



ADMINISTRATIVE - INTERNAL USE ONLY

ODP-84-876

29 JUN 1984



MEMORANDUM FOR: Director of Communications

FROM: 

Director of Data Processing

SUBJECT: ODP Requirements for Local Area Network (LAN)  
in the New Building

1. The Office of Communications is designing a Local Area Network (LAN) for installation in the new building. This project is critical to ODP's future. Accordingly, any LAN will have to provide a viable transmission capability for both our short and long-term computer system architecture. While our personnel have had numerous conversations, it is most appropriate to formally state our requirements to avoid any apparent conflict.

2. Our requirements can be divided into two major categories. First, there are critical requirements which should be present when the new building is occupied. Please note, these requirements assume that the LAN installed in the new building will be expanded to encompass the current building.

a. The LAN must have the capability to support at  It is reasonable to project a terminal count that reflects use by two-thirds to three-quarters of the total Agency population. These terminals will be our current Delta Datas and, in the future, a Personal Computer (PC) which appears as an IBM 3270, or other standard protocol terminal, to the mainframe. The current Delta Datas must be supported in the 300 to 19,200 baud range (nominally 9600 baud) with hardware flow control, while the future PCs must initially be supported at speeds of 2.5Mb per second. This 2.5Mb rate is a conservative estimate based on today's requirements for graphics and down-line loading of files. The Information Systems Board (ISB) has specifically requested high resolution graphics for imagery processing by the end of this decade, which will drive the terminal data rates to 10Mb or greater.

b. In addition, the LAN must support a variety of bisynchronous devices at speeds of 9.6Kb to 56Kb per second. These devices and their interfaces require external clocks. The LAN should also be able to carry SDLC/HDLC (Synchronous Data Link Control/High-level Data Link Control) circuits as well as bisynchronous ones.

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c. The LAN must provide a host interface directly into the IBM mainframe channels, preferably without modifying the Operating Systems.

d. The LAN needs to provide gateways into multiple hosts which are selectable by the user.

e. The LAN must provide a significant improvement in the time and effort required to install and relocate terminals.

3. The second category of requirements can be deferred for a short time, but must be incorporated into the total plan and should have reasonable dates for completion after building occupancy. These requirements are no less critical than the first category, however.

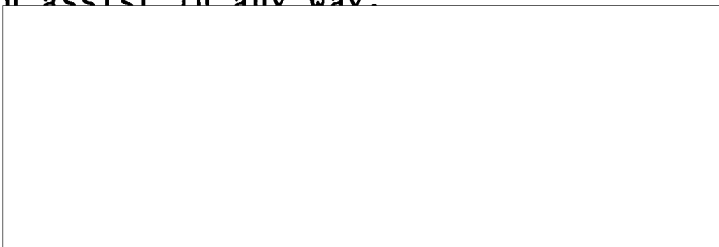
a. The LAN needs improved network management capabilities including fault detection and isolation. Also it should provide the capability to find and account for terminals.

b. The selected LAN must have adequate security to ensure compartmentation.

c. The LAN must be installed into the existing Headquarters building and integrated with the new building LAN. The entire system should function as a single LAN from both the user's viewpoint and the system administrator's perspective. Also, we would like to see gateways for interconnect to remote sites, providing the potential for a Metropolitan Area Network (MAN).

4. We look forward to working with the Office of Communications on this project, which is vital to our mission. We are prepared to offer any assistance or support within our means to make this a successful venture. Please do not hesitate to call if we can assist in any way.

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