UNIVERSITY OF QUEENSLAND

Prentice Computer Centre

NEWSLETTER

authorization: Director of the Centre

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2   SYSTEM PERFORMANCE

We have had a miserable period as far as system reliability is concerned. A major problem caused substantial damage to the whole magnetic tape system. Magnetic tapes are used directly by many users but, additionally, they are essential for the general backup and house-keeping of the system.   The major part of our technical effort has been devoted to reinstating this magnetic tape system.   What generally happens (and this time is no exception) is that problems compound and we are fighting valiantly to stabilize the situation.

The load on the system is very heavy.   We have no spare capacity
and all of our perturbations are immediately obvious to our users.
We do hope that you will understand the situation and request
your co-operation.   Let me assure you that we would much sooner
have a smoothly running system.

As users are aware, we have introduced Sunday operation (9a.m. to
5p.m.) at ¼ rates to provide more computing time.   Additionally,
we are planning to extend third shift operation (by 1½ hours) and
introduce some Saturday operation to handle the batch load, but
the increase in capacity which can be provided in this way is
strictly limited.

ʌile we will endeavour to provide overnight turnaround on priority
4 batch work and one week turnaround on priority 2 work, we
anticipate that the work load during second semester may be such
that this response cannot be guaranteed.   Users are therefore
advised to check with operations staff before submitting any time-
critical runs at these priorities.

It is expected that this situation will be relieved early next
year with the availability of new computing equipment.

3   MID-YEAR COURSES

During the mid-year vacation, the Centre plans to run the following
two courses:

(a)   Introduction to Use of the PDP-10   (4 - 8 July)
       including an outline of the machine and Centre services,
       concepts of files and their manipulation, use of terminals,
       use of batch, system commands, editor (new version) and
       various system CUSPS, e.g. spooler, loader etc.

(b)   Statistical Packages on the PDP-10   (11 - 15 July)
       including an introduction to available packages, operation
       of packages, facilities of each package and the relative
       merits of the various packages. This course will assume
       knowledge of the material covered by the introductory
       course above.

Full details of the sessions and timetable for each course will be
published in the next newsletter so that users who may not need to
attend a complete course can attend sessions of particular interest.

4   QUOTAS ON DISK SPACE

It has been noted that a number of users are exceeding the allocated disk space quotas.   As there is only a finite amount of disk space available, this practice necessitates more frequent purges of the online file space.

Currently, files unaccessed for more than 18 days are archived every three days - an inconvenience to all users.

To try to overcome this problem, all quotas will be checked daily. Any ppn exceeding the standard quota will be logged-out 'batch' 'tyle.   This will enforce the quota leaving a file OPRKJO.LOG on _he area to inform the user of the action taken.   Any UFD protection which has been altered to avoid quota checking will be reset to limit access.

5   MANUALS

New editions of the following manuals are now available from the Centre:

MNT-2	Using the U.Q. PDP-10 System
MNT-3	Statistical Packages on the U.Q. PDP-10
MNT-6	Editor Manual

Further new editions currently in preparation are -

MNT-1   General Information.

NEW REMOTE BATCH SOFTWARE

On 19 April, the Centre implemented new versions of the remote batch software which removed all previous restrictions on $cards and switches available at remote stations (except as detailed below). As from that date all batch decks from remote stations are processed in exactly the same way as decks submitted to the central site.

The single remaining exception is image mode decks (e.g. EVAL) which still must be processed from the central card reader.

7   USE OF THE UPPER & LOWER CASE PRINTER AT THE HAWKEN BATCH STATION

Because of slower print speed and the amount of time dedicated to running MONECS, much of the output for the Hawken Batch Station is actually printed on the central high speed printer. This is immaterial to most users.

If you require the upper and lower case capabilities of the Hawken
Batch Station printer (LPTS2), use the form type 'PRLC' for your
output.   This will ensure your file is printed on LPTS2.

8   NEW VERSION OF SIMDDT

A revised version of SIMDDT is now available on NEW: for testing.
This version corrects a problem in the DISPLAY command where, if
the user attempted to display a source line located in the file
before the last displayed line, SIMDDT looped typing

                 "ERROR IN INFILE".

9   CHANGES TO RUNOFF-10

Version 10 of the document formatting program RUNOFF has been
enhanced by the addition of the UQ commands from version 7. These
new commands, their permissible abbreviations and their functions
are as follows:

Command	Abbreviation	Function
.DOCUMENT ID text	.DI text	Uses the text as a title line on each page
.DOCUMENT DATE text	.DD text	Uses the text as a subtitle line. If no text is given todays date is used.
.BOTH SIDES m,n	.BS m,n	Causes the document id and date to be 'swung' to the right hand side of odd numbered pages. The document margins are set to m and n respectively.
.ONE SIDE m	.OS m	All further pages will have the document id and date on the left hand side with margin m.
.TOP NUMBER	.TN	Page numbers printed at the top of the page (the default).
.BOTTOM NUMBER	.BN	Page numbers printed centrally at the bottom of pages.

Command	Abbreviation	Function
.ROMAN NUMERALS	.RN	Allows page numbers (up to 20) to be in roman numerals. Useful for a document prelude but can only be used in conjunction with the .BOTTOM NUMBER command.
.ARABIC NUMERALS	.AN	Sets the page numbering mode to use arabic numerals (the default).

The following points should be noted -

(i)   document id lines, if declared, will appear on the chapter title pages in a chapter oriented document. Other titling (via .TITLE and .SUBTTL commands) will not appear on such pages.

(ii)   document id lines only work when used in conjunction with bottom numbering of the pages.

(iii)   the function formerly performed (in version 7) by the .TOP MARGIN command can be achieved by use of the /DOWN:n switch on a command line.

10   RESTRICTIONS ON FILE NAMES

Many system programs make assumptions about the nature of files and consequent action to be taken on the basis of the file name and/or extension.   Appendix A of the DEC System-10 Operating System Commands Manual gives a table of standard file names and extensions currently in use or reserved for future use.

These restricted file names fall into two broad categories -

(a)   Spooled Extensions

Files names with an extension of .CDP, .LPT, .LST, .PLT or .PTP are put on the spooler queue by LOGOUT and are automatically deleted after being output to the appropriate device. To avoid any problem which this may cause, NEVER create a file with a spooled output extension

i.e. NEVER create files of the form DSK:name.zzz

where zzz is one of the extensions given above.

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(b)   Special File Names

In cases where a default output device is used (e.g. logical unit 3 for the line printer in Fortran), the system generates a name for the output file of the form xxxyyy.zzz where

xxx is a three character prefix chosen to make the name unique

yyy is either Snn to indicate the station for output
    or nnn to indicate a particular output device and

zzz is one of the spooled output extensions given in (a)above.

Thus QPXS3.LPT is a file to be output on the line printer on station 3.

On LOGOUT files named in this manner are automatically queued for the appropriate station and/or device.

If the user generates a name of this form complications can arise e.g. a file named REP70.LPT will be queued for the device LPT70 which does not exist.   Such a file might remain in the queue for weeks before it is detected and deleted.

If you want to specifically create a print file, do so by writing to the device LPT, i.e. create a file LPT:name.LPT. Do NOT create a file DSK:name.LPT.

If for some reason (which we cannot envisage) you must create a file of the form DSK:name.LPT, queue the file by means of the PRINT command rather than allowing LOGOUT to do it for you.

Observance of these rules will save both you and us time and money.

 sers requesting plotting or card punch spooling should note that such spooling is done only at the central site, and so jobs should be locate'd at station 0 before issuing the queue command or a specific output device should be specified in the command: e.g.

        Q CDP0:= file list
or   PLOT PLT0:= file list
or   .LOCATE 0
        .CPUNCH file list
        .LOCATE 3

Users who have queued files to non-existent devices, e.g. PLTS3
or LPT20 should restore the files to their own area and then queue
them to the correct device, e.g. to requeue .LPT files in a job
named REP30 from LPT30 to LPTS2:, the following command sequence
should be used:

.Q REP30=/DISPOSE:PRESERVE/KILL

.Q LPTS2:=*.LPT

The first command will rename the users files back to his area
and delete the queue request, the second command will then queue
the files to LPTS2:.

11   MIGRATION OF INFREQUENTLY ACCESSED FILES

In the interests of conserving space on DSKB, the system disk, a
number of infrequently used programs have been transferred from
STD: to OLD:.   If usage on OLD is not found to justify their
retention, they will shortly be removed from the system.

Similarly, a number of documentation files have been removed from
DOC: and transferred to backup storage.

12   UTILITIES LIBRARY

The utilities library MACUTL has been expanded to include a number
of more advanced routines. Most of these new routines are
modifications of a set of routines we obtained from the University
of Western Michigan.   Full documentation is provided in WMULIB.HLP
~n HLP:.   MACUTL.REL is on REL:.

Subroutines available:

ACMSRT:	Sort
ALLCOR:	Dynamic Core Allocation
BLOCKT:	Transfer a Block (Array or Vector) of Data (BLT)
CHKNAM:	Check Legality of Filename
DELETE:	Delete Files
DISMOUNT:	Request the Operator to Dismount a Device
EXIST:	Check for Existence of File
MAXIMUM:	Find Maximum of a List
MAXWYT:	Limit wait for Input from Teletype
MINIMUM:	Find minimum of a List
MOUNT:	Request the Operator to Mount a Device
PRINTS:	Print a Specified File on the Line Printer
PROTEK:	Protect a File from within Program
RENAME:	Rename a File

RENAMS:	Rename, Delete, and/or Protect Files on any Devices
RUNUUO:	Transfer Control to New Program
SORT:	Sort
SSORT:	Sort
SUBMIT:	Enter a Job in the Input (Batch) Queue
TRUTH:	Manipulate Compacted Truth Table
TTYNAM:	Return Name of User's Teletype
TTYPTY:	Determine if on Teletype or Pseudo-Teletype
TYPEON:	Turn off Control O and turn on Type Out
ZEROP:	Zero a Vector or Array

These are FORTRAN callable routines and can be loaded -

        .LOAD 'PROGRAM', REL:MACUTL/SEA

13   USER PROGRAMS

There are a number of programs developed in the University by our
users that have wider application within the University. We are
most anxious to publish the availability of such programs in the
Newsletter.

Please send copy to Miss Dixon, Secretary of the Prentice Computer
Centre. Obviously the Centre cannot accept responsibility for the
support of such programs. To start the ball rolling, Bill Whiten
of the Julius Kruttschnitt Mineral Research Centre has contributed
the following note on a linear curve fitting program.

14   LINEAR CURVE FITTING PROGRAM

   linear curve fitting program is being developed to solve the problem
of fitting curves of the form

$$y = \Sigma a_i x_i + b$$

to data sets (Y_j, X_{ij}) where there are errors in both the Y_j and
the X_{ij}. For many sets of data it is possible to give a reasonable
estimate of the error in each variable however, this type of data is
normally processed by regression or stepwise regression techniques
which assume all the error is in Y_j. The new program calculates the
maximum likelihood estimate of a_i and b taking into account the
specified errors (assumed normal) in each of the variables and if
required each data set. It also will reject insignificant variables
if this is required.

The amount of calculation involved varies with the particular case
but is generally of similar order to that required for stepwise
regression. The cost of running test cases on the PDP-10 has
generally been less than 50¢.

The development of this program has now reached the stage where
wider testing is desirable and I would now like to contact persons
using regression or stepwise regression who are interested in
comparing this new program with the normal regression techniques.
Details of the use of this program can be obtained from Bill Whiten
extension 6665.

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