

# MAC NEWS

The Australian Macintosh Business Magazine

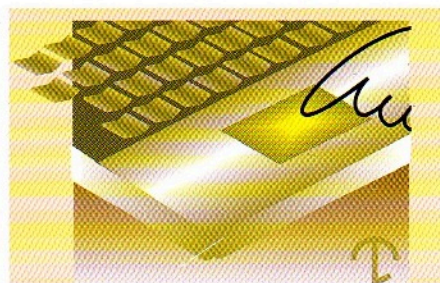
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## Learning to drive on the INFORMATION SUPERHIGHWAY



The information superhighway is already here. Today, a global network of computers forms the well-travelled road to an enormous databank of human knowledge far larger than any library. It began as a US military network. Now more than 17 million people around the world already use it. You can too.

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### PowerBooks get the perfect touch

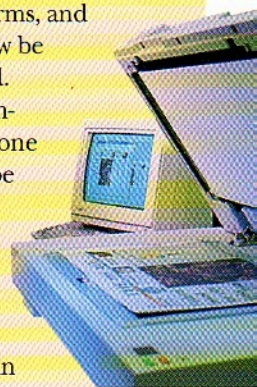
Apple's new PowerBook 520 and 540 include some startling new features, most notably a revolutionary trackpad (nicknamed 'the Midas touch') in place of the normal trackball.

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### Books on demand

Books, manuals, forms, and newspapers can now be printed on demand. Transmitted by computer over a telephone network, they can be printed by a 135 page-per-minute Xerox printer-copier on the other side of the world, saving costs in storage and freight, time and resources.

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Teachers are always talking about concepts and skills. The old days of rote learning are well and truly gone.

Today's students need to do a lot more than simply learn a whole pile of facts and figures. They need to be able to use the information, to process and apply it to the world around them. That doesn't just involve text books and camping out at the local library, but grabbing with both hands as wide a source of material as is relevant and accessible. Tapping into more material provides the students with an enriched learning environment.

### Getting the right information

However, access to huge amounts of information can have its problems. Students need to develop the skills to use this material effectively. Otherwise, the standard for many students will still be work that's copied directly from the closest encyclopaedia.

Everyone needs to learn not only how to access the information, but to decide which information is most appropriate for the task at hand. Learning to be discriminating about material is a skill in itself. Next, they must be able to absorb and analyse the material and then integrate it with other sources. Only after much processing is the student at a stage where they can think about writing up a report, presenting or applying their findings.

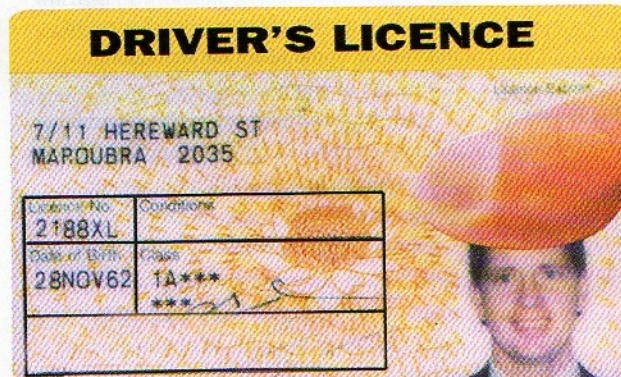
These are all-complex skills, and they can't be learned overnight. However, with the bank of human knowledge expanding at an astounding rate and the opening up of the information superhighways, all our students need to prepare for life in the information fast lane. To ignore this process would be the same as if our parents had locked us out of the school library when we were kids. (Not that that ever happened!)

### Developing research skills

Today's primary school students will be using information superhighways before they graduate. So how do they prepare, if these skills are so complex?

Whenever a child is given an assignment, a project or an essay, the opportunity to develop those skills exists. Analyse the question or the topic to establish the requirements very clearly. List the information that is needed and then only collect relevant material.

# DRIVING CLASSES



Encourage the child to research well beyond the encyclopaedia, to assimilate information from different sources, books, computer programs (if appropriate), texts and library materials. Help the student to work through the whole process rather than jumping from book to write up in one fell swoop.

Accessing information via electronic communication (a modem connected to your computer) is here right now. Many people use their modem to communicate with colleagues and friends, or to download public domain programs from bulletin boards. However, the greatest benefit of electronic communication for educators will be access to that ever expanding pool of human knowledge. Not only will isolated students and those confined by illness or disability and home schoolers gain, but all students can have immediate access to current wide-ranging material at their fingertips.

*Preparing our students for the information superhighways of tomorrow can begin right now, in the classroom or at home.*

**By Anne Glover**



# DRIVING CLASSES

## Nexus

Nexus is an electronic information service set up by the South Australian Department of Education. It was developed by teachers for use by teachers and students. Nexus may not yet be classified as a 'superhighway' material, but neither is it a bike track.

Nexus provides not only a rapidly expanding base of information, but an opportunity to exchange ideas and access a range of educational activities. Better still, it facilitates the development of those research skills for the present as well as the future. Many schools are using Nexus, both at primary and secondary levels, and I urge all schools to get into Nexus now! A growing number of home users are also taking advantage of Nexus' facilities.

Nexus provides access to the Australian Associated Press (AAP) news service. This means full text news articles of current events around the world, as they are released. Over 600 items are added daily and over 200,000 articles for each of the last two years can be accessed. This material is being used in schools not only to obtain current information and learn of world events and conduct research, but also to compare the AAP report with local media interpretation of overseas events.

The AAP news service is an ideal way for upper primary and secondary or tertiary students to learn to be efficient in their communication procedures. After all, we don't want huge phone bills and little return

in information gathered. Students will learn to be precise in their search, discriminating in their selections, and to download material for viewing later.

## Account ability

Nexus, by the way, has a great account-keeping facility (this allows the principal to sleep soundly at night.) Each school, department or teacher can be allocated a budget, (for example, \$100) over which point their access is denied. A primary school with 300 students using Nexus on a regular basis would expect to spend around \$300 and a secondary school with 900 students around \$500 in a year. The cost is around 20 to 30 cents per minute anywhere in Australia. A \$20 one-off joining fee is imposed. Each time you log onto Nexus an indication of your credit is shown on the screen. Bills simply cannot get out of hand. This also encourages efficient procedures in the classroom.

On Nexus you will also find the 1986 and 1991 Census figures. These are ideal for use by Mathematics and Social Science teachers. These teachers will also appreciate the weather bureau's database of observations from all meteorological observation sites in Australia — for this entire century.

At the time of writing, Nexus was also taking on board Compton's Encyclopaedia as a new addition. It already has *The Macquarie Dictionary of the World's People and Places*, and a database of sexually-transmitted diseases, compiled especially for schools. Once again they can be used to provide information and/or develop research skills. Then, how about 200 famous Australians, all of Aesop's fables, the complete works of Shakespeare and each of Sherlock Holmes' adventures? Perhaps an Injuries Surveillance Database interests you, or the full Mabo Judgement or details on each and every country of the world?

As an information source Nexus continues to grow. There will be no guarantee that the exact topic of your study is featured on the service, but there is sure to be something of interest. When using Nexus as one (albeit a wide-ranging) source of information you can't go wrong.

As a communications network Nexus can also be used to contact overseas pen pals, interact with chess companions, or be part of

**Hackham South Primary School in South Australia gives its students an early introduction to the information superhighway. Here teacher/librarian Johanna Emptage and students Agnieszka and Jennifer dial into Nexus.**



an environmental watch program that coordinates data across the nation or exchanges material around the world. It can be used to communicate with others on the Internet or send faxes to anywhere in Australia (at an extra cost.)

As Nexus becomes more extensive, it is also becoming easier to use. A 'Find' option built into the main menu does the searching for you, not only through the wide-ranging Nexus material, but into bibliographic lists that send you to other sources. This means Nexus is not only training the student in research skills and providing material to work with, but also encouraging students to examine alternate sources of material. To contact Nexus, phone 08 243 5606 or fax 08 347 1781.

### Keylink

Set up by Telecom Plus, Keylink is a very popular electronic messaging system in schools. Schools in New South Wales and Queensland in particular are embracing the opportunities it provides. Schools are setting up collaborative research projects, perhaps in an environmental watch activity, and then communicating and compiling their data across a wide range of schools. Keylink can be used to communicate with other messaging systems both nationally or internationally. Using Keylink costs around 25 cents per minute to communicate anywhere in Australia, and no joining fee is imposed.

John Walters, computer consultant with the Metropolitan East Region of the Department of School Education in NSW, recommends that schools consider joining both Nexus and Keylink to take advantage of all available activities.

### Ozprojects

Also available via Nexus or Keylink is a group of very popular educational activities, called Ozprojects. Activities range from 'talking' to the Easter Bunny, Santa or a series of book characters, through to talking with a scientist or prominent Australian for older students.

Austour is a popular activity where students from different schools take turns to be 'host' and answer questions from other areas about their school and local area. Run a hypothetical property for eight weeks and see how your farm survives, or solve the

environmental mystery and add a bit of fun to your studies. Produce an electronic 'newspaper,' take part in a chain story or solve some wacky puzzles. There is plenty to do in Ozprojects, with activities spread throughout the year.

### Getting started

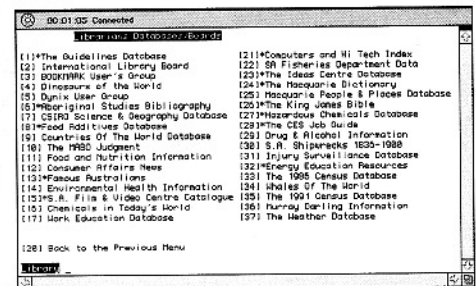
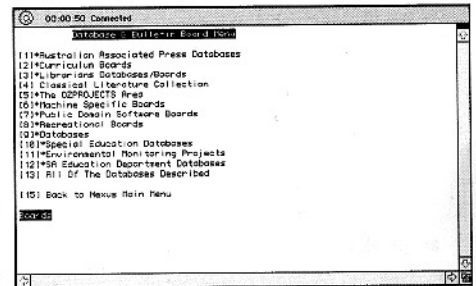
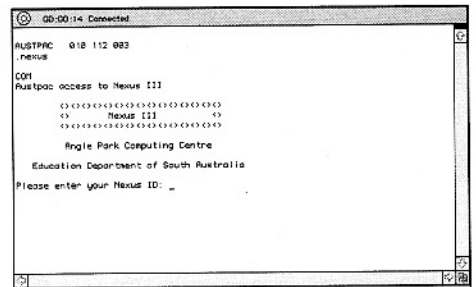
The first step for any school considering starting out in electronic communications is to contact their local computer education consultant. The odds are they will be happy to get you started, and they will certainly point you in the right direction. They will also be available to answer all those starting out questions, and will organise to register you with any of the appropriate systems. You will need to be prepared to spend some money, but not a huge amount.

In addition to a computer you will need a modem connected to an accessible phone line. The modem will cost around \$400. You will also need some communication software. Bulletin Boards usually have public domain software available, with a popular choice to look for being ZTerm, but you will need some communications software to download the communications software, if you get the idea. Have a look first at any 'Works'-type programs you may already own, as these often incorporate a communications program, but you may not have noticed it. ClarisWorks, for example, has a useful communications program built in.

### Desklink

Telecom has a new communications program called Desklink. It is more user friendly than many on the market, and it is great to see the use of icons to perform some functions. Use Desklink to communicate with others, download programs or access material from Nexus.

Like all communications programs, if you are a true beginner, it will take some time to get used to the procedures. Try to play around for a while on your own, after getting some guidance from the local expert. Desklink is geared to make it especially easy to get into Keylink. Desklink is available at a very reasonable rate —



*While the command-line-interface may be offputting for Mac and Windows users, Nexus nevertheless allows easy access to a wide range of databases, including those of the AAP news service.*

# DRIVING CLASSES

contact your Computer Education Consultant for details. Consultants without appropriate details should contact Telecom Plus by phone on 02 956 9930, or fax to 02 956 9919.

Any communications software currently being developed needs to be open-ended in terms of its capacity, yet at the same time, easy to operate. The teacher who wishes to simply communicate with another school or take part in one or two Ozprojects a year, needs to be able to do so without any stress. That teacher also needs to feel confident that the students can handle the program without too many disasters. Others who are intent on accessing Internet, set up their own communication projects or take part in a 'Global Laboratory' also need to do everything on the one setup.

Nexus is currently looking into a couple of programs to facilitate easy access to telecommunications. One such program has been set up by Catholic Schools, and another, called ALICE, is a US import currently being used in a couple of our schools. ALICE sounds particularly useful, allowing students to impose map overlays on their material. Users then click on the location to view the information from that area, accelerating the move from collecting material to actually using the material.

## Right now

In addition to Nexus, Keylink, Ozprojects and the various activities available to educators, electronic communications is currently being used in many of our universities and large libraries to communicate with colleagues, access Internet, view catalogues and bibliographic lists across a range of sources. For a few years students have been able to send their assignments to their tutors electronically. However, this is only the beginning.

## The next step

In the long distant past when I was at school, we didn't have a calculator in our home — and certainly not in our Maths class. We didn't have video machines, video cameras or of course computers as standard equipment in our schools. In fact we could probably not even imagine the


schools of today. In one generation we have accepted all these changes and acknowledged that the rate of change is accelerating.

I'm looking forward to the time when our students carry portable (not luggable) devices about the size of a large calculator or the Newton, to perform a myriad of functions. Not only to run programs, communicate with pen pals and take part in global simulations. Not only to send the assignment to the teacher or let Dad (not always Mum) know we will be home late. Not only to ride on a superhighway of communications but to use the information highway to access newly or not yet published reports and journals, professional references, case studies and international databases.

Senior students can use their little black boxes to collect information from international sources of this ever-expanding bank of knowledge. Apple, Microsoft and others such as General Magic are already working on making this a reality. On the local level, the NSW State Library is among those libraries now trying to jump the many hurdles to deliver such a service as soon as possible.

Along the way a few more things do need to happen. All new information needs to be available electronically before printing, which shouldn't be too hard, as most material is compiled on computer now anyway. Handheld devices for students need to come down in price so they are accessible to all — a price that won't force teachers and parents to visit the bank manager when a student loses, jumps on or tries to reassemble their device.

Of course, for all to embrace this technology, it needs to be extremely user-friendly. The move towards user-friendly systems is already well advanced, with DOS users converting to Windows (and Macs!) in droves after spurning icon-based machines as toys.

And of course, more than just text needs to be available on the highway. In teaching, words tell only part of the story. Pictures, charts diagrams, animation, movies and multimedia — we want the lot! 

*If you've an educational program you would like MacNews to review, or simply a question regarding education software, you can contact Anne Glover at PO Box 786, Riverwood, NSW 2210.*

**Accessing Nexus, Unley High School teacher Louise Nordestgaard with students Mark and Kareena.**

