Ability Newsletter

ABILITY
TECHNOLOGY

Simple Environmental Control Options

Often when we think of environmental control systems we think of large, expensive systems that control just about everything in the house. But not all environmental control systems are elaborate or expensive. Quite a lot can be achieved through much simpler systems.

Most environmental control systems work through a combination of three technologies: X-10 (which works through the house wiring), infrared (like your TV remote, requiring basic line of sight) and radio frequency [RF] (does not require line of sight). There are inexpensive modules available that convert say, infrared signals to X-10, or RF signals to X-10. This allows quite simple controlling devices to have quite extensive coverage. Take this remote control shown below:

This device has a normal infrared output, to control infrared appliances such as TV, video, stereo and some air conditioners. But it also has an RF output; in combination with a Transceiver Module (a device that plugs into a power point and converts RF signals to X-10) this remote can control any facility or appliance that is powered through your wiring, such as lights, fans, heaters. It can also be set up to control doors, curtains and other specialised products.

The cost? This 8-in-1 Remote costs less than $100.

Many people with disabilities can use a remote control successfully with their finger, thumb, hand splint, mouth stick or head pointer. For others an alternative method of control will be required.

Product News

They may choose to use a device such as the GEWA Prog. This is an infrared device that can be set to scan through the keys, thus enabling a person to control its functions with a single switch. Its output is only infrared, so a device to convert infrared signals to X-10 signals will be required. Line of sight restrictions can be overcome through the judicious use of little "PowerMids": the PowerMid Transmitter receives an infrared signal in one location, converts it to RF, sends it to a PowerMid Receiver in another part of the house, which then re-converts it back to infrared. The Prog costs around $900.

Both of these simple devices offer considerable scope for controlling a wide range of household appliances and facilities. They may be all that you need, especially if you are on a budget.

How do you go about getting an environmental control system like these?
This has not been an easy task up until now, especially for people in NSW. That is why Ability is pleased to announce that it is now able to offer a one-stop shop for basic environmental control system needs. Our services are as follows:

Assessments: We will verify which controlling system best meets your needs. It may be that these simpler systems are insufficient for your needs. If you require a more elaborate system, we will advise you of these. However we will not sell these more expensive systems (so that we will not profit by recommending these). You can see some of the available systems in operation at our demonstration centre at Seaforth.

Specifications: Based on a visit to your home, a video of your home, or even house plans, we can determine which modules and devices you will need and where they should be placed in the home. Precise instructions will be given to enable an electrician to make necessary installations.

Supply: We will supply the basic modules and simple controllers (such as the 8 in 1, if suitable for you)

Training and Support: We will customise the system for you, train you in its use and provide telephone support as required.

We are excited by this new service and we hope you are too. If you would like more information, then please contact Graeme or Michael at the Ability office.

ABILITY
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**Speech
Recognition**

Speech Recognition – Let the Buyer Beware

Ability has received a number of complaints recently from people with disabilities or injuries who have had their computer system needs recommended by vendors of voice recognition systems. It is a free country, and I guess people are entitled to buy their systems from whoever they wish. But the experiences of those who have shared their stories with us make us sound a warning to those contemplating such action.

The first thing to consider is that speech recognition is almost never a complete solution for a person with a disability or injury. Alternative text input methods are usually required, and alternative mouse control mechanisms are invariably required. The evidence is that being a reseller of a speech recognition system gives the company no expertise, qualification or authority to make recommendations in these other areas. While these companies are quick to offer a "system", their recommendations are partial and, when it comes to special needs, ill-informed.

Secondly, the experience of many people with disabilities is that vendors of speech recognition systems often do not provide continuing support and advice. People are left in the lurch, and abandoned as soon as something more complicated arises. At Ability we are increasingly being asked to come in and rectify a job that has not been done properly by another company. We even had one case recently where a speech recognition vendor had trained a user with a microphone with an empty battery pack! And then deserted them when performance was obviously inadequate!

Finally, Ability has expertise second to none when it comes to determining the computer needs of people with disabilities, and that expertise extends to speech recognition. We have set up many systems for people with varying disabilities and needs. We have undertaken national research projects (and we are currently in the midst of the largest comparative study of speech recognition systems ever undertaken in Australia). We supply the *best* speech recognition system for a person's needs, not just one brand.

The choice is yours. But you can save yourself a lot of trouble and expense down the track by getting it right the first time – with Ability.

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**Multiplay
CD-ROM**

Multiplay CD Options

For many years at Ability we have recommended multiplay CD-ROM players for clients who are unable to insert and remove CDs independently. This inability can stem from physical problems, such as impaired hand function. It can also arise when a person with cognitive disabilities would be confused by system requests to change CDs. These devices have been helpful, in that they allow up to six CDs to be loaded and then accessed by the user independently.

Unfortunately supply of these items is becoming uncertain. The Pioneer Autochanger is still available through local suppliers, but only on a 'special order' basis. This lower status is associated with a 30% price increase, lifting the retail price of the unit to around $1300.

We thought it would be timely to consider a few alternatives. One would be to have a CD stack, which in effect has multiple CD drives sharing a single power supply. We are awaiting confirmation of a price for an 6 or 8 CD stack.

The other option is to copy the whole CD contents onto the hard drive. Modern computers have large hard drives and upgrading to a drive with an extra 4-6 GB storage space would allow a number of CDs to be copied onto the hard drive. Readers contemplating this strategy would need to read their software licencing provisions very carefully. Some programs, such as the Encyclopedia Britannica, invite the user to install the whole contents onto the hard drive. In other cases difficulties or special setup modifications may be required. But this would be the simplest and cheapest solution for many.

CDs are a vital part of the modern computer experience. Many people with disabilities lack independence in this area because they are unable to insert and remove CDs. But there are solutions available!

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Datacasting

Datacasting

The following letter was sent to the Minister for Communications, Information Technology and the Arts on 1 January 2001:

Dear Sir,

Datacasting and People with Disabilities

I note that today is the first day of digital television broadcasting. In the months and years ahead, datacasting facilities will be offered through this new technology. My concern is that people with disabilities will be excluded from this technology at its birth, just as they were with personal computers and automatic teller machines when these technologies were first released. I am writing to urge you to take steps to ensure that this does not happen.

Datacasting will allow users to access information services, interactive shopping, banking, bill paying, education programs, games, Internet services and email. My simple question is: how will people interact with the new technology to achieve these services? I have been unable to obtain a clear answer on this. If users will be required to operate a small remote control device, then many people with disabilities will be excluded from this new wave of technology. Their hopes for inclusion in the new possibilities opened up by datacasting will be still-born. I am sure you would agree that such an outcome would be unacceptable as we enter the 21st century.

I am not sure what steps your Department has already taken to ensure that datacasting and related facilities will be accessible to people with disabilities. If steps have been taken, then public announcements and reassurances would be most welcome.

On the other hand, there is still time for action to be taken. Manufacturers of datacasting technology should be required to develop, if they haven't already done so, systems with open architecture — thus opening up possibilities for alternative input devices to be developed and used by people with disabilities. USB connection, for example, would allow a person with a disability to use a trackball, joystick or keyboard instead of a remote control device.

I view this matter as urgent and important. Along with many people with disabilities who share my concerns, I keenly await your response to these issues.

Yours faithfully

Graeme Smith
Executive Director
Ability Technology

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News**

Speech Recognition Research

We are deep into our large and detailed study of speech recognition systems available in Australia. Some very interesting results await! We have five users, with three different computers testing three different speech recognition systems. We are also testing microphones, ambient noise and the effect of RAM changes.

Employment Research

Ability is also about to commence a study of the role of computer technology in the employment of people with quadriplegia.

Brain Injury Research

The final report on our study of the recreational benefits of computers for people with traumatic brain injury will be completed in the next few weeks.

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