, easy-to-fit, off-the-shelf solutions and at the other are high performance, bespoke systems.

Structured wiring systems, residential gateways and home automation technologies allow homebuilders to offer buyers the opportunity to have the technology they want and need now, and the infrastructure for what they may want or need later.

While whole-house entertainment is still far from achieving 'commodity' status, growing demand is leading to more manufacturers and installers and addressing the desires of a growing number of potential clients.

The Increasing Popularity of Home Automation

Home automation has previously been regarded by the general public as 'toys for boys' - especially rich boys - and not for the mainstream. But that perception is changing.

The main drivers behind the market are increasing affordability, the growth of wireless applications, the integration of home automation with security and communications, and the need to keep control of the growing number of electrical devices in the home.

Additional trends include:

1. Continually increasing use of the Internet by everyone in all aspects of their lives
2. Multiple home computers
3. Fully functional and regularly used home offices
4. Entertainment options
5. Assurance of resale value

The UK is well ahead of the rest of Europe in the adoption of home automation systems, particularly in multi-dwelling buildings such as apartment blocks. Home automation systems are now being seen as a practical solution to the growing complexity of running a modern home - handling heating, air-conditioning, alarm systems, multiple televisions, DVDs, videos, hi-fis, accessing the Internet and sending emails.

System capabilities

A sophisticated home automation system can be used to control any electrically-powered device, from a humble light bulb to a multi-source home cinema/entertainment room. The functionality of each device can be controlled from a single control unit.

Asset management software further enables the system to not only control devices, but monitor them for malfunctions. For example, if your video or DVD recorder fails to start recording a programme, if a light bulb blows or if the freezer fails while you are at work, the system can be programmed to let you know by text message, pager, email or a message on your system control panel.

Access Security

Systems can be accessed over the Internet using a standard PC from work or when out of town. A suitable level of security is included to prevent unauthorised access.

Indeed any intelligent system will feature a number of security levels to allow access to different aspects of the system, from total access 'administrator' level, to limited access for children and guests, who will be allowed to control all of the everyday devices such as lights and TVs/DVDs, but, for example, will be unable to reprogramme the heating system or alter security settings.