PRENTICE COMPUTER CENTRE

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

NEWSLETTER

N-258   8-December-80

CONTENTS

Authorized by the Director of the Computer Centre

Principal Service Centres

1.0 <u>OFFLINE FILE STORAGE CHARGES</u> - <u>CORRECTION</u>

The cost for offline storage in the last newsletter (N-257) was incorrect. The correct figure is $0.025 per 1000 blocks per day, not $0.25 per 1000 blocks per day. Note that the figures in the example are correct, however. That is, 640,000 characters would cost 2.5 cents per day or $9.13 per year.

Director
extension 2189

2.0 <u>CHANGE TO DEFAULT FOR READING OF CARDS</u>

To reduce demands on disc space the default mode for reading cards will be changed to enable suppression of trailing spaces. This means that records created from cards will have a <carriage return, line feed> inserted after the last non-blank column on the card instead of after column 80. The only case where this may make a difference is for FORTRAN program decks which have FORMAT statements containing literals split over two cards, where the first card has spaces which are part of the literal at the end of the first card. This problem may be avoided by

a) using the /NOSUPPRESS switch on the $DECK or $FORTRAN card;

b) punching any character in column 73 of the first card of the literal; or

c) rearranging the literal so that there are no trailing spaces (i.e. putting the spaces at the beginning of the next card).

This change will take effect on both systems on 22-12-80.

Will Gout
extension 3023

3.0 NEW MONITOR FOR KL SYSTEM

3.1 Version 7.01 of TOPS-10

This version of the TOPS-10 operating system will be released in the near future.   Prior to the full implementation of version 7.01, the KL-10 system running 7.01 will be operated. Dates for these test runs will be announced in NOTICE.TXT and will probably be in January 1981.

The details of changes in 7.01 set out below are for the advance information of our users.

The new version is fully upward compatible, with very few exceptions (described below), with the current monitor. Note that version 603A will continue to be used on the KA. Some of the major new features are as follows:-

(a) The parity recovery and reporting code has been rewritten, incorporating better retry algorithms and a facility for replacing of bad pages in the monitor.

(b) Improved monitor error recovery: the dump and reload process on monitor errors has been considerably speeded up (to less than thirty seconds); also, the monitor now creates a dump and continues on non-fatal errors.

(c) Network improvements. Much of the network software has been rewritten to improve reliability. Multipathing (the ability to have several paths betwen two points), dynamic reconfiguration (automatic redefinition of network topology and rerouting of messages if a node fails), and route through (the ability to send messages via intermediate nodes) are now supported. Terminals are now "disconnected" after two minutes if no job is logged in and there is no activity. This is indicated by the "Host sent disconnect" message. Typing carriage-return will re-establish the connection.

(d) Terminal I/O has been largely rewritten to improve performance.

(e) Additional SFD support - subfile directories are now supported for the RUN, SAVE and GET commands. Also a RUN with no arguments remembers the complete previous specification.

(f) Command level editing has been improved. For video terminals, a backspace now blanks the backspaced character. A facility to delete a word from a line has been added (^W command).

(g) Increased number of I/O channels. The number of software channels available to users has been expanded from 16 to 80 by extension to the FILOP.UUO.

(h) Improved software interrupt system.   This module (PSISER) has

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been written for improved reliability and efficiency. The
software is now much simpler, while providing an expanded number
of events on which to operate.

(i) TERMINAL TYPE command. This command is used to set up
information on screen size, fill class, carriage width, and other
terminal-specific parameters. Use .HELP TTYTYP for more details.

3.2 New Commands for 7.01 Monitor

(a) ^W (control-W) deletes the last word typed. A word is defined as
all spaces, tabs, and alphanumeric characters until a
nonalphanumeric character is typed. On video terminals, the
deleted word is erased from the screen, while on hardcopy
terminals it is printed backwards between backslashes.

(b) TERMINAL TYPE command - see above. LOGIN and INITIA will also
accept the /TYPE switch in SWITCH.INI. (For LOGIN the format is
/TERMINAL:(WIDTH:132,TYPE:LA36,etc.))

(c) TTY DEFER command. This command prevents input characters from
being echoed until they have been read, for improved handling of
display terminals. May be set by /TTDEFER to LOGIN or /DEFER to
INITIA.

(d) TTY DISPLAY command controls echoing of BACKSPACE (erased
characters are blanked).

(e) SET DEFAULT BUFFERS n command. To improve efficiency (at the
expense of an increase in core usage) the default number of disc
buffers has been increased from two to six. Each disc buffer is
203 words long. Note that this will not affect COBOL programs,
which specify the number of buffers to be used explicitly. This
default value may be changed by the above command. A value of
zero reverts to the system default. LOGIN will accept the
/DEFBUFFER:n switch. Some overlaid programs may have problems
when the number of buffers is increased, since space for buffers
is taken from a fixed area of free core between the end of the
main program and the start of the first overlay.

(f) NETWORK command types information about nodes in the network,
with more facilities available than exist with the current NODE
command. See HLP:NETWORK .HLP for details (or .HELP NETWORK).

3.3 Incompatibilities with current monitor

(a) With the new version of the microcode required for 7.01, support for KA double precision floating point instructions has been removed. These instructions may be trapped and simulated by the monitor if desired. This is controlled by the .SET FLOATING or .SET FLOATING NO command. The default setting is NO. The setting may also be changed by program by using code 41 with SETUUO monitor call. If floating point compatibility is off, execution of a KA double precision floating point instruction will cause a trap and the monitor will type

"?KA10 floating point instruction at user PC XXX"

The instructions involved are FADL, FSBL, FMPL, FDVL, UFA and DFN. This should not generally cause any problems, as no programs compiled on the KL under FORTRAN or COBOL will contain these instructions.

(b) Constructs of the form LIBn:, meaning the library PPN on DSKn, are no longer supported.

(c) The NODE command has been replaced by the NETWORK command. The NODE command will now type details of only one node. Support for the NODE command will be removed in a future version of the monitor.

(d) SET WATCH FILES command types a message for each file accessed. The message takes the form:

[Fxn: dev:file.ext[ppn,sfd,...]errorz]

Where F (where it appears) signifies a FILOP.

x = L for LOOKUP
    E for ENTER
    R for RENAME

n is the channel number

z is the error code if the LOOKUP, ENTER or RENAME failed.

Will Gout
extension 3023

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4.0 LONG TERM FILE STORAGE FOR USERS

With the introduction of minimal charges for archived file storage from 1-1-81, some users are looking for cheaper alternatives for the long-term storage of larger files. One such mmechanism is the use of magnetic tape. For instance a 1200' tape (purchase $7, rent $1 per month) can store up to 20,000 blocks written by BACKUP at 1600 BPI. Other costs involved would be normal tape mount and read/write costs for saving and any restoring files. For further details on magnetic tape file storage, phone Belinda Barnett on extension 2188.

Glenda Black
extension 3471

5.0 INFORMATION CONCERNING COURSES

5.1 January-February courses

The next series of courses will be held in the period January 29-February 19, 1981. The timetable is set out in 5.3 below.

5.2 General notes about courses

(a) All courses are conducted in the Client Room, Hawken Building.

(b) Enrolments are made by contacting Barry Maher, ext. 3021.

(c) Staff and post-graduate students are enrolled free; other users are charged $10.00 per half-day session.

(d) The Introductory Course is designed for users with little or no previous experience of the PDP-10 system, and provides basic instruction in the use of terminals, monitor commands, editing and introduction to batch processing. Prospective users without this background must attend an introductory course before enrolling in other courses.

(e) To ensure that participants obtain sufficient practice on a terminal, all course enrolments are limited.

(f) Courses are normally held in usual office hours during non-lecture periods of the year. However, during 1980, some evening courses were conducted. Where resources exist, evening sessions may be arranged again during 1981.

(g) Short information/demonstration sessions can also be arranged for common-interest groups to explain either general or specific usage of the system and supported packages. Requests for such sessions should be directed to ext. 3021.

5.3 Course schedule for January-February

(a) Introductory Course   Jan 29-30

    9.00-12.00am + 2.00-5.00pm each day

A two-day course concerned with the elements of computer systems, broad operation of the PDP-10, fundamental monitor commands, editing, and introduction to batch processing.

(b) VG Course   Feb 2-4

    9.00-12.00am + 2.00-5.00pm each day

A three-day course on the VG package, which is a simple interactive data-base system suitable for use in a variety of applications associated with the storage, interrogation and retrieval of records such as student records, catalogues and registers, bibliographic material, mailing lists, etc.

(c) Introductory Course   Feb 5-6

    9.00-12.00am + 2.00-5.00pm each day

(d) SPSS Course   Feb 9-11

    9.00-12.00am + 2.00-5.00pm each day

A three-day course on the Statistical Package for the Social Sciences, which is a widely-used general-purpose statistical package. This basic course in SPSS is based on a series of tape-slide presentations prepared at Newcastle-on-Tyne University, designed to assist new users to establish the techniques necessary to perform any of the statistical procedures available within SPSS.

(e) RUNOFF Course   Feb 16-18

    9.00-12.00am + 2.00-5.00pm each day

A three-day course on the text-processing program RUNOFF, which incorporates such operations as automatic pagination and justification (right-hand alignment of text) to user's specifications. It has found wide acceptance in the production of office papers, theses, papers for submission to journals, etc.

(f) Student Accounting Course   Feb 19

10.00-12.00am + 2.00-4.00pm

A one-day course on the use of the student accounting program STUPID
(Student Processing Interactive Dialogue). This program is used by
supervisors to control the activities and expenditures of groups of
students.   This course may be of value to those who may wish to have
their students perform activities with the system for the first time,
and also for those who may have experienced some difficulty in
applying this program in the past.

5.4 Enrolments

To enroll for any of the above courses, please contact:

Barry Maher
extension 3021

6.0 "FORTH" LANGUAGE - INSTRUMENT CONTROL

We would like to contact anyone with a solid interest in FORTH to
hopefully start an informal FORTH Interest Group, depending upon the
response.

In the course of our postgraduate studies we are hoping to use
FORTH in the near future for instrument control; an application ideal
for an extensible language such as FORTH. We have a general interest
in:

implementation (dictionary format, operators, cross-
compilation etc.)
extensions (debugging, file systems, floating point)
and more exotic things like FORTH hardware (at least to
discuss.)

At present we have two implementations running:

DECUS FORTH on U.Q.'s PDP-10 (only a minimal FORTH.)
CP/M User's Group STOIC (powerful version with modified RPN
syntax.)

Unfortunately due to our study committments we can't become too heavily involved but to register interest contact:

Danny Thomas   275 7332 (Griffith University.)
Peter Milford   377 3424 (University of Queensland.)

NOTE both are office numbers but we are not always there.

7.0 CALCULATOR FOR SALE

One Hewlett-Packard HP-97 programmable printing calculator, bought last year.

Please phone the Department of Occupational Therapy on ext. 3795/3797.

8.0 CHRISTMAS GREETINGS

The Director and Staff of the Prentice Computer Centre extend to you their best wishes for a Happy Christmas and look forward to being of service to you in 1981.

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SYSTEM PERFORMANCE REPORT

For node   KA10   there were   29 working days in the period   1/Nov/80 to 30/Nov/80

		< KA10 >	
		HHH:MM	%
1.	Attended system running time	457:15	
2.	Plus unattended system running time	218:09	
3.	Equals total system running time	675:24	100.0
	less time used for:		
4.	Scheduled maintenance	20:00	3.0
5.	Dedicated operations tasks	7:28	1.1
6.	Dedicated systems development	0:30	0.1
7.	Equals time scheduled for use	647:26	95.9
	less lost time due to:		
8.	Unscheduled maintenance	8:37	1.3
9.	Hardware faults	0:00	0.0
10.	Software faults	0:06	0.0
11.	Unresolved	1:14	0.2
12.	Environmental conditions	0:00	0.0
13.	Equals time available to users	637:29	94.4
14.	Effective user uptime (13./7.)		98.5
15.	Number of crashes		5
16.	Mean availability between crashes		127:30
17.	Mean time to recover crashes (minutes)		16
18.	Total number of Jobs		3580

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SYSTEM PERFORMANCE REPORT

For node   KL10   there were   29 working days in the period   1/Nov/80 to 30/Nov/80

		< KL10 >		< DN87A >		< DN87B >	
		HHH:MM	%	HHH:MM	%	HHH:MM	%
1.	Attended system running time	486:49		486:49		486:49	
2.	Plus unattended system running time	113:47		113:47		113:47	
3.	Equals total system running time	600:36	100.0	600:36	100.0	600:36	100.0
	less time used for:						
4.	Scheduled maintenance	35:01	5.8	35:01	5.8	35:01	5.8
5.	Dedicated operations tasks	9:15	1.5	9:15	1.5	9:15	1.5
6.	Dedicated systems development	15:22	2.6	15:22	2.6	15:22	2.6
7.	Equals time scheduled for use	540:58	90.1	540:58	90.1	540:58	90.1
	less lost time due to:						
8.	Unscheduled maintenance	1:47	0.3	0:00	0.0	0:00	0.0
9.	Hardware faults	4:18	0.7	0:00	0.0	0:00	0.0
10.	Software faults	0:14	0.0	0:02	0.0	0:14	0.0
11.	Unresolved	3:25	0.6	0:07	0.0	0:15	0.0
12.	Environmental conditions	0:00	0.0	0:00	0.0	0:00	0.0
13.	Equals time available to users	531:14	88.5	540:49	90.0	540:29	90.0
14.	Effective user uptime (13./7.)		98.2		100.0		99.9
15.	Number of crashes		18		9		29
16.	Mean availability between crashes		29:31		60:05		18:38
17.	Mean time to recover crashes (minutes)		27		1		1
18.	Total number of Jobs		13549				

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For node GRIFFITH there were   28 working days in the period   1/Nov/80 to 30/Nov/80

		< GRIFFITH >	
		HHH:MM	%
1.	Attended system running time	158:19	
2.	Plus unattended system running time	443:40	
3.	Equals total system running time	601:59	100.0
	less time used for:		
4.	Scheduled maintenance	1:37	0.3
5.	Dedicated operations tasks	0:00	0.0
6.	Dedicated systems development	0:00	0.0
7.	Equals time scheduled for use	600:22	99.7
	less lost time due to:		
8.	Unscheduled maintenance	0:00	0.0
9.	Hardware faults	2:41	0.4
10.	Software faults	0:00	0.0
11.	Unresolved	1:09	0.2
12.	Environmental conditions	0:00	0.0
13.	Equals time available to users	596:32	99.1
14.	Effective user uptime (13./7.)		99.4
15.	Number of crashes		15
16.	Mean availability between crashes		39:46
17.	Mean time to recover crashes (minutes)		15

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For node COMMERCE there were 20 working days in the period 1/Nov/80 to 30/Nov/80

		< COMMERCE >	
		HHH:MM	%
1.	Attended system running time	163:33	
2.	Plus unattended system running time	0:00	
3.	Equals total system running time	163:33	100.0
	less time used for:		
4.	Scheduled maintenance	0:00	0.0
5.	Dedicated operations tasks	0:00	0.0
6.	Dedicated systems development	0:00	0.0
7.	Equals time scheduled for use	163:33	100.0
	less lost time due to:		
8.	Unscheduled maintenance	0:00	0.0
9.	Hardware faults	0:00	0.0
10.	Software faults	0:00	0.0
11.	Unresolved	0:00	0.0
12.	Environmental conditions	0:00	0.0
13.	Equals time available to users	163:33	100.0
14.	Effective user uptime (13./7.)		100.0
15.	Number of crashes		0
16.	Mean availability between crashes		0:00
17.	Mean time to recover crashes (minutes)		0

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