



automation 4 limited
www.automation4.com

STARDRAW  2007
ultimate control CONTROL


Stardraw.com
eye-opening software solutions

Automation 4 takes Control at home...

Automation 4 Ltd. is a young company based in the north east of England providing specialist automation services across a range of market sectors, including the burgeoning residential market. Recently the company was commissioned to design and install a state-of-the-art system into a stone-built cottage in North Yorkshire that was undergoing a sympathetic but comprehensive modernization including a two-storey extension containing a new luxury kitchen, family bathroom and master bedroom with en suite facilities.

The brief for Automation 4 was to integrate lighting, heating, security and AV systems in a manner sympathetic to the style of the cottage. This meant no clutter, particularly where the AV system was concerned – no large floor-standing speakers, no hi-fi or DVD hardware under the TV and no CDs cluttering up bookshelves! Furthermore, as the owners have more than one residence, they also wanted the ability to monitor the cottage remotely and simulate occupancy whilst they were abroad.

As with any complex installation of this nature, the potential for accumulating remote controls by the dozen is enormous. It is also what the owners specifically **didn't** want, so how to resolve the issue of unified

control of so many disparate elements? Having done their homework, Automation 4 had no hesitation in opting for a Stardraw Control solution.

"We needed a control platform that could integrate products from many different manufacturers without locking us into a single hardware solution," explained Automation 4's technical director, David Birchall. "The open architecture of Stardraw Control enables us to do that very easily. As long as the driver exists, you can use whatever equipment you like and, even if it doesn't, it's very simple to write one. We are very experienced in Windows

application development, in particular using C#, so we were comfortable using Stardraw Control's C# scripting interface to create sophisticated bi-directional drivers and system functions. Furthermore, the software will run on any system that supports the Microsoft .NET framework, so we're not limited in our choice of hardware to run the

"We needed a control platform that could integrate products from many different manufacturers..."

application and its graphical user interface (GUI): any Windows PC device is fine."



In this particular instance, Birchall and the owners selected an ultra-mobile PC (UMPC) – a wireless touchscreen running Windows XP - to host the GUI. "This interface provides a single control point for the owners to control any element of their fully integrated home from any room," explained Birchall. "This includes control of the AV systems (Sky Digital, LCD TV screens, Imerge Audio Server and the Opus multiroom audio/video system), the security systems and features (Axis IP cameras, simulated home occupancy, PIR-triggered events etc), the EIB/KNX lighting

installation, heating system and automated curtains and blinds."

Automation 4 chose a proven industry-standard wired system called KNX/EIB for all lighting, heating, blind and curtain control. This system is extremely flexible, offering the user several ways to control each function. For example, a single wall-mounted light switch can dim the lights, close the blinds and turn up the heating. Functions may be changed by the user so that if, in the future, the same switch is only required to turn a light on and off, it can easily be programmed without the need for re-wiring or a visit from the electrician.

The same KNX/EIB technology was also used to enhance the security of the cottage. Interfaced with a standard intruder alarm system, the EIB system simulates occupancy by opening/closing curtain and blinds, and switching lights on/off. Three external PIR (passive infra-red) sensors detect movement on all three sides of the

cottage and trigger events inside the property to give the impression of occupancy. In addition, two cameras, one mounted at the rear and one on the side of the property, constantly look for movement and email images off site instantly as well as record onto DVR for historical information.

"We always recommend the use of the KNX/EIB system for heating and lighting installations," Birchall explained. "It is the first and only open international standard for home and building control. Many companies are offering lighting solutions that have their origins in home cinema/AV installations but they aren't sufficiently future-proofed for use in evolutive whole home integrated solutions. By using a KNX/EIB system we can ensure that our client's investment in their installation will retain its value and be supported for years to come. As it is, many new homes and buildings are now being constructed with EIB/KNX installed as standard, allowing our control systems to be added without the need for



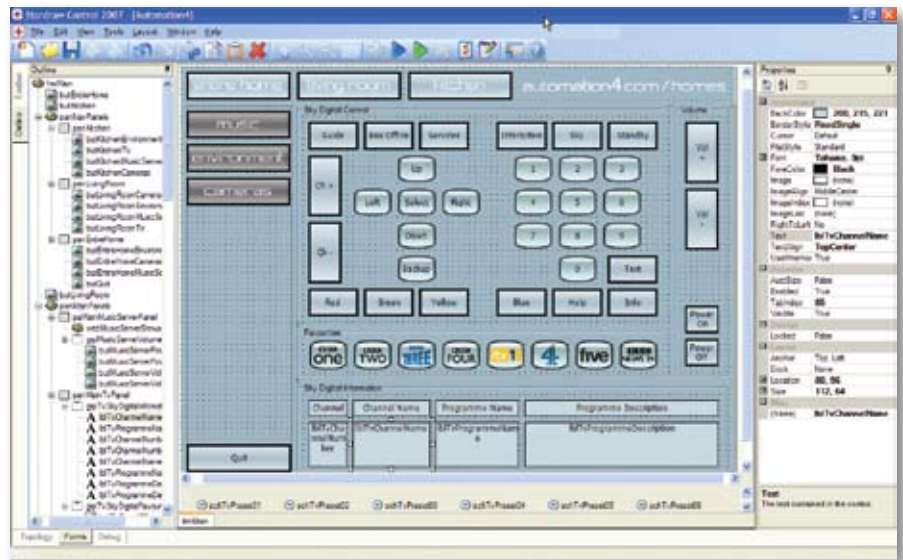
"...now that Stardraw has added support for EIB/KNX within Stardraw Control, our job has become even easier as we can control all EIB/KNX elements (usually heating, lighting and automated curtains and blinds) directly from the Stardraw Control GUI."

additional wiring or cable-pulling. Furthermore, now that Stardraw has added support for EIB/KNX within Stardraw Control, our job has become even easier as we can control all EIB/KNX elements (usually heating, lighting and automated curtains and blinds) directly from the Stardraw Control GUI. Previously we required an EIB server and a dedicated EIB touch screen to do the same job, so it's not only simplified the system but reduced cost to the end user as well."

In terms of the AV system, in order to adhere to the "no clutter" brief, an Imerge S3000 audio server was chosen as the audio source for the living room and kitchen/breakfast room. This state-of-the-art server enables digital storage of the client's entire CD collection. It automatically connects to the Internet and downloads album covers and track details. The CD collection can then be viewed via the TV, remote tablet or wall-mounted control panel. "It completely eliminates the need for CD cases on shelves, including the infuriating phenomenon of the empty case, which was inevitably the CD you really wanted to listen to!" remarked Birchall with a grin.

The multi-room audio system distributes audio throughout the house via discreet high quality ceiling speakers for maximum sound quality with minimum visual intrusion. In addition to audio, the client requested control of Sky TV via the remote tablet. The Sky remote was duplicated on the touchscreen eliminating the need for separate remotes, and an added advantage is that live Sky programme information is displayed within the GUI.

"We always strive to find an elegant control solution right from the initial design stages of all our work, be it an industrial conveyor system, an interactive visitor centre or, as in



Stardraw Control – Forms View

this instance, a residential control installation." commented Birchall. "Stardraw Control has enabled us to create that simplicity and elegance using one software solution to do the job of three. The UMPC will control all the house technology, and Stardraw's client/server capabilities mean that you can have as many control interfaces as you like, either remote or wall-mounted, as well as on your own PC if you so desire. Better still, the same screens can be accessed via the Internet giving complete control from anywhere in the world just as if you were at home. For example, the client can view the security cameras, close curtains, switch lights on/off and even turn the music on remotely. It really is breathtakingly powerful and yet remarkably simple and flexible at the same time."

"We were also very impressed by Stardraw as a company," continued Birchall. "The people are passionate about their products and provided assistance and support right from the initial stages of experimenting with the freely downloadable demo version of Stardraw Control. We were able to build a prototype system very quickly and test its functionality (which we ultimately demonstrated to the client) without spending weeks on training courses learning a system-specific scripting language or being taught the basics of RS232 and TCP/IP communications which we work with on a daily basis anyway! As I said, our aim is for a simple and elegant control solution whatever the situation and Stardraw Control is a perfect example of what can be achieved simply, elegantly and also extremely cost-effectively."

Automation 4 Ltd. company bio

Established in 2004 and based in the North of England, Automation 4 Limited provide Specialist Automation Solutions in the following fields:

Industrial

- Industrial control panel design and build
- Motion control and PLC software development
- SCADA and custom GUI interface development
- Mechanical machine design and build

Entertainment

- Show control software development
- Custom GUI and interactive interface development
- Dynamic signage and media management systems
- Technical AV and IT consultancy design services
- Total project solutions

Homes

- Integrated residential and commercial building automation
- Automated lighting, heating, curtains and blinds
- Multiroom audio and video
- Integrated security systems
- Touch screen interfaces

Automation 4 offer a complete range of services from software development and programming through to the complete management of a project, including technical feasibility, system design, installation and maintenance.

"Stardraw Control has enabled us to create that simplicity and elegance using one software solution to do the job of three."

Equipment List

Control Equipment

- 1x Stardraw Control 2007 generated application
- 1x Global Cache GC-100-12
- 1x NetGear Wired and Wireless Networking
- 1x UBIQUIO 701 Ultra Mobile PC
- 1x Gira Home Server

AV Equipment

- 1x Sky Standard Satellite box
- 1x Imerge S3000 audio server
- 1x Opus MCU 500 Master Unit
- 1x Opus TXT 500 Text Unit
- 1x Opus VCU 500 Video switching unit
- 1x Opus SCU 500 Serial control unit
- 3x Opus WCU 500 Wall control panels
- 3x Opus DZM 100 Amplifiers
- 6x Opus in ceiling speakers
- 2x Panasonic TX32LXD60A 32" LCD TV

EIB / KNX controlled equipment

- 1x ABB Smart Touch touch screen interface
- 5x Goelst motorised vertical blind mechanisms
- 5x Goelst motorised curtain mechanisms

Various switches on EIB :

- 5x 5 fold Busch triton switches
- 7x 3 fold Busch triton switches
- 6x 1 fold Busch triton switches
- 1x 6 fold binary input module

Cameras

- 2x Axis Network camera

System User Interface



Kitchen Music



Living Room Sky Digital



Security



Music Server



UBIQUIO 701 Ultra Mobile PC

Installer Contact Details

automation 4 limited
www.automation4.com

Automation 4 Ltd
Unit 2, Stephenson House,
Lund Lane, Killinghall, Harrogate. HG3 2BW

Tel: 01423 772907
Fax: 01423 771129
Email: info@automation4.com
Web: www.automation4.com



Download Your
Free Demo
Today



280 Madison Avenue, #912 9th Floor, New York, NY 10016, USA
Tel: +1 212 386 5644 Fax: +1 888 317 7812

The 401 Centre, 302 Regent Street, London W1B 3HH, England
Tel: +44 (0)20 7692 7117 Fax: +44 (0)20 7692 7118

www.stardraw.com info@stardraw.com