

LOCAL AREA NETWORKS:
SELECTION CRITERIA AND PRODUCT DESCRIPTIONS

by

Linda Diane Alvey Lockwood
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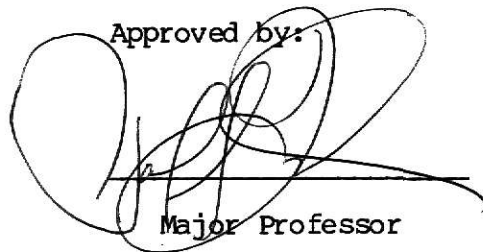
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CHAPTER 1: INTRODUCTION

1.0 PURPOSE

The local area network arena is sizzling with strong competition and new contenders are continually entering the market. Some firms are announcing complete systems and others are specializing in specific components.

Because of this influx of local area network manufacturers, it is becoming more difficult for businesses to determine which system or components to purchase or lease.

Generally, high level executives make all decisions which involve substantial expenditures. Most of these executives may not know what is meant by the term "local area network" much less know how to choose the right one for his or her purpose. Often the technical expertise which should be available in lower management positions is inadequate for major decisions because the expertise does not exist in new technologies. Relying on vendor opinions and suggestions can be unwise as vendors are inclined to fit the business needs to the system, while the executive should be concerned with finding the system which best serves the company's needs.

This report defines the terminology and explains the concepts which should be understood so that informed decisions can be made by non-technical high level executives. Also, twenty products currently on the market are described with emphasis on major local area network characteristics. Finally, the paper takes a look into the future to see how local area networks may be utilized.

1.1 LOCAL AREA NETWORK (LAN) DEFINED

Businesses are having to make crucial decisions in relatively short periods of time due to the state of the economy and the proliferation of governmental and regulatory mandates. Having access to reliable, current data from any physical area of the corporation is becoming necessary for survival.

This is the purpose of a local area network: to send, receive, process, and store useful information in co-operation with a central or neighboring site quickly and accurately.

A local area network can be described as a short distance data link network composed of lines, terminals, processors, and peripherals which create a resource sharing environment. The major elements of a LAN are:

- (1) A method to transport data from one location to another
- (2) A method to connect devices to the network
- (3) A set of rules essential for the efficient and reliable operation of the system.

Typical characteristics of a local area network include:

- (1) Single building or office complex residency
- (2) Data transmission rates from 100 thousand bits per second to 100 million bits per second
- (3) Maximum transmission distance of a few miles. (Currently, it is estimated that about 86 percent of all information needs fall within this distance constraint.)