

CHAPTER TWO

WHAT IS THE NET?

A mind stretched to a new idea never returns to its original dimension,
Oliver Wendell Holmes

The internet is one of the most complex machines ever developed. Describing and understanding the internet at all levels of operation has been, and continues to be, the focus of PH.D. theses of librarians, computer scientist, and electrical engineers. It is not necessary for e-researchers to understand the Net on this kind of detailed level of complexity, but we believe that e-searchers should be knowledgeable enough to discuss their needs and use of the Net with both technicians and potential research subjects. To help gain this larger conceptual understanding and functional vocabulary, this chapter covers the operations, we think it is important that researchers understand how to search the Net for information critical to the research process. Thus, we also focus on the techniques and strategies for efficient and effective Net searches.

WHAT IS THE NET?

As with many high-tech developments, the Internet has both a military and an academic association (Underwired, 1997). The Internet had a rather modest and unassuming origin in 1969, during the Cold War, when the American think tank RAND Corporation and the United States Pentagon joined to design an indestructible information resource (Diamond & Bates, 1995). During this time, the telephone was the primary communication system in use by the military. However, a problem with the telephone was its dependence on switching stations that could be targeted during an attack. The challenge, then, was to design a communication system that could quickly reroute digital traffic around failed nodes to ensure successful communication after a nuclear war. A strategic solution was possible, in theory, through the construction of a datagram network called a catenet and the use of dynamic routing protocols that could