

PRENTICE COMPUTER CENTRE

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



NEWSLETTER

N-307

February 1986

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* UNIX is a trademark of AT&T Bell Laboratories.

Authorized 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	3944
System Status Automatic Answering	3101
General Enquiries & Course Enrolments	3018
Dial-up modem numbers	(300 bps) 377 3977
	(1200 bps) 377 2922
	(1200/75 bps) 377 2655

Service Advice & Problem Reporting	Mail Box	Extension
Central Services HELP Desk (0830-1630)	CCHELP	3025
Program Librarian		3943
Distributed Computing and Network HELP Desk	CCDCHELP	3938
Accounts (0830-1630)		2188
Operations		3212

Engineering and Maintenance

Development and communications ENGIN

Management

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

Griffith University

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

Consulting	7796
Computer Services	7560
Computing Co-ordinator	7561

1. Newsletter Summary

- Senate approved the recommendation contained in the Centre's 1986 Budget that charges should not be increased for use of central computer facilities in 1986. Rather we have accepted that grade of service will be reduced and six positions in our Operations group will be kept vacant unless workload and revenue is higher than budget estimates. We will, of course, continue to do our best to provide a friendly and helpful service but I would be very grateful to receive the co-operation of users by recognising our resource limitations.
- Those users who transfer files from the IBM 3083E to the VAX 11/780 should accept delivery within a week, otherwise their transferred files will be deleted.
- With our current resources, it may at times be difficult for us to complete small operational jobs (e.g. magnetic tape conversions) in less than a week.
- A UNIX system (v release 2) is now available on the IBM system. The UNIX system has been established initially for UNIX projects which may require higher levels of processing power than that available on local computers.
- The plotting routines which have been available for Fortran 77 are now available for PASCAL.
- There is a new version of Fortran now available on the KL which will increase compatibility with Fortran on the VAX 11/780 and on the IBM 3083E.
- Simscript, a language designed for simulation, is now available on the IBM 3083E.
- Advice is provided of courses available to staff and post-graduate students.

Director
extension 2189

2. Central Computing Facilities – Allan Woodland, ext. 4017

Operations – Sandra Campbell, ext. 3471
Systems Software & Extensions – Ian Burgess, ext. 4074

2.1 Removal of Files from IBM to VAX

Owing to limited system resources, clients are advised that files transferred from the IBM to the VAX will be deleted from the VAX transit area if users do not accept delivery within one week.

Sandra Campbell
extension 3471

2.2 Small Job Requisitions (Operations)

We will attempt to complete all Small Job Requests for operations services (e.g. magnetic tape conversions) as quickly as possible; however, due to limited re-

sources, individual jobs may take up to a week.

Requests are attended to in order of receipt so, depending on the number of pending jobs and other workloads, a completion time of less than a week is not always possible.

Any enquiries about this service should be directed to the Help Desk, x3025.

Lee MacDonald
extension 3025

2.3 UNIX(*) ON IBM

A UNIX(*) environment using Amdahl's UTS/V software is now available on the IBM 3083 (host UQVM). Due to AT&T licensing restrictions, this service is limited to teaching and research.

Languages available include C, PASCAL, FORTRAN, a BASIC like language called BAS and SNOBOL. Most System V release 2 features are provided including the shell layering facility which provides capabilities similar to the C shell job control under Berkeley derivatives of UNIX(*). The Source Code Control System and the standard graphics/statistics packages are provided. The graphics package will drive Tektronics 4010 series and compatible terminals. The standard text processing facilities, NROFF and TROFF, are available, but at this stage, output to the Centre's typesetter is not possible.

Files can be transferred between CMS and UTS, and direct transfers to and from the VAX system should be available shortly.

It is envisaged that this will be of particular interest to users of UNIX(*) who have need of greater memory and/or computing power than that available on their departmental machines. As the concept of "Kit" charging has proved so popular for other IBM use, it will be continued as far as practicable for this facility.

A UTS user will be charged a basic access charge equivalent to the charge for 1.25 Mbytes of memory, that is, \$77.95 per month. When applying for access you should indicate the amount of disk you expect to require as a number of units of 512 Kbytes (the same unit as for SQL DB spaces). Actual usage may be greater or less than that nominated but will be ultimately constrained by the total allocated to the UTS machine and the usage by other UTS users. The Centre will regularly sample and record details of disk usage as a number of units of 512 Kbytes or part thereof. An average for the month will be used to calculate charges at the same rates as for units of SQL dbspace and cylinders of minidisk. It should be noted that for other than large users of disk space, this is a relatively minor component of the total charge. For example:

No. of Units	\$ per month
1	4.50
2	8.65
3	12.52
4	16.18
5	19.66

Charges for paper printed will, of course, be additional and at standard rates. Printing will be restricted to standard stationery and no tape mounts will be possible.

People wishing to use this facility should contact Accounts in the Hawken Service Area (extension 2188).

Alan Coulter
extension 2189

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2.4 Pascal and CALF77 on the VAX

It is now possible to make calls to the CALF77 plot library from within Pascal programs on the VAX by taking advantage of the 'INHERIT' feature found in VAX Pascal which allows a library of external CONST, VAR, TYPE, PROCEDURE and FUNCTION definitions to be included in your code.

You must insert the line:

```
[INHERIT ('SYS$SHARE:CALF77')]
```

immediately before the PROGRAM statement, after which normal Pascal procedure calls may be made to use the individual routines.

Some minor changes to the CALF77 routines were necessary for compatibility with Pascal, for example, the routine LABEL has been renamed LABLN because LABEL is Pascal reserved word. Other such changes are explained in the file PAS-CALF.DOC which can be found on SYS\$DOC. These changes have no impact on the routines when called from FORTRAN programs; the original procedure names are still available as before.

To compile and link a graphics application written in Pascal on UQVAX, you should use the following commands:

```
$PASCAL prog  
$LINK prog SYS$LIBRARY:CALF77/LIB
```

Barry Costin
extension 3022

2.5 New Version of the Fortran Compiler

A new version of the Fortran compiler (Fortran-10 version 10) will be placed on NEW: on the KL on the 1-APR-86. The major thrust of this release is to increase compatibility with VAX-Fortran and to provide a tool to aid in conversion between Fortran-10, VAX-Fortran and standard Fortran. VS Fortran on the IBM conforms to the standard. Details of the major differences are given below.

Fortran-10 version 10 is validated at the full level of the Fortran-77 standard. The major new features include:

- The INQUIRE statement.
- A compatibility flagger which optionally detects extensions to the Fortran-77 standard, and incompatibilities with the VAX-11 Fortran currently running on the VAX under VMS.
- Support of unlabelled industry-standard magnetic tape.
- Comments may be interspersed with continuation lines.
- G-Floating is supported for double precision real numbers.
- FORDDT has a PAUSE ON ERROR command which will cause a trap to FORDDT whenever a runtime error is encountered.

- New bit manipulation functions for doing logical operations using functions compatible with other implementations of Fortran.

In addition, changes have been made to features which exist in V7:

- The global optimizer may now be used even though there is character data present in the program.
- The INCLUDE statement has two new options, and may be nested.
- Certain I/O statements have been changed in order to be more compatible with the VAX/VMS Fortran.
- The IMPLICIT NONE statement has been added.
- The PARAMETER statement may contain expressions involving the multiplication, division and exponentiation of constants of type COMPLEX.
- Values in DATA statements may be expressed as Octal or Hexadecimal constants in accordance with MIL-STD-1753.

The Fortran language and this implementation are described in the reference manual:

TOPS-10/20 Fortran Language Manual – AA-N383B-TK

There is also a booklet that provides quick reference information about Fortran-10/20:

TOPS-10/20 Fortran Pocket Guide – AA-P529B-TK

Similarities and differences between Fortran-10/20 and VAX/VMS Fortran are described in:

Fortran-10/20 and VAX Fortran Compatibility Manual – AA-Y868B-TK

Users are advised to familiarize themselves with the relevant documentation before using the new version. Further details of the new version may be obtained by printing the file FORTRA.DOC on DOC. Any enquiries concerning this new version can be directed to the Help Desk on ext. 3025.

Ian Burgess
extension 4074

2.6 Recent Changes Regarding Files Transferred from UQVM to UQVAX::

UQVAX:: users may have noticed recently that there have been some changes concerning files received from the IBM system. There have been two particular changes worth noting. These are evident at login time, and when actually “receiving” files.

2.6.1 Lifetime of Files on JAN__FILES:

At login time, the JAN__FILES: area is now scanned for files awaiting delivery to the user. This has become necessary because we now find that some users, either through negligence or design, are leaving large numbers of files on the JAN__FILES: area. It has been stated many times that old files may be removed from the JAN__FILES: area. We hope that this new procedure will help users to clean up their own files, because a life time of one week will be automatically enforced, commencing on 1 April, 1986.

2.6.2 Version Numbers of Files Processed by IBMRCV

We have been concerned for some time that the sequencing of files arriving in JAN__FILES: can get confusing if files of the same name and extension already exist in the directory in which the files are being "received".

The new procedure extends this by firstly warning the user if a file of the same name and extension exists in the current directory. Then (if such a file exists), it takes the highest existing version number and adds it to the version number of the file in JAN__FILES: to form the default version number. In this way, files which adopt the offered default specification should remain relatively well sequenced, and not run foul of any file version limits which might prevent them being received at all.

Please report any problems on extension 3025, or by sending mail to CCHELP.

Bryan Claire
extension 4078

2.7 Simscript II.5 – A Powerful New Language for Simulation

(a licenced product of C.A.C.I., California)

Simscript II.5, a language designed for simulation, is now available on the IBM 3083 UQVM system.

All language constructs are designed especially for simulation (e.g. processes, resources, events, attributes, entities and sets). These, along with all the mathematical and statistical functions most useful in simulation, are provided so that programs resemble the model they implement, rather than the machine they run on. Thus, programs are readable and easily written.

Simscript II.5 also includes sophisticated report generation and error detection facilities.

Simscript II.5 is implemented as a normal programming language under CMS. Programs can be developed under XEDIT and then compiled by

SIMCOMP progname (options
and run by

SIMCON (*sets Filedefs and TXTLIBs—modify as you like*)

For further information and compiler options, type INFO SIMSCRIP.

Neil Skinner
extension 2951

3. Applications Development – Sarah Barry, ext. 3944

3.1 Information Concerning Courses

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

The following courses will be offered during the period March – July 1986:

March

Introduction to PDP-10

March 17-20

4 half days 9-12am each day

Typesetting	March 24-27 4 half days 9-12am each day
April	
RUNOFF	April 1-4 4 half days 1-4pm each day
SAS	April 7-11 5 half days 9-12am each day
SQL	April 14-18 5 half days 1-4pm each day
Conversion to IBM	April 22-24 3 half days 9-12am each day
SPSS	April 28-May 2 5 half days 9am-12.30pm each day
May	
SCRIPT	May 6-9 4 half days 1-4.30pm each day
Introduction to IBM	May 12-15 4 half days 9-12am each day
Introduction to PDP-10	May 19-22 4 half days 1-4pm each day
Conversion to VAX	May 27 1 full day 9-12am + 1-4pm
Using PC on the Network	May 29 1 half day 9-12am
June	
Elementary programming in BASIC	June 2-6 5 half days 9-12am each day
Introduction to PDP-10	June 10-13 4 half days 9-12am each day
STATPACK	June 11-12 2 half days 2-4pm each day
Conversion to IBM	June 16-18 3 half days 9-12am each day
1022	June 16-20 5 half days 1-4pm each day
Introduction to IBM	June 23-26 4 half days 9-12am each day
SPSS	June 23-27 5 half days 1-4.30pm each day
RUNOFF	June 30-July 4 5 half days 9-12am each day
SAS	June 30-July 4 5 half days 1-4pm each day

July

Elementary programming
in FORTRAN

July 7-11
5 full days 9-12am + 1-4pm each day

SQL

July 14-18
5 half days 1-4pm each day

General Notes:

1. Intending users of the PDP-10 system must be familiar with the content of the course *Introduction to PDP-10* (i.e. terminal usage, file-management, editing) before attending other PDP-10 courses.
2. In corresponding fashion, for the IBM system, users should have attended either *Conversion to IBM* (for previous PDP-10 users) or *Introduction to IBM* (for completely new users) before attending other IBM courses.
3. Courses held at St Lucia (with the exception of CAD/CAM courses) are conducted in the Computer Centre's teaching area near the Physics Annex. Courses designated (GU) are held in Room 1.49, East Wing, SIA Building at Griffith University.
4. Staff and post-graduate students are admitted free to courses. The charge for internal users is \$10.00 per half day; \$17.00 per half day for affiliated users; and \$37.00 per half day for external persons.
5. Enrolments for all courses may be made by phoning ext. 3018.

Barry Maher
extension 3021

