PROPOSAL FOR FINAL DEVELOPMENT OF THE PDS1 SOFTWARE

B. Carpenter

The software in the PDS1's must be modified once more, to what should be regarded as its final state, in conjunction with the introduction of the PDP 11/45's.   If no criticisms are received, the modifications will be made on the basis of the present document.

1. Character codes

    The PDS1's will accept and generate characters in either ASC11 or EBCDIC, with a view to the eventual abandonment of EBCDIC.

2. Independent screens and keyboards

    The two terminals on each PDS1 will be handled independently.

3. Communications

    Dialogue with any computer capable of using STAR will be possible, with management of errors, busy flags and back-up by the PDP 11/10.

4. Check-list mode

    No change.

5. Teletype mode

    The teletype mode used by ISAAC will be made a general facility, for use in free format interaction.

6. Other modes of interaction involving the cursor are abolished.

7. User programs are progressively abolished (there are only 3!)

8. Continuous line graphics will be added using the existing hardware subject to memory space.   (The purchase of long vector hardware is not justified since most of the vectors in continuous graphs are relatively short.)

    By taking these steps, operating staff will be faced with only two ways of using the keyboard (check-lists for fixed format interaction

/je

and teletype mode for free-format interaction). For the free-format case, some mutual back-up with LA30's or VT05's could be arranged.

It is difficult to decide how to allocate memory between the two users of one PDS1; this will be done by an easily changeable algorithm so that we can experiment.

PDS1 program development, reloads, and test programs must eventually be transferred to the largest PDP 11/45. On-line test facilities should be improved, and error detection should be added to normal transmissions if possible (e.g. checksum).

Implementation of the proposal is closely linked to that of the multi-computer communications hardware and software and will clearly occur at the same time. (Modifying the existing software in the IBM 1800 to handle independent terminals and the third PDS1 is a major enterprise involving the Executive, Spar 5 and all user coreloads, and is probably impossible due to lack of space).

                                                    B. Carpenter

Distribution

IBM programmers
Controls Committee