Here are a few tidbits you're likely to run into at parties where the conversation is about Ethernet standards:

- Ethernet is a set of standards for the infrastructure on which a network is built. All modern operating systems can operate on an Ethernet network. If you build your network on a solid Ethernet base, you can intermix different operating systems: Windows, macOS, and Linux.
- Ethernet is often referred to by network gurus as 802.3 (pronounced "eight-oh-two-dot-three"), which is the official designation used by the *IEEE* (pronounced "eye-triple-ee," not "a*ieeee!*"), a group of electrical engineers who wear bow ties and love to argue about things like inductance and cross-talk — and it's a good thing they do. If not for them, you couldn't mix and match Ethernet components made by different companies.
- The original vintage Ethernet transmits data at a paltry rate of 10 million bits per second, or 10 Mbps. (*Mbps* is usually pronounced "megabits per second.") Because 8 bits are in a byte, that translates into roughly 1.2 million bytes per second. In practice, Ethernet can't move information that fast because data must be transmitted in packages of no more than 1,500 bytes, called *packets.* So 150KB of information has to be split into 100 packets.

  Ethernet's transmission speed has nothing to do with how fast electrical signals move on the cable. The electrical signals travel at about 70 percent of the speed of light, or as Captain Kirk would say, "Warp factor point-seven-oh."

- A faster version of Ethernet, called *100 Mbps Ethernet* or *Fast Ethernet,* moves data ten times as fast as normal Ethernet.
- The most common version of Ethernet today is *gigabit Ethernet,* which moves data at 1,000 Mbps.
- Most networking components that you can buy these days support 10, 100 Mbps, and 1,000 Mbps. These components are called *10/100/1000 Mbps components.*
- Some networking components support 10 gigabit Ethernet, which moves data at 10,000 Mbps (or 10 Gbps). Ten Gbps Ethernet is usually used for high-speed connections between servers and network switches.

All about Cable

Although you can use wireless technology to create networks without cables, most networks still use cables to physically connect each computer to the network. Over the years, various types of cables have been used with Ethernet networks.