
SECTION I

INTRODUCTION

Revolutionary developments in micro-electronics technology have placed computer power—in the form of small computers and computerized devices—directly into the hands of office, factory, management, and data processing personnel. These users are finding a greater need to send, receive, and share the information stored in the computers and computerized devices now at their fingertips. In short, more users need better computer communication.

Most of these computer communication needs are local—between offices in a building, between floors of a building, within a factory, and the like. Zilog, from its vantage point in the forefront of the micro-electronics revolution, saw this need early, and is among the first to offer a successful local area network, called Z-NET.

1.1 Scope of This Manual

The material presented here offers an introduction to Zilog's Z-NET local area network (the "Z-NET System") for current and prospective users of a local area network. The following pages look at Z-NET in the context of some local area network alternatives, discuss the criteria that Zilog determined its local area network should meet, show how the Z-NET System meets these criteria, and examine the concepts underlying the Z-NET System, the facilities it can provide and the product and configuration aspects of the Z-NET System. Local area network performance concepts are also discussed.

1.2 What is a Local Area Network?

A local area network is a communications facility of hardware and software elements that connects a group of computers and/or computerized devices located within close geographic range of each other.

Some definitions of a local area network are expanded to include voice devices, video devices and facsimile devices. This manual focuses on data networks where data are of the type used by, or generated by, computers.

1.3 Objective of Z-NET

Underlying the research, planning, design, development, and production of Z-NET has been the marketplace's mandate to get the computer to the work, and get the work to the computer. From the beginning, Zilog followed a commitment to this mandate, and formulated a goal of its own: to put on every desk a small computer communicating with other computers via the Z-NET local area network. Striving for "a small computer on every desk communicating via Z-NET", futuristic though it may sound, is really a practical innovation evolving from Zilog's demonstrated accomplishments in the micro-electronics industry.