

Fortran Library for an X/Y Plotter Based on the Laboratory Peripheral Accelerator

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Abstract: *Many times a user is faced with the difficult task of manually plotting a large number of data points which may arise from a laboratory experiment. Alternatively, one may wish to plot the parameters of a user supplied function. Text or tabulated data usually fail to use our natural abilities to comprehend information fully since data is presented in a linear sequential manner. As a result the full significance of the information is usually obscured. The use of graphical and pictorial representations which can supplement the text, should therefore be encouraged. This paper deals with the development of a set of Fortran-callable subroutines which a user can use in designing application programmes to perform such functions as graph plotting. This software package together with the Laboratory Peripheral Accelerator (LPA 11-K) co-processor were used to design application programmes which can then drive a Gould HR2000 X/Y recorder, to perform functions such as generating (a) graphical display of tabulated experimental data, (b) graphical display of any function (c) standard drawings and/or symbols. In writing an applications programme, each subroutine may be called, either on its own or in conjunction with other subroutines, to perform specific functions. Examples of the use of the package are included and recommendations are made to increase its flexibility in this paper.*

Keywords: *Graphical display, subroutines, applications programme, peripheral accelerator, Fortran*