3. COMPUTER STATISTICS

IBM SYSTEMS 14/6/82 - 11/7/82

Weekly availability is uptime/168.

SYSTEM AVAILABILITY - % of 672 hrs available

MVT - 93.1%, CMS - 98.7%, ELECTRIC - 87.2%.

TERMINAL SYSTEM USERS

	CMS	ELECTRIC
Registered users	801	1236
Active users	388	495

SERVICE LEVELS

Percentage of prime shift short jobs not turned round inside guideline:

MVT Batch

Core size	P12	P10	P8
0 - 210k	4.8	9.3	2.5
212k - 350k	1.1	1.1	1.6
352k - 560k	2.6	2.6	0.4

MVT THROUGHPUT

Average Jobs/week	11264
Average CPU hrs/week	187

Response to trivial command during peak period:

TERMINAL SYSTEMS

	Week 1	Week 2	Week 3	Week 4
CMS				
% <1 sec	94.3	90.7	95.0	93.6
% <3 secs	99.8	99.7	99.8	99.8
ELECTRIC				
% <2 secs	78.1	52.4	74.8	76.1
% <5 secs	88.4	67.9	85.4	85.7

USAGE

Cumulative totals are for current financial year - 10 weeks to date.

Board	MVT 195hrs	ELECTRIC AUS	CMS AUS
ASR	122	134	109
Engineering	242	101	133
Nuclear Physics	1706	887	749
Science	260	230	159
Central Funding	75	172	1811 *
NERC	49	34	64
External	40	43	84
Overheads	-	-	5
TOTAL	2494	1601	3114

* These entries include some usage due to "service" functions which are strictly an overhead and should be accounted separately.

4. DIARY

AU USAGE BY BOARD - periods 8204-8207

		ICF SYSTEMS		
Board	Prime	GEC	DEC-10	TOTAL
ASR	84	71	21	176
Engineering	4004	1366	2486	7857
Nuclear Physics	70	91	0	162
Science	213	254	418	885
Central Funding	2398	545	496	3440
System Overheads	4453	106	758	5318
External	137	119	87	345
TOTAL	11359	2552	4266	18183

USER MEETINGS

The next meeting of the DECsystem-10 Users Committee will be held on Wednesday 1 September 1982 at 10.30 am in room 5210 of the James Clerk Maxwell Building, King's Buildings, Edinburgh. The new chairman is:

Miss Anne MacKinnon
Department of Electronic and Electrical Engineering
Rankine Building
Glasgow University
GLASGOW G12 8QQ
Tel: 041 339 0684/8855, Ext 7232

and the Secretary is:

R J Hare
SERC DECsystem-10
ERCC
Mayfield Buildings
Mayfield Road
EDINBURGH EH9 3JZ
Tel: 031 667 1081, Ext 2619

IBM PREVENTATIVE MAINTENANCE DATES

Routine Preventative Maintenance will take place on the following days from 1800 - 2200 hours. Login messages on the ELECTRIC and CMS services will be issued prior to each maintenance session as a reminder.

16 Sept 21 Oct 18 Nov 16 Dec

AIR-CONDITIONING SHUTDOWN - CHANGE OF DATE

The next shutdown of all computer systems (except network equipment) scheduled for 1982 for the maintenance of air-conditioning plant is:

0800 hrs on Friday 22 Oct till late Monday 25 Oct

SYSTEM DEVELOPMENT - reminder

System development is scheduled on Wednesday mornings from 08.30 to 10.30 and Thursday evenings from 17.30 to 19.30.

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1. CENTRAL COMPUTING REPRESENTATIVES MEETING NOTES

8 July 1982

INTRODUCTION

After a long period of uncertainty about future equipment and systems things are now beginning to happen. Users are likely to see several changes during the next 18 months or two years. Efforts within Computing Division are directed towards a continuity of service consistent with taking advantage of the new hardware and software that will be acquired.

User Liaison Committee

The RAL Computer User Liaison Committee met on April 30th and June 4th. Among other items, it requested that each Representatives Meeting examine its Terms of Reference.

Central Computer Replacement

FORUM 25 carried an informative article on various stages of replacement of the 195s by the IBM 3081D. It is believed that the effect of this on users will be slight, with some changes in /*NEEDS control cards, short interruptions in service, some differences in elapsed times and, later, increased memory availability.

Initially a scale factor of 0.8 will be used for accounting cpu hours on the 3081. This will be reviewed at approximately quarterly intervals during the current allocation year.

OPERATIONS

There were major problems with power on one of the 195s after the air-conditioning maintenance in April. Approximately 95 hours were lost on 195/1 and 55 hours on 195/2. A director fault on the 3032 caused a down time of 3.5 hours. This was most probably caused by air-conditioning and alternator problems which resulted in a total of 10 hours lost time. A major fault on 195/2 was responsible for lost time of approximately 44 hours in the week ending 20 June. Batch turnaround was affected by all of these faults.

Problems with fixed disks necessitated restores of both ULIB03 (after air-conditioning shutdown) and RHEL01 (week ending 23 May). In both cases it required an HDA replacement to the drives.

Following a head crash on one of the MEMOREX 3350 equivalent disk drives on Friday 16 April it was necessary to restore all user libraries (ULIB's) from back-ups taken on the night of Wednesday 14 April.

It is intended to run a courier service between R27 and the stores pickup and delivery points in R2, R3 and R25. This will commence as soon as collection boxes have been arranged.

There are three new terminal pools in the Atlas Centre. The graphics pool is in R31 G51/52, the Starlink terminal pool is in R30 3/4 and there is a new pool in R26 West with IBM 3270 compatible terminals and documentation printers. The pool in R26 East no longer exists.

Users are again reminded that anyone who believes they will need continued use of the central computer's 7-track magnetic tape drive should contact P C Thompson as soon as possible. It is intended to withdraw this facility on April 1st 1983.

FREE03

Datasets created since 1st May 1982 using VOL=REF=FREE were irretrievably lost early on Wednesday 9th June due to operational problems. Steps have been taken to safeguard against this happening again in the future.

ACCOUNTS

The charge factors for ELECTRIC and CMS, introduced at the beginning of the financial year, are as published in the March issue of FORUM (21). The maximum charge rate for jobs run in CMSBATCH is 0.4. Overdrawn users may login to CMS or ELECTRIC after 1600 on Fridays.

On 21 June the 10 hours allocation of Priority 1 195s was withdrawn. Users are now issued with a P1 allocation equal to the total weekly allocation, except perhaps in those cases where the allocations are in the control of the Category Representative. The sum of allocations at other priority levels remains at 1.5 times this value. Users experiencing difficulty with their P1 allocation should contact their Category Representative if they have one, otherwise Mrs Sue Ward, CMS USERID=SHW, ELECTRIC ID=FE.

Category Representatives are now able, each week, to list by account the usage of time at all PRIORITY levels and of CMS and ELECTRIC AU's. A similar facility will be provided for Account Representatives at the ID level but this will not

initially will include information on CMS and ELECTRIC usage.

SYSTEM SOFTWARE

ELECTRIC

As ELECTRIC is being phased out, no work other than normal maintenance has been done on it. A plan is under preparation for the run-down of ELECTRIC.

Graphical Kernel System (GKS)

There has been considerable progress towards two ISO (International Standards Organisation) graphics standards: one for graphics systems and one for graphics file formats. RAL Graphics Section took the decision earlier this year to implement GKS, the proposed ISO graphics system. This decision now appears even more sensible as GKS has been ratified as a Draft International Standard and six countries (UK, USA, Germany, France, Netherlands, Japan) have indicated their intention to adopt GKS, without change, as a national standard as well. The importance of this standard, considering the proportion of graphics equipment made there, is obvious. For graphics metafiles, a joint USA/ISO effort aims to define a metafile standard by about January 1983 and bring the standard to the same status as GKS now has by May 1983. RAL staff are involved in these discussions and support of the metafile standard will be provided when its format has been agreed.

Graphics Manual

Users will have noticed that part of the RAL Graphics Manual has been circulated. Many more chapters have been typed and will be distributed when the illustrations and examples have been produced and checked.

Plotting Device Support

Support for all FR80 cameras and all Sigma terminals has been written and installed under CMS as well as experimental support for the Calcomp 81 desktop A3 plotter. Work is now in hand on facilities for high quality text, on the FR80 and on less capable terminals. As part of this development a large library of fonts is being organized.

Support of Private FR80 Tapes

There will be no support for seven track tapes. Nine track tapes will be supported at 800 bpi and 1600 bpi. The maximum blocksize will be 1536. Spanning of FR80 files across multiple tapes will be supported. The facilities provided for use under MVT will need some modification for CMS. No support will be provided for CMS. Multiple files will be allowed. Details of how to use the facilities will be published later.

Multiple Virtual Storage (MVS)

As stated at the previous meeting, the general implementation of the MVS operating system will have three main phases. The first phase will start after the 3081 installation is complete. When a few basic facilities will be established. The second phase will allow a limited service to some users. During this phase components required for the full service will be implemented. This test system should be ready approximately a year after the 3081

has been running effectively. The production system is expected to be operational after a further period of about 10-12 months. The ATLAS-10 (Fujitsu M380), if available, will be integrated into the production MVS/JES3 complex. The third phase will involve the full system when users will be migrated from the MVT service. Firm timescales are still being sought.

The present auto-archive library management system involving the ULIB's cannot be implemented for MVS in a satisfactory manner. Alternative arrangements are still being sought.

Please contact PAO if you think your program may be MVT or HASP dependent so that they can assess the level of program modification required and help you to be ready for MVS when it comes.

HASP - Status Replies Concerning Tape Jobs

Users who submit jobs for tapes which are not in the local library may, in certain circumstances, notice the job status fluctuate between HELD-WAITING TAPES and not held. This is caused by the design of TDMS whereby all of the jobs which are HELD-WAITING TAPES are released when the librarian does a TDMS update. Jobs whose tapes have not been moved into the local library only become held again when they reach a sufficiently high point in the job queue. How to overcome this is a subject of study.

Maximum Card-limit

In order to overcome problems with file transfer mechanisms using pseudo punches, which need to transfer more than 9999 card images, a specification of a cards limit of 9876 is interpreted as a very large number. The new maximum is unlikely to be reached.

VM/CMS

VM Spool - Users should note that very old spool files are subject to deletion without notice. This is because the VM spool can become full, thus causing operational problems.

New CP and CMS Versions - The present version of CP is 1.7, and of CMS is also 1.7 though version 1.12

CMS Commands

The following is a very brief summary of the main changes to CMS since the last User Representative Meeting. Further details can be found in the NEWS files and the HELP system. The main changes since the last CCRM were the introduction of XPLANT and the FREEDA storage system.

- XPLANT is a replacement for the ELECTRIC stored edit facility which makes dynamic planting and OS job submission much easier. It also has many additional features such as a macro facility. It is intended that XPLANT should replace the CMS PLANT program which will then be withdrawn. As the stored edit syntax is not compatible, some conversion is necessary and users will be given adequate warning.

- FREEDA provides temporary disk storage for CMS files and is similar to the MVT FREEDISK facility. Users can transfer files to FREEDA's

minidisk for a period of up to 28 days, after which the files are either deleted or returned to the user. Files can be accessed directly from FREEDA's disk, but in read-only mode. Users can have group directories maintained by FREEDA so that only certain users can access a particular group of files.

- An ARCHIVE facility is currently being written for CMS so that files may be migrated onto magnetic tape from CMS with minimal user intervention. Though the details of this facility are not yet definite, the system will probably consist of an ARCHIVE virtual machine, with an ARCHIVE command sending, fetching or querying files in the filestore. Files will be migrated from disk to tape as ARCHIVE's disk space becomes full and restored as requested.

- A series of XEDIT macros have been provided to enhance the editor functions: TC, TL and TP now provide support for line numbers on ASCII terminals, and DELWORD, CURSLAST and PAR to assist with text formatting, the first two on screens only. See supplement to FORUM 24.

- A REBLOCK EXEC enables users to change the block-size of their mini-disks from the default 1K to 2K or vice versa. A 2K blocksize is more efficient if the minidisk contains mainly large files.

- The CMS EXEC 'QVOL' is now generally available and may be used to determine the current location, home library, account and ID for a given tape. See FORUM 23.3

- The Cambridge ZED editor is now installed on the U-DISK. This allows editing of very large files, but should be used only when the file is too large for XEDIT, as it is much more expensive in AU's.

- Though CMS can have no direct equivalent of ELECTRIC 'JOBFILES', work is in progress to implement some of the more important Jobfile facilities in ELECTRIC as EXEC files on CMS. These will consist of sets of XPLANT instructions guided by EXEC2 controls, allowing simpler and more powerful construction of jobs. Users will be able, naturally, to duplicate the ideas and style of these to form their own 'JOBFILES' in CMS. The first candidates for this conversion are XTAPE and TAPEANAL, which should be ready soon.

- The VNET EXEC provides a more user-friendly interface from CMS to VNET.

- A third operand, DISCONN, is allowed on the LOGIN command which allows a user to transfer from one terminal to another. This is particularly useful if a network call has timed out without logging the user out.

- The AU algorithm no longer includes time during which a virtual machine is running disconnected, although any CPU time or I/O's whilst disconnected are still accounted.

- AXEMAN no longer charges users for 'connect time' when they are disconnected. The connect time given in reply to the AUS command also refers to the time that a user has been actually connected, rather than including disconnected time as it did before.

- CA-SORT/CMS was installed. This is the CMS version of the SORT/MERGE program which has been running under MVT for many years.

- CMSELEC was extended to allow the ROOM command and also to allow QUIT as an alternative to FINI.

- The RECALL facility was provided for the screens. This allows any one of the last three commands to be recalled to the command line area of the screen where it can be modified if required and re-entered.

- CP SET WHERE allows a user to store information about where he is situated. CP QUERY WHERE displays this information, together with details of the line connecting the user's terminal for a single user or for all users.

- Assembler program debugging and tracing has been enhanced and new features installed in the PERTRACE and SYMBOL CP commands, so that selected parts of the program may be displayed. See the NEWS file on JUN16 for more details.

- A menu extension facility has been added to the HELP system. For example, 'HELP abc MENU', as well as displaying the contents of the file 'abc HELPMENU', will now also include the contents of all files called 'abc HELPEXT'.

- The command ABEND EXEC has been introduced to supply information on MVT ABENDS.

- An improved version of the USERS command is now accessed through a module.

FORTRAN

No change has been made to any of the Fortran compilers since the last meeting. Current releases are as follows:

Fortran G1	2.0
Fortran H (Extended Plus)	2.3.4
VS Fortran	1.1.1

Release 1.1.1 of the VS Fortran compiler and its library have been installed a trial version of MVS and found to run satisfactorily (limited testing only) has so far been carried out). CMS users are advised to start making use of this compiler (the current release is considered stable). The new library VFORTLIB is considered stable) and all support files compiled under FORTHX or FORTGI as well as FORTVS.

IBM have announced release 2.0 of VS Fortran which will contain bit-handling functions (similar to Fortran H (Extended Plus) compiler functions) and language extensions for Hollerith and hexadecimal in DATA statements. A considerable number of enhancements is envisaged for this compiler over the next few years (including the possible addition of SLAC traceback code - MR CLEAN).

Future Policy - The H Extended Plus compiler produces object code which is primarily intended to run on a 360/195. The special coding concerns instruction scheduling which is performed during

The IBM manual VS Fortran Application Program: Language Reference (ref no:- GC26-3986-1) may be ordered from the RAL Computing Division Documentation Office.

the level 3 optimization. It is based on a standard IBM compiler known as H Extended that just has optimization levels 1 and 2. Because 195s are so rare, H Extended Plus is very expensive to rent and difficult to support. Ultimately we expect a Fortran 77 Compiler to be the main one used here. In the meantime it might be sensible to exchange H Extended Plus for H Extended. The manuals etc are the same, and language extensions are compatible. With the departure of the 195s the expense seems no longer justified.

Known Bugs

Two new bugs have been identified in the VS Fortran compiler release 1.1.1 - fixes for them are awaited from IBM. One bug appears in code that contains an expression for an I/O statement inside a DO-loop when the DO-loop controlling variable is used in the expression. This bug appears at optimisation levels 2 and 3 only. The second bug concerns bad source code whereby a statement WRITE(1) IWORD(2:) with IWORD not dimensioned will cause the compiler to ABEND.

One bug in the Fortran H (Extended Plus) compiler is being investigated whereby the statement W = 1.000/2.000 (extended precision - REAL*16) causes a compiler ABEND at optimisation levels 2 and 3. This problem appears under CMS only.

Fortran Interactive Debug

SYMBUG is an interactive debugging facility provided for RAL by Computer Associates Incorporated as a rapid debugging aid for use with Fortran programs. At the moment it is under test, but when it is fully implemented, it will replace the IBM Fortran Interactive Debugging Aid, FIDBUG (currently on the U-DISK), with a fully supported and much enhanced utility. Additional features of SYMBUG include command abbreviations, a small HELP system, CP and CMS commands, and CMS DEBUG facilities.

DISKS

Disk Space on 3330 Packs

A significant number of private and public 3330 disks have already been withdrawn. Nine of the busiest 3330s have now been permanently mounted. All of the public 3330 disks, except for one system disk still to be moved, have been transferred to 3350s. This has had an impact on the number of disk mounts.

A number of users still have to be contacted so that arrangements can be made for data on these private disks which are suitable for withdrawal. Busy datasets should be moved onto public space. Idle datasets should be deleted or written to tape. It is an operational goal to eliminate disk mounts.

Cataloguing of O.S. Datasets

It should be appreciated by users that the use of O.S. datasets is much easier if they are accessed through the extensive cataloging system on MVT. Users are therefore reminded that, as suggested in the notes for the previous meeting, datasets that are not catalogued do not conform to the conventions adopted at RAL and as such will shortly be subject to deletion by the housekeeping programs.

Mainframe to Mainframe Links

An experimental line has been installed between the 3032 Front End at RAL and the IBM 3081 at CERN. Tests are being carried out using the IBM supplied Network Job Entry (NJE) system. Jobs submitted from RAL, normally by logged in CMS users, run at CERN and output received back at RAL. Similar tests are being carried out in the opposite direction. When the basic system has been proved, a similar experimental line will be installed to DESY. It will then be necessary to identify what facilities might be needed in order to provide services encompassing VNET workstations based at RAL and RIOS (Remote Input Output Stations) stations elsewhere. It is expected that this work will enable the existing back to back connections to be removed.

WORKSTATIONS AND TELECOMMUNICATIONS

VNET Workstation Conversions

Sixteen workstations have been converted to VNET so far. The first conversions were on the RAL site and brought to light some problems which system testing could not produce. The major problems have been solved and the conversion programme resumed.

Most of the networked GEC2050's not due for replacement have been, or are about to be, converted. During July and August it is intended to convert some more networked machines that are not GEC machines. The GEC4000 machines with filestores will be converted when an appropriate new release of the operating system is ready in the near future. Development work is also necessary for the SERC Primes. About 14 HASP workstations will not be converted to VNET. It is intended to have a provisional schedule ready for the date of the meeting. It will be maintained in a CMS file, visible by typing 'HELP VNET SCHEDULE'. A list of outstanding problems will be kept in CMS, visible by typing 'HELP VNET PROBLEMS'.

Several HASP workstations are due to be changed or superseded. Some GEC2050's are due to be replaced by GEC4000's, or have their users transferred to SERC MUM's in the same university. The continued use of a number of connections is still under consideration. The aim is to substantially complete the transition to VNET before the end of this calendar year.

Developments in SERCNET

The chief development by Telecommunications is the introduction of the new Packet Switching Exchanges, which are now located at ERCC, ULCC, Cambridge and CERN. A further machine is about to be installed at Newcastle. This has enabled the connection of various new hosts and workstations, and a programme of rationalisation aimed at cost saving, is now under way.

The first area for rationalisation is the connection of existing hosts to their nearest PSE. The second aim is to convert from the old communications protocol (called binary synchronous - a half-duplex method) to the full-duplex, high-level Data Link Control (HDLC). The third area of rationalisation is to share the load on the RAL PSE between two machines, RLE1 and RLE2. The opportunity is being taken to move the machines of individual families, such as the ICF GEC's and ICF Primes, which connect to the Network at RAL, to be connected to the same PSE's.

With such a program of work, there is inevitably some disruption to the Network from time to time to enable exchanges to be reconfigured, etc. The effects of this, however, are being minimised by restricting such changes to Tuesday mornings (0830 - 0900) with test sessions for new exchange software between 1730-1930 on Thursday evenings. Warning of any changes will be entered in the NETSTAT machine at least one day in advance.

PACX Service Names

A new version of the PACX software will be introduced on Monday 2 August. The important change is that services may then be selected by alphanumeric names, eg CMS, RLGB. Speed selection will be done automatically. However, if a terminal set at, say, 4800 baud finds that there is a queue for the service, the user will have to change the terminal speed before attempting to change to another speed, eg 1200. PACX will recognise SERC network names, plus CMS, ELEC, and CERN. The existing numerical system will no longer be appropriate in most cases.

Carriage Control Tapes

It has been found that some workstations do not have channel 8 on the carriage control tape set correctly. This is used by HASP to print a line of asterisks along the perforations between pages at job start and end. If the line of asterisks is not on the page perforation the control tape is incorrect or the sensing mechanism is wrong. It is important that such faults are rectified, because VNET banner pages use channel 8 and if that is incorrectly set then VNET banner pages will not be properly separated from the tail page of the preceding output.

DRIN/DROUT

The question of support for the DRIO package has been resolved. It will continue to be supported under MVT and MVS and a CMS simulation will be provided.

LIBRARIES AND PACKAGES

RHELIB

The ROUTES routine has been modified to return the secondary route parameters if supplied with a second argument. It is upwards compatible with the old version. Several other routines from the SY chapter have been made available on CMS. They are MVTID, CLOCK, SPM, GPM, CLFILE, STOP, KLOCK and DATE. A new routine, INDUSE, is also available on CMS. It returns the values provided by the CP INDICATE USER command. It is not available on MVT. See 'NEWS RHELIB' for further details.

CERNLIB

The new CERN library is now available. Users on CMS should type 'NEWS CERNLIB' for more details.

There have been a number of problems with the new library because there are several routines which appear in both RHELIB and CERNLIB, yet have slightly different specifications. In order to remove these inconsistencies, it is proposed that on 11th August the following will be done:

1. The versions of UZERO, VZERO, UBLANK, VBLANK, UFILL and VFILL in CERNLIB will be replaced by the versions compatible with CERN and RHELIB. The entry points in RHELIB will be renamed as UZERO4, VZERO4, UBLANK4, VBLANK4, UFILL4 and VFILL4. Users who wish to use the extended functions should switch to the distinct names.

2. The entry point UCOPY in RHELIB will be renamed as UCOPY4.

After three months, UZERO, UBLANK and UFILL will be altered so that they will abend if they are not called with 3, 3 and 4 arguments respectively. After a further three months, UZERO, VZERO, UFILL, UBLANK and VBLANK will be replaced by versions from CERN.

TDMS Write-up

TDMS Write-up - This has been produced as CIGAR section D12 and distributed with FORUM 25.

TDMSUSER - A catalogued procedure called TDMSSORT has been installed on the MVT Batch system. This procedure performs all the functions provided by the existing TDMSUSER procedure but in addition the existing serial numbers generated by the LIST function will be sorted in alphabetic then numerical order. The use of TDMSUSER functions is described in CIGAR section D12.

Screen Terminals - Building R1 now has four IBM-3278 terminals for use by general users. A document is now available describing the elementary principles of their use and indicating how to find out how to use them to great effect. Users having difficulty using them should get in touch with FAO.

CIFER Terminals - An enhancement to the CIFER terminal to enable it to emulate IBM full screen working over the network has been designed and a prototype is expected in a few weeks. If this is successful it should be possible to convert some of the existing CIFER terminals eventually.

++T - This facility has also been introduced ... the tape librarian should be sent to ELECTRIC ID-JU or the CMS userid-TAPELIB.

SMALL ITEMS

++U - This facility for communication with the FAO has now been removed. Users still have use of MESSAGE (ELECTRIC), ASKUS, TELLUS and GRIPE (CMS). It should be noted that an experience problems, it is attached, so that messages are recorded out of office hours and when the advisors are busy.

2. QUESTIONS RAISED AT CCR MEETING (8/7/82)

Q1. What is the size of the M380?

A1. 1Mbyte is the minimum M380 configuration. Up to 64 Mbytes can be the dual version (M382) which will then support up to 128 Mbytes. However there are no immediate plans for upgrades. (C J Pavelin)

Q2. Are we satisfied that there is enough redundancy in SERCNET facilities? At present SERCNET does not have the necessary 'tools' with which to measure throughput and to identify bottlenecks in a network-wide fashion.

Software for this activity is available and known as 'Network Management'. However this cannot be supported on the SERCNET Packet Switch Exchanges which are driven by software provided by RAL. This does not provide the basic mechanisms for the addition of Network Management. Two alternatives are available, one of which is to modify the SERCNET PSE software which is estimated as a 6 month task. The other is to purchase the Network Software, including the integral Network Management, from a commercial source. The latter path is currently being explored as a matter of urgency as this relieves the SERC of the problem of maintenance support. The answer, at present, to your question is 'we don't know'. (C Balderson)

Q3. How do changes to SERCNET affect the Swindon link?

A3. None of the services provided by the SERC Headquarters at Swindon are currently connected to the SERCNET Network. There are discussions about a completely new service which might well use this Network. These are not yet complete. (C Balderson)

Q4. Is RCONET connected to SERCNET?

A4. Yes, it has a connection at Edinburgh – EDXB is the network address. Authorisation to use this service should initially be discussed with Edinburgh. (C Balderson)

Q5. Is there a procedure for getting on SERCNET?

A5. Approval for connection to SERCNET is given by the SERC Network Management Committee chaired by Dr Paul Kummer of Daresbury Laboratory. The secretary to this body is Dr Paul Bryant of Rutherford Appleton Laboratory. Authorisation having been given, connection is then controlled by the SERC Network Operations Sub-committee who liaise with the parties involved on methods, timescales, protocols validation, operational and user procedures. (C Balderson)

Q6. Who are the chairmen of the various SERC Networking Committees?

A6. G Manning – SERC Network Co-ordinator
P Kummer – SERC Network Management Committee
P Girard – Installation Sub-committee
P Bryant – Local Area Sub-committee
D House – SERC Network Operations Sub-committee
C Balderson – Network Operations Working Party
(C Balderson)

Q7a. Are there plans to improve line speeds on links?

A7a. The SERC Network Management Committee is currently reviewing the way in which Network links are supported. Up until now the standard British Telecom provision for 'wide-band' circuits has been 48 Kb/s lines with BT standard modems and are very expensive. 'New Technology' methods under the overall heading of British Telecom Switchstream are now about to become available. It is expected that this provision will be cheaper than the earlier methods and the provision is likely to be fairly quick in the areas of the country where Switchstream is supported. The total picture is not quite clear but we would expect that the main inter-PSE links should have some improved linespeed capability in the medium term future. (C Balderson)

Q7b. What is happening with the CERN link?

A7b. The link to CERN currently carries several individual circuits, multiplexed in various ways. The longer term future should be that all services between RAL and CERN run on the single 'Networked' connection between the CERN and RAL PSEs, with the individual services such as job submission and retrieval, file transfer and terminal access between the sites all handled by appropriate processes attached to the PSEs. The technology currently exists to upgrade the linespeed of the current circuits to 14,4 or 16 Kb/s from the present 9.6 Kb/s overall. The modems to provide the greater speed are very expensive and various questions such as support arrangements and multiplexing possibilities need investigation before a decision is taken. (C Balderson)

Q8. Is it possible to have a subset of HASP commands available through CMS?

A8. Technically it is possible to provide the type of facility required. The question as to whether it is desirable is being discussed with Operations Group, which is most likely to suffer from side effects. (J Murray)

Q9. Will VNET conversions be delayed until all problems with VNET have been resolved?

A9. No! Most of the problems can be classed as irritations (both operational and user unfriendliness) and are being dealt with. (P J Hemmings)

Q10. Should the problems with JOBSTAT-COPPER communication be resolved as a matter of urgency?

A10. JOBSTAT suffers problems when communicating with COPPER as have been observed with ++H for many years, namely, no reply or message rejected. A time-out will be implemented in JOBSTAT to inform the user when this has happened. An attempt to alleviate the problem will be made by increasing COPPER's buffer pool. However, no significant development to COPPER/HASP/MVT will be undertaken to cure the problem. The communication between JOBSTAT and MVS will use a different mechanism and steps will be taken to make sure that this problem does not recur. (T G Pett)

Q11. Will there be a method of help implemented to convert edit files from ELECTRIC to CMS?

A11. The provision of a utility to convert ELECTRIC edit files to CMS XPLANT files will be investigated. No commitment can be given at present. (T G Pett)

Q12. Can the Graphics FIND command be installed under CMS?

A12. No. It is not required. MVT output should be routed to the virtual reader of the user's CMS machine if it is required to browse through it at the terminal. There will shortly be a facility for creating CMS graphics files from MVT batch jobs. This will eliminate the need to create graphics files in ELECTRIC. (T G Pett)

Q13. As User Support is being run down on ELECTRIC is it possible to have support for conversion from ELECTRIC to CMS?

A13. User Interface Group and Systems group are committed to help users with conversion from ELECTRIC to CMS. (T G Pett)

Q14. Will the Harwell Library be provided on CMS?

A14. It has been the policy to update Harwell Subroutines Library at approximately 2 year intervals. (New subroutines are obtained when there is a demand but there is no automatic update each time a new subroutine is issued). It is hoped to do this during the current year. When it is done it will be installed on MVT and CMS (and possibly MVS). (P J Hemmings)

Q15. With the demise of ELECTRIC is it possible in some way to keep archived files (eg stored edits) so that they can be used if necessary?

A15. It may be possible to keep archived files so that they can be accessed from CMS in read-only mode via CMSELEC. However this access may have to be restricted to infrequent intervals. This will be investigated. (T G Pett)

Q16. There is a bug in LKED which crashes CMS batch compile/link/go when using more than 2 OS loadlibs. When is it going to be fixed?

A16. This will be fixed in the next version of CMS. (T G Pett)

Q17. Why have CERNLIB routine names been changed, eg HPLOT?

A17. The introduction of the new CERN library has highlighted the problem of entry points in CERNLIB which are duplicated in RHELIB. One entry point in CERNLIB, HPLOT, has been renamed in the current implementation at RAL because of a name clash with a local routine. It is hoped to correct this in a later version. The long term solution is to remove all such entry points from RHELIB. The simplest way to achieve this, from our point of view, is to rename rather than physically remove them. (C P Wood)

Q19. Will it be possible to restrict the search of RLDISK to a particular ID and how will cataloguing affect this?

A19. Yes, it will be possible to do this from CMS. The IDENT parameter of RLDISK allows searching for a particular ID. RLDISK scans one or more disk VTOCs (Volume Table of Contents). It does not scan the catalogue. The CMS EXEC RLDISK will allow the same facility (no extensions planned). However, to list the same information directly without running an MVT job. (D F Parker)

Q20. Is it possible to get RAL and Daresbury to use their asterisked lines on the output in the same position and not half-way down the page as in Daresbury's case?

A20. Daresbury output their lines of asterisks on carriage control Channel 9. The Format Loop for sites receiving output from both RAL and DL should have a hole punched in the carriage control tape of the printer on both channels 8 and 9 at the row currently used for RAL outputs in channel 8. Wherever output is received from Daresbury, representations should ensure that the Format Loop on their printer conforms to these requirements. This of course means a new carriage control tape – do not attempt to punch an additional hole in channel 9 to the one already existing. (C Balderson)

Q21. Does GKS supersede the IMPACT system?

A21. Although the majority of the GKS implementation, including device handlers, will be in Fortran 77 and so transportable to the IBM system and a replacement compiler, Fortran H extended, IMPACT may be used to provide device handlers not yet written for GKS. It will continue to be supported for some time. (C D Osland)

Q22. Is it correct that tapes from the R3 archive library should be placed back there after use?

A22. No. Tapes from R3 which have been used will go back into the Main library in R30. (D G House)

Q23. Program Library Manual: will RHELIB standard procedures be carried over into MVS?

A23. The Program Library Manual consists of two parts. The subroutine library described on the blue pages will, with perhaps a few exceptions, transfer readily. There may be a few internal changes but the descriptions should not, in general, require modification. It is also worth mentioning that a revised contents list is about to be issued which will state that definitive versions are no longer stored in ELECTRIC but in CMS. The utilities described on the pink pages will undergo a thorough revision which will accentuated by changing the colour of the paper. The revised description will pertain to both CMS and MVS as appropriate. (P J Hemmings)

Q24. DESY transfer: Can you login to TSO at DESY via the Network?

A24. Provision for TSO (DESY) ports on the RAL PACX is being pursued. We are currently awaiting allocation on the DESY communications processor. Access to this will be available from the Network via the Gandalf PIN9102 at RAL. This device is currently connected under conditions and is awaiting new manufacturers software. (C Balderson)

Q25. If Remote 72 does not have access to CMS how do you connect from ELECTRIC?

A25. Access to CMS from Surrey should be via the SERC Prime computer. Consult the local computer centre for details. (C Balderson)

Q26. Does the R3 archive library have a name?

A26. Yes. R3R3. (D G House)

Q27. Is the transfer of tape from R3 strictly the first Thursday of each month?

A27. Yes, but requests for 'emergency' transfers at other times will be treated sympathetically. (D G House)

Q28. The new terminal pool in R26 is extremely noisy. Can something be done about it?

A28. Yes. This will be investigated. (D G House)

Q29. It is possible that remote users can be told of the current mainframe configuration, preferably in graphical form?

A29. Yes. This will be done in an edition of FORUM. (D G House)

Q30. Will the replacement of Fortran H-ext+ compiler mean recompiling programs?

A30. The replacement compiler, Fortran H extended, will not involve users in recompiling programs. The Fortran library will not be changed so existing object or load modules will be compatible. There will be an overlap period during which both compilers will be available. (D F Parker)

Q31. Will there be a HELP facility for the new XTAPE and TAPEANAL in CMS?

A31. All the 'jobfile' EXECs provided under CMS have their own helpfiles. XTAPE and TAPEANAL are now available on the UDISK for evaluation, with their relevant helpfiles. A helpfile called JOBFILE may be provided to list those 'jobfiles' that have CMS EXECs available. (D F Parker)