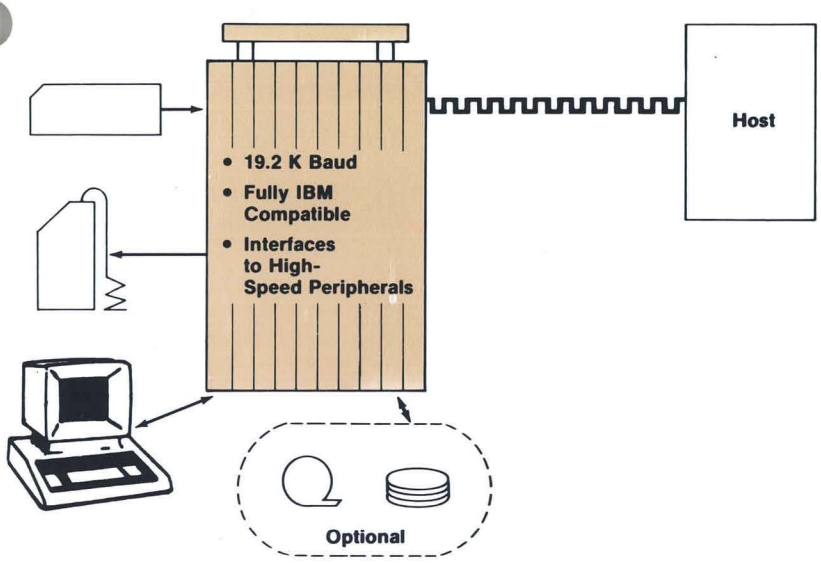
PERKIN-ELMER

DATA
COMMUNICATIONS



2780/3780 RJE EMULATION

PRODUCT DESCRIPTION

The 2780/3780 Remote Job Entry (RJE) Emulator permits Perkin-Elmer's wide variety of 32-bit computer systems to emulate the popular IBM 2780 or 3780 Remote Job Entry terminals.

Remote Job Entry provides the user with access to the computing facilities of a central host computer. Common carrier facilities are used to provide the communications link between the RJE site and the central computer. Industry-standard binary synchronous (BISYNC) line protocol is used for information transfer between the two locations. The RJE site can be located at any distance from the host, limited only by the availability of appropriate common carrier facilities.

The 2780/3780 RJE Emulator allows a user to transfer data between a device or file on the Perkin-Elmer processor and a processor at the other end of the communications line. This capability is provided in a device-independent manner, using the facilities of the operating system. In addition to the 2780/3780 standard card reader and printer, the 2780/3780 RJE Emulator permits the use of both disc and tape devices.

The 2780/3780 RJE package makes data communications operations on Perkin-Elmer computers both convenient and straightforward. The applications programmer is relieved of the burden of line connects, disconnects, modem control, handshaking protocol, error detection and recovery and the other responsibilities associated with transferring data to and from the remote host.

FEATURES

- Fully IBM BISYNC compatible with EBCDIC line code
- Point-to-Point, 2-wire or 4-wire operation
- Leased or switched facilities
- Automatic Answer
- Up to 19.2K baud
- Horizontal Tabulation
- Vertical Forms Control

2780/3780 OPERATIONS

IBM 2780 or 3780 RJE terminals use BISYNC protocol to transfer data to and from an IBM System 360/370. The two terminals differ only in the mode of data formatting used. The communications protocols of the two terminals are fully compatible. The 3780 provides higher throughput by using space compression techniques. The information transfer scheme used by 2780/3780 terminals is half-duplex, that is, data (either job or results) is transferred in only one direction at a time (e.g., Card Reader to Communications Line or Communications Line to Line Printer).

Perkin-Elmer's 2780/3780 RJE Emulator uses an interactive terminal (such as a Model 550 VDU) as a command input device, as opposed to the hardwired switches of the IBM 2780/3780 terminals. The command repertoire and IBM equivalent are summarized in Table 1.

For Perkin-Elmer processor-to-processor communications, a special formatting mode is provided, combining several features of both the 2780 and 3780 formats. This special format permits higher throughput. The user can select strict 2780, strict 3780, or Perkin-Elmer processor-to-processor mode depending on his network and throughput requirements.

COMMUNICATIONS SOLUTION

The 2780/3780 Emulator provides straightforward communications capabilities for a variety of end-user applications. The 2780/3780 RJE Emulator can be installed and up-and-running in a matter of hours without requiring any application programming. Simple networks of satellite Perkin-Elmer processors and central Perkin-Elmer processors (or non-Perkin-Elmer mainframe computers) can be put in place quickly. Network operation is sure and reliable because it uses industry-proven protocols and techniques. Return-on-investment is almost immediate.

OPERATING SYSTEM SUPPORT

The 2780/3780 Emulator is handled as a separate task under OS/32, Perkin-Elmer's 32-bit operating system. The OS handles such functions as interrupt servicing and maintaining the real-time clock used by the 2780/3780 Emulator. The operating system allows data transfers to communication devices as if they were local peripherals.

The device independence afforded to 2780/3780 Emulator installations provides considerable flexibility. For example, a communications line can be assigned to a logical unit, closed, renamed, reprotected, or have buffers checkpointed. For sites simultaneously performing non-communications tasks, the 2780/3780 RJE input from the central facility can be readily assigned to the OS spooler task, permitting the system printer to be kept optimally busy servicing both local users and the 2780/3780 Emulator needs.

PRODUCT NUMBER

S80-031 2780/3780 RJE Emulator Task

RELATED DOCUMENTATION

29-466 Common 2780/3780 Remote Job Entry Emulator Task User's Manual.

COMMAND	2780	3780
DISPLAY	No equivalent	
TRANSPARENT	Switch Selected	
NORMAL	Switch Selected	
FLAG	No equivalent	
READER	Fixed	
PRINTER	Fixed	
PUNCH	Fixed	
LIST	No equivalent	
RECEIVE [CONTINUOUS]	Switch selected — always continuous	Default Mode
TIMEOUT	Not necessary	
SEND [AUTOTURNAROUND-CONTINUOUS]	Switch selected	Switch selected— always AUTOTURNAROUND
CONTINUE	Not necessary	
STOP	Switch Selected	
PAUSE	Not necessary	
END	Switch selected (power)	
LINE	Fixed	

TABLE 1 — COMMAND SUMMARY

PERKIN-ELMER

Manufacturing facilities, and Sales/Service offices throughout the world.

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