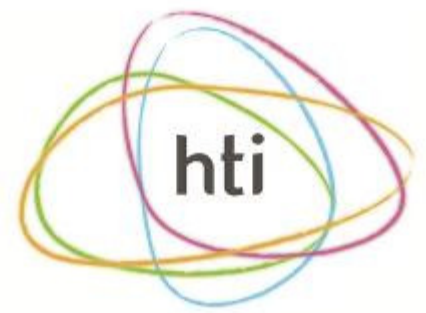


Case & Point

» LARGE RESIDENTIAL NEW BUILD



INTEGRATED TECHNOLOGY

Overview

- » 30,000 sq ft new build home in northern Scotland (20 miles of AV and control cabling)
- » Rooms: 11 public, 9 bedrooms (incl 3 staff). 25m pool with spa
- » Control of 4 heat sources including geothermal, via 27 bore holes within grounds and solar panelling
- » Distribution of high definition content to 29 screens
- » Audio delivery from 16 sources to 32 areas
- » 3 Home Cinema areas
- » 23 touch screen controllers (17 wireless)
- » Web access for owner and technician alike



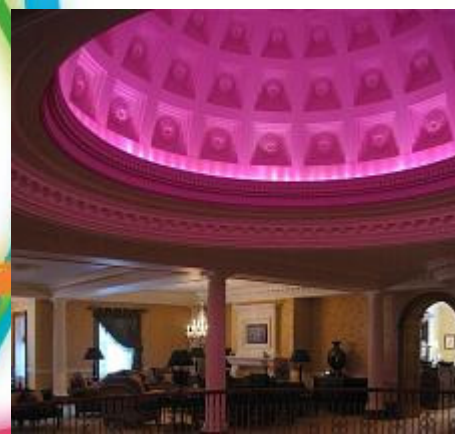
Challenge

In order to ensure that the client's family had technology which complemented how they envisaged using their new home, Home Technology Integration (HTI) had to carefully consider the design and integration of such a diverse spread of systems. The control systems, therefore, had to not only fit within the interior design scheme, but also be easy to use.

The client specifically stipulated that:

1. The energy efficiency was maximised via simple monitoring and alteration.
2. The security system would interact with the lighting/audio system to provide a maximum deterrent, whilst the telephony system would notify the homeowners by text message if they were not at home.
3. Any room would give access to the home entertainment system without having to move media (i.e. start watching a recorded TV programme/DVD in one room, finish watching it in another). Essentially, the client wanted the rest of the family to have a similar type of access.
4. Parental control to monitor/restrict children's access to DVD server system remotely.
5. None of the 46 speakers would be viewable (now that was a challenge!)





Deliverables

Early project coordination had to take place to ensure that lighting, heating, security and AV audio systems all worked together as planned. Inputs and outputs were agreed at an early stage and rechecked often during the build program. Each of these systems was brought on line in stages weeks before the customer moved in to ensure that they would all work together when they needed to.

Individual Media Servers

A Crestron matrix was designed to distribute 14 high definition video sources and 16 audio sources to any of the 29 connected rooms. The source components were then dedicated to a particular user, giving each their own 'mini-system', i.e. each of the four main residents would have their own Sky HD box, DVD player, iPod dock, etc. Each user was given a personal identification number (PIN) that they could enter into any of the 23 touch-screens around the property and once entered, they could then access their own personal system, no matter where they were, including the cinema systems.

Speakers (where?)

The Client did not want to see speakers within the property and therefore HTI had to creatively source products that delivered the quality expectations whilst taking advantage of the interior design. 46 plaster in, 'invisible', speakers in walls and ceilings were sourced and installed together with 34 transduction speakers (hidden behind mirrors that turn the mirror itself into a speaker.

Heating /Lighting Control

All lighting switching was also integrated into the control infrastructure, with some of the 250 scene setting modes being linked to associated actions (eg cinema screen drop down/projector activation). Sensors also dim lights in response to changes in sunlight in certain rooms. The control of air conditioning and zoned underfloor heating is via touch panel as is the management and efficiency of solar and ground source heat facilities.

Movie Goers

HTI installed 5 x SKY HD boxes and a 9 Terabyte (5000 movie) DVD jukebox allowing up to 5 movies to be watched in 5 different rooms simultaneously. The main cinema room was installed with a retracting HD projector throwing to an 84" screen (trap doored). 29 screens in total were installed and integrated to the client's requirements including 2 x 50" mirror screens, 2 x waterproof bathroom TV's and an outdoor weatherproof 42" screen for the courtyard.

Where's the remote?

17 wireless and 6 fitted-to-wall LCD touch screens provide user specific control dependant upon rights. A secure web page allows the owner to monitor and alter systems, should he wish, remotely. Engineers can also access systems allowing speedy upgrades and resolution to issues.

Safe as Houses

Security is tied to the lighting automation and the AV system. Once activated all lights illuminate and loud music plays in order to encourage the intruder to leave (Police have already been called). CCTV—camera can be accessed via any TV screen and secure private web page. Gate and Door Entryway—cameras can be viewed using any TV of the touch-panel. Fire Alarm—connected to the lighting system (& fire brigade) so once the fire alarm is activated, the lighting lights a path out of the building.

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