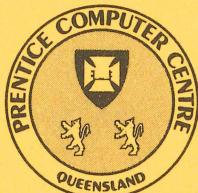


# PRENTICE COMPUTER CENTRE

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



## NEWSLETTER

N-296

January 1985

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Authorized by the Director of the Computer Centre

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For prices on microcomputers, terminals, line charges, computer bits and pieces, type HELP PRICES on your terminal. This will provide appropriate menus.

## **1. Newsletter Summary**

As previously advertised the KA system was decommissioned at the end of last year. The original KA-10 machine, the first time-sharing computer in Queensland, was installed at the University in 1968 and provided the main University computing service until 1977 when the first KL-10 was installed. The decommissioning of the KA-10 marks the end of an era of computing at the University.

- There have been a number of developments and changes in our communications services:
  - many countries can now be addressed by the MIDAS link,
  - reduced charges have been implemented for MIDAS,
  - the OTC MINERVA message system is now accessible via the AUSTPAC gateway; users must arrange their own accounts and sign-on's with OTC,
  - a new version of the DEC-10 Network File Transfer utility has been released, and
  - users are invited to comment on proposals for a new gateway to CSIRONET.
- For the start of the year we bring to your attention the rules for use of the Centre's services and problems of maintaining security. We ask that you pass this information to your students.
- Details are given of EVALX, an interactive version of the EVAL program for marking multichoice tests, and new versions of the NAG library of routines.
- Problems of file security and back-up on the IBM 3083 are discussed and users are advised NOT to use the spool area or T-disk for file storage.
- Increased disk capacity is now installed on the VAX 11/780 requiring some rearrangement of user directories, and the VAX maintenance schedule is being changed to provide longer periods of continuous running.
- Finally details of courses scheduled to May are given.

As all KL-10 users are no doubt aware, that machine was plagued with reliability problems for the first part of the New Year. This was the result of a lightening strike on 29-12-84. All the problems now appear to be corrected and the KL-10 has run continuously from 18-1-85 to the time of writing (28-1-85) without hardware error – a situation we will endeavour to maintain. We appreciate the frustration this situation caused our users, and thank those of you whose forebearance and co-operation assisted us in scheduling our repair work.

Deputy Director  
extension 3017

## **2. Engineering & Communications Services, – G. Rees, ext. 3288**

### **2.1 Overseas Countries Accessible through AUSTPAC**

Along with the notice of revised MIDAS charges mentioned elsewhere in this newsletter OTC have supplied a list of public data networks accessible through MIDAS. The list does not include all countries with X.25 public data networks (for

example, Spain and Israel both have public X.25 networks not accessible through MIDAS and, indeed, the Centre's AUSTRALIAN gateway has accepted calls from Israel).

Country	Networks
AUSTRIA	Radio-Austria, DATEX-P
BELGIUM	DCS
CANADA	TELEGLOBE, DATAPAC, INFOSWITCH
FINLAND	DATAPAK
FRANCE	TRANSPAC, NTI
GERMANY	DATEX-P
HONG KONG	IDAS, DAS
JAPAN	DDX-P, VENUS-P
LUXEMBOURG	LUXPAC
NEW ZEALAND	PACNET
NORWAY	NORPAK
SINGAPORE	TELEPAC
SOUTH AFRICA	SAPONET
SWEDEN	TELEPAK
SWITZERLAND	TELEPAC, DATALINK
UNITED KINGDOM	IPSS, PSS
USA	ITT, WUI, TYMNET, TELENET, RCA, TRT, UNINET, AUTONET, ALASKANET

Arthur Hartwig  
extension 4079

## 2.2 Significant Reductions in Call Charges to Overseas Countries

The Overseas Telecommunications Commission (OTC) announced significant changes in tariffs for X.25 public network calls to overseas countries. The tariffs consist of two components:

- a call duration charge which has been reduced from \$0.20 per minute to \$0.13 per minute,
- a data volume charge which has been changed from \$0.60 per kilo character to \$0.11 per 10 segments.

The main result of the changes will be significant reductions in charges for "bulk" traffic such as file and electronic mail transfer. Charges for interactive sessions may be reduced or even increased. The change depends on the nature of the traffic because a segment (the charging unit for data volume) is from 1 to 64 characters. The networks operate on packets of variable size and each packet contains a segment for each 64 characters or part thereof of data. Thus, in an interactive session a response Y<cr> containing two characters of data is charged as one segment.

Savings on charges for file transfers can be significant. Suppose a 64,000 character file is sent over the network in such a way that all packets consist of full segments, then the data volume charge is for 1,000 segments, i.e. \$11.00. Under the old tariff the charge was \$38.40.

Smaller savings are also available because the chargeable units were minutes and kilocharacters, whereas under the new tariffs the chargeable units are 6 seconds call duration (1.3¢) and segments (11¢).

As from Monday 3 December 1984 the charges levied by AUSPAC, the Computer Centre's gateway to AUSTRALIA, have been according to the new OTC tariffs.

Arthur Hartwig  
extension 4079

### 2.3 Access to MINERVA through AUSTRALIA Gateway

It has been possible to access the MINERVA message system from the AUSTRALIA gateway for some time. (MINERVA is a computer based message system run by the Overseas Telecommunications Commission. It has links to similar systems in a number of overseas countries).

The recommended techniques are as follows:

- (a) for users with terminal access to the MICOM circuit switch:
  1. select host UQKL10
  2. type the command SET HOST AUSPAC to reconnect your terminal to the gateway computer to the AUSTRALIA network
  3. type the command CALL MINERVA
- (b) for users with terminals connected to a DECNET node in the University network:
  1. first log in on your DECNET system
  2. type the command RTX AUSPAC (if a VAX/VMS user) or RXT AUSPAC (if a RSX-11/M user) to create a session on the gateway computer to the AUSTRALIA network
  3. type the command CALL MINERVA

Samples of the two dialogues follow.

#### Access to Minerva through the MICOM

WELCOME TO "UQNET" MICOM CIRCUIT SWITCH

SELECT HOST uqkl10

GO

Connecting to UQKL10

Prentice Dual KL 701A#46 14:16:49 TTY37 system 2236/643

Connected to Node DN87SC(12) Line # 46

Please LOGIN or ATTACH

.set host auspac

University of Queensland Gateway to the world

Node AUSPAC(22) V10(157/0) — 19-Oct-84

[To return to the DECsystem10 type SET HOST UQKL10 <cr>]

[AUSPAC(22)]CMD > call minerva

[AUSPAC(22)]Calling

[AUSPAC(22)]CALL Setup

[BREAK-IN character is ^\ (Default) ]

[INTERRUPT character is ^P (Default) ]

Welcome to Minerva

Please Sign On

>

### Access to MINERVA through a VAX/VMS System

```
$ rtx auspac
%RTXPAD-S, Connection to AUSPAC completed
University of Queensland Gateway to the world
    Node AUSPAC(22) V10(157/0) - 19-Oct-84
[To return to the DECsystem10 type SET HOST UQKL10 <cr>]
[AUSPAC(220]CMD > call minerva
[AUSPAC(22)]Calling
[AUSPAC(22)]CALL Setup
[BREAK-IN character is ^\ (Default) ]
[INTERRUPT character is ^P (Default) ]
Welcome to Minerva
```

Please Sign On

>

Users desiring to use the MINERVA system must establish the necessary accounts with OTC — the Centre is not able to this for you.

Arthur Hartwig  
extension 4079

### 2.4 New Version of DEC-10 Network File Transfer Utility (NFT)

A new version of NFT was recently released on the DEC-10. It is enhanced over the previous version by now supporting the ability to request execution of command files on DECNET nodes. This is possible in two ways:

1. request execution of command file which already exists at the remote node (/SUBMIT)
2. copy a DEC-10 file to the DECnet node and execute it there as a file of commands (/EXECUTE).

Note that the file must contain commands in the form expected by the appropriate command file processor on the DECnet node. These are:

- (a) VAX/VMS systems — the command file is processed by the batch system
- (b) RSX-11M — on multi-user systems the command file is executed at a terminal specified when the MCM task is built (normally TTO:). This terminal must be logged in for the command file to execute and should be logged in under a non-privileged UIC to prevent any network user executing privileged commands.

If, for security reasons, it is desired to prevent network users executing command files, TTO should be logged OUT **OR** the task .CMTS. should not appear in the installed task list.

Arthur Hartwig  
extension 4079

## **2.5 CYBARITE Bulletins from CSIRO's CYBER-76**

CSIRO maintains two "notice" files known as CYBARITE and CYBERFLASH on their CYBER-76 system in Canberra. CYBARITE contains information pertaining to general operational aspects of CSIRONET whilst CYBERFLASH contains urgent operational notices. A copy of these files are held on UQKL10::DOC:. CYBARITE is contained in DOC:CYBARI.DOC and is updated every Thursday at about 11.00am (CSIRO update CYBARITE weekly on Wednesday afternoon). CYBERFLASH is contained in DOC:CYBERF.DOC and is updated after every system reload.

UQNET users who also use CSIRONET facilities may find it more convenient to keep informed of CSIRONET details by inspecting these files.

Bryan Claire  
extension 4078

## **2.6 New CSIRONET Gateway Evaluation**

It has become increasingly obvious that the current gateway between the University's ANF-10 network and CSIRONET needs upgrading. This has occurred for a number of reasons:

- the unreliability of the current file transfer facilities;
- the gateway software is currently configured for the maximum possible ANF-10 and DECnet nodes, and so cannot cope with our expected network growth (may even degrade our network operation); and
- the CYBER-76 (via which all file transfers must currently go) is being decommissioned 31st May, 1985.

In the 3 week period before Christmas, a new type of CSIRONET gateway was evaluated. This gateway has been considered because it already exists (no development effort required and can be installed now), and because a reliable file transfer facility (known as CNFTP) exists allowing file transfers to any cooperating host on CSIRONET.

Of course, there is a catch. It interfaces directly to DECnet instead of to the ANF-10 network. This would mean that anyone wanting to do their CSIRONET work from a terminal connected to UQNET would need to have an account on UQVAX to access CSIRONET. This would also mean that CSIRONET users wanting to access the KL-10 (which has to date been their only possible objective) must also have an account on UQVAX, just so that they could use RTXPAD to "set host" through to the KL-10. File transfers between the KL-10 and CSIRONET will also have to be performed by logging onto the gateway VAX. On the other hand, a much greater variety of machines are accessible to CSIRONET users, and file transfers should be more reliable. This issue is as yet unresolved, as more possibilities are investigated in an attempt to circumvent some of the headaches.

There are two other possibilities for improving interaction between UQNET and CSIRONET, neither of which could be ready by 31st May, 1985. The first of these is a private X.25 connection between our ANF-10/AUSTPAC gateway and CSIRONET, and the second is to rewrite the existing gateway. Both possibilities require implementation of CNFTP on the KL-10.

The X.25 approach is interesting to us as we already have experience with this type of internetworking with AUSTPAC (which CSIRO are not planning to connect to at this stage). It allows easier access to ANF-10 from CSIRONET and hopefully

in the near future will also allow easy access to DECnet. However, there are some problems with supplying interactive access from the RSX hosts on CSIRONET to X.25 connected facilities.

To upgrade the current ANF-10/CSIRONET gateway would require rewriting the current gateway into a high level language for operation on a machine less restrictive in addressing capabilities (probably a microVAX). This option is obviously not favoured.

We invite users of our gateway services (either UQNET users accessing other hosts via CSIRONET or CSIRONET users accessing the UQNET hosts) to submit a summary of their current and expected requirements in this area (e.g. location on the network, what hosts are used, what packages, frequency of use, quantities of file transfers, etc.). Summaries should be sent as soon as possible (preferably by the end of February) via electronic mail to username NETWORKS on the UQKL10 or UQVAX, or via regular mail to Networks Coordinator, Prentice Computer Centre.

Bryan Claire  
extension 4078

### **3. Software Maintenance – Ian Burgess, ext. 4074**

#### **3.1 Non-Conforming Use**

At this time of the year it is appropriate to bring to your attention that unauthorised use of the Centre's machines and facilities will not be tolerated. Those who use these systems improperly are disadvantaging other users. They are breaking the statutes of the University and in some cases may be breaking the criminal law.

Users are expressly directed not to:—

- use another user's PPN, account number or UIC
- allow another person to use your account
- interfere with the work of other users
- access, copy, alter, or destroy files belonging to another user
- use others' programs without permission
- abuse or improperly use hardware or public software
- use your fund allocation for a purpose other than that for which it was granted
- use encryption techniques on information held on files
- knowingly overspend the fund allocations provided to you
- use strategies to avoid charging
- use the machines or facilities in any way contrary to conditions of use which may be advised from time to time by the Director, Prentice Computer Centre or your academic supervisor.

You may hear stories of how some users may have "beaten the system". It is fair to point out that we do monitor the use of the system, and that punitive action has

been taken where necessary. The intention is to give specific warning that computer abuse is unacceptable to the University.

Director  
extension 2189

### **3.2 Security of Your Account**

Despite reminders published in past newsletters, some accounts have proved to have been inadequately protected. Protection is necessary to safeguard your files and your funds. Occasionally improper use of the system has been traced back to accounts used without the owner's consent.

The University does not allow access to its computers to all and sundry; external clients are reputable organisations and are charged competitive commercial rates. There are good reasons for this. Persons who allow others to use their accounts must assume full responsibility for the actions of any such third party.

The main protection the Centre provides for accounts is the password. Although it may seem elementary to take care in choosing a password, several recent security breaches have occurred because the account owners did not do so.

Points to note:

1. Do not give your password to anyone else.
2. Change your password often, especially if using a public terminal.
3. Try to use at least six letters or digits in your password. This makes the task of guessing it, or of reading your fingertips as you type in the password, as hard as possible. Passwords may consist of letters (case not significant), numbers, \$ (dollar sign), and \_ (underscore).
4. Avoid obvious passwords. These include your initials, parts of your name, your spouse's name, your car registration, or your telephone number.
5. Never leave a terminal with a job logged in. This is important even in offices, since sensitive accounts may be in use.
6. Do not leave the terminal until the log out sequence is complete. If there are too many files the log out sequence may abort and leave the job logged in.

To change your logon password:

On the IBM system, log in and then use

DIRM PW

On the KL system, use

.LOGIN ppn/PASSWORD

On the VAX system, log in and then use

\$ SET PASSWORD

For each of the above systems, you will then be prompted to enter both your current password and your new password.

In summary, while we continually monitor the systems to detect abuse, you, the user, must also take care; the ultimate responsibility rests with you.

Ian Burgess  
extension 4074

### **3.3 EVALX – A Cardless Interactive Version of EVAL on the KL-10**

Multi-choice examinations have become popular in recent years. Marking them can easily be automated, and the EVAL program does this, but more importantly it evaluates the test itself and can show which questions were of value in the test and which need to be reconsidered.

EVALI is a version of EVAL which runs interactively and so removes the need to punch a parameter card. Now we have EVALX which goes a step further.

EVALX, an adaptation of the EVAL program, is designed to be used from a terminal with all student responses entered into a file from the examination papers instead of on mark-sense cards.

It is suggested that the examination papers be designed for ease of entry by data entry personnel using QDATA, so that they can be verified at that time. The responses could also be entered by the examiner's staff using any editor. Corrections can be made using an editor of your choice in any case. All parameter information is entered at run time rather than as part of the file.

#### **3.3.1 Running EVALX**

To run EVALX the command .R EVALX is typed when the user's job is in monitor mode. EVALX takes its input from a file on your area called EVAL.DAT or a file of your choice. EVALX then asks the user questions about the test. These are the questions which under the old EVAL program were answered on the parameter card.

#### **3.3.2 Answering the Questions**

The questions will be asked as soon as EVALX is run. Most of the questions require either a Y(yes) or N(no) answer or a numerical quantity. If an illegal numerical quantity is typed it will be necessary to run EVALX again. If an answer other than Y or N is typed the answer is assumed to be NO.

#### **3.3.3 Default Answers**

Answers to YES or NO type questions default to NO. The required mean defaults to 62 and the required standard deviation defaults to 12. The current date is the default for the date. The default for "University or School" is U, which means that the student number is 9 digits, not 3 digits in length. Proper answers are required to all other questions.

#### **3.3.4 Preparing the File for EVALX**

The file consists of one or several sets of student responses, each set preceded by a correct answer line with student number 0, and followed by an end of set line with student number 999999999 (or 999 for schools). Student responses are entered with one line per student of the form:

nnnnnnnnn aaaaaaaaaaaaaaaaaaa

where nnnnnnnnn represents the student number in 9 columns left justified with leading zeros or blanks (3 columns for schools).

EVALX checks that the 10th (or 4th) column is blank.

aaaaa represents the student responses, "A" to "E", for each item in the test. Lower case letters are converted to upper case when the responses are processed.

The maximum number of items is 180, so lines in the data file can be up to 190 characters in length, allowing for university student number and a blank column.

There is a limit of 500 students in a class if sorting is required, otherwise there is no limit.

The output is self explanatory with full descriptions of the tests and how to interpret the results.

### 3.3.5 Example

.R EVALX<cr>

EVALX – a cardless version of EVAL

File of student answers? (default is EVAL.DAT) : EVAL.DAT<cr>

Output to TTY (Y or N) ? :<cr>

School/department(Ctl-Z to exit): Prentice Computer Centre<cr>

Class/Subject : EVALX test<cr>

Name of Test : example<cr>

Date : 6-Jun-84<cr>

Item Analysis(Y or N): Y<cr>

Class distribution(Y or N): y<cr>

Rank order (Y or N) : <cr>

No. of Items : <cr>

A number between 1 and 180, please.

No. of Items : 60<cr>

Mean : <cr>

Standard Deviation : <cr>

Sort into student number order (Y or N):Y<cr>

Responses listing (Y or N) : <cr>

School or University (S or U) : u<cr>

[End of test example ]

School/department(Ctl-Z to exit): ↑Z

END OF EXECUTION

CPU TIME: 1.32 ELAPSED TIME: 4:33.74

Exit

The output is automatically printed unless terminal (TTY) output is requested.

Ian Burgess  
extension 4074

### 3.4 New Version of NAG for the VAX

The Mark 11 version of NAG, a collection of algorithms for the solution of numerical problems, has arrived and will be installed on SYS\$UTI: on 4 March.

The Mark 11 version has an added 35 new primary ('user-callable') routines and one routine has been withdrawn. Users were advised in N-288 to replace the deleted routine D01FAF with the routine D01GBF. Over 50 routines have been revised in Mark 11. Further details on the revised routines can be obtained by typing the command HELP NAGM11.

Several routines are scheduled for withdrawal at Mark 12. The routines and their recommended replacements are listed below. Users are advised to replace these routines as soon as possible to avoid problems when Mark 12 is released.

**Routines scheduled for withdrawal      Recommended replacements**

C06ACF	C06EKF or C06FKF
C06ADF	C06FFF
E04VAF	E04VDF (easy to use) or
E04VBF	E04VCF (comprehensive)
E04WAF	
E04ZAF	E04ZCF
E04ZBF	(not needed as E04WAF will be withdrawn)
H02ABF	E04MBF (easy to use) or
H02ADF	E04NAF (comprehensive)
H01AFF	
H02BAF	
H02AAF	E04NAF

Further details on the new routines are available by typing the command HELP NAGM11.

*Lee MacDonald  
extension 3943*

### **3.5 NAG on the KL**

Because of the imminent arrival of the Mark 11 version of NAG for the KL, the version of NAG currently on NEW: will be moved to STA: on 4 March. The version currently on STA: will be moved to OLD: and the version currently on OLD: will be deleted. For further details on changes between the versions currently on STA: and NEW:, type the command HELP NAGM10.

*Lee MacDonald  
extension 3943*

### **3.6 Outstanding NAG Errors**

The following errors apply to the NAG libraries on the KL and VAX and will apply to the Mark 11 versions of NAG.

<b>Primary Routine Name</b>	<b>Description of Error</b>
E04ABF	Overflow may very occasionally occur in either
E04BBF	E04ABZ or E04BBZ.
E04CGF	
E04DEF	
E04DFF	
E04EBF	
E04FCF	
E04FDF	
E04GBF	
E04GCF	
E04GDF	

E04GEF  
E04HEF  
E04HFF  
E04JAF  
E04JBF  
E04KAF  
E04KBF  
E04KCF  
E04KDF  
E04LAF  
E04LBF  
E04UAF  
E04VAF  
E04VBF  
E04WAF

E04CGF  
E04DEF  
E04JAF  
E04JBF  
E04KAF  
E04KBF  
E04UAF  
E04VAF

The corrections made at Mark 11A to E04JBF (IER-445) and E04KBF (IER-447) have been found to have an unsatisfactory side-effect. On some problems the routines fail to make significant progress after reaching a point close to the solution, and may eventually take an error exit after exceeding the permitted number of function evaluations. This may be observed particularly when calling E04UAF or E04VAF, which in turn make a sequence of calls to E04JBF or E04KBF. Users who encounter this problem are advised to use a version of E04JBF or E04KBF in which the corrections at Mark 11A have been reversed, or even to use the Mark 10 versions of these routines; but should note that the problem corrected at Mark 11A – incorrect approximation of the Hessian at the solution – will then persist. We are trying to find a solution which cures both problems and hope to issue a further correction in a future bulletin.

F02FJF

(BEWARE) Integer overflow could occur if NOITS\*\*2 is larger than the largest representable integer for the machine. This is only likely to be the case on machines with a short integer range. If the overflow is not trapped then subsequent iterates may be incorrect.

F04MBF

Intermediate values of the 2-norm of y may occasionally be sufficiently large to cause floating point overflow when this value is squared.

H01BAF

An array element with a zero subscript could be referenced if no constraints are active at the solution. This is very unlikely to occur.

H02AAF

(BEWARE!) Incorrect solutions may be returned as a result of the routine occasionally choosing the wrong pivot element.

Any problems concerning any of the above changes to the NAG libraries should be directed to me.

Lee MacDonald  
extension 3943

## **4. Operations – Sandra Campbell, ext. 3471**

### **4.1 Use of “T-DISK” and “READER FILES” for File Storage on UQVM**

This item explains the intended use of, and restrictions associated with, the use of T-DISK (Temporary DISK) and the VM Spool area (READER files) for file storage on the UQVM system.

The following considerations apply to the use of T-DISK (Temporary DISK) on the UQVM system:

- \* T-DISK (Temporary Disk) space is intended to be used for those occasions when your normal private disk space quota is not sufficient for some short-term need. For example, you may need to use T-DISK to accomodate some large workfiles during the execution of a program.
- \* T-DISKS are DETACHED from your virtual machine (and all files on them are thus forever lost) when you logoff or if the system is shutdown or fails for any reason.
- \* For data security and privacy reasons, T-DISKS are completely cleaned when they are DETACHED from a user.
- \* T-DISK space is NOT backed up during the regular backup cycles.

From the above, it is clear that T-DISK should only be used for the short-term storage of files, normally during a single terminal session, and even then only for files that can be readily re-created.

The following considerations apply to the use of the VM Spool area for file transfer and storage.

- \* The VM Spool area was originally intended as a holding area for SPOOL files; that is, files awaiting processing by the system unit-record output devices (PRINTER and PUNCH) or files that had been read from the system card reader (READER files).
- \* More recently, the use of the Spool area has been extended to include its use as a storage area for file transfer between users. Electronic mail (NOTE) files and files sent to other users using SENDFILE are examples of such files. Files sent from the UQVAX system using IBMSND are also stored in the spool file area until RECEIVED.
- \* Although the VM Spool file system is normally very reliable, occasionally exceptional circumstances may result in the loss of spool files.
- \* The Spool area is NOT backed up as part of the regular backup cycle, and so must not be regarded as a secure file storage area.
- \* The Spool area is not, and has never been, intended to be used as a general file storage area. It is intended to be used only for short-term storage of files ‘in-transit’.
- \* If you get an ‘A-DISK FULL’ condition and need to store more files than will fit comfortably onto your A-DISK, then you should do one of the following:
  - apply to have your A-DISK enlarged.
  - Clean up your A-DISK to eliminate unwanted files (for example, old

versions) using the ERASE command.

- Obtain a private tape and dump unwanted files to that tape volume. Note that the use of private tapes involves a charge for mounting.
- \* A recent tendency on the part of some users has been to use the Spool area as a general file storage area in an attempt to obtain 'free' file storage space. This practice can use large amounts of the Spool area and therefore inconvenience other users by restricting the ability to accomodate large print files. It may therefore be necessary in the future to automatically purge files that have been stored for excessive periods in the Spool area.

Users are therefore advised to restrict the use of the VM Spool area to it's intended uses, and to RECEIVE or otherwise dispose of files in that area as soon as is practical.

In short, the Centre will not accept responsibility for the loss of any files from the Spool area or T-DISK.

Arthur Pool  
extension 2952

#### 4.2 File BACKUP and RECOVERY Facilities on UQVM

User and system mini-disks on the UQVM system are automatically backed up as follows:

- \* Each normal working week a TOTAL backup is performed, in which all user mini-disks including CMS files and VSAM dataspaces are dumped to tape. For most users, this simply means that your A-disk files are fully backed up once each week.
- \* Each normal working day a DELTA backup is performed, in which all files on CMS minidisks that have been created or changed since the last TOTAL backup are dumped. DELTA backups do NOT include files on VSAM minidisks or on minidisks in any other non-CMS format. For most users, this simply means that any files you change on your A-disk (or any other CMS minidisk) will be dumped each day until the next TOTAL backup.

To request recovery of a file from any CMS minidisk, you should obtain the appropriate form from the Batch Station and indicate on it your userid and the filename and filetype of the file(s) to be recovered. If you own more than one CMS minidisk, you should also indicate the virtual address of the minidisk on which the file was located.

If you want to recover other than the latest version, you can specify the date and time of the version to be recovered.

The following classes of files are NOT backed up at any time:

- \* Files on "temporary disks" (T-DISK) CANNOT be backed up.
- \* Files in the VM Spool area (READER, PRINTER, or PUNCH files) are not backed up. This includes files which have been transferred from other systems (for example, files sent from UQVAX using IBMSND) or electronic mail files from other users (sent using NOTE or SENDFILE, for example).

Users are therefore advised to use T-DISK only for files which can readily be recreated, and to promptly RECEIVE any files transmitted from other users and stored in the VM Spool area.

*Arthur Pool  
extension 2952*

#### **4.3 UQVAX:: VAX 11/780 Availability**

To further improve the availability of the VAX 780 Node UQVAX it is intended to reduce the routine maintenance period for both hardware and software to once per month.

As users are aware all equipment in computer room 1 is not available on the first Saturday of each month because it is in the nature of the old airconditioning plant to require much love and attention. Therefore, if clients raise no major objections, we will adopt the following program for VAX maintenance on the first weekend in each month beginning March.

Saturday, approx. 0800 to 1200 – airconditioning maintenance, VAX not available.

Saturday, approx. 1200 to Monday 0700 – reserved for major software or hardware upgrades or maintenance. If there are no activities scheduled the system will be available for unattended running as normal.

Monday 0700 to 1200 – routine hardware maintenance. Although the system will usually be brought up earlier than midday on most occasions.

If these arrangements do not suit any of our clients, please discuss with Sandra Campbell on ext. 3471.

*Graham Rees  
extension 3288*

#### **4.4 VAX System Disk Rearrangements**

With the arrival of the 'Eagle' drive (Fixed-head Winchester type) for the VAX system, the Centre has made changes to the physical and logical locations of users' directories. Originally there were two main disks, DSKA (DBA0:) and DSKB (DBA1:) which resulted in frequent space problems. To alleviate these problems, the following changes have been made:

DKSA, the system disk is still on DBA0:  
DSKB, for Centre use is UMA0: (Eagle drive)  
DSKC, for academics etc. is UMA4: (Eagle drive)  
DSKD, for students only is DBA1:

These arrangements required a quite considerable amount of file transferring, directory creation and account changing.

It is important that command files, especially LOGIN, are checked and changed where necessary. For example, a line in LOGIN.COM defining your default directory to DSKB: will not work if you are a departmental user.

Any problems should be directed to the HELP desk or the Supervising Computer Operator, x3212, if after 5pm.

*Lyndal Hill  
extension 3941*

## 5. Distributing Computing – Geoffrey Dengate, ext. 3391

### 5.1 KERMIT for VM/CMS

Yes, KERMIT is finally available on the IBM 3083 system for VM/CMS. To access it when logged on to VM/CMS either type

KERMIT command <cr>  
or  
KERMIT <cr>

if you want to be prompted for your commands. One point to note though. Most versions of KERMIT implemented on micros have a command SET IBM. This should not be used with this version of KERMIT-CMS. It is for accessing KERMIT-CMS via a 2701 ASCII terminal controller, not via YALE 3270 terminal emulator as we have on UQVM. If you set it, it will become obvious that you have done the wrong thing when you see every character echoed twice.

Included below is the basic HELP file available on UQVM.

KERMIT is a family of programs that do reliable file transfer between computers over TTY lines. These are the commands for the IBM VM/CMS version.

SEND	fn ft (fm)	fn: ft: fm:	file name file type file mode (wild cards are allowed)
RECeive	(fn ft (fm))	fn: ft: fm:	file name file type file mode
SET	parameter	parameter:	RECFM END-of-line QUOTE LRECL PAcket-size
SHOW	parameter		
STATUS			
CP	command	command:	any valid CP command
CMS	command	command:	any valid CMS command
FILEList	(fn (ft (fm)))		(as for SEND above)
HELP			
Exit			
Quit			
?			

where

SEND

Sends a file or file group from the IBM to the remote host. The name of each file is passed to the remote host in a special control packet, so that the remote host can store it with the same name. Wildcarding of files is allowed. Default file mode is A1.

RECeive

Receive a file or file group from the remote host. If an incoming file name is not legal, then attempt to transform it to a similar legal name, e.g. by deleting excessive characters. If the file already exists, Kermit-CMS will append the received file to the existing one provided the record formats of the two are the same. Default file mode is A1.

SET

Establish various system-dependent parameters, such as maximum packet length, logical record length, record format, etc. System dependent parameters include:

RECFM	Record format (F or V, def:F)
END-of-line	End-of-line character (range: 00-31(dec), def: 13)
QUOTE	Quoting character (from ranges 33-62, 96 or 123-126 (dec), def: 35("#"))
LRECL	Logical record length (max. 133(dec), def:80)
PACket-size	Size of data packets (range 26-94, def:94)

SHOW

Display the current value of any variable that can be changed via the SET command.

STATUS

Give information about the previous file transfer. Kermit-CMS will either indicate that transmission was successful, or display an error message.

CP

Issue a CP command from within Kermit-CMS.

CMS

Issue a CMS command from within Kermit-CMS.

FILEList

Performs a directory using FILELIST EXEC.

HELP

Type this message.

Exit

Exit from KERMIT back to the host operating system.

Quit

Synonym for EXIT.

?

List all legal Kermit-CMS commands.

[End of KERMIT-CMS help file]

Consult file KERMIT DOC for more details. If anyone experiences any problems with KERMIT-CMS please report them via electronic mail to ether CCHELP on UQVM or NETWORK on UQKL10 or UQVAX.

Bryan Claire  
extension 4078

## 5.2 KERMIT-86 for IBM-PC

There is a new version of KERMIT-86 for the IBM-PC. It allows use of the arrow keys for movement of the cursor when conversing with a host. These keys now generate standard VT-52 escape sequences.

For the purposes of working with the IBM 3083 mainframe via YALE 3270 ter-

minal emulator, we have also implemented <Insert>, <Home>, <Field Back Tab> (i.e. shift <tab>), and the function keys on the left of the keyboard (PF11 and PF12 are available as Alternate-F1 and Alternate-F2 respectively). This version is availale on the UQKL10:: KERMIT area DSKX:[5,124]. The source file is PCKERM.ASM and the "HEXified binary" file is PCKERM.FIX. See PCBOOT.HLP for further instructions on getting it onto your IBM-PC.

Bryan Claire  
extension 4078

## 6. User Services – Tony Bird, ext. 3944

### 6.1 Information Concerning Courses

The following courses will be offered in the period February – May 1984.

#### February

Introduction to IBM	February 11-14 4 half days 1-4 each day
SQL	February 12-15 4 half days 9-12 each day
RUNOFF (GU)	February 11-14* 4 half days 9-12 each day

[\*denotes difference from details previously advertised]

SAS (GU)	February 11-15 5 half days 1-4 each day
Introduction to PDP-10	February 25-28 4 half days 1-4 each day
Introduction to IBM	February 26-March 1 4 half days 9-12 each day

#### March

SPSS	March 4-8 5 half days 9-12.30 each day
Conversion to IBM	March 5-7 3 half days 1-4 each day
Elementary BASIC Programming	March 11-15 5 half days 9-12 each day
SCRIPT	March 18-22 5 half days 9-12 each day
SQL	March 18-21 4 half days 1-4 each day
CAD/CAM	March 25-28 4 full days 9-12 + 1-4 each day

#### April

Introduction to PDP-10	April 1-4 4 half days 9-12 each day
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Conversion to IBM	April 9-11 3 half days 9-12 each day
Conversion to VAX	April 11-12 2 half days 1-4 each day
1022	April 15-19 5 half days 9-12 each day
Introduction to IBM	April 15-18 4 half days 1-4 each day
Plotting	April 22-24 3 half days 9-12 each day
SAS	April 29-May 3 5 half days 9-12 each day
RUNOFF	April 29-May 3 5 half days 1-4 each day

### May

Elementary FORTRAN Programming	May 13-17 5 full days 9-12 + 1-4 each day
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### 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. For the plotting course, familiarity with elementary FORTRAN programming is necessary.
4. 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 the AES Teaching Laboratory at Griffith University.
5. Staff and post-graduate students are admitted free to courses; all others pay at the rate of \$10.00 per half-day session.
6. Enrolments for all courses may be made by phoning ext. 3018.

Barry Maher  
extension 3021

## 7. Miscellaneous

### 7.1 Departmental Equipment for Sale

The Department of Anthropology and Sociology has for sale a TI733 terminal. Any reasonable offer. Contact Paul Hewitt, ext. 3654.

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