

An Introduction to Networking

Objectives

By the end of this chapter, you should be able to discuss the following:

- Networked applications.
- Network standards (protocols).
- Network quality-of-service (QoS) metrics.
- Network security.
- Switched networks.
- Routed networks (Internets).
- LANs and WANs.
- Network management.

NETWORKED APPLICATIONS

Meeting User Needs

The president of Stanley Works once told his board of directors, "Last year, we sold four million drills that nobody wanted." He went on to explain that what customers really want is *holes*. A drill is only a tool to produce holes, and it is not the only possible tool. To customers, tools are merely expensive requirements, not something desired. Only by focusing on what customers want could the company succeed in the marketplace.

What Is a Network?

In that spirit, we will begin with a preliminary definition of the term *network* in terms of user needs. Figure 1-1 shows that a **network** is a communication system which allows application programs on different hosts to work together. An application may be used directly by a person, as is the case for browsers. The application may also operate without direct human intervention, as is the case for webserver programs on World Wide Web server hosts that supply browsers with information.

Our preliminary definition of a network is that a network is a communication system which allows application programs on different hosts to work together.
