

UNIVERSITY OF QUEENSLAND

Computer Centre

WEEKLY NEWSLETTER

date : week ended 9 November 1972
authorization : Director of the Computer Centre

1 OPERATIONS

1.1 PDP-10 System

Friday	3 November	system failure 2123-2131, reloaded monitor.
Monday	6 November	system failure due to lightning power failure 2110-2115, reloaded.
Tuesday	7 November	magnetic tapes hung 0810-0940, system to maintenance.
Wednesday	8 November	system hung 0913-0939, reloaded.
Thursday	9 November	system hung 2120-2130, reloaded.

2 IMPROPER RESTORATION OF ARGUMENTS

It has been previously notified that when double precision arguments are included in the call to a subroutine, it is possible for incorrect values of these and other arguments to be returned. This error only occurs in certain situations and may be avoided by adhering to the following rules.

- (a) array arguments are always handled correctly
- (b) where double precision or complex arguments are used these should always be first in the argument list.
- (c) if both scalar and array double precision arguments are used, the array arguments should occur first.

3 SUGGESTIONS

3.1 Algol versus Fortran

A suggestion was made that the Centre should encourage the use of Algol, rather than Fortran since it 'compiles five times faster, is more powerful and generally better', and that

- (a) Algol errors should be reported in the Bulletin
- (b) Algol should be given type 1 support
- (c) useful LIB40 library routines should be made available.

Algol will be considered for type 1 support when its usage is sufficiently high to warrant the effort involved. Use of Algol from a remote terminal is presently fairly satisfactory, but its use via batch can present some problems. The library situation should improve with version 2A, to be implemented shortly.

Unfortunately, we have not currently the resources to verify whether compilation is five times faster than Fortran. This would require a series of controlled tests providing comparison of execution as well as compile times. We would agree that Algol is a powerful language and we hope that it will be possible at some future stage to devote resources to a detailed investigation so that all users may be well informed of the facilities offered by this language.

If compilation times are a matter of concern, it would be worth noting the availability of M40, a fast Fortran compiler developed by the Medical School of the University of Pennsylvania. One test indicated a 2 to 1 cost advantage over Fortran. Details are given in the writeup available in the clients' room.

3.2 Soundproofing the Clients' Room

It was suggested that the clients' room be soundproofed because the noise level, particularly when the teletypes are in use, made concentration difficult.

It is recognized that the present clients' room at the Centre is very noisy and generally unsatisfactory. The Centre has always regarded that particular area as temporary only, and is currently trying to obtain a more suitable clients' room near the Centre.