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SUMMARY

A set of FORTRAN-callable subroutines, written in the FORTRAN IV-PLUS language, was developed on the DEC PDP-11/34A computer system. This software package, together with the co-processor (the LPAll-K) and the Gould HR2000 X/Y recorder, were then used by the author in designing applications programmes to perform the following functions:

- (i) the continuous plotting of USER-SUPPLIED function,
 $f(x) = 4x^2$
- (ii) the point plotting of user-supplied data
- (iii) the creation of interactive graphics.

The twelve (12) callable subroutines developed are listed below with brief description of their function:

- INIT : initializes plotting/sets up drawing area
- DWRPRT : defines a user's drawing area (window)
- USRCRD : maps user's co-ordinates onto the
drawing area.
- TRNFRM : converts user's co-ordinates to paper
co-ordinates.
- LPA : converts paper co-ordinates to plotter commands
- POSITP : moves pen from one position to another,
according to paper co-ordinates, with different
types of dashed lines.
- POSITU : moves pen from one position to another,
according to user's co-ordinates, with
different types of dashed lines.

AXES : draws the X- and Y-axis
POLY : draws polygons with different types of
dashed lines.
CURV : draws curves with different types of
dashed lines.
DWAIT : allows interactive use of plotter
DRWEND : ends all plotting.

In writing an applications programme, each subroutine may be called, either on its own or in conjunction with others, to perform specific functions. Numerous examples of the use of the package are included in the report, and recommendations made to increase its flexibility.