August 1984

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MAGAZINE

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Symphony Preview

Magnabiz Accounting Software

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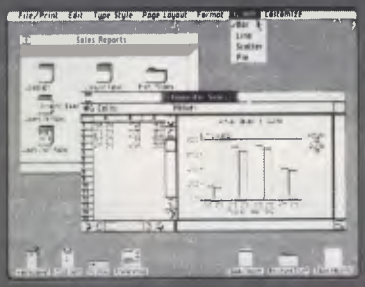

User Friendly — User Insulting? 5

Has it struck anyone that all this messing about with mice, touch screens and other fiddly methods of computer input that avoid the keyboard is basically an insult to the intelligence of the managers it's supposed to be helping? Will it all lead to an information society controlled by those with the data literally at their fingertips, rather than the coddled managers locked in their Luddite traditions? This opinion piece takes a new look at 'user friendliness'.

BY HOWARD KARTEN

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Software with 'windows' is the latest fad to hit the computer industry, but is it truly an advance, or does it bring with it some awkward disadvantages?

BY HOWARD KARTEN

Magnabiz 11

Most small business people don't want a huge, complex accounting software package, but rather an easy to operate program which simply tells them the state of their finances at any given time and helps their accountant prepare the books at the end of the year. Magnabiz could be the answer to every such business's prayer.

BY LES BELL

Symphony Preview 14

Symphony is the latest offering from the Lotus Corporation, which developed the runaway success Lotus 1-2-3. It's not released officially in this country at the time of going to press, but John Nicholls has had a good look at much of the pre-release publicity, and gives us a rundown on what we can expect from the new package.

BY JOHN NICHOLLS

Instant Information 21

Videotex is all set to take off in this country now Telecom is preparing to launch the Viatel network, which will enable people to access videotex services much more cheaply than at present. What difference will this instant information make to business?

BY NORMAN KEMP

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Soon the days of the discreetly scratched nose or waggling newspaper in auction rooms may be past. If other auction rooms follow the example of one in New South Wales, patrons may be able both to search through lots and bid by simply using a computer.

BY NORMAN KEMP

Commodore Gets Serious 30

Commodore until now has been mainly associated with the home computer market. However, it is now making an all-out effort to make itself known as a supplier of business machines; how will it succeed?

BY NORMAN KEMP

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Somewhere along the line an assumption has been made that managers can't, or don't want to, type – hence the rash of mice, touch screens and so on. But is this not a rather Luddite fantasy for both managers and computer manufacturers to indulge in?

User Friendly – Insulting?

BY HOWARD A. KARTEN

Middle and top managers, by and large, are stupid, lazy, forgetful, and/or incapable of learning even the simplest keyboarding task – that, at least, is the implicit message delivered by touch screens, electronic mice, ultra-simple languages, and other alternatives to the keyboard as an input device.

Many of the executives at whom user friendly-computing is aimed are business school or university graduates, lawyers and other professionals – people used to dealing with systems far more complex than computers. Moreover, many of these professionals presumably typed material while they were earning their degrees. Yet, if user-friendly-computing purveyors are to be believed, these same people *(a)* have forgotten how to type, or *(b)* are too busy to learn. Another possibility is *(c)* that these managers are too busy to use keyboards, and so will be willing to spend far larger amounts of time touching screens, moving around cursors with cute names, or channelling their information requests through subordinates.

The Image Dilemma

But I suspect the real reason is *(d)*: as we all know, image is important in business, and most managers have unreasonable fears of tarnishing their images by performing tasks that have often been associated with clerical employees (secretaries, programmers, data entry clerks and so on). This is unfortunate because, carried to its logical end, executive fear of keyboards has a somewhat startling conclusion.

Who, Who, Who Will It Be?

Who will it be who accesses the manager's electronic mail? (Incidentally, since one of the touted benefits of electronic mail is that one can retrieve messages from virtually anywhere on the planet, what does our high-level, no-typing-skills manager do when he or she is on the road?) Who will it be who uses all those user-friendly Total Sophisticated Integrated Management Information Systems to find out what the trend is in widget production? (Oops – Widget is now a trademarked term!)

Who will it be who pulls together information for a report comparing sales records in different areas of the country? Who will it be who uses the ultra-simple graphics systems now available to produce pie or bar charts showing market share and growth?

If user-friendly-computing purveyors have their way it will be the staff assistant, or, perhaps more likely, the secretary who performs these tasks. It will almost certainly not be anyone from the DP department, those ogres whom management wish to avoid at all costs.

Communications Mix-ups

The point of this is not to put down secretaries. However, anyone who has ever played 'Telephone' or 'Pass it on' knows how garbled messages become as a result of communication misunderstandings. Moreover, there are some interesting security or privacy questions that one might ask about this possible development.

Those who have read *Catch-22*, or who have been in the military, may recall ex-PFC Wintergreen, the company clerk who, in effect, controlled the information lifeline of that Air Force unit. In business and other civilian organisations, secretaries of all types – executive secretaries, correspondence secretaries, appointments secretaries, and so forth – often serve as 'gatekeepers', controlling telephone and written access to their bosses and thereby often wielding legendary powers.

Managers, Mice or Stooges?

This means, I believe, that the natural end result of user-friendly computing will be one of three scenarios.

Scenario one is the most obvious and simple – managers will use their own keyboards to access information. Scenario two has managers using touch-screens, electronic mice and so on. In scenario three staff assistants would use information centres (or distributed small business computers) to develop information for management on a quick-response basis, access the manager's electronic correspondence, and generally gain informational control of the manager whom they support.

If number three comes to pass, executives will be truly at the mercy of their 'information mediators'. Assuming information is truly the lifeline of business, imagine the havoc that could be wreaked by poor communication between manager and mediator – or by nefarious information mediators, able to feed information (or deny it to) their managers.

The *Wall Street Journal* recently quoted a spokesman for a New York advertising agency as saying that executives don't need computers. "That's why we have secretaries," sniffed the adman. Ironically, ex-adman Phillip Cooper, founder of Boston's Computer Pictures Corp (recently sold for $14 million to Cullinane Corp), began his business precisely because of the difficulties he encountered in trying to interpret masses of computer data for clients – and in dealing with information intermediaries such as DP personnel. Computer Pictures Corp's graphics display software was well-received in the marketplace precisely because it allowed managerial users to interactively – and simply – prepare data for management use.

It's time to shatter once and for all the absurd myths and false images surrounding computers and terminals. Desktop terminals can extend the quality and quantity of work done by every manager. Those who maintain their Luddite stance may well find themselves at a significant competitive disadvantage in the marketplace. ❑

'Windowing' is the latest trend in the microcomputer world, with both hardware manufacturers – like Apple – and software designers – such as Microsoft and VisiCorp – rushing to show the public their latest product in this area. In all the hoo-ha, you might just wonder what the advantages – and disadvantages – of windowing could be.

BY HOWARD A. KARTEN

Do Windows Work?

Businessmen who are microcomputer users, rather than industry participants, can be forgiven for taking a jaundiced view of the continuing stream of wondrous announcements which tout every new computer product as an advance in user-friendliness – advances which sometimes fall short of the hoopla when they reach end users.

The computer industry, no less than any other product-based business, is subject to fads and fashions. The latest such trend is 'windowing'. Although windowing has been fairly common in computer science labs for several years, it has so far shown up in the commercial world chiefly on Apple Computer's Lisa, introduced in January 1983; and despite the promises windowing seems to hold, Lisa has not achieved the expected commercial success. In the last few months, however, windowing products have been introduced by several vendors, and industry figures hold high hopes for the windowing concept.

Fundamentally, windowing allows the computer user to view several unrelated files or programs on the screen simultaneously. It is thus intended to simulate real-world work experiences, in which people compare information from several (often independent) sources, interrupt tasks to deal with more pressing business, and often have several unrelated tasks going on at once.

Windowing is easily recognisable. Suppose you drew imaginary horizontal and vertical lines dividing the face of your computer screen into four equal-sized mini-screens. Suppose further that you could somehow run a word processor in the upper left window, a spreadsheet with a departmental budget in the upper right window, a desk calendar in the lower left, and a database program in the lower right. That would give you four windows, and the data shown in any of the four could (ideally speaking) be moved to any other window.

This method of windowing is called 'tiling'. Another approach to windowing is known as 'overlays', in which separate windows partially obscure or cover each other. Thus, a screen with tiled windows is somewhat analogous to a newspaper page with multiple items – different news stories, ads, illustrations, and so on – while overlay windows are analogous to separate reports, files and the like on a desktop. The point of either approach is to be able to see different items simultaneously, and/or to work on one item while keeping others in view as a reminder.

VisiCorp's 'VisiOn' (above and right), distributed in Australia by Imagineering, uses the 'overlay' style of windowing to allow access to several files on the same display screen.

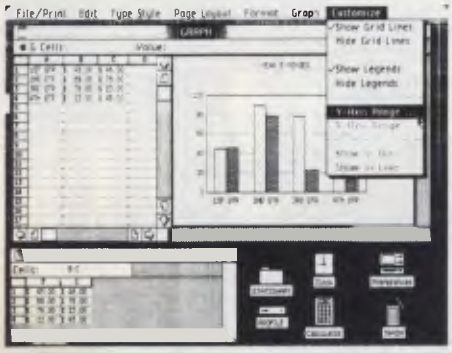
Two Components

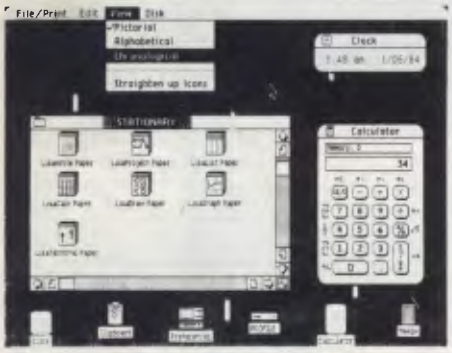
Windowing really describes two aspects of computer use, a visual component and a software component. The visual component – what users can see in front of them – refers to a display showing two (or more) tasks in progress.

"You might be writing a memo and want to capture the wording and tone of your memo of two weeks ago," explains Dr Ben Shneiderman, head of the Human/Computer Interaction Lab in the University of Maryland Computer Science department and a leading investigator of man-machine interaction. The ability to flip back and forth between two or more items is, of course, made easier with appropriately designed windows and screen displays.

The software component manages the program represented by each window and permits users to copy data easily from one file to another, merge parts of two (or more) otherwise unrelated files, perform cut-and-paste jobs easily, and so on. The applications, of course, can be totally unrelated to each other.

Managing several windows implies the need for an additional means of controlling the environment represented on the screen. A typical way of doing this is via a mouse; moving the mouse moves a pointer from one section of the screen (that is, one task) to another. ▶





Just an Environment

In addition to understanding what windowing is, it's important to understand what windowing is not. Windowing software runs at the operating system level, and therefore creates an environment for application software such as spreadsheets, general ledger packages, word processing software, and so on. But windowing itself will do no work that's directly productive; windowing is not directly connected with word processing, spreadsheets, graphics, payroll, or any other computer application.

Nor is windowing synonymous with that other computer industry concept currently in vogue, integrated software. Integrated software consists of separate programs which are intended to be easy to use with each other. However, integrated products, such as Lotus Development Corp's 1-2-3, perform only one function at a time in the computer.

Finally, windowing (at least for the near future) is not synonymous with multi-tasking. This concept, common on large computers, allows several programs to run simultaneously. Most windowing products under development or just released into the marketplace permit only one program at a time to be active – the one containing the mouse pointer.

Drawbacks

Windowing has several potential, as well as real, costs. The software obviously costs money – for example, VisiOn's basic 'Application Manager' retails for around $780, and 'packs' containing various extras such as VisiCalc, VisiWord and more run to as much as $1695.

Windowing software also requires memory. Users running applications requiring large amounts of memory may find they do not have enough space to run windowing as well as their applications. Again, VisiOn requires 256K of memory and a hard disk.

Nor is it automatic that all of a user's current applications will run in a windowed environment. Although most vendors are striving for this level of compatibility, some programs currently in use may have their own methods of disk input and output, and therefore be incompatible with windowing. For example, Microsoft claims 99 per cent of current software will run under Microsoft Windows, but company officials have reportedly conceded that some software, such as Lotus Development Corp's 1-2-3, will encounter problems. VisiOn may also be incompatible with programs which use the operating system in unusual (non-standard) ways.

Windowing products which rely on the use of mice (not all do) may encounter another obstacle. Mice connect to computers via one of the 'ports' (sockets, or input-output pathways) at the

rear of the computer. A suitable port might be the game connector found on a computer such as the IBM-PC, or a mouse might be connected via a communications port (usually used to attach to a modem). This means that users whose computers are already attached to a modem may require an additional I/O port, which in turn may mean putting an extra plug-in board in the computer. Those users who have already filled all the slots in their computer, and who wish to use mouse-controlled windows, might have to buy expansion cabinets.

Finally, using applications under windowing software may slow down the speed at which applications run. The operating system software must do several additional tasks in a windowed environment; these all take time. ❑

On the opposite page is Apple's Lisa, one of the first computers to have windowing as a built-in feature; examples of its screen displays are shown.

On this page IBM's entry into windowing is shown: the 3270 Personal Computer, which can display up to four interactive applications at one time, sourced from one or more computer systems.

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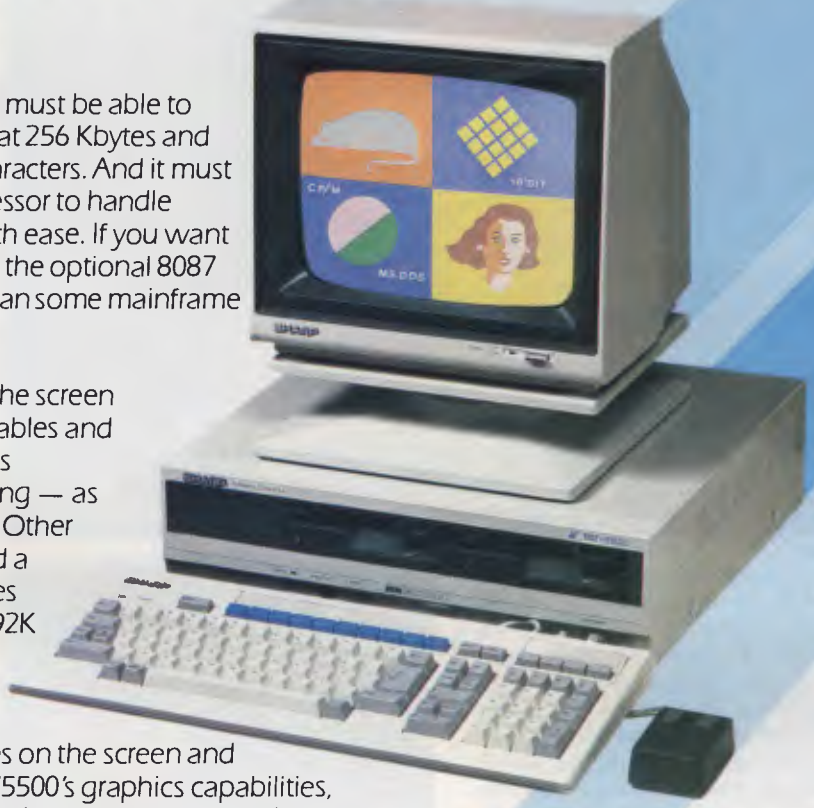

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One problem with many accounting packages is their complexity, which often defeats the small businessman who simply needs to maintain a set of records and figure out whether he's ahead of the game. Les Bell reports on a system designed to meet just this need.

BY LES BELL

Magnabiz

A great many accounting systems on the market really are quite large, filling entire disks or even sets of disks, and their very size is intimidating to the small businessman with no formal training in accounting. Add to this manuals which rely on technical jargon and can become incomprehensible at times, and the result is difficult and slow to use.

Most small businessmen want to use an accounting system for three purposes. First, they need to keep records of who owes them money and who they owe money to; obviously business would be impossible without this. Second, they need to be able to figure out, from time to time, whether they are operating at a profit or a loss. If showing a loss, they need to be able to figure out why and take corrective action, such as cutting costs or raising prices.

Finally, every business must maintain records for taxation purposes. Usually the records of payments and receipts is adequate for an accountant to be able to prepare a statement of profit and loss.

More than this, many businessmen don't want to know. Inventory control is not a problem, capital assets management sounds like buildings in Canberra, and besides, they just don't have the time.

MagnaSoft's Solution

With this kind of person in mind, Sydney software house MagnaSoft has created an accounting system somewhere between a 'cashbook' level of program and the full-blown integrated accounting package.

Magnabiz is designed to provide complete record-keeping and reporting facilities for small to medium-sized trading ventures. While it is based upon solid accounting principles – as every such program has to be – it avoids technical jargon and instead proffers good advice on such topics as numbering chequebooks and generally preparing all your paperwork for data entry when first setting up the system.

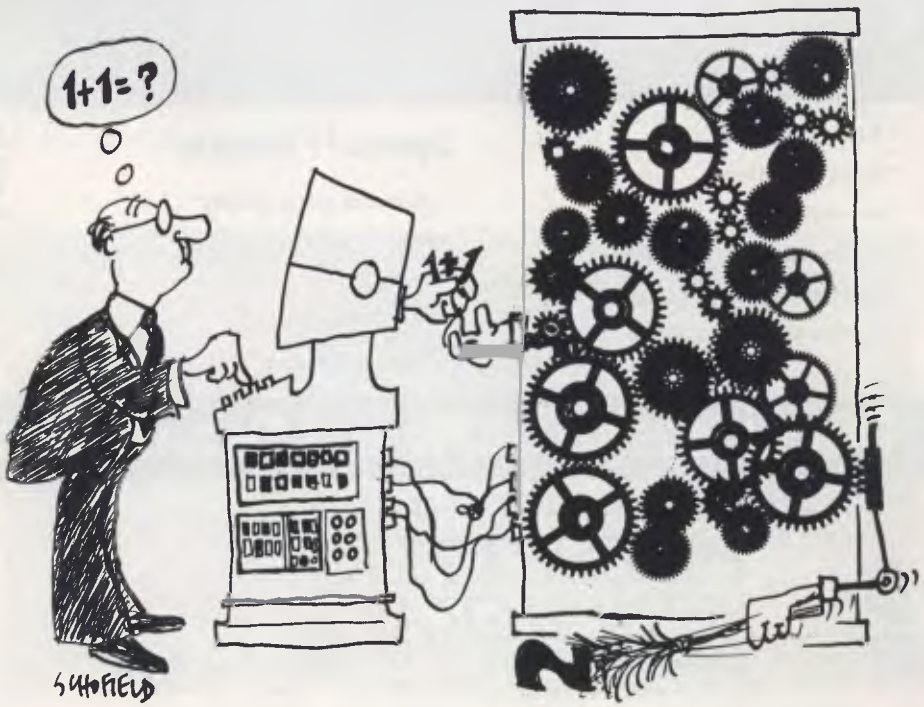
This involves marking the deposit book 'A' and then marking the cheque books with 'B', 'C' and so on; collecting the invoices and credit notes received into one pile and those sent into another pile; then finally putting the deposit books and bank statements into another pile.

The system automatically starts up after the system boots, and the user is shown the current system date and offered the opportunity to change it. The main menu is then displayed and the user can proceed to work.

Setting Up

Generally, the first thing to be done in any session is to add entries to the transaction file (choice A on the main menu). The system prompts the user to specify whether this is a credit note, cheque, deposit or invoice (N/C/D/I). Obviously, in most cases it makes a major difference whether the document was sent or received, and this is the next question the system asks. It then prompts for the date, description code (D for deposit, for example), the amount and the deposit number (which must begin with A, as on the deposit book cover).

In the case of cheques, the system asks for the name of the creditor (actually, avoiding jargon, it asks who the cheque was payable to), and then asks for a classification. This is the account to which the cheque will be allocated – purchases, adverts, insurance, vehicle, fix/fittings, and so on. Once the cheque number has been entered, the system will offer to automatically generate a received invoice entry, to take account of cash dealings where the supplier does not send an in-



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voice. This keeps the system in balance. Of course, if the transaction was on credit and the supplier does send an invoice, it is entered in the usual way, and the system is again kept in balance.

Invoices (sent or received) are entered in a similar way, as are credit notes.

Once transactions have been entered, we will occasionally need to refer back to them, and the system has a 'Find/Edit Entries' option to allow this. Entries can be retrieved by amount or by document number and, when located, will be displayed like this:

```
TYPE DATE    NO   CLASSIFICATION PAID TO AMOUNT
=============================================
CHQ 6 NOV 83 B001 PURCHASES/1    SMITH $123.45
=============================================
```

One can then opt to edit the document, using a procedure which is virtually identical to data entry, and is therefore familiar.

Entries can also be deleted, and the system will warn the user to make carry forward entries for any deleted records. For example, if one wants to delete old entries to make space, the balances for all suppliers or debtors must be carried forward, otherwise the block deletion will throw the entire system out. Again, transactions can be deleted by amount or by document number.

Reporting

A number of reports are available in the system. The full journal printout shows the entire contents of the database, complete with the bank balance at each stage of the listing. Like the other reports, it can be sent to either the screen or printer.

Related to the full journal report is the cashbook. The only difference between them is that the cashbook only takes into account cash transactions which affect the bank balance. It therefore records the company's cash flow, and can be used to indicate troublesome times of the year, for example.

The purchases accounts report gives a full report of transactions with each supplier since the beginning of the financial year. It shows all invoices and credit notes received, payments and their dates. A similar report, the sales accounts report, shows transactions with your customers. The system can also report all transactions, either sales or purchases, by classification categories.

To assist with chequebook reconciliation, a listing of each chequebook is possible by entering its identifying number.

And Most Important ...

The final and most important report is the analysis sheet, which consists of two pages. The first is a Profit and Loss report, which shows the current trading position of the company. First it lists all sales, then it deducts the cost of goods sold, to arrive at the gross profit to date. Then come the trading expenses, bank charges and interest on loans, which are deducted to arrive at the operating net profit.

The second part of this report is the Financial Summary, which is actually a skeletal balance sheet. This uses the various assets and liabilities of the company, including the profit and loss from the year's trading, proprietor's drawings and various figures derived from the opening balances, to calculate the net worth of the company.

The opening balances, which are entered at the beginning of the year, are items such as stock, plant, fixtures and fittings, vehicles, balance of mortgage, overdraft, capital – in other words, the current and long-term assets and liabilities of the company. These figures are purely used in producing the reports.

Finally, the program includes a special sub-system to cope with petty cash. Petty cash is always a pain to keep track of, but this system handles it quite neatly with a program which is really a sub-set of the main system. Transactions can be added, found and edited, deleted or sorted, and a number of reports are available.

Performance

The system is very quick in operation. All transactions are stored in a single file, which is accessed sequentially, rather than using index files as larger systems do. In practice, the system sorts so quickly that the overhead of index files would possibly be greater. In any case, it seems as though many transactions are maintained in buffers in memory most of the time.

Reports are generated quickly, making it possible to produce reports on the screen just to locate one particular transaction.

The manual is quite clear and specifically avoids accounting jargon. While a basic knowledge of accounting procedures might help the user, it should be possible to follow, even for a complete tyro. I particularly liked the sensible hints the manual offered about daily updates of files, ways to use the reports, and general background information about accounting and taxation principles. I felt that I actually learned something from the manual.

The system corresponds to standard accounting and taxation principles, and no doubt many an accountant will be glad to see his client using it, since it will make the job of preparing year-end returns very much simpler. In fact, I'm contemplating buying the system for myself. For the three objectives outlined at the beginning of the article, the system is near ideal. ❑

SOFTWARE REPORT CARD

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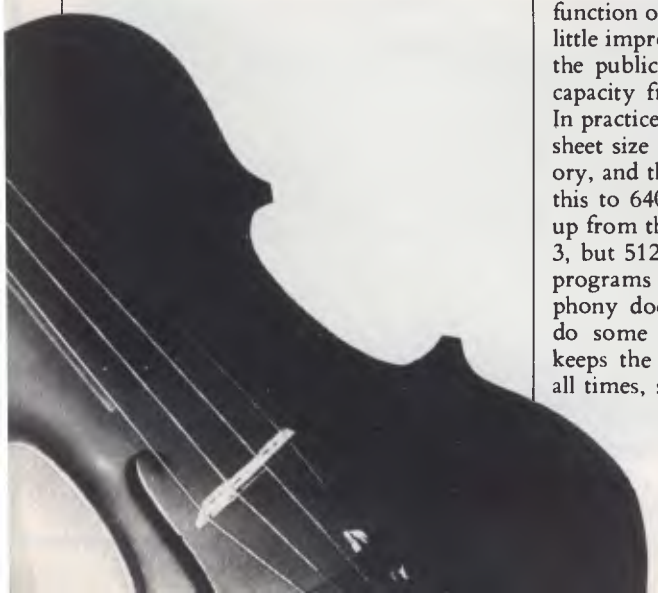
Value for money	•			

Price:	$775 including tax
Distributed by:	Ilehead Pty Ltd, PO Box 510, Chatswood 2067. (02) 412-3470.

Lotus's first product, 1-2-3, was so named because it combined three functions – spreadsheet, graphics and database manager – in one integrated package. Now its new product, Symphony, due to be released by the time you read this, enhances each of these functions and adds two more: word processing and communications. John Nicholls previews this latest advance in integrated programs.

BY JOHN NICHOLLS

Lotus Symphony: 1,2,3, Plus 4 and 5



VisiCalc introduced the concept of spreadsheets, to automate the process of performing mathematical calculations on figures set up in columns and rows. 1-2-3 built onto this simple framework an impressive array of features in the spreadsheet; added the capability of producing graphics from the same information; and incorporated the novel idea of using the spreadsheet as a database, with each row forming a record and each column a field. The result was a runaway success from the moment of its introduction.

The spreadsheet – termed a worksheet by Lotus – has been the most developed function of 1-2-3, and therefore called for little improvement in Symphony. One of the publicised changes is the increase in capacity from 2048 rows to 4000 rows. In practice this offers little benefit; worksheet size is restricted by available memory, and the design of the IBM-PC limits this to 640K. Symphony requires 320K, up from the 192K recommended for 1-2-3, but 512K is really needed for running programs of any size. However, Symphony does not require a hard disk, as do some other integrated packages. It keeps the entire program in memory at all times, so disk accesses are eliminated.

On the other hand your worksheet size is restricted. If your worksheet only just fitted in 1-2-3 it certainly won't fit in Symphony.

Macro Feature

1-2-3 has a 'macro' feature with which a program is written in a special command language to record a sequence of keystrokes for later playback. The procedure to record 1-2-3's macro is clumsy, requiring you to write out the sequence first and then enter it in a cumbersome language, rather than using the interactive ProKey approach where you can record the keystrokes as you enter them. Symphony uses a new command language which is easier to use than that in 1-2-3, so you have to rewrite all your 1-2-3 macros. This seems to be the only incompatibility between the two programs, and seems a small price to pay.

Additions to the spreadsheet program include a copy command that copies values instead of formulas, a look-up feature that handles non-numeric as well as numeric data, and password protection. At the time of writing this, the passwords were believed to be encrypted. This would be a two-edged sword, as there would be absolutely no way for anyone to discover the password. So if you forget it, goodbye spreadsheet.

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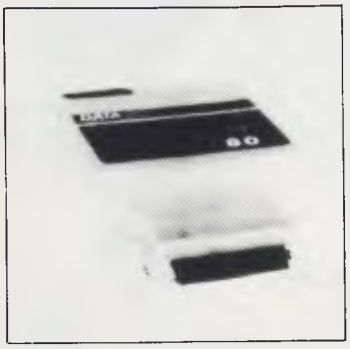

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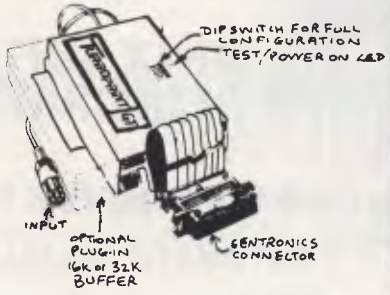

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The graphics program of 1-2-3 produced graphs that were adequate for most purposes and looked extremely good in printed form. Symphony has corrected some of its weaknesses by providing for exploded pie charts (where one segment, or slice, of the pie is removed from the pie for emphasis), and shaded pie charts (1-2-3's pie charts are only outlines in one colour). Text can be added and positioned on the graph to provide further information.

Earlier this year Lotus substantially increased the number of plotters you can use with 1-2-3; the same expanded list is used by Symphony.

The database manager of 1-2-3 was not received with the same degree of enthusiasm as other parts of the program. Symphony has added a data entry format to help an untrained person enter data into a preset format, without having to learn anything about the workings of the rest of the program. Some data entry validation has been added (for example, to stop alpha characters being entered in a field where the program expects only numeric characters). Unfortunately, as with 1-2-3, Symphony does not support use of the 8087 co-processor.

Word Processing Included

Word processing was the most notable omission from 1-2-3. Lotus originally planned to include it, but the designers were forced to abandon this idea in order to finish 1-2-3 and have it ready for the market. The word processors on the market tend to fall into two categories: full-featured or basic. Symphony follows the full-featured approach, inviting comparison with programs like WordStar and Multimate. It uses windows to let you see different documents at the one time, or different parts of one document. It is designed to include mailmerge facilities, and to allow documents produced by word processing to be used by the communications program to transmit them as electronic mail.

The communication program is intended to allow data received from another microcomputer or a mainframe to be downloaded and translated into a form usable by the worksheet. (In the States several programs have been released to convert such data for use by 1-2-3.) The program is also written to allow unattended operation. This allows you to prepare documents and data during the day and transmit them later, to take advantage of the cheaper night-time rates.

Upgrading 1-2-3

1-2-3 exists in three versions: 1, 1A and 1A* (the version number is shown on the screen that immediately precedes the worksheet). Version 1 cannot be updated to 1A, but all three versions can be traded-in on Symphony. To take advantage of this offer, you return the 1-2-3 manual and disks and receive the Symphony equivalents in exchange. You should see your dealer for details of this limited-time offer, and the cost. Expect to receive more manuals and more disks!

Lotus Corporation has announced that Symphony is designed as an open-ended product to which additional modules can be added. This statement has been misinterpreted by some people; Lotus does not allow you to add these modules yourself. Any extra modules will be added only by Lotus Corporation. An example given by Lotus is that of a spelling checker, which is becoming commonplace with today's word processors. To be taken seriously in its stated aim of providing a single product that can be used for all your business needs, Lotus will have to add a spelling checker as one of its first upgrades to Symphony.

Learning to Swim

1-2-3 is easy to use, but it offers so many features that to learn all of them takes a long time – even with the excellent manual and on-line context-sensitive help screens. Symphony should be just as easy to use, but its range of features is so much bigger than that of 1-2-3 that learning all of them becomes an even more formidable task.

There has been a proliferation of courses designed to teach you how to use 1-2-3 in a few days, and we can expect to see the same thing offered for Symphony. For people with retentive memories who are extraordinarily gifted this should present a good general overview, but for the rest of us there is no substitute for poring over the manuals and help screens and learning by actually using the program.

Imagineering, which now distributes both 1-2-3 and Symphony in Australia, has wisely decided to provide a telephone hotline to assist users who get stuck, and is building up a team to staff it. Those of us who have used Sourceware's excellent hotline (Sourceware was previously the sole distributor of 1-2-3) know what a boon a hotline run by knowledgeable and helpful people can be. Will use of Imagineering's hotline be restricted to the Symphony users who have purchased from that company's dealers? No doubt we shall see Symphony become available at lower prices from other dealers who have imported it legally or illegally from other sources and provide little or no back-up support. You pay your money and you take your choice.

Initially Symphony will be available only for the IBM-PC. If you buy it for one of the IBM 'compatibles' you're buying it at your own risk. Versions for other computers will follow: Hewlett-Packard has its version scheduled for September.

Lotus has stated it will continue to sell, support and develop 1-2-3, although we would imagine that most of its efforts will be directed towards Symphony. In any event we are fortunate in having two such fine products, plus the competitors who are trying to topple Lotus from its perch. Look to our 'Lotus Hotline' column in this and subsequent issues of *Your Computer* to keep up-to-date on Lotus and similar integrated software packages. ❑

Hotline Supports Lotus

The following details were supplied to us by Imagineering about the company's new Lotus 1-2-3/Symphony Hotline service:

"As part of our ongoing support and service for 1-2-3 and Symphony, we have introduced a 1-2-3/Symphony Hotline.

"This means that users have direct access to prompt and professional answers to all 1-2-3 and Symphony technical questions. Imagineering has dedicated two key technical support people, Adrienne Erwin and Mike Jones, to manage the Hotline.

"They'll also provide you with information on upgrades, new compatible machines and peripherals, product enhancements and the latest 1-2-3/Symphony technical news.

"Call Adrienne or Mike on the Hotline number, (02) 211-4462, if you need any assistance. They'll be happy to help."

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Both business and home users of computers have already become aware of the value and convenience of information stored in databases and accessible through a computer terminal. Later this year, Telecom Australia will introduce Viatel, an interactive videotex service, which, once it's operating fully, will provide just such a database of varied information accessible through your computer terminal or TV – for the cost of a local phone call.

BY NORMAN KEMP

Instant Information!

By the end of this decade your copy of *Your Computer* may be delivered to you personally, not by Australia Post but through a dial-up call to Telecom Australia. The service which will allow you to do this is generically known as videotex. As its name suggests, videotex is a combination of visual and textual information made available by the public telephone network and presented on a screen. Newspapers, magazines and business documents are some examples of items that can be received in this way.

Though the service – at present operated by private organisations, not Telecom – is growing rapidly and has involved numerous large organisations and corporations in communicating and retrieving information between specialised groups over long distances, there are still severe technical limitations to its being used on a commercial scale.

One of the most important of these is the inability of present software to produce pictures, or 'graphics', in forms that don't appear 'chunky' on conventional terminals or TV screens. With current equipment suited mainly for the display of charts or diagrams, most illustrations would fall far short of the quality required by publications which use screened or half-tone photographs liberally. Since almost all consumer publications rely heavily on photographs to illustrate their editorial content and advertising, videotex would be acceptable only as a limited service; possibly for newsletters, speeches, or editorials, and major stories from topical publications that do not need the benefits of pictures.

However, these problems are in the process of being overcome; videotex will not only eventually make available most of the contents of consumer periodicals now sold on newsstands, but will also enable accessing of educational material, engineering drawings, architectural plans, sales catalogues and a host of reports, timetables and other information for the price of a local telephone call – plus the charges of the databank providing the information.

Public Facility

The public access facility Telecom intends to introduce to Australia in December this year will be known as Viatel. It will be a gateway to privately-sponsored videotex systems using technology based on the British Telecom Prestel project. Inaugurated about four years ago, Prestel now has around 42,000 regular users, most of them in business or financial fields.

Other countries have adopted similar systems: Canada has its Telidon service; France has two facilities, Teletel and Antiope; and the US is still in the early stages with its cumbersomely-titled North American Presentation Level Protocol Systems (NAPLPS).

Videotex is sometimes confused with teletext, a receive-only information service available through the fitting of a special receiver to your television set; an example is Channel 7's Seventext. There are also several privately sponsored videotex systems already operating in Australia, such as ICL's Bulletin, but the Viatel public access videotex – a two-way, or interactive telephone network gateway facility – is the first of its kind in Australia.

Prestel was the pioneer in such public services and was an ambitious project supported by the British Post Office and Telecom, with the intention of bringing information to millions of television sets in British homes. However, for several reasons Prestel did not appeal to the masses, and almost foundered. People did not welcome the novelty of shopping by remote control, or the possibility of arranging banking without leaving the house; children tended to prefer ordinary TV shows to the extra-curricular educational lessons available. In addition, the early letters and diagrams on the screens were extremely crude, and the costs of receiving the information, charged on a time and character-count basis, seemed rather high for the domestic market. Prestel has been reprieved by an upsurge of interest from businesses with strong travel and money market affiliations. But though it was ahead of the world in its successful implementation, it has only penetrated 1.7 million homes in the British Isles – a very small count compared with the size of the population.

Australia's entry into videotex through Telecom is being more carefully commercially controlled. Under the Fraser Government, videotex would have been run by private groups – Channel 9 had already begun preparations with its TV broadcast (receive-only) Teletex service – but with the election change in March 1983, Telecom was permitted to operate the central computer facilities and is at present installing them in readiness for the public opening.

Telecom could be an 'information provider' but has chosen not to, though it may put the Yellow Pages on line later. Telecom hopes the score or more private videotex services currently operating, some for more than two years, and many new groups will pay to become information providers. Small organisations that cannot afford the full charges, but are willing to share screen space with other companies, will be placed together. ▶

How it Works

Basically videotex works through users connecting by modem or computer terminal, via the telephone lines, to large databases or networks. Payment for the service comprises a set or annual subscription fee to the information provider, the Telecom rate for the call and a charge per thousand characters displayed on the screen. Current users of the private databases are making contact through Austpac at STD rates, or company dedicated or leased lines, all of which are fairly expensive methods. Viatel is expected to consolidate these, making connection either to databases or between individual computers cheaper; link-up should cost the price of a local call, regardless of the distance between caller and database.

As mentioned before, Australian videotex will be on-line and interactive – that is, users will be able to communicate each way from computer to computer or computer to database across long distances, to exchange information or update data. Though confidential or sensitive videotex-stored data would be protected against unauthorised entry, the facility will enable legitimate users to rewrite information on privately-owned databases. This is a feature intended for large companies, educational institutions or specialised groups, such as news organisations, that want to keep their information up to date by the fastest means of communication.

The significance of the national Telecom videotex network is not merely that it will encourage the development of even more databases than there are now. It could also be a very positive influence in furthering communications and the exchange of knowledge among users residing in Australia's distant cities and remote outbacks, with the telephone as the vital link. The farming community has already been targeted for videotex services by several groups; among them are the Victorian Department of Agriculture and the Livestock Division of the large pastoral group, Elders-IXL.

Through organisations such as these, farmers are being provided with terminals linked to bureau computers which can provide information on weather forecasts, crop harvesting and irrigation times, stock breeding advice and market conditions. More than 400 farmers in Victoria and South Australia are already hooked into services of this type, and near-saturation of the country's agricultural community is predicted within three to five years.

Among public service organisations, the CSIRO has been a leading supplier of technical information for several years. A major commercial service is Aussinet, run by ACI Computing Services, which includes financial items from the *Australian Financial Review* on its database. General Motors-Holden's has inaugurated videotex as a stock locator system throughout its dealer network; while Qantas and a large number of

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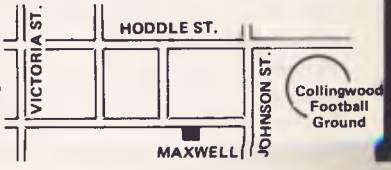


hotels, motels and travel agencies subscribe to videotex services, both nationally and internationally, to facilitate room reservations and transport arrangements.

Among other applications are credit references checking and various proposed forms of electronic transfer of funds, including paying bills and banking from the home. Virtually every month new services are being added in the commercial area, with growing applications within large organisations or industry groups.

A self-regulatory Australian Videotex Industry Association has been formed. It has about 50 members to date, and its aims are to ensure high standards of presentation and accuracy of information available to the public. Its president is Tony Cohen, general manager of Computer Power, a Melbourne company one-third owned by Rupert Murdoch's News Limited group, which has set its sights on development of high technology ventures both in Australia and internationally.

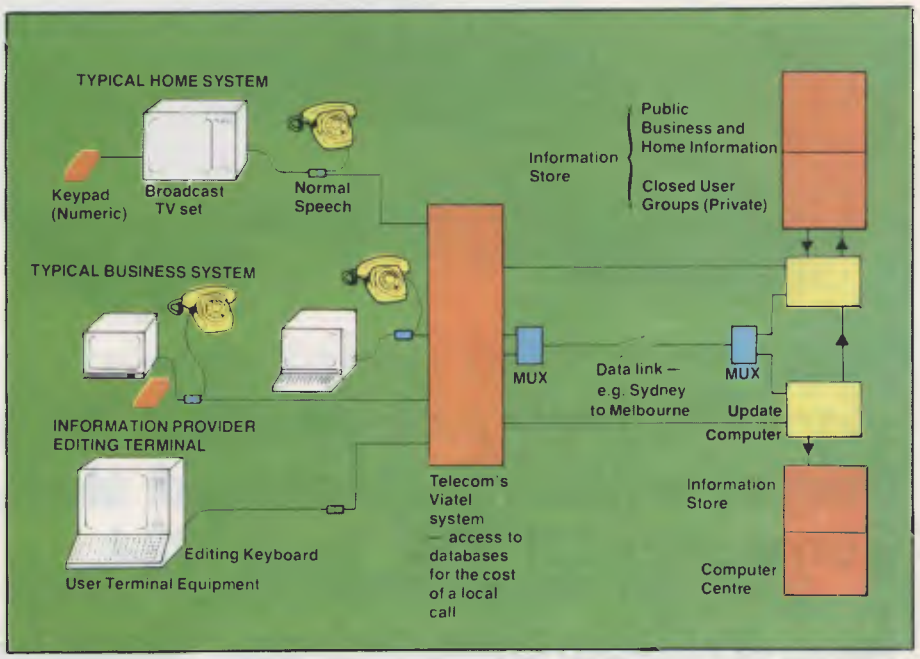
What Will It Cost?

Precisely what the costs to the user will be is not yet clear, but at present a suitable terminal with communications software and keyboard costs around $500 to $600 – probably too expensive an item for general home use, though some small computers that connect into TV sets may be adaptable with the aid of a modem and a decoder.

According to a Victorian Department of Agriculture spokesman, trials showed that farmers used the service for about five minutes each day, and paid nearly $300 a year in charges. These may not be typical of all users: a business firm, for instance, may require longer or more frequent connections with correspondingly higher charges. By comparison, in Britain business users of Prestel made 15.2 million frame accesses a month, equivalent to 363 a terminal. Home users were estimated to connect for about 15 minutes a day, two hours a week.

The full potential of videotex offers a huge range of possibilities, but a governing factor in Australia will be the cost of access as well as the variety of information provided. Users will soon distinguish the type of information which duplicates that easily available in local newspapers or by domestic phone calls, such as airline arrivals and departures, or

An example of the graphics possible using videotex.



A graphic representation of Australia's future videotex system.

notices which purport to be news but are actually advertisements, or over-lengthy – and therefore expensive – abstracts from documents when only a few key paragraphs are sought.

According to David Peers, technical director of Visionhire Australia, one of the leading companies in the field, videotex is certain to become integral to life in the business community, and it is eventually likely to become commonplace in the home. It's a case of the chicken and the egg: users won't subscribe until a wide range of videotex information is available, and information providers will be reluctant to commit themselves before a reasonably large user base is on-line. However, with time, videotex will surely become as commonplace as libraries are today. ❑

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Just as the street cries of newspaper boys and itinerant vendors with horse-drawn carts have vanished with the changing times, so the familiar auction room call of "Going-Going-Gone ... !" is now under threat from new technology. The tradition of putting goods under the hammer could fall to the power of the microcomputer.

BY NORMAN KEMP

HP 150 Takes Over Auction!

The HP-150's Touchscreen will allow would-be auction bidders to 'rummage' through lots easily and quickly.

A microcomputer can be programmed to take bids from the floor and keep track of money and sales without intervention from the auctioneer, so regular attendees at public auctions may be in for a shock when the auctioneer on the rostrum no longer recognises their surreptitious signals: the craftily scratched left ear or the pronounced nose-wiping with an ostentatious handkerchief. Instead, the decidedly impersonal computer will be left to make a note of the bid and calculate the appropriate setting-up charges automatically and simultaneously.

The prototype of Australia's – and possibly the world's – first computerised auction is likely to be held in early spring in a former timber mill almost inaccessible except by wagon-rutted road threading through the heavily-wooded New South Wales mountain ranges near Bulgong settlement, some 50 kilometres west of Taree, the nearest large township. Below the ridges and about six kilometres further along a valley lives Chris Page, a contented semi-recluse whose business interests are a distant world away from his early career as a teacher and demonstrator in zoology and biology at Sydney University.

About 15 years ago he quit the academic sphere to travel widely and work in a variety of occupations, one of which was as a stallkeeper at the Paddington Markets in Sydney. He became fascinated by buying and selling bric-a-brac from the fashionable townhouses around him – and some of a different character not far away – and set out to look for someone willing to take on an ambitious lad as apprentice auctioneer.

"An auctioneer has to be an apprentice for two years before he can apply for a licence, and at first I didn't get much encouragement as I didn't want to be committed to one firm for that long," Page said. "Then I observed that most of the people with auction licences worked in real estate. While continuing to earn money at the market and in other jobs ranging from teaching to importing goods and managing several businesses, I succeeded in putting in time by assisting at real estate auctions to obtain the necessary experience."

During his travels, Chris Page developed a liking for the country and decided to settle among Bulgong's picturesque forestry about five kilometres from Australia's largest waterfall at Ellenborough. In the vicinity is a former timber mill, Elands, last owned by the multi-national Adelaide Steamship Group, but closed during the 1980s recession as demand fell off and operating costs became too high.

To Chris Page this seemed an ideal site for an auction – a large building which needed some restoration and partitions, but which had ample room for the collection of furniture, books, chinaware and other items he has been amassing from districts around Sydney and Newcastle, and storing at his home. At monthly or six-weekly intervals he toured with a van in outlying towns and farms, accumulating his stock. Through friends and contacts in Sydney he has added more goods to the collection, ▶

which will eventually be auctioned.

"My chance to use the old timber mill as an auction site came when the owner's representatives granted me a provisional lease until September," he said. "With a lot of items to be auctioned, I needed to devise some way of cataloguing them quickly. It would be very laborious doing it manually, and after talking to a friend who owns a small home computer I decided that might be the answer. After enquiring at several suppliers around Sydney, I soon found the real difficulty a first-time user faces when trying to select a computer is he cannot see what the software is like until after the machine is purchased. Many users have their own ideas of what they want to achieve, but they have to buy the complete computer system and then work out their own applications when they go home. It's not easy to know whether a program is suitable or not from the demonstrations given by the dealers, who often do not seem aware of the full capabilities of a computer or program."

Touchscreens Help Customers

After numerous enquiries and consultations with friends, Chris eventually obtained a Hewlett-Packard HP-150 Touchscreen desktop system from a Sydney business systems supplier, Comops of Gordon.

"I could see two possible benefits in the HP-150," he said. "In the first place, Hewlett-Packard has a Personal Card File software package which can hold all the details of items to be sold as lots, with prices and short descriptions. Second, I had the idea of encouraging bidders to search through the computer file, looking for objects they were interested in, instead of rummaging around in the boxes and cartons at the auction. It could take me three or four hours to go through everything that would be on offer, but the computer could make that much quicker.

"The great advantage of the Touchscreen over other makes is the ease with which a bidder can use it. There is no need to learn how to use a keyboard or control symbols or characters; the touch technique can be quickly picked up. It just seems the natural way to handle a lot of goods that can be listed and gone through just like thumbing through a real card file."

Not having used a computer previously, Chris Page admits the early stages of acquiring the techniques were frustrating at times; particularly since although he has a telephone and could communicate with the Sydney dealer, there were inevitable delays in obtaining answers to some questions, and in organising the software.

Initially he had to work out the auction details on a demonstration tape which had space for only about 100 items, because the full Personal Card File program was not available. He also started with only two disks, and learned to back up his work when he wiped out his program disk, and his efforts to date, by accidentally reversing the diskettes during a copying exercise. He then had to wait for a new program disk to arrive so he could start again.

The final version of the computerised auction system will incorporate the VisiCalc spreadsheet and the Personal Card File. With the program still in the fine-tuning stages, he expects there will be about 500 different lots which could include scores of single articles. He has stamp collections covering the British Commonwealth with hundreds of separate stamp values, all of which are being catalogued individually with prices and descriptions. In other lots there are large numbers of books, made up of children's volumes, hardback novels, non-fiction and paperbacks, and old Australian magazines dating back to the 1920s which he hopes will attract the attention of an ardent collector looking for long-lost issues of the past. All the titles and approximate values researched from catalogues, where available, will be listed with edition details, and displayed for the customers.

Household and office furniture, china, crockery and other general items will all be entered with two-line descriptions, leaving space for perhaps the most unusual feature of the auction – buyers will be given the opportunity to write bids in advance on the computer files before the auction proper starts. Chris Page confesses he is not certain how acceptable this method of bidding will be.

"I expect between 30 to 50 buyers to attend the auction, which will be well-advertised," he said. "There may be more, but that is generally the number who are regular second-hand dealers and bid at almost every auction. In the usual way, auction slips will be available so they can save time by writing their bids and handing them to the auctioneer before the sessions starts. With my system the computer will be used to receive and store the information, instead of buyers filling out bidding slips.

"That is where I am hoping VisiCalc will fit in. I am writing a program to handle this, as the spreadsheet features of VisiCalc seem designed to be able to keep track separately of every lot and entry made for it. It may be able to work out a number of other calculations as well, such as discounts and total prices for the various lots".

Testing the Water

As the computerised auction scheme still untried in practice, Chris Page is prepared to compromise in the beginning and keep to normal business methods until he has been able to check every part of his system.

"It might be too much to bring on for the first auction, and I won't know until people arrive how they will react to the computer," he said. "If people want me to I'll hold the auction in the regular manner, but I believe the computer will be used for many of the items that do not have a particular value. I'm not expecting any difficulties, and I won't be taking any chances.

"As this is the first auction, there is much more work to be done with entering the information files and working out every aspect of the system that will be needed for succeeding ones. But I'm sure this is the way of the future. It will take away the routine drudgery of preparing masses of price details in ledgers and descriptions on cards, which has to be done now for each auction. And it will give the buyers much readier access to information about their intended purchases."

The culmination of the system, Chris Page hopes, will be the accumulation of a database which will co-ordinate all information about the goods, together with prices they have sold for and any comments about the conduct and results of the auction. The ultimate aim, he said, will be to speed up the passage of lots at an auction from about 350 a day to up to 1000.

It may not be a Sotheby's or a Christie's, handling fine and rare art treasures, but it could lead to a new era in mass marketing for second-hand goods in that highly patronised area known to most people as the 'junk trade'. ❑

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Apple Computer became a living legend in microcomputer folklore for its sensational rise from the obscurity of a Los Angeles garage to a multi-million dollar worldwide company in fewer than five years. Yet it still hasn't vanquished its long-time competitor, Commodore, which continues to thrive despite a changing market, and which had an even more obscure start as a typewriter repair business, in Toronto, Canada, as far back as 1958.

BY NORMAN KEMP

Commodore Gets Serious

Since its recovery from being on the brink of financial disaster when it was making calculators and digital watches in 1977, Commodore International has topped the $1 billion financial landmark in earnings in the microcomputer hobbyist and small business areas. Recent unsettling management changes, with the departure of its founder and president Jack Tramiel and several leading executives early this year, have not seriously diminished its position as a market leader. But its reputation over the past three years has been gained largely in the area of home computers, and consistent support from user groups, rather than as a supplier of business machines. In recently revealing its plans for the future, Commodore has clearly stated its intention to have the best of both worlds – and still keep its computer prices at the lowest possible levels.

New Models Announced

At the Hanover Trade Fair, West Germany, in April 1984, Commodore briefly described two major new business computers: one a portable based on the Canadian-made Hyperion, and the other a desktop 16-bit machine for office executives. Commodore was not changing direction, but consolidating a line of products that has been in existence for six years. Home computers will not be jettisoned; although the VIC-20 is gradually being phased out, another model in the under $US500 class will soon be announced.

The company's new chairman, Irving Gould, will be facing stiff encounters with competitors over the next two years. In a heavily saturated office equipment area, Commodore will be head-on against the formidable competition of IBM, Apple and others – companies which already have established reputations in this field.

Nigel Shepherd, managing director of the company's Australian subsidiary, has no worries about Commodore's future. "Commodore," he said, "may not have a computer in the class of an IBM-PC, Sirius or NEC Advanced Personal Computer, but in 1983 the company sold close on 1500 business machines priced at between $5000 and $8000."

Quietly Muscling In

"We do it fairly quietly, mainly because we have business machine dealers who have been with us for nearly six years and they are confident about the product. There are also customers who buy Commodore after looking at more expensive machines but find our prices are 20 per cent lower and our computers meet their needs for straightforward applications. The dealer doesn't have to worry them with CP/M or MS-DOS, but can tell them that if they have an application such as stock control or debtors then Commodore can do that as adequately as the higher-priced business machines."

When Commodore launched its Vic-20 and Commodore 64 it had no clear forewarning of the reaction it would get from dealers who were stocking the higher-priced business machines.

"We were a little bit traumatised about what dealers would think of us selling a computer for about the price of a toy," he said. "We were concerned about that, and whether we should split off the different lines of distribution."

The power of extensive consumer advertising was used to publicise the models, with the result that for many people Commodore became a household name.

"Two years ago a Commodore was only a motor car in Australia," he said. "Now we have the kids singing the television jingle. We have sold more computers into schools than any other company, and that does rub off on our business machines. A lot of people who have a Vic-20 or Commodore 64 at home recognise the name when they come to buy a computer for business."

Two Kinds of Buyers

Nigel Shepherd has defined two specific types of business machine buyers. The first is the typical small business – usually comprising a husband and wife team, or a self-employed professional or tradesman with a staff of only one or two – maintaining records by monthly manual bookkeeping. The second is the business with several staff members, covering a wider variety of activities and with more complex requirements of salary payroll, debtor and creditor ledgers and monthly statements.

"The self-employed business person probably needs only a simple cashbook program," he said. "There is no point in their spending $10,000 or $12,000 on comprehensive business systems when all they want to do is list their expenses. People in these occupations may be self-employed bricklayers, plumbers, or drainage contractors. All they need to know on a regular basis is how much they have spent on materials, subcontracted labour, motor vehicles and other items directly connected with the business. At the end of a month they can tally their unpaid bills and money owing to them, and work out their revenues. A lot of companies send salesmen to try to talk them into buying computers at $5000 or $6000 each, but most of these people could do all they need on a Commodore 64."

For more extensive business purposes, Commodore has the 8000 series, the latest in a line after the 3000 and 4000, which began in 1978 with the ubiquitous

The 'hefty portable' SX-64 is one of Commodore's flagships in its attack on the business computing market.

PET – a computer with many recognisable commercial functions but most of the software written later by enthusiasts. That machine was fitted with a flat keyboard, which even for those days was controversial in design and today would fail the simplest ergonomics test. In 1979, Commodore added a disk drive and printer – a daring pioneer touch – and started on its long run of specialising in low-priced computers.

Diverse Appeal

Although Commodore's sales of personal computers are about 50 times higher than business machines, there is no profile of a typical user for either, according to Nigel Shepherd. In Australia, sales in outer metropolitan and remote rural areas are proportionately comparable to those of such densely populated areas as Sydney's western suburbs.

There are about 4000 members in 25 Commodore user groups in Australia, and many are professional or part-time software writers providing small business programs for particular applications. These have formed a useful core for enlarging the scope of Commodore sales in vertical markets, with material written specifically for the Australian scene. They augment the substantial Commodore library of general commercial and educational packages available from its worldwide contacts. Some writers have sold their products to Commodore for Australian or international distribution, while others prefer to hold their own rights and provide the software on a royalty basis when a computer is sold.

"The Commodore 64 has really started to come together in about the last 12 months," Nigel Shepherd said. "Before that, business-type software was either imported or written by large systems houses for the bigger business machines. But now we have people in Australia who have written packages for video shops, newsagents, doctors, accountants, bricklayers, window glazers and almost anything else."

Australian Software

One of the most successful general programs designed for small businesses' financial records has been Cashbook. Developed by a Sydney company, Pittwater Computers, it has sold more than 3000 copies at a retail price of under $100.

"We attract software writers because we sell more computers than anybody else, and we want good packages that will help to sell the Commodore 64," Nigel Shepherd said.

Although the number of Australian-designed software packages for the Commodore sold overseas is small to date, a Melbourne company, Gambit Games, has devised a Pascal program which Commodore is now selling throughout Europe as G-Pascal.

"They have to be very good programs to be sold overseas because there is an enormous amount of expertise in America and Europe. Although we like to see the software industry in Australia progress, a program has to be better than what's available in those countries to make real impact."

Aiming for Small Businesses

Commodore Business Machines released its SX64 portable in Australia in June this year. The machine will probably more often function on a desktop, as it unashamedly comes in the 'hefty' class. More new products are in the offing following a drive by the parent organisation to consolidate its low-priced business market.

Commodore International has announced a series which it has nicknamed 'The Productivity Machines'; these will compete with the IBM PCjr and Apple's IIc and Macintosh. They are clearly aimed to overcome objections by Commodore users regarding lack of compatibility between models.

This series has the Commodore 64 graphics set, an upwardly compatible BASIC language, full typewriter keyboard, and capability to operate with major Vic series peripherals such as disks, monitors and keyboards, at a price below $1000. Added features are 64K random access memory (RAM), of which 60K will be available for BASIC; a window capability; 128 colours made up of 16 primary colours and eight luminance levels for spectacular spectrum effects; high-resolution graphics plotting; and a built-in machine language monitor with more than 12 commands. The new series will have optional built-in ROM software.

Commodore has already announced its showcase package, the Commodore Plus 4, which includes a word processor, spreadsheet, database manager and graphics. Fitted with video screen and one floppy disk drive, it is scheduled for delivery to the US market in September or October at a price of $US300! Among forthcoming software is Magic Desk II, Superscript,. Easycalc spreadsheet, Business Graphics and Financial Advisor.

Not far down the track are more advanced models: the 264 for business reports and graphics, featuring a new keyboard and built-in applications programs; and the 364, the most adventurous of all, with a speech capability and inclusive vocabulary of 250 words. Although these models have been promised for later this year, Commodore admits there could be production delays before they can be released to all regions. But the outlook is that Commodore expects to stay – and make progress – in business machines for at least the rest of this decade. ❑

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...other computers cringe

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Take an extra close look at the Canon disk drives. If Rolls-Royce built computers, they'd use Canon drives. See the massive head protection shield? Hear the way the heads lock away every time they deselect? The designers had an unusual attitude to reliability – fanatical.

Now carry out some speed tests. On a standard benchmark test using BASIC routines*, the timings are: PortaPak 12.9 seconds, IBM PC 16.4 seconds, NEC APC 19.7 seconds and Sirius 16.4 seconds. Using a standard dBASE II routine**, the timings are: PortaPak 8 minutes 11 seconds, IBM PC 11m 52s, Sirius 17m 9s and NEC APC 19m 16s.

The expensive imports really cringe at this because they make so much of being "16-bit" machines. PortaPak is an 8-bit machine and proud of it. Not only is an 8-bit machine inherently better suited to jobs like word processing, accounting, spreadsheets, etc, but the 6MHz clock rate ensures it can run rings around the others even in complicated mathematical tasks.

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*See Australian Personal Computer, Feb., 1984.
**See Australian Micro Computerworld, Nov., 1983.

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