

Backyard blitz

TO MANY AUSTRALIANS, THE BACKYARD IS JUST ANOTHER ROOM IN THE HOUSE. **HARRY SIMIDIS** LOOKS AT SOME OF THE THINGS THAT CAN BE EFFECTIVELY MANAGED BY A CONTROL SYSTEM TO TAKE THE COMFORTS OF THE HOME TO THE GREAT OUTDOORS.

To many people, the backyard is an escape from the everyday grind. It's the place they go to relax, entertain or even dine (among a plethora of other activities).

In this day and age of the 'time-poor' professional (myself included), it is now more important than ever that these surroundings are good to go when the owners need to use them. But, who has the time to water the lawn regularly to keep it looking as green as possible, while observing the regulatory restriction times? Who remembers to open the motorised awnings every morning to let sunlight into the home and to the plants underneath? Who remembers to close the motorised window louvres when the air conditioning system is trying to cool the home? And, honestly, how many times have you hissed and cussed at yourself because you forgot to switch the pool cleaner on and let it run for the few hours it needs to every day?

I'm not sure about you, but I've certainly committed some of these domestic offences. Like myself, I assume there are hundreds, if not thousands, of others that would benefit from some simple automation that wouldn't only free up time but, more importantly, reduce our stress levels and manage resources in the most efficient way.

In these days of global warming, energy efficiency, carbon footprints, greenhouse gases and drought, we need to start thinking about how to use water more efficiently. I've already been slammed at home for trying to introduce the 'if it's yellow let it mellow...' rule to do my bit for the environment, but this just isn't enough. So, it's welcoming to see that many new homes (and some existing) are having irrigation systems installed to do just that.

Irrigation solenoids (a fancy word for electric control valves) open and close water pipe feeds to nominated areas, which in turn allow water to be reticulated during certain times. These systems often come with their own control boxes that allow the home owner to manage time and day scheduling of the watering, through some sort of user interface, usually a multi-line LCD display.

These systems are designed to work fine by themselves and usually don't need to be connected to anything else for any sort of higher intelligence or logic. And, usually, the more sophisticated a system you go for, the bigger the bucks you pay.

But you can have the irrigation solenoids driven by your home's lighting control system, which should save you some money.



I've integrated many lighting control systems with irrigation zones that work seamlessly. The beauty here is that you're using the smarts already present in your control system to do more than just dim lights. The timers in these systems will often accommodate some pretty sophisticated scheduling, if that's what you're looking for.

For example, in addition to time of day, day of week or even day of year scheduling, you could implement a soil moisture sensor in the relevant zone(s) and make the watering in those zones contingent on inadequate moisture levels in the soil, before the system even considers the time of day. The direct benefit of this is that we effectively eliminate the all too common sight of sprinklers and drip systems continuing to operate soon after or even during a downpour.

One of the most interesting applications I have seen involved implementing irrigation control in a sky garden on the 32nd floor of an apartment. As there was only a single zone and the apartment was already



having a lighting control system retrofitted in, we decided to integrate this functionality into the system. There was also an ornate water feature in the middle of this 2m x 2m balcony-come-garden that was also controlled by the lighting control system's timers.

LIGHTING THE WAY

The ability to dim certain lights while strengthening others adds another dimension to the visual landscape of an outdoor area.

Landscape lighting can have a marked effect on the appearance of the backyard. In the evening, it creates drama by accentuating features such as statuettes, intricate surfaces and vegetation, which will no doubt prove to be a centrepiece of discussion, in addition to providing the ideal atmosphere for entertaining on a warm summer's evening. Add to this the versatility that light emitting diodes (LEDs) have in their ability to change colour, and you may end up with guests that just want to keep coming back to experience this

wonderland again and again.

And, let's not forget the safety aspect of landscape lighting, as it immediately changes a space filled with darkness and shadows to one bathed in light that should make the wiser intruder think twice about approaching and being noticed. Further, it's needless to mention the peace of mind it provides to people in the home being able to look out and see what exactly is or isn't going on.

In the past I've integrated two types of pool LED lighting: those with automatic colour change based on the number of times their controller is pulsed on-off, and those with the ability to be driven directly from the lighting control system and effectively able to achieve any colour in the spectrum. Take it from me, though, watching a pool at night change from a deep emerald green to a rich Atlantic blue is quite a sight, and works in well in different pre-determined lighting scenarios such as 'Night Swim' and 'Entertain'.

Taking this one step further, the lighting control system can instigate different scenarios during the different

stages of early evening to pitch dark night. During this process, certain lights may slowly dim to off, while others slowly brighten with fountains being activated at appropriate times, all conspiring to give the impression of an environment that is as much alive as the people enjoying it.

Pool cleaners are another item that I've been asked to integrate into the lighting control system. This usually means controlling a power point close to the pool or in a plant room, into which the cleaner system connects. This is something that can be catered for in proprietary control systems that also manage pH levels and filtration. Again, the more functions you want, typically the more you have to pay. But, if your home is going to have a lighting control system then you could also consider controlling this piece of equipment.

LOUVRE LOVERS

Motorised louvres play a significant role both in the backyard and around the home.

More and more homes are being installed with patio motorised louvres,



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motorised louvres closed. This ensured that whenever the air conditioning system was on, all external motorised windows were closed. To this day, I trust the customer derives much satisfaction from knowing he's doing his bit to conserve energy through efficient operation and no doubt reaping the financial savings as a result.

There are many other items that would make good candidates for integration to a lighting control system. A classic example is the garage door. There are ways to tie in the status of the door to the state of the surrounding driveway lights. The benefit here would be that as the home owner approaches in her car and presses the key fob remote, the driveway lights automatically switch on as the garage door opens. This is a relatively simple and practical application, often overlooked in many home automation projects.

Further, lighting control systems have also been used to manage stormwater overflow catchment reservoirs, that often reside underneath the basement garage slab. In these systems, there is usually a floatation device that monitors water levels in the holding tanks which then alerts the connected control system that it's time to activate an evacuation pump to rid some of this water out into the stormwater drain, thus preventing flooding of the basement floor.

Ultimately, practicality, usefulness and lifestyle should determine how beneficial it will be to proceed with any proposed integration activity. Generally, my view is that lighting control systems are often underutilised with much unfulfilled potential left untapped. **CHA**

which are usually supplied and installed with their own rain sensors and controllers.

The main benefit of integrating these devices with the lighting control system is, again, the ability to use the embedded schedulers to manage their opening and closing at different times of the day.

I had one customer who wanted the louvres to open in the morning in the winter months to allow as much sunlight below onto the plants and into the home. The louvre system's native controls then took care of closing up whenever it rained. This would leave the louvres closed until they were opened again either manually or in the morning, by the lighting control system.

Another significant benefit of using the lighting control system's embedded

timers is that they usually incorporate an astronomical clock, giving them the ability to know the changing times of sunset and sunrise. Control events can then be pegged to these instances and will stay in sync even during events such as daylight saving.

This same customer also wanted to ensure that whenever he switched on his air conditioning system, energy wasn't wasted by trying to cool the home with all the external window louvres in the main living area open. And, he also wanted the ability to activate the air conditioning remotely prior to returning home from vacation with the family.

As a result, we ended up integrating the air conditioning system's operational status into the lighting control system and then, using embedded logic, the

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