PRENTICE COMPUTER CENTRE

UNIVERSITY OF QUEENSLAND, ST. LUCIA, QUEENSLAND, AUSTRALIA 4067.

NEWSLETTER

N-312   April 1987

CONTENTS

Authorised by the Director of the Computer Centre

COMPUTING SUPPORT CENTRE FOR UNIVERSITY OF QUEENSLAND AND GRIFFITH UNIVERSITY

Phone Numbers for Enquiries

External users may dial direct by prefixing these extension numbers with 377.

Principal Service Centres	Extension
Contract Programming & Feasibility Studies	4281
System Status Automatic Answering	3101
General Enquiries & Course Enrolments	3018

Dial-up modem numbers	
	(300 baud) 377 2977
	(1200 baud) 377 2922
	(1200/75 baud) 377 2655

Service Advice and Problem Reporting	Mail Box	Extension
Central Services HELP Desk (0830-1630)	CCHELP	3025
Program Librarian		3943
Hardware Fault Reporting		3938
Accounts (0830-1630)		2188
Operations		3212
Data Entry		3967

Engineering and Maintenance

	Mail Box	Extension
Development and Communications	ENGIN	4307

Management

	Extension
Director	2189
Deputy Director	3017
Manager, Applications Development	4281
Manager, Central Computing Facilities	4017
Manager, Distributed Computing	3391
Manager, Engineering and Communications Services	3288
Manager, Finance and Administration	3963
Manager, User Liaison	3944

Griffith University

External users may dial direct by prefixing these extension numbers with 275.

	Extension
Consulting	7796
Computer Services	7560
Computing Co-ordinator	7561

1.0 Newsletter Summary

- The IBM 4250 Printer uses electro-erosion technology to produce crisp images for subsequent reproduction of documents. This newsletter was produced using this printer. A detailed article is included.

- Some staff changes in the Centre are brought to your attention.

- The Centre is conducting a review of its services with a view to ensuring they meet user requirements. Arrangements have been made through the Pro-Vice-Chancellors for Geoff Dengate to visit Departments. Geoff is seeking input from users.

- A document showing the results of a user survey of VAX packages is available at the Operations Station in the Hawken Building.

- The Personal Computer Support Group has a copy, for perusal, of "The Australian Apple Educational Software Directory 1986/87".

- Details are provided of DECNET-DOS for IBM personal computers.

- A new version of SAS is available on the IBM VM system.

- The plotting software available on the central mainframe systems is summarised. The point of origin on the HP7585 plotters will be shifted. There is a new plot command for the VAX system and a new version of VUEPLT for the VAX.

- Bryan Claire suggests that users should check system notices.

- Details of PCC courses for staff and post-graduate students are provided and the Library has a number of TTY43 terminals for sale.

Director
extension 2189

2.0 PCC Organisation Changes

A number of senior staff changes were made in the Centre from the start of this year.

Mr. Anthony Bird (telephone extension 3391) has been appointed manager of the Distributed Computing Group where he has overall management responsibility for software support and hardware maintenance of departmental computing equipment. Anthony is placing special emphasis on the development of new Personal Computer services.

Ms. Sarah Barry (telephone extension 4281) has been appointed manager of the Application Development Group to replace Anthony. Users should be aware that this group can handle applications work on a wide range of machines and software systems. Many applications for personal computers, including a large number on dBASE III, have been developed. Sarah is improving the strengths of this group in some of the newer application technologies (e.g. relational data base, 4GL's, expert systems etc.). The applications development group will provide up to one man week of time, at no charge, to assist with feasibility studies of the use of computers for research projects.

Mr. Geoffrey Dengate (telephone extension 3944) has been seconded to work with the Deputy Director for 12 months to review services provided by the Centre. A criticism of the Centre is that it is sometimes seen to be remote from its clients and that it is not providing all of the services which clients require. The Centre needs to redress this situation. Geoff has arranged to meet a broad spectrum of our users and will try to resolve immediate problems as well as obtain input to assist with the planning of our future services. Geoff would like to talk to anyone with criticism (or constructive suggestions) of the Centre's services.

Mr. Graham Rees (telephone extension 3288) remains the manager of Engineering and Communications with responsibility for the development and maintenance of the communications network and for special engineering services such as the development of interfaces to instrumentation and printed circuit board design services.

Mr. Allan Woodland (telephone extension 4017) continues as manager of Central Computing Facilities responsible for the operation of and software services on the IBM, VAX, KL10 and Computervision mainframe computers. Allan's section has responsibility for the distribution and maintenance of all VAX/VMS software on departmental machines as well as central systems.

Mr. Denis Antonellie remains the manager of the Finance and Administration section of the Centre. Our administrative systems have not kept pace with the growth in volume and range of services. Now that decisions have been made on central administration financial packages, it is proposed to review the Centre's administrative procedures. Denis would be pleased to hear of any suggestions that users may have to improve our office systems.

Ms. Sandra Campbell, the Centre's Operations Manager since March 1982, has resigned to take up a new position in Canberra. Sandra has made an outstanding contribution to the effectiveness of the Centre's computer operations. I am sure our users join with the staff in congratulating her on her new appointment and in wishing her every success for the future.

Mr. David Molloy (telephone extension 3471) is acting Operations Manager.

Director
extension 2189

3.0   Review of Services

I am sure many of our users have often said to themselves or their colleagues: "I wish the Prentice Computer Centre would .....".

Now is your chance to tell *us*. All users, and indeed non-users, are invited to prepare and forward to me a wish-list of items on any topic relevant to the PCC and its role in providing computing support for the University of Queensland and Griffith University.

To determine the services you require, and correct the problems you currently encounter dealing with us, we need your feedback. I hope you will take a few minutes to compile a brief (or exhaustive) wish-list and send it to me via the internal mail, or electronic mail to:

> [10,561] on the KL-10
> or CCDENGATE on the VAX 11/780
> or CCGEOFF on the IBM 3083E.

Alternatively, please feel free to come and personally discuss your ideas with me.

Geoffrey Dengate
extension 3944

4.0   IBM 4250 Printer

The IBM 4250 Printer offers good-quality printing at an affordable price. Its electro-erosion technology creates an extremely crisp image that can be used as a camera-ready master for subsequent reproduction of documents, or it can be inserted into a copier or direct-plate maker.

In addition, it prints text in a wide selection of typefaces and sizes to accommodate various layout needs.

Highlights

- The IBM 4250's print density of 600 x 600 dots or pels (picture elements) per square inch enables sharp, good-quality reproduction of both text and graphics.

- Document Composition Facility (DCF) and Graphical Data Display Manager (GDDM) are the programs used to generate composed pages that can contain both text and graphics.

- The 4250's resolution enables document printing using true proportionally spaced typefaces in various styles and sizes.

Typography highlights: The IBM 4250 Printer enables use of many typeface families in a range of styles and sizes. The result is clear, readable documents that can be used to meet a wide variety of communications requirements.

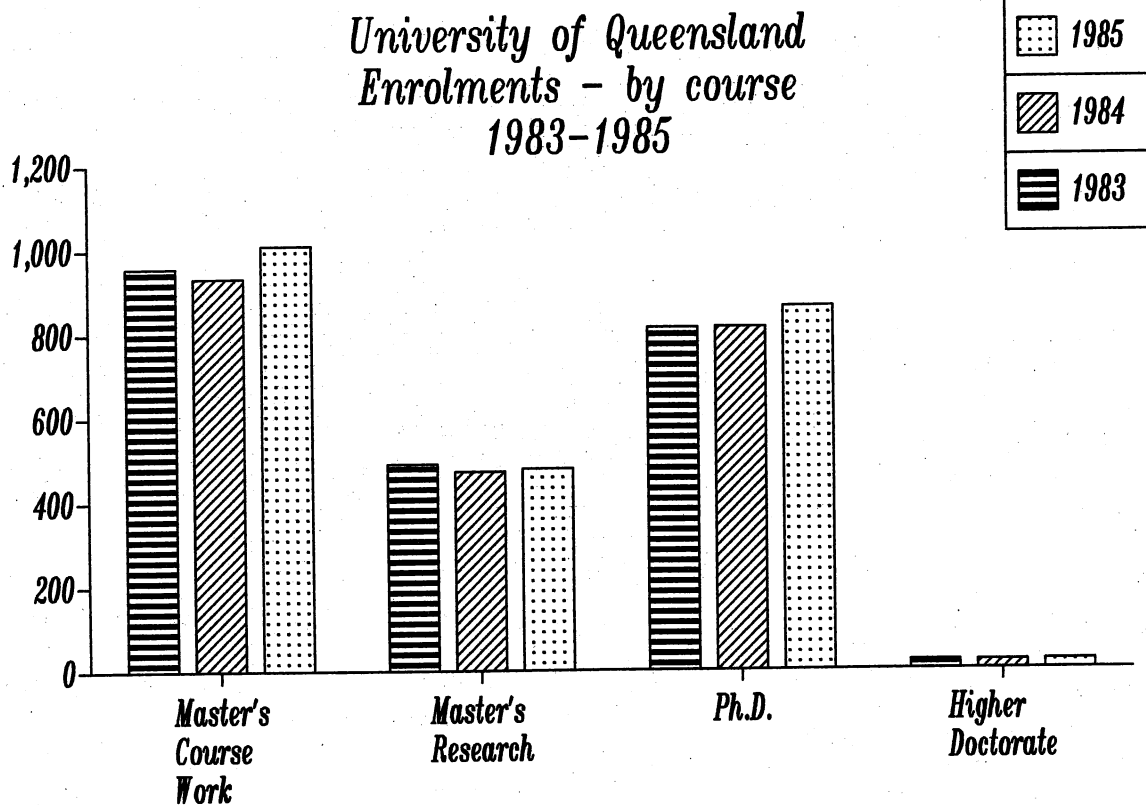Key features of the IBM 4250's typography offerings are:

- A set of widely used typeface families, including ITC Avant Garde Gothic, ITC Souvenir, Monotype Baskerville, Monotype Bodoni, Monotype Century, Monotype Century Schoolbook, Monotype Garamond, Monotype Rockwell, Monotype Times New Roman, Candida, Excelsior and Typewriter/APL/Pi Specials.

- Each family contains many of its popular typefaces.

- An international character set of 184 characters in 11 languages, including Danish, Dutch, English, Finnish, French, German, Italian, Norwegian, Portuguese, Spanish and Swedish.

- Four widely used typeface families are extended by an additional 66 characters which allow support of 8 further languages: Catalan, Czech, Hungarian, Icelandic, Polish, Romanian, Serbo-Croatian, Slovak and Turkish.

- Five Hebrew typeface families (Peninim, Alachsoni, Levenim, Oron and Hadassah) provide for ten typefaces offering 47 Hebrew characters to be used in combination with the Latin characters of four typeface families with their respective character set.

- Three Cyrillic typeface families, in four typefaces each, provide for 72 or 78 Cyrillic characters to support the following languages: Bulgarian, Ukrainian, Byelorussian, Russian, Macedonian and Serbian.

- All typefaces except Typewriter and Pi Specials supplied in 17 sizes from 6 points (1/12 inch) to 72 points (1 inch).

- Typewriter typefaces contain three popular mono-spaced typewriter designs - IBM Prestige Elite, IBM Letter Gothic and IBM Courier.

In addition, Pi Specials contain a set of 178 special characters in four typefaces (Serif, Sans Serif, Medium and Bold) and four sizes. A 132 character APL set is also available in Light Italic.

This newsletter was produced on the 4250 using the "Monotype Times New Roman" font which is just one of 33 available on UQVM.

Details regarding usage and prices for the 4250 will be included in the next issue of the PCC Newsletter.

An Example of Graphical output:

University of Queensland
Enrolments – by course
1983–1985

A sample of the typefaces available on UQVM:

The following is in "Monotype Baskerville" (italic) at 10 points.

The invention of printing from movable type was one of the chief events affecting the history of European civilisation. The task of duplicating texts without variance was impossible before Gutenberg equipped the scholar with the accuracy of type.

The following is in "Monotype New Berolina" (italic) at 14 points.

The invention of printing from movable type was one of the chief events affecting the history of European civilisation. The task of duplicating texts without variance was impossible before Gutenberg equipped the scholar with the accuracy of type.

The following is in "Monotype Garamond" at 18 points.

The invention of printing from movable type was one of the chief events affecting the history of European civilisation. The task of duplicating texts without variance was impossible before Gutenberg equipped the scholar with the accuracy of type.

4

The following is in "Monotype Old English Text" at 20 points.

The invention of printing from movable type was one of the chief events affecting the history of European civilisation. The task of duplicating texts without variance was impossible before Gutenberg equipped the scholar with the accuracy of type.

Arthur Pool
extension 2952

5.0 Australasian Tertiary Institutions VAX Survey

Recently the Centre received the results of a VAX User survey of various Australasian Tertiary Institutions. The survey was of the packages in use on their systems with details of the version, the cost, the supplier, a rating, the application area and some comments.

For example, the document can provide you with the names of the tertiary institutions using a particular package of interest (e.g. POWERHOUSE, IFPS, etc). These institutions can then be personally approached for detailed information regarding the performance of that package. The results are available for perusal at the Hawken Batch Station.

David Molloy
extension 3471

6.0 Apple Software Directory

We have recently received "The Australian Apple Educational Software Directory 1986/87" which is available for perusal at the Personal Computer Support Group. This directory contains information about a wide variety of educational software for both the Apple II family and the Macintosh. While the majority of software is relevant to primary and secondary schools only, there may be some of interest to academics in the University environment.

Chris Barker
extension 4233

7.0 Beginners Guide to the DEC-10 Mail System

A beginners guide to the DEC-10 mail system is available on line as DOC:INTMAI.DOC and may be printed or typed by specifying that file.

Arthur Hartwig
extension 4079

8.0 DECnet on Personal Computers

For some time now a version of DECnet has been available for IBM as well as DEC Rainbow personal computers. It operates over a serial asynchronous line at speeds up to 9600 baud or an Ethernet using either a 3-Com or MICOM-Interlan Ethernet controller. While DECnet-DOS is not supported for compatible PCs it is known to run on some compatibles but obviously can't be guaranteed to run on them all.

DECnet-DOS offers a number of features:

1. Program to Program communication - a PC program can communicate with a program running on another DECnet machine connected to the network.

2. File transfers between the PC and another DECnet machine can be initiated from either end.

3. Remote File access - PC programs can access files on other DECnet systems in the same way they would access a local (to the PC) file.

4. Remote login - the PC user can run a utility allowing login on other DECnet systems.

5. Mail can be sent from the DECnet-DOS system to another DECnet system which supports network mail.

6. Remote Network Devices - The PC user can have references to a PC disk redirected to a disk on another DECnet system so giving the PC the impression it has much larger disk space available than it really has. Up to four such disks of capacity up to 32 Mbytes can be opened simultaneously. Also the PC printer can be redirected to the default system printer on another DECnet node.

DECnet-DOS is a memory resident program occupying 172 Kbytes. Therefore a PC of at least 320K memory is required. Disk storage of 800 Kbytes is required for storing all the component files of DECnet-DOS. On tests run by the Computer Centre, a network file transfer from DECnet-DOS to the VAX-11/780 over a 9600 baud line took 380 seconds to transfer a 251 Kbyte file. This yields a line utilisation of about 68% of the possible data throughput. The cost of the transfer is only a few cents.

DECnet-DOS and KERMIT share some facilities (e.g. file transfer). DECnet-DOS offers a much richer set of facilities than KERMIT but KERMIT operates on a much wider range of machines.

Further information about DECnet-DOS is available from Arthur Hartwig.

Arthur Hartwig
extension 4079

9.0 SAS on the UQVM System

The old version of SAS (82.3) which is accessed via the "SAS82" command is no longer supported by the SAS Institute. Consequently any problems arising with this version will not be corrected by SAS. Users are therefore urged to migrate to the newer version of SAS (5.08) which is accessed via the "SAS" command.

Any problems migrating to SAS version 5.08 should be reported to the Help desk.

Noela Meier
extension 4287

10.0 Printing Large Files on the UQVM line printer

Files with more than 5000 lines are not automatically printed on the IBM line printer. Often these large print files are generated by mistake. The system checks the size of the files in order to save a user the cost of printing large unwanted files. Users can however issue commands to either print individual large files or to bypass the size check.

Additional printing information is available on the UQVM system by entering the command "INFO PRINTING".

Noela Meier
extension 4287

11.0 Plotting Software, and Introducing PLOT79

Plot facilities on the University of Queensland central mainframes currently consist of the following five software systems:

- CALF77

- PLOT10 TCS

- Tektronix GKS

- SAS/GRAPH

- PLOT79

CALF77 is a library of elementary plotting functions and has been with us a long time. It has been modified from the original CALCOMP plotting routines, but now has extra functionality and interfaces to other libraries to allow support for other types of hardware.

It has been documented in the locally produced manual known as MNT-11. This is currently undergoing revision, but the current draft is available as files UQKL10::DOC:MNT11.MEM (or UQKL10::DOC:MNT11.LPT for printing on printers which do not have an underline character, e.g. the printer at the Griffith University Batch Station) and UQVAX::SYS$DOC:MNT11.DOC. CALF77 is currently available on all the central mainframes.

The CALF77 plotting package supports the following plotting devices:

- HP7475

- HP7585

- Tektronix 4010/4014 (not on the IBM host UQVM)

- Tektronix 4662 plotter (not on the IBM host UQVM)

- GIGI (REGIS devices) (not on the IBM host UQVM)

PLOT10 TCS (Terminal Control System) is a library of graphics routines for controlling Tektronix graphics terminals. It is available on nodes UQKL10 and UQVAX, and is documented in the publication "PLOT10 Terminal Control System User's Guide".

Tektronix GKS (Graphics Kernel System) is an international standard describing high-level graphics functions. It allows sophisticated plotting in a device independent manner, although at this stage in 2D only. It is fully documented in the manual "PLOT10 Graphical Kernel System (GKS)" produced by Tektronix Inc. It is only available on UQVAX at this stage.

Tektronix GKS currently supports a range of Tektronix graphics devices and DEC's VT241 terminals (in Tektronix 4014 mode).

SAS/GRAPH software is a graphics system for displaying data in the form of colour plots, charts, maps and slides on CRTs and hardcopy devices. SAS/GRAPH programs are SAS procedures, which require only a few statements to produce results. SAS Software is a data analysis package which is currently only available on the IBM host UQVM. SAS/GRAPH is fully documented in the publication "SAS/GRAPH User's Guide", produced by SAS Institute Inc.

PLOT79 is a new addition to the graphics software available on the central mainframes. It is a very large software package for support of passive computer graphics, based partly on the 1979 SIGGRAPH CORE Graphics System, and provides a substantial amount of additional support software. It is distinguished by its high degree of portability, having been installed at over 160 computing installations in 24 countries, and complete graphics device independence. It is available on nodes UQVAX and UQADM, and we plan to install it on UQVM when time permits.

The VAX VMS implementation of PLOT79 provides the user with a choice at present of about a dozen different output devices. User programs can be linked with either the shareable or non-shareable libraries. Shareable libraries should be the normal choice, because:

- linking is faster

- disk space for the .EXE file is drastically reduced

- the output device can be chosen at runtime

- bug corrections applied to the library will automatically be in effect the next time the user program is run, without it having to be re-linked

Further information on PLOT79 is available within the normal VMS HELP facility. Just type

```
     $ HELP  PLOTTING
 or
     $ HELP  PLOT79
```

The PLOT79 User's Guide is available in machine readable form as file UQVAX::SYS$DOC:PLOT79.DOC. Also check the HELP text on the PLOT79 application programs GRAPH, GRAPH3D and PIECHT.

Bryan Claire
extension 4078

12.0   Point of Origin on the HP7585 Plotter

As a result of trying to cope with new plotting packages, we have found it necessary to move the origin point on the Centre's HP7585 plotter when under the control of node UQVAX. The end result will be that the origin will no longer be under the pinch roller, so plots from new packages will not have a smudged area along one edge.

UQVAX and UQADM users of CALF77 who already make allowances for the current location of the origin will find that their plots move 6.0mm away from the edge held by the pinch wheel (left or lower edge depending on size of paper and/or rotation of paper). Users of plotting packages on node UQVM will also notice the change because their plots are transferred to node UQVAX for plotting.

If this change has any adverse effects on users' plots, please let us know if assistance is needed to resolve the problems. We apologise for any inconvenience that this may cause.

The change will take effect within 2 weeks of this newsletter becoming available. Final notice will be in the system notices on UQVAX, UQADM and UQVM.

Bryan Claire
extension 4078

13.0   New PLOT Command on UQVAX and UQADM

After several years of queuing plots by using a command file disguised as the PLOT command, we have finally implemented a proper PLOT command which takes qualifiers in the normal VMS manner. Please type $ HELP PLOT for a list of the qualifiers supported.

Bryan Claire
extension 4078

14.0   New Version of VUEPLT

A new version of VUEPLT is available on UQVAX::SYS$UTI: to provide support for PLOT79 plot files. It can now be invoked by the command

    $ PLOT/PREVIEW

An attempt has also been made to improve support for terminal-attached plotters. Please report any problems to the HELP desk.

Bryan Claire
extension 4078

15.0   Systems Notices on UQVAX and UQADM

Users on nodes UQVAX and UQADM are reminded that the current system notices can be displayed by using the command

    $ NOTIce

This command will display the current system notices in the same way that notices are displayed when the user logs in.

If a user is intending to leave a batch job to run overnight or for several days (perhaps across a weekend), it is sometimes useful to check the current notices before leaving the system for the day to make sure that the system status has not changed since logging in. Also use the TIMES command to check attended times.

Bryan Claire
extension 4078

16.0 Information Concerning Courses

The following courses will be offered during the period May-July 17, 1987 (i.e. up till beginning of Semester 2):

May

‡	PC Overview	May 6 1 half-day 9-12am
●	Text facilities on IBM	May 6-7 2 half-days 9-12am each day
●	Conversion to IBM	May 11-13 3 half-days 9-12am each day
‡	Introduction to dBASE III	May 12-14 3 half-days 9am-12am each day
†	Conversion to VAX	May 14-15 2 half-days 9-12am each day
●	Introduction to SQL	May 18-21 4 half-days 1-5pm each day (Note 4 × 4 hour sessions)
‡	Introduction to PC-DOS/MS-DOS	May 19-21 3 half-days 9-12am each day
†	Introduction to VAX	May 25-28 4 half-days 9-12am each day

June

†	SPSS-X	June 1-5 5 half-days 1-4pm each day
‡	Introduction to dBASE III	June 2-4 3 half-days 9-12am each day
●	Introduction to IBM	June 9-12 4 half-days 9-12am each day
●	SCRIPT	June 9-12 4 half-days 1-4pm each day
●	Introduction to SAS	June 15-19 5 half-days 9-12am each day
●	Conversion to IBM	June 16-18 3 half-days 1-4pm each day
†	Conversion to SPSS-X	June 23-24 2 half-days 1-4pm each day
●	Further Features of IBM System	June 25-26 2 half-days 9-12am each day
†	Introduction to DATATRIEVE	June 29-July 3 5 half-days 9-12am each day
†	RUNOFF (DSR)	June 29-July 3 5 half-days 1-4pm each day

July

‡	Introduction to BASIC	July 6-10 5 half-days 9-12am each day
†●	General Graphics* **	July 7-10 4 half-days 9-12am each day
●	Text Facilities on IBM	July 8-9 2 half-days 1-4pm each day
†●	Introduction to FORTRAN**	July 13-17 5 full-days 9-12am + 1-4pm each day
‡	Introduction to PC-DOS/MS-DOS	July 14-16 3 half-days 9-12am each day
‡	Introduction to dBASE III	July 21-23 3 half-days 9-12am each day

●   denotes IBM course
†   denotes VAX course

If marked †● please indicate when enrolling whether you would prefer your course account to be established on the IBM or VAX machine.

‡   denotes PC course.
*   indicates a new course - see Explanatory notes below .
**   please indicate when enrolling which machine (IBM or VAX).

General Notes:

1. As previously stated, it is expected that users attending courses on specific packages (SQL, SAS, SPSS-X, dBASE III, etc) will be familiar with terminal-usage, file-management and editing on the relevant machine (IBM, VAX or PC). Attendance at such short courses without this background provides many problems, as all courses are hands-on. Introductory/conversion courses are given frequently to allow familiarity with the fundamentals *before* attending courses on particular application packages.

2. All courses will be held in the Centre's teaching rooms near the Physics Annexe - the mainframe courses in Course Room 1 and the micro-computer courses in Course Room 2.

3. Staff, kit owners, and post-graduate students are admitted free to courses. The charge is $10.00 per half-day session for other internal users; $17.00 per half-day session for affiliated users; and $37.00 per half-day session for external users.

4. Enrolments for all courses may be made by phoning extension 3018.

Explanatory Notes for Specific Courses:

1. The Course *Conversion to SPSS-X* is designed for those who have worked previously with SPSS and need to know the essential differences between the two packages.

2. *General Graphics* - how to use both the CALCOMP plotting routines within a FORTRAN program and the facilities available within the SAS package. A basic knowledge of either FORTRAN or SAS would be an advantage.

3. *Text Facilities for IBM*- what text-processing facilities (both software packages and output devices, e.g. laser printer) are available for users of the IBM 3083E system.

4. *Further Features of IBM System* - a brief course on aspects of CMS/CP, XEDIT and EXEC-files for those already familiar with the content of, say, the Introductory or Conversion course.

Details on PC courses are contained in Newsletter N311 (December 1986)

Barry Maher
extension 3021

17.0   TTY43 Terminals for Sale

The Library has for sale a number of TTY43 teletype terminals. The age of the terminals varies from 5 to 9 years. These terminals have been fully maintained by the Prentice Computer Centre from the date of acquisition.

The terminals, which are in the Central Library, can be inspected by telephoning Carmel Meiklejohn on extension 3805. Offers should be forwarded to Judy Wilson, Central Library (extension 2153). Closing date for offers is 29.5.87.