

intensity

the art of integration and technology | issue 02 summer 2007



C-Bus
pointOne™
accredited integration professional

introduction

This edition also includes industry case studies, providing ideas for your next residential or commercial project, and a profile of the work of Lawrence Katz, former Director of Lincoln Scott in Melbourne.

Finally, on the opposite page you will see the excitement of the C-Bus pointOne cocktail parties – the official launch held throughout major centres across Australia.

The first event kicked off in style at the Museum of Contemporary Art, Circular Quay in Sydney, followed by The Block at QUT, in the Creative Industries Precinct, Brisbane, and then ZINC at Federation Square in Melbourne. Launches are set for Adelaide and Perth in the coming months with planning well under way when *Intensify* went to print.

Hopefully those of you who attended the east coast events enjoyed the night as much as we enjoyed putting it on for you! So if you get invited to the next one in your state, be sure to attend and see what all the excitement is about!

Well, we hope you enjoy our second edition and of course become regular readers.

Please visit our website – www.c-buspointone.com.au – for more information and to find a C-Bus pointOne member in your local area.

Regards,
Michael Jack

*National Manager
C-Bus pointOne program*

Welcome to the second edition of *Intensify* – the publication that showcases the art of integration and technology.

We trust you enjoyed our first magazine; full of information on the automation, lighting control and energy management solutions that C-Bus pointOne deliver to both residential and commercial environments. They are your one point of contact after all.

This time around, we will provide you with more insight into our C-Bus pointOne accredited integration professionals and focus on an important factor that they consider in almost every project they work on – energy management.

We will show you how Clipsal C-Bus can contribute to saving electricity, assisting not only your client's hip pocket but also helping the planet; both of which are significant considerations in this day and age.



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cocktail anyone?

The C-Bus pointOne cocktail parties being held throughout major centres across Australia kicked off with launches in Sydney and Brisbane.

With fabulous canapés and cocktails, impressive lighting shows, music from well-known local DJs, and most importantly short and entertaining presentations, these evenings provided just the right mix of entertainment and information.

One of the highlights was the high-tech Clipsal C-Bus interactive displays; custom designed and crafted from stainless steel, acrylic and polished concrete. Lights, music, motorised blinds and louvered windows were all controlled at the touch of a button via the C-Bus switches or colour touch screen. They also doubled as the cocktail tables for the evening, making them not only practical, but also a talking point for guests and C-Bus pointOne members alike.

Guest speakers on the night emphasised the importance of integrating technology into any environment as well as the relevance of utilising the expertise of C-Bus pointOne members to maximise the benefits.



Sydney Launch



Brisbane Launch



From Top
Sydney 01 Bernard Farrell and Phillip Yang (Norman Disney & Young) 02 Geraldine Pettineo, Stephen Cox, Paul Croci (Ancher Mortlock & Woolley) 03 Greg Jin, Elizah Nelson, Ken Choo (Ailsdair McDonald Architects) 04 Tony Hiliadas, Julia Liu, Joseph Elkhaug (Brewster Murray)

Brisbane 01 C-Bus pointOne member Kelly Weijers (5thCorner) and Jane Claxton (Harry Poulos Architects) 02 Sharon Jaklofsky (Cavalier Homes) and Tanya Thus (Clipsal Australia) 03 Adam Tsai and Ben Hennig (Mercury Design) 04 Richard Eton (Master Builders Association Queensland), Sharne Kellenberg, Tony Van Dyk and Robert Vankooten (Plantation Homes) with C-Bus pointOne member Glenn Wollenweber (Nuvo Solutions Qld)

lawrence katz

engineering change

Lawrence Katz, Director of Lincolne Scott, Melbourne, has had a career as an electrical engineer spanning some 30 years. Over this period, he has witnessed huge changes in technology, but the basics remain the same. Jane Burton Taylor reports.

"I call it the TLC principle: telephone, lights and coffee," he says. "And it works in more ways than one. You have to put all your energy into the design and think about the function of every little corner of the space with the architect."

Katz, who was born and raised in South Africa, migrated to Australia with his family seven years ago. Initially, he found the move daunting. "It was a humbling process," he says. "Arriving in Australia and having to restart my career afresh – to develop the credibility and trust that one needs to succeed in an extremely competitive environment was challenging."

Katz has certainly achieved that credibility. As well as being one of the directors of an electrical engineering firm that employs 400 plus staff, he has routinely worked on major commercial and public projects.

The majority of these projects involve working with high profile architectural firms. Some of his recent jobs include designing the communications infrastructure and security system for The Melbourne Convention Centre (Woods Bagot and NH Architecture), the Aquavista office development in Docklands (Peddle Thorp Architects), and currently, the IAG building (interior architects: HASSELL) and the Skilled Stadium in Geelong (also with Peddle Thorp).

To meet the demands of projects of this ilk, Katz has added security and communications requirements to his repertoire. Another general prerequisite for projects of this size and prestige, is a high degree of energy efficiency.

"Often the buildings are specifically targeting an energy efficiency rating or require green building council accreditation," Katz says.

The first step, in terms of lighting, is to ensure all lights are fitted with DALI control, Katz says. "That means every light is addressable, instead of hard wiring, and all the switching and all the dimming is software-controlled," he explains.



“Consulting engineers should always be looking at how the end-user is going to benefit”

"The next thing you need is a really good control system that can go into the building. In selecting that control system, you want something that is simple to install, accessible to all electrical contractors and easy for the end-user to operate."

Katz says he often specifies Clipsal C-Bus for lighting control in the majority of his projects. "The simplicity of the C-Bus system is its big selling point," he says.

"Another significant point," he adds, "is that most corporate tenancies today have board rooms fitted out with AV equipment, and the C-Bus system interfaces well into the better known audio visual control systems."

C-Bus works in well too with the green agenda, Katz says. In the Skilled Stadium complex in Geelong for example, Katz designed sensor toilet lighting. "So as you walk into the toilets all the lights and vent fans switch on, but if unoccupied, they all switch off."

He also reduced energy in the overall complex, as well as saving the legs of the caretaker. Originally each building in the complex had its own light switches, so the caretaker had to walk around all the buildings to switch off lights. When the new stadium was built, Katz upgraded all the lighting control so it is controlled by a common C-Bus network. Now, the caretaker just has a touch screen to control all the lighting in the Stadium.

"Consulting engineers should always be looking at how the end-user is going to benefit from the use of technology, and how the owner is going to benefit too," Katz says. "And ultimately how the environment is going to benefit. So you've got a cycle, economic and environmental." Katz left Lincolne Scott at the end of August to work as an independent consultant.

*Text Jane Burton Taylor
IAG Workplace, Designer HASSELL (top right)
AWB, Architect Peddle Thorp Architects (left and bottom right)*

doing the right thing

energy saving in the home

What with the drought, Al Gore and the politicians finally catching on, it seems that climate change is at the forefront of everybody's mind. In the area of housing, this has translated into increasing demand for environmental features in homes, both new and existing.

For Clipsal, this has meant that more and more of their customers are citing environmental issues as vital in their choice of the C-Bus automation system. "Two years ago, when we asked our customers what they wanted, it was almost always the wow factor, followed by the convenience after it had been installed," says Simon Wehr, Residential Marketing Manager at Clipsal. "The difference is that now they are asking: 'How can this help me save electricity?'"

The answer to this question is that it can help in a number of ways. The ability to set the maximum level of the lights to 90% makes no noticeable difference in a room, but delivers significant savings in power over the course of a year. It also increases the life of the light globe by up to twice as long, thereby reducing landfill. The 'all off' function also allows home-owners to be sure that everything is turned off when they leave the house or go to bed at night. This can include lights and air conditioning, as well as appliances that use power when in standby mode, such as TVs, DVD players and washing machines.

Timers can make sure that water features, outside lighting or Christmas tree lights are on when you want them to be and off when you don't, without having to remember to flick a switch. Again the 'all off' switch overrides this when you go out or when you go to bed. And sensors in pantries or walk-in-wardrobes can ensure that lights are on only when they need to be.

Apart from these basics, there are plenty more features to really make the system fit with your life. "We have young children and we have it set up so that their bedroom lights can be controlled via remote from our bedroom – we can check whether the light is on and we can hit a button so the lights slowly fade," says Wehr. "They can also activate their own bedside and overhead lights from the remote control next to their beds as well as the bathroom light so they're not wandering around in the dark."

"It's a quirky thing," he adds, "but we also have it so that when the kids come for breakfast, we can check on the touch screen and see whether they've left their light on – then turn them off if necessary from the kitchen or family room."

Every little bit helps. You can tailor the system to minimise wasted energy and to fit in with your lifestyle. "Lights are only on when you're there," says Wehr. "Those are the things you can apply to achieve energy savings in any home, from an inexpensive place through to a multi-million dollar mansion."

Text Penny Craswell



Now they are asking: 'How can this help me save electricity?'



The convenience and flexibility of the C-Bus system is ideal for delivering energy savings

codes, ratings and stars

energy efficiency for commercial projects

Meeting the energy efficiency requirements of Section J of the Building Code of Australia is just the beginning of what a Clipsal C-Bus system can offer in the commercial arena.

From offices to hotels, retail environments, restaurants and sporting stadiums, each project has a different need for lighting control. "It's about understanding the building's use and then designing the control system functions around that use," says Greg Bryant, Commercial Marketing Manager at Clipsal. Key to this is the ability to provide the right light for a building or interior to function properly, without wasting electricity when the lighting is not needed.

A Clipsal C-Bus system can provide all this and more. On a C-Bus system, electronic devices are networked together and can be set according to factors such as time of day, light level, occupancy and temperature. Lighting control functions such as time scheduling, staged shutdown or fade-outs can ensure that lights are not left on when they are not needed. Lights can also be reduced or turned off completely according to the natural light levels in a space.

Occupancy sensors can provide savings of up to 60% for rooms that have irregular usage such as

corridors, cellular offices, classrooms, conference rooms, amenities, lunch rooms or storage rooms. Bryant says: "For example, in corridors, you can control lighting so that when there's no movement, the lights dim down to a moderate level and when someone's present the lights ramp back up."

The convenience and flexibility of the C-Bus system is ideal for delivering energy savings. Controls such as touchscreens and remotes make it easier for people to control lights in lecture theatres, meeting and board rooms and hospitality settings. And lighting areas and control functions can be easily changed if requirements change. "Being able to adapt to the changing needs and provide flexibility is very important," says Bryant. "For example, at the Electoral Commission they normally work nine-to-five, but when an election is announced, they need to work extended hours leading up to the election. The Clipsal C-Bus system can easily accommodate the change in operating hours to minimise the impact on staff whilst still delivering energy efficiency."

Using Clipsal C-Bus can also allow for more creative use of lighting. This is because, in the Building Code of Australia regulations, there is a dispensation in the lighting power density requirement if lighting controls are used. This means that you can have more light output, but use it more efficiently. "Lighting is an art, but it's also got stringent control – there are certain levels of lighting that must be met for certain applications," says Bryant.

As well as meeting the Building Code regulations, Clipsal C-Bus's energy efficiency assists in obtaining a superior Australian Building Greenhouse Rating and more Green Star points – whilst providing cost savings for the client.

Text Penny Craswell



The system actually improves the home's overall green performance

the 'green' house

Installing solar panels was only the beginning in creating this fully automated, environmentally-friendly home in Somersby, NSW. Jane Burton Taylor finds out why Clipsal C-Bus was the obvious choice.

When clients want a large house, environmental issues become even more important than usual. So says James Cooper of Sanctum Design Consultants, who recently offset a home's sprawling floor plan with a raft of green initiatives, including a Clipsal C-Bus system that trims energy use and interfaces with onsite solar panels.

The brief was for a house to accommodate several families, Cooper says. "The clients have family members that live overseas and come for long term stays. So they wanted a central family home for a number of families."

Cooper's solution was a passive solar design for a home which could be shut down when just the two owners were in residence.

As the site is a small acreage at Somersby, north of Sydney, Cooper was free to orientate the house due north. He created a U-shaped plan, with two wings forming a courtyard protected from prevailing winds.

He specified double glazed glass and a mix of automated and fixed louvres for sun control, solar

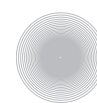
panels on north facing roofs of the garage and machinery shed, a mega 100,000 litre rainwater tank and an aerobic system that purifies black and grey water for reuse in irrigation.

To manage this sophisticated palette of environmentally friendly initiatives, Clipsal's C-Bus automation system was added to the mix.

"Because it is quite a complex system, and because there is such a large array of solar-generated electricity stored on site, C-Bus [plays an important role in] managing the distribution of that energy," Cooper says.

Glenn McJannett of Jory Electric, C-Bus pointOne accredited integration professionals, says the system actually improves the home's overall green performance and makes the most of solar power.

"Having C-Bus stagger the times of use [of different appliances], so everything isn't running at once, means the owners are able to draw most of their power from the solar panels, minimising the power they take off the grid,"



C-Bus pointOne member
 Jory Electric Pty Ltd
 Builder
 Claron Property Group
 Electrical Contractor
 Jory Electric Pty Ltd
 Architect
 Sanctum Design Consultants
 Interior Designer
 Lightsmart Solutions
 Other consultants/contractors
 Solar Online, Lifestyle Store

Similarly, as the owners were concerned about the inconsistency of the local grid, C-Bus serves as a safety net. If the house loses power from the grid, C-Bus switches to solar self-sufficiency. Further, it immediately cuts non-essentials and trims use of power-hungry items like pool filters and towel racks.

The system will announce to the owners that the grid is down and it is about to ramp off lighting to reduce power consumption. If the owners are in the room they simply press the button to stop it ramping off.

Clipsal C-Bus also suits the function of the house as a multi-family home, shutting down guest accommodation at the flick of a switch.

Another energy saving function it offers is that lights throughout the house are on dimmers and run at 90% capacity. The reduction of intensity isn't visually noticeable, McJannett says, but it cuts energy use.

A handy function is how C-Bus switches the house into "away mode" when the owners set their

alarm. "It will turn all the lights off, bar the odd light that comes on randomly," McJannett says.

In the near future, McJannett also plans to program C-Bus to drop down automated blinds on external windows at a certain time of day. "Once the owners have lived there for a while, they will let us know any additions and changes they require," he says.

In the meantime, the owners are well pleased with their automated green home.

"Part of the brief was that the building could run independent of the grid," Cooper says. Now that he and the building team have achieved this, the house can operate independent of power, water and sewer from main supplies.

*Text Jane Burton Taylor
 Photography Tyrone Branigan*

covering ground

The newly re-vamped Royal Melbourne Showgrounds, covering a huge 19 hectares, was just as big a challenge for C-Bus pointOne members KLM Group as it was for architects Jackson Architecture.

In terms of size, KLM Group's \$12 million electrical upgrade of the Royal Melbourne Showgrounds, as part of a recent revamp of the historic complex, wasn't the biggest project the company had handled, but it was spread over the greatest area.

The site, which borders Flemington racecourse on one side, covers 19 hectares and comprises 20 buildings (three of them heritage-listed), plus parks and open spaces, temporary and permanent arenas and exhibition pavilions, and kilometres of pathways and roads. Over the 20 months the project took to complete, 40 tradesmen laid 10 kilometres of underground cabling and installed 30 new switchboards in the open areas alone.

"It was a very large job with a lot of infrastructure," says KLM Group's National General Manager of Energy Management and Building

Automation, Darren Blake. "It was also complex because we had some fairly stringent time-frames to adhere to."

To manage the extensive lighting network throughout the site, KLM Group used Clipsal's C-Bus lighting control and management system, consisting of six remote networks connected to the Main Control Room. "Throughout the open grounds area, there are approximately 30 remote electrical distribution boards, all of which contain C-Bus control equipment for the street lighting, in-ground and building façade lighting," says Blake. "As well as controlling the lighting, the C-Bus system also controls numerous power outlets located on each of the public lighting poles."

These outlets provide electricity for temporary lighting and power for events such as the Royal Melbourne Show. And, of course, while the upgrade

was taking place, the show had to go on. "The work didn't stop the show running," says Blake. "We started in January 2005 and we had to have a certain amount of work done before the show in September that year, and then we undertook the next stage in preparation for the 2006 show."

Prior to the C-Bus system being installed, the showgrounds relied on caretakers to physically walk around the site turning power and lights on and off. C-Bus allows the showgrounds staff to centrally monitor and control all aspects of the lighting system from the Schedule Plus Graphical User Interface located within the Main Control Room. The software, using site and building floor-plans, provides accurate, real-time feedback on the status of each and every light within the showgrounds precinct, meaning both the lighting and power supply can be controlled from the central computer room.

"What used to take two or three people a couple of hours to do manually can now be done in only three to four minutes with the press of a button," says Blake.

The new system is also highly efficient and, therefore, environmentally friendly, mentions Blake. "The PC based user interface includes time based controls, and reduced lighting modes to ensure the site operates as energy efficient as possible."

KLM Group were so pleased with its design and construct effort that it entered the project in the National Electrical Contractors Awards (NECA), where it was commended."

Text Jenna Reed-Burns

"What used to take two or three people a couple of hours to do manually can now be done in only three to four minutes with the press of a button."



C-Bus pointOne member
KLM Group Ltd
Builder
Multiplex Constructions
Electrical Contractor
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Lincolne Scott
Architect
Jackson Architecture



If you are looking to enhance the design, functionality and comfort of your commercial or residential premises, look no further than a C-Bus pointOne accredited integration professional.

To find out more about C-Bus pointOne and to locate your nearest member, visit c-buspointone.com.au or email info@c-buspointone.com.au