



PC VOICE

*The Newsletter for
Personal Computer Users
in Fiji*

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Edition 4: March 1989

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Dear Reader,

We are proud to present our latest version of PC VOICE, the quarterly newsletter for you, the PC User.

Nobody sent us pictures or names for our newsletter logo (see competition Edition 3, Dec 88), so we have created one by ourselves - and saved the prize for an upcoming quiz or something similar (M. Naseem from MPI will receive a useful tool plus a box of floppy disks for the only helpful hint).

In February a PC Management Workshop was held for Permanent Secretaries and Heads of Departments. The response was surprisingly good: over 40 senior civil servants attended. For us it was important to inform these people about the concepts behind the PC Information Centre, and specially the training facilities we can offer. Furthermore they learnt about strategical and financial aspects of Personal Computers. We will try to repeat the course again.

Since I've been here in Fiji quite a few people have asked why E.D.P. is recommending "old" technology like XT's and AT's and dot matrix printers. Let me explain that in our opinion not everybody needs an 80386 PC, a multisync colour monitor (to print colourful charts out you will need a colour printer - not to forget the problems you face when making plenty copies) and a laser printer. Fiji has a tropical climate in which the life of all computer equipment is shorter than in other countries with lower humidity. Moreover, one has always to ask: "What about support and maintenance?". As far as I am concerned as a PC user I prefer to count on reliability, easy repair service and affordable cost. And the truth is: with the most exotic and fanciest equipment, we have the biggest problems.

A few weeks ago my hard disk and hard disk controller became faulty; disk checking came up with strange errors. I switched to a new PC and re-installed my backup floppies. For two days the machine worked fine. But then the hard disk got corrupted again. Since I didn't make new backup's I lost the whole work of these days. Motto (and it can't be repeated enough): **Make backups/saves as often as possible** !. It may take a bit more time but, like an insurance, you are prepared for the worst case, the disaster.

Some people have claimed not to receive our newsletter. If that is the case use the form in the appendix, indicate that you have already requested a copy. For new PC VOICE subscribers: please give us the entire details of your Ministry/Department/Section (e.g. Ministry of Finance/Bureau of Statistics/Administration Section). Otherwise you may risk delayed delivery.

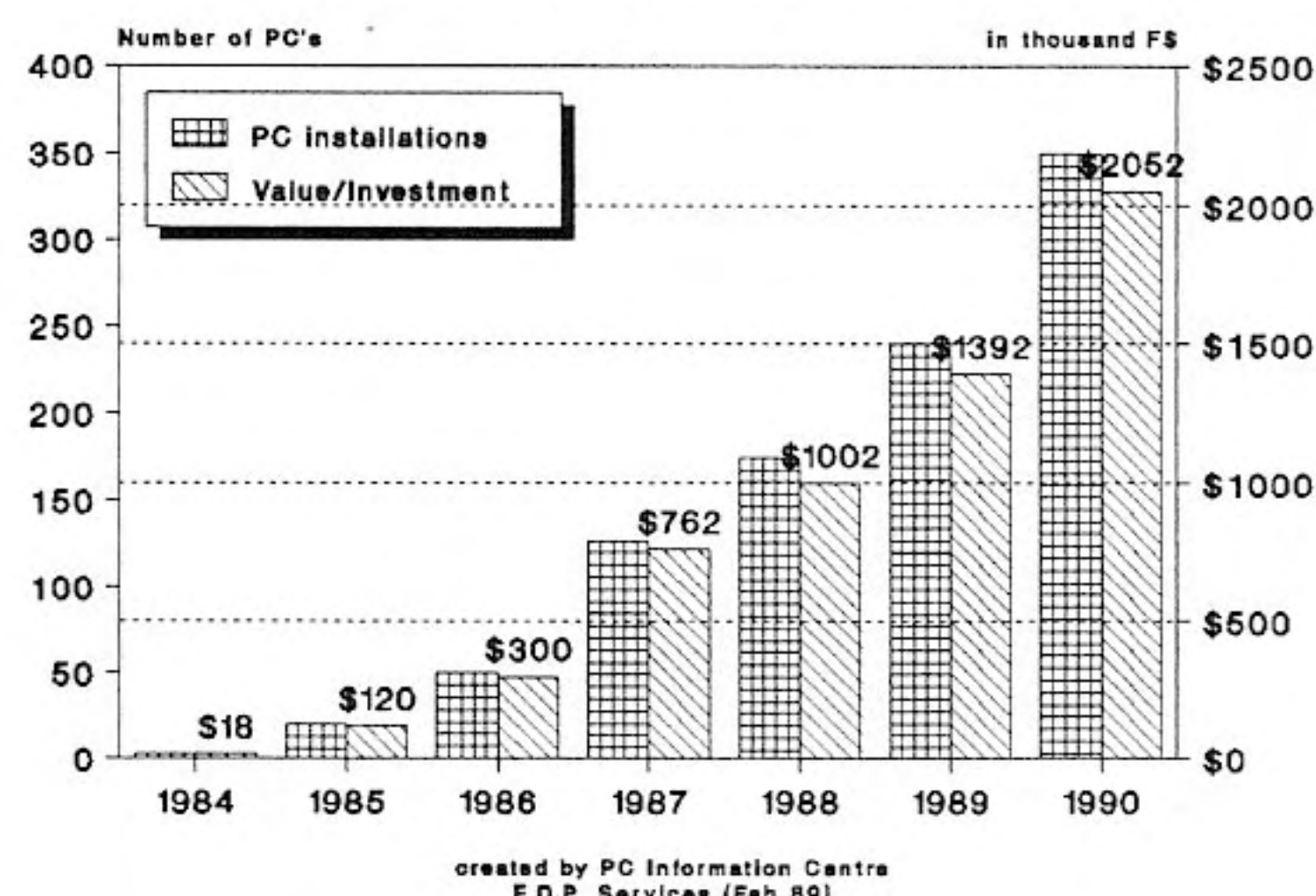
Happy reading!!!
Dani Zender, Consultant

PC INVENTORY

The number of Personal Computer installed in the Government is increasing, it has even outnumbered the terminals of E.D.P. Services' DEC VAX mainframe computer.

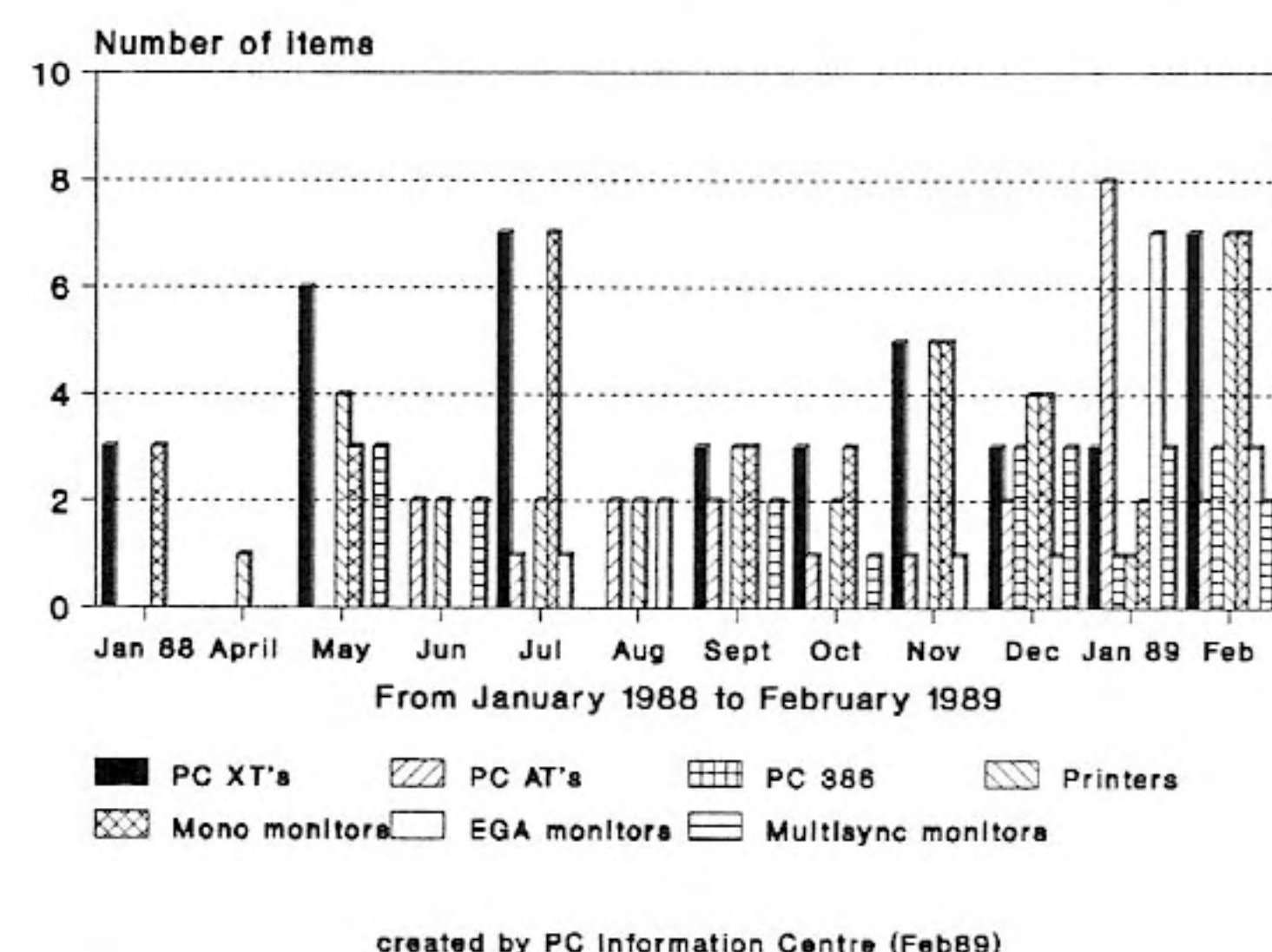
Pessimistic estimates predict that another 65 PC's will be purchased in 1989 by various Ministries. Find below a chart of the future trends:

**Investment in Personal Computers
(assumption: buying directly since 1988)**



Interesting also is that the amount of faster systems (e.g. AT's or PC's with 80386 processors) and colour monitors has increased as shown in the following chart:

PC purchases through E.D.P. Services



Finally we would like to remind you that:

- standard PC parts are held on stock and can be obtained with a requisition form from us (see also article "PC SHOP")
- all PC purchases have to be approved by Ministry of Finance and the E.D.P. Working Committee
- prior to purchasing PC equipment, E.D.P. Services must be consulted, even if aid funded (Reasons: optimal configuration, installation, support, training, prices)
- E.D.P. Services should be informed if PC's have been donated by an aid agency or any other source - otherwise we cannot keep track of the inventory/investment

If everybody keeps this in mind it will help us a lot. And you as the user will profit the most through improved support and service.

USER MEETING

Some people asked us to conduct another user meeting. This time we decided to use our PC training room for it.

The date: **Thursday, 28th April 1989**

The time: **5 p.m. (17.00)**

Venue: **E.D.P. Services, 310 Victoria Parade, Suva**

- Topics:
- Current situation at the PC Information Centre
 - Demonstration of software utilities like CAROUSEL, PRECURSOR, TORNADO etc.
 - Second attempt to form a 'PC User Group'

Since the meeting is after hours, we also might have time for some sort of "socializing" (but at your own expense).

Users and interested people have to send back the form (in Appendix) to E.D.P. not later than 31st March 1989.

PC TRAINING CENTRE

The PC Training Center at E.D.P. has just "officially" opened its doors with the announcement of its upcoming courses in:

- 1) Introduction to PC's (different modules)
- 2) Introduction to WordPerfect 5.0
- 3) Introduction to LOTUS 1-2-3
- 4) Advanced WordPerfect 5.0
- 5) Introduction to R:BASE

Written announcements were sent out in the week of January 30th, which included a listing of available courses and their schedules. However, these classes have either already been allocated or will be allocated by us according to certain procedures. If you have received a separate invitation (they were sent to each Ministry's Permanent Secretary or Head of Department) and you would like to attend the course indicated on your invitation, please contact Yolanda Floor at 211 204 at least two weeks prior to the scheduled course date. If you did not receive an invitation, rest assured that these classes are continuous and will be offered again at a later date.

The enrollment procedure is as follows: First, the PC Information Center determines **who** will attend those courses which are immediately offered, based on the number of PC's within each ministry or department and the types of software available to them. Then, after allocating a certain number of seats to those Ministries who qualify, we send out official invitations via the Permanent Secretary or Head of the respective Departments. Within the invitation letter we indicate which department the allotted course space is recommended for. It is then up to the Permanent Secretary or Head of Department to determine those people who will attend the courses. Sign up is required two weeks ahead of the course date.

During our first few "special" courses for P&T, Rural Housing and PWD we offered condensed sessions in Introduction to PC's and WordPerfect 5.0. As a standard procedure we gave the students a short test and asked that they fill out a course evaluation form. This allows us to get some feedback as to the course material, our teaching skills and the pace of the class. So far, the feedback has indicated that the students have enjoyed the courses and found them to be helpful. It has also indicated a need to slow down course pace. Recognizing this concern we will try to cut back on course content for any subsequent condensed sessions. Our normally scheduled courses, however, should allow enough time to cover the material outlined.

Problems currently faced by the Training Center are varied, and largely due to the fact that it is still in its early stages of development. These include shortage of trainers (currently all courses are being conducted by Yolanda Floor), lack of "real" experience among trainers, and limited documentation and structured course material. In regard to the latter, training packages have just been purchased through a U.S.-based company for all of the courses presently offered and should be received in the coming month.

At a later stage we will offer other courses like:

- Printer handling
- PRECURSOR: menu-driven hard disk management
- Advanced LOTUS 1-2-3
- Advanced R:BASE for DOS
- Introduction to Harvard Graphics
- Introduction to MS-Windows
- Trouble-shooting workshop

Any questions regarding training or course scheduling should be directed to Yolanda Floor at 211 204. (YF)

NOTICE

In the course schedule sent out there was a mistake in the time scheduling of the April 12-14 course of Modules. This will be a 2 1/2 (2 full days and 1 half day) course beginning at 8:30 a.m. and ending at 4:30 p.m.

PC SHOP (Hardware & Software)

The New Way

After discussions between EDP, COGS and the Ministry of Finance it has been decided that COGS will now be responsible for ordering and maintaining a stock of PC hardware and software (which will be stored in an air conditioned room at EDP). It is hoped that in this way the average time between making a decision to purchase hardware or software and it being installed will be greatly reduced.

Obviously because of the cost of these items (and in the case of software, new versions becoming available) only a certain number of each item can be held in stock. Thus, if there has been a "run" on certain items COGS may well be out of stock. Mind you, there should be no reason why an order can't be filled in the same time as EDP has been filling them in the past year, even if the items are out of stock.

The items stocked will be those that EDP has found to be a standard requirement. Items which are not on this list but are required by a department can still be ordered through EDP. However whereas in the past EDP tried to immediately process the order it is envisaged that now all special orders will be processed together at one time, at the end of each month. It is hoped that in this way less of the PC Information Centre's time will be taken up with the order process and more with supplying information, assistance and training.

The following is an outline of the items that will be stocked. If EDP perceives there is a change in the general requirements of departments then this list will change.

Software

MS-DOS 3.3
WordPerfect 5.0
R:Base For Dos 2.11
Lotus 1-2-3 Rel 2.01
Harvard Graphics 2.1

Hardware

- 10 PC XT compatibles with
- 10 Mhz; 8088 processor
 - 640 kb RAM
 - 2 360kb Floppy Disk drives
 - Monographics Adaptor card
 - parallel & serial ports
 - Keyboard
- 6 PC AT compatibles with
- 12 Mhz; 80286 processor
 - 640 kb RAM
 - 1 1.2 mb Floppy Disk drive
 - Hard Disk/Floppy Disk controller card
 - parallel & serial ports
 - Keyboard
 - no graphics adaptor card (added according to customer needs)
- 2 80386 PC
- 16 or 20 Mhz; 80386 processor
 - 1 MB RAM
 - 1 1.2 mb Floppy Disk drive
 - Hard Disk/Floppy Disk controller card
 - parallel & serial ports
 - Keyboard
 - no graphics adaptor card (added according to customer needs)

These above systems are the base units to which further items can be added (eg. hard disks, monitors, mouse etc)

Hard Disks (20, 40 or 80 mb)
Graphics adaptor cards (EGA, VGA)
Monitors (monochrome, EGA colour, NEC Multisync II colour)
Power conditioners
Printers
Cut sheet feeders
Printer ribbons
Data switch boxes (3 way) and cables
Mouse pointing devices

In future all assessments made by EDP will include an instruction sheet on how to order the items recommended. (GL)

Special offer for Power Users

We have 1 spare hard disk utility MACE H-TEST/H-FORMAT for sale. Nice software for testing and formatting of hard disk.

Price F\$ 170.00

Hurry, only 1 is left!

SOFTWARE DESCRIPTION

LOTUS 1-2-3

1-2-3 from Lotus Development Corporation is the industry standard for electronic spreadsheet use. It allows the user to look at and alter information presented in a tabular format and allows both horizontal and vertical scrolling thus enabling the user to view data "outside" the screen.

As well as the spreadsheet function 1-2-3 has database and graphic functions. Information stored in the database can be extracted for spreadsheet calculations or expressed in a variety of graphic displays including line graphs, x-y graphs, bar charts, stacked bar charts, pie charts, exploded pie charts and scatter graphs. The spreadsheet function allows you to analyse information in a variety of ways, principally through the provision of a variety of functions (formulas) and, importantly, to perform "what if" scenarios. This "what if" concept is central to the idea of 1-2-3: You can establish budgets, project cash flows etc and the result of any changes in the data can quickly be seen.

It is important to be aware that all work on a spreadsheet is stored in memory

until you give the save command at which time it is stored to the floppy or hard disk. This means that if there is a power failure or you forget to save your spreadsheet before exiting the program you will lose your work. It also means that each spreadsheet is limited by memory size. (GL)

Minimum system configuration: 1 Floppy Disk Drive, 256 KB RAM

Recommended configuration: Hard Disk, 640 KB RAM

HARVARD GRAPHICS

As the name suggests this program's purpose is to create presentation graphics. The user creates "charts" which can contain words, graphs and special images and then produce the output as overhead transparencies, 35mm slides, on paper for use in reports or handouts, or on the computer screen as a "desktop presentation". Harvard Graphics includes a wide variety of chart templates (text charts, organisation charts, charts for graphing data - line, bar, pie etc) automatically choosing size and layout of both text and graphics (open to alteration by the user of course) thus requiring the user only to enter the information to be displayed. Furthermore you can create charts of your own using the built-in drawing package or use it to make alterations (eg. draw arrows, add text or boxes) to a chart created with one of the templates. The program comes with quite a large library of "symbols" (pictures, eg pointing hand, computer, country maps etc) which can be placed in the chart. (GL)

Minimum system configuration: Hard Disk, 512 KB RAM, Hercules monochrome graphics card, DOS 2.0 or higher.

Recommended configuration: Hard Disk, 640 KB RAM, Hercules monochrome or CGA or EGA or VGA (or better) graphics card.

WORD PERFECT 5.0

This is a very powerful word processing package including the following features:

- spell checker
- thesaurus
- printing in columns
- merging of documents
- print preview (this enables you to see just how the document will look when printed - requires a graphics capability)
- edit two documents at once (one key switches you between documents, which can be displayed on the same screen at once by splitting the screen horizontally)
- box and line drawing
- ability to include graphics and drawings from other programs
- ability to "capture" and include in a document "photos" of the screen from another program
- forms and labels support

Although some users may not use many of the capabilities of this powerful package few users will ever find themselves limited by this program unless wanting to carry out full scale desktop publishing. (GL)

Minimum system configuration: 2 floppy disk drives, 384 KB RAM.

Recommended configuration: Hard Disk, 512 KB RAM.

R:BASE FOR DOS

This is a database management system (DBMS) and like all DBMS provides facilities for organising files and records into relationships and hierarchies (databases). It provides facilities for the recording, storing, organising, manipulating and retrieving of data.

Some of the features of R:Base include:

- relational DBMS
- command line mode or prompted query-by-example mode
- 15 SQL commands
- over 70 functions (mathematical, logical, string manipulation, etc) are included
- searchable, variable-length NOTE field
- up to 40 user defined function keys
- password security at numerous levels
- on-line tutorial
- File Gateway utility for importing and exporting data between a wide variety of popular software programs and ASCII or DIF files
- a pseudo compiler is included for speeding up developed applications

An important aspect of R:Base is that many of its powerful features can be carried out from the user interface (ie. without programming). Furthermore it has an application generator which provides a quick path to automating the application required. (GL)

Minimum system configuration: Hard Disk, 512 KB RAM, DOS 2.0 or higher.

Recommended configuration: Hard Disk, 640 KB RAM, DOS 3.3.

ENVIRONMENT

NEW COMPUTER ASSETS TRACKING SYSTEM

E.D.P. has just purchased a new PC inventory software package called CATS (Computer Assets Tracking System). This system is specifically designed to manage our PC hardware and software (whether on-order, in stock or already distributed) as well as problems and changes associated with the information center. It features management

reports, workstation definitions for PC configurations, a data entry duplication function, a mass update facility, problem analysis reporting and more. CATS will be used mostly by those people within the PC Center who deal with PC ordering and distribution and once learned, it will provide our section with a more reliable source of consolidated information. (YF)

MARKETPLACE/USER-TO-USER

Question: (asked during the E.D.P. Open Day) Your presentation of scanning photos and including them into a word processing software is nice and fancy, although it takes a long time until the page with the picture has been printed. But what is the real use of it, if I could place a photo onto a document and use the photocopier for making copies? I mean, 5000 dollars for a laser printer and 2500 dollars for a scanner is a lot of money.

Answer: This question surprised us a lot. It is true that by cutting charts or photos, putting them in the right place on each page, and making photocopies of the whole document, the time and the cost are, apparently, lower than with our demonstrated "high-tech" method.

The reason why we are evaluating desktop publishing was an experience we had when we created the first PC newsletter. After printing it we gave it to Government Printers for final typesetting. More than 6 weeks later we received the printed newsletter back. Why that delay? Mainly, because all text has been **retyped** again. Since a newsletter must include **n e w s** we looked for a faster solution.

Postscript, a language which describes both text and graphics, has been invented by Xerox Corporation. With Postscript printers (e.g. laser printers from Apple, AST, IBM or Xerox) or Postscript type-setting machines (e.g. Linotronic 300) you can print manuals, brochures, advertisements, or any other document created with software running on a Personal Computer.

It should (will) be once possible to create the publications (e.g. annual reports, project papers etc.) of any Ministry on a PC with a word processing software (WordPerfect), then import the text file into a desktop publishing package (PageMaker), and add graphics or photos if desired. Then you can make changes for your final layout. For desktop publishing supports WYSIWYG (what-you-see-is-what-you-get), you will be able to see who the document will look like when printed. Finally, you store the created document as a Postscript file onto floppies, and give them to Government Printers. Their type-setting machine, if it understands the Postscript language, will then directly produce the amount of requested copies from your document.

Desktop publishing can drastically reduce the time needed to print high-quality documents. But it requires staff which are familiar with publishing terms (e.g. page composition, fonts, kerning, style sheets etc.) and layout generally.

Question: We recently purchased a PC which you have recommended. You called it a MAC-XT. What does 'MAC' stand for? And why are you buying this brand?

Answer: MAC is the brand of our supplier, Malifax Ltd. in Singapore. Why they chose this name? - we really don't know.

The reasons why we bought computers from this company are: fully IBM-compatible, favorable pricing, one year warranty on parts, and satisfactory support.

However, we are always monitoring the PC market, evaluating other companies, their products and conditions. It may happen that we switch to another supplier (or buy locally if prices and support are reasonable). But we will still service MAC-PC's.

EXPERIENCING COMPUTERS

(an article by a student from Nasinu Training College)

Comparing computer knowledge of what a student learns in school and how he performs at work place is not very different. Because I am a student and currently working at EDP Services, I find my work not difficult at all. Although I have completed only half my course, and the other half which I will be completing this year, my work experience has been tremendous. In school we learn about wordprocessing, database, and spreadsheet softwares and also programming in different languages. At work we also do the same thing but sometimes we have to use a new software. But if for example you have learnt about a wordprocessing package and later on have to use a new wordprocessing software then it is no great deal. The difference will be only in the commands which the software recognizes. I also had a chance to use new softwares like Harvard Graphics, Rbase, Word Perfect and Turbo Prolog. The latter one is a fifth generation programming software and its name means programming in logic.

Apart from an accounting project for Marine Department, I was able to use different types of computers and learn about minor servicing and installation of new computers. In school we have Olivetti, Apple Macintosh, and Commodore PC's. At EDP we used MAC XT's and AT's and also a 80386 Tower which is a very fast computer. When new computers arrive at EDP we had to follow a testing procedure to make sure the computer fully functional and without any faults. This servicing and installation of computers is something new which I have learnt because it is not taught in our school.

Since I will be leaving in a couple of weeks time to resume my course, I think that my overall work experience at EDP has been great and I have no regrets about it. The

staff were very nice and cooperative especially Dani Zender, Panos and all the others. I personally feel that looking at the current trend of computerization in Fiji, the future will hold a very demanding role for people who are computer literate. (Abdul Nausad)

Please note that the dead-line for the next edition of PC VOICE is **30th April 1989 !!!**

BEGINNER'S PAGE

Open Heart Operations

For those of you in government who have bought MAC PCs from EDP. Never open the MAC casing! Computers are very fragile. Anything could cause a costly break-down. A particle of dust, spilled coffee, oily fingers, static electricity, ants, hair, ... etc. The list is endless. If you have a problem call the doctor. Don't try any experimental operations. (PK)

Technical Notes

Did you know that 25% of all damaged equipment is from users not following proper installation procedures. If you receive a new PC **not through E.D.P.** please contact us (211 204). (PK)

"BOOTABLE FLOPPY"

One reason why a bootable floppy might be used, is to reboot the system after a hard disk failure. For the purpose of merely rebooting the system your bootable floppy must contain three files -- 'COMMAND.COM' and two 'hidden' system files.

To create a bootable floppy disk, insert a blank floppy into A drive, and type:

FORMAT A:/S

This will format your floppy. The 'S' added to it tells the computer to copy the 'hidden' system files onto the floppy (these files will not be listed under the A directory, however, they are listed when 'CHKDSK A:' is typed). To copy 'COMMAND.COM' to the bootable floppy just type 'COPY C:\DOS\COMMAND.COM A:' given that your DOS files are kept under the DOS3 directory in drive C. You should now be able to boot your system by inserting the floppy into your drive A and turning your computer on (or pressing the keys <ALT> <CTRL> <DEL> together.

A '.BAT' FILE DEFINED

A file with the extension '.BAT' (e.g. AUTOEXEC.BAT) is known within MS-DOS as a batch file. Collectively, any files with the extensions of either '.BAT', '.COM' or '.EXE' are known as executable files in that by just typing the file name at the DOS prompt, without the extension, the series of commands contained within that file will be executed.

Why use a '.BAT' file? You may often find yourself repeatedly typing the same sequence of commands to perform some common task. With MS-DOS you can put this command sequence into a batch file and then run the whole sequence of commands by simply typing the name of the batch file. MS-DOS performs these "batches" of your commands just as if you had typed them from the keyboard. This is called batch processing. By using a batch file, you only have to remember to type one command, instead of several. In effect, you use batch files to create personalized commands. To create a batch file simply type in the online commands that you would normally type on the keyboard to perform a sequence of tasks, using 'EDLIN', the MS-DOS editor. After exiting, name the file with the extension '.bat'. To activate, simply type the file name at the DOS prompt. (YF)

POWER USER

Software Notes

Game software is not a good investment. The average game depreciates at least 50-75% annually. However a good game will always keep its high price tag. For example, the first version of Wizardry came out in 1980. Now, almost 10 years latter, the game still commands a small punch in the wallet.

If you are a well seasoned pirate, free software, no matter what its long term investment value, is always seems like a good deal. This is especially true if you live in the Philippines where the average cost of any piece of software is sometimes taxed four times its market value. Consequently, the Filipinos have become world famous, the most viscous pirates to sail the software seas. However, you leave yourself open to costly doctor bills if you pirate software which are infected with a virus.

Viruses come from pirated programs. Some of the most deadly electronic diseases come from the Philippines. Please do not accept pirated software. Viruses attached to such programs can permanently destroy the data on your floppies or hard disks. Original is best. We, at EDP, have a vaccine to protect your computer against deadly disease. However, it is a preventative vaccine. If the virus is in the system already, you can do nothing but pray. Anyway, its your own fault for being so cheap by trying to make a good investment from a bad one. (PK)

WordPerfect 5.0 Corner

For some people the opening screen when you start WordPerfect (a blank one or as WordPerfect say "a blank piece of paper") is a little disconcerting - particularly if you've just made the move from a word processor like Multimate whose first screen is a menu.

The following macro results in the initial screen being the same as if you had pushed the Function key <F5>, ie. list files. The example presumes that you keep your documents in a subdirectory called c:\wp\files (It is always better to keep your documents in a different directory from the program files. One simple reasing being that you can quickly see what documents you have; another is for ease of backup). Change that name to the one you use when you create the macro. Let's begin: From within the program type:

```
<Ctrl-F10>          (starts macro definition)
STARTUP<Enter>       (macro name is startup)
List Files at startup<Enter> (macro description)
<F5> = \wp\files<Enter> (changes directory)
<Enter>              (activates F5)
<Ctrl-F10>          (ends macro definition)
```

Now you edit your autoexec.bat file by adding the following line:
SET WP =/M-STARTUP

The next time you turn on your PC (or of course you can immediately, from the DOS prompt, enter the command autoexec to reboot with your new autoexec.bat) and start up WordPerfect the screen listing your documents will be the initial screen.

You can edit your AUTOEXEC.BAT file (or any other ASCII text file) from within WordPerfect by using <Ctrl-F5> then pressing 1 to indicate you want a DOS file, 2 to retrieve and then enter the name of the file. (GL)

Lotus Corner

Lotus Corporation have announced their "Value Pack". This is available free from dealers or at US\$15 from Lotus Corporation if you have a legal copy of Release 2.0 or 2.1. The most important feature of this Pack is Lotus's official mechanism to remove copy protection from 1-2-3. So, no more need for the key disk. You also get 6 months (toll free if you're in the U.S.) telephone support from Lotus. Other features are new drivers to support VGA, 43 line EGA, and Post Script printers; a speedup feature that allows you to recalculate only the cells you've changed; and a keystroke recorder that makes writing macros easier.

As we wait and wait for Release 3.0 (latest E.T.A. is now not until the third quarter of this year) one might begin to wonder if Lotus is not worried about changing loyalties with other excellent spreadsheet programs about of the calibre of Excel, Quattro and Surpass. But remember, 1-2-3 is still the largest selling software package (of any type). (GL)

R:Base For DOS Corner

According to Microrim (the company responsible for R:Base) an R:Base Compiler (R:Base already comes with Codelock and Developers Express but these are both only pseudo compilers) is on the way. This will create stand-alone EXE files (ie. can be run from the DOS prompt without R:Base) and has a comprehensive debugger that's flexible and easy to use. It is expected that R:Base applications will execute three to five times faster after being compiled with R:Base Compiler. The price of course won't be cheap - about US\$900 retail. (GL)

General MS-DOS

The BACKUP command in MS-DOS (or PC-DOS) 3.1 has a small problem. Files bigger than 1 floppy disk won't be backed up properly. If you use version 3.1 and you use the read-only attribute, it's a good idea to remove it before backing up (otherwise you risk losing files when executing the RESTORE command).

```
ATTRIB -R C:\*.*/S
```

for example, will remove the read-only attribute from all files on drive C:.

PC NEWS

Hard-Notes

The newest technology has landed on the shores of Fiji. Now available through EDP for your IBMs and compatibles are such HTTs (High Tech Toys) as optical disks drives, 700 mega byte hard disks, full scale architectural plotters, and flat screen monitors.

Optical Disks: There are two basic types now available. The WORM (Write Once Read Many) and the long awaited erasable optic drives. In a straight one on one competition, the erasable optical drive really beats the WORM back into its hole. Here are some of our findings:

	WORM	Erasable
Avg. Formatted Capacity:	786	650/1000
Avg. Bytes/Sector:	2048	512/1024
Avg. Seek Time (msec):	108	35
Avg. latency (msec):	60	16
Avg. Bus transfer rate (MB/sec):	1.25	40
AVG. PRICE FOR UNIT:	\$3,500	\$6,500
AVG. PRICE PER CARTRIDGE:	\$200	\$350

As you can see the new erasable optical disks definitely pack a new bang for your computer dollar. However, you will have to have a fat wallet to be able to afford one. Orthodox optical disk fans will argue that the erasable drives do not utilize true optic technology. In part they are right. The WORM uses the traditional thermal ablation. Whereas the erasable uses Magneto-Optics, which is a half-breed of traditional magnetic media and optical technology. Don't come running to EDP yet with hefty departmental warrants. A more job specific examination shows that both systems have advantages and disadvantages. For straight ahead disk performance the erasable magneto-optic disk wins the gold. However, it is susceptible to all the standard floppy disk problems of age, mould, temperature, magnetic fields, ... etc. In fact the media is so fragile that some companies force the user to buy special protective lead cases for extra cartridges. This adds to its already high cost.

On the other hand, the WORM is a librarians dream. Its is perfect for use as an archive system. The average WORM optical cartridge costs \$200. Equivalent archive systems are magnitudes slower, more tedious, and expensive. For example 13 equivalent 60 megabyte tape cartridges would cost \$800, 655 1.2 megabyte diskettes would cost \$1300, and \$1900 double sided diskettes would be a budget-destroying \$2800 - The cost of a new computer!! Furthermore, the media can withstand incredibly harsh conditions. Data stored on them are like a tatoo on the skin. WORMS were used in the latest climb up to Mount Everest by a Japanese team to store data concerning everything from weather conditions to acidic levels of the climbers' urine. Considering the carelessness of the average computer user and the indigenous difficult weather patterns, WORMS should not be tossed aside. Would it be better to have a fancy car that is always in the shop, eating money; or to have a simple, durable, relatively slow van?

Lastly, optical disks still don't perform as well as the equivalent hard disk. A 800 megabyte hard disk has an average seek time of about 16.5 msec, which is at least two times as fast as the best optical drive. However, the hard disk is an indivisible unit. Whereas the versatility of optical disk cartridges has a potentially infinite storage capacity. (PK)

Various news

If running memory-resident (TSR) software together with WordPerfect 5.0, you may encounter problems. The reason is that WordPerfect 5.0 uses nearly all possible key combinations. Until now we couldn't manage to run TORNADO, however, SIDEKICK (we prefer the key combination <Shift Left> <Shift Right> will work fine. We have written to WordPerfect about a possible solution. Maybe we receive an answer.

Niklaus Wirth (55 years), professor for information at the ETH in Zurich/Switzerland has been awarded with the "IBM Europe Science and Technology prize", worth F\$ 170,000. The price has been given for Wirth's invention of the programming language 'PASCAL' in 1970. PASCAL is a flexible but structured language and currently available for nearly every computer system. In 1978 Wirth, presented his development of 'MODULA-2', a computer language similar to PASCAL but also ideal for systems programming. Last year he published another language called 'OBERON'. It is a super-set of MODULA-2 with programming methods used in the special field of Artificial Intelligence.

Hewlett-Packard is shipping its latest laser printer, called HP LaserJet IID. The price of US\$ 4,295.00 looks high but you get something nice for the bucks: the LaserJet IID can print on both sides. After printing the top side of a sheet, the printer ejects the page into the rear paper tray, then pulls it back through a special paper path to print the bottom side. A printer driver for WordPerfect 5.0 is included.

A good idea recommended for copying: Mr. Tonsi Takagy, a JICA volunteer in Town & Country Planning provides internal training for all the staff there. Even people from the management level put hands for the first time on a PC. And according to them - they are interested in learning even more.

For power users only: We just have received the fastest 80386 PC. It runs at 20 Mhz, has 64 KB cache memory, and the main memory (1 MB RAM, expandable to 2 MB) is not on the motherboard but on a 32-bit memory board. Installed are a Video Seven V-RAM VGA graphics adaptor card, 80 MB hard disk, a Logitech mouse, and the interface for the scanner (this PC will be used mainly for presentation graphics and desktop publishing). It is the fastest machine we ever seen in Fiji. Results of our testing:

- the installed hard disk controller is the fastest ever seen; it transfers 491.0 KB/sec.
- the graphics adaptor card (VGA) seems to be made for this machine: In nearly all our tests it is 200% faster than any other card tested.
- Norton (we still use 3.0) came up with a processor index of 23.0, i.e. the PC's processor is twenty-three times faster than the "old" IBM XT.
- the scanner does not (yet) work with the PC. It seems there is an address conflict between the installed controller cards
- A print-out of this newsletter takes more than twice of the time in an "ordinary" MAC-AT. If we would add a math co-processor it would be a even faster.

Although we are not fully happy with everything, this fast machine might be the solution for applications like DTP (desktop publishing), CAD (computer aided design), and large, comprehensive spreadsheets.

EGA/Monochrome fight: Are you unhappy with your monochrome display? Do you want to see the "screen world" in colour? Everything is possible at E.D.P. On the other hand, plenty of our "customers" have chosen monochrome monitors (normally we recommend a EGAMAX card which allows the connection of monochrome, EGA or Multisync colour monitors). The reason? What can you do with the fanciest colours on your screen, if the listing or graphic is still printed in black-and-white, if the photocopying machine works black/white? Stick on it, our suggestion. But if you are really interesting colour printing, maybe you should have our highly recommended printer, the Epson LQ2500+. We can supply you with an colour option kit (approx. \$125, plus colour ribbons). But remember: it's a low-cost solution, a colour graphics laser printer cost still more than \$25,000.

If someone tries to sell you a "Desktop Publishing" software: be suspicious. We still have problems with PageMaker. And WordPerfect 5.0 is also quite powerful for this task (as you can see in **PC VOICE** !). Apart from the learning curve for a software like PageMaker you will need a basic understanding of graphics/text layout. Without that you risk losing Government's money.

Sheri Tibbs from the PC Information Centre did a good job: The project outlines for the computerization of FSM (Fiji School of Medicine) have been finalised. Apart from having access to a system in Australia they also plan to introduce a new library software.

Accounting: nearly all the time our staff complain about the structure of the 24-digit accounting number in the SI General Ledger. All the accounting packages we have evaluated in 1988 only support a 10-digit number, even if fund accounting with commitment ledger is included. On the PC there is only one fund accounting software which allows for constant 20-digit numbers. Some times we are asking ourselves **how** it is possible that several big cities (with more than 1 million citizens) in USA are using accounting packages with only **10 digit** accounting numbers (at this point a little math for refreshing: 10 digits give you possible numbers up to 10^{10} , i.e. 100 million possibilities; however if you have alphanumerical **or** numerical values in a 24 character field you will get 36^{24} , a such an incredible amount of possibilities that our calculator gave up). Now our question: Can 100 million account numbers (active, inactive, posting, summary) be enough for a country with 750000 people? (DZ)