

# Definitions

- network - a collection of computers and other devices that can send data to and receive data from each other.
- internet (small i) - a set of two or more networks connected and configured to pass traffic among the computers attached to the individual networks. The word intranet is often used to refer to an internet contained within a particular organization.
- Internet (capital I) - the global internet we are all familiar with. Specifically, the Internet uses the TCP/IP protocol which we will discuss later.

# Definitions

- local area network (LAN) - a network spanning a small geographic area. For example, a network in a single home or building, our CS network.
- wide area network (WAN) - a network spanning a large geographic area. For example, a network owned by a network service provider, a satellite network.
- protocol - a precise set of rules defining how computers communicate. The word was originally (and still is) used to mean the forms of etiquette and ceremony observed by diplomats and heads of state.

# Why Networking Is Confusing

1. Computer networking is a complex subject.
  - There are many different hardware technologies.
  - There are many different software technologies.
  - There are many different networking standards.
  - Yet, totally different networks need to be connected.

# Why Networking Is Confusing

2. There is no underlying theory of networking.

- Organizations and research groups have attempted to define conceptual models.
- Unfortunately, the technology is diverse and changing rapidly, and the models are either too simplistic to distinguish details or too complicated to help with understanding.

# Why Networking Is Confusing

3. There is no simple and uniform terminology.

- New terms are constantly being invented.
- Industry and academia often use different terminology.
- More than one term often exists for the same concept.
- The same term is used to describe similar concepts in different technologies.