ABOUT BBSes AND COMPUTER MODEMS

ABOUT BBSes AND COMPUTER MODEMS

Modems that send random information need start and stop bits to let them know when one piece of information stops and the next piece of information begins. This kind of informaiton is referred to as "asynchronous".

Other modems are "synchronous"; they send and receive information at a certain time. The modem sends a signal with its start bit which lets the receiving modems synchronize their internal clocks. This allows the modems to send and receive information without having to keep sending start and stop bits.

The only major difference between the two is the cost. Synchronous modems will work a little faster than asynchronous modems. But, because of the difference in the prices of the two, you will find that most BBSes use asynchronous communications.

Different Modem Speeds

Modems have to "talk" at the same speed so that they can pick up each other's signals. If they can't operate on the same signal speed, then they won't be able to understand each other. Because of this, modems operate in BAUD or in BITS PER SECOND.

The term "baud" got its name from Emile Baudot, who was an early pioneer in telegraphy. "Baud" deals with how fast a modem can change its tone to indicate a bit. This type of bit is not exactly the same thing as bits transmitted per second (bps), but the two words are interchangeable.

Standard modems can operate at speeds of 300, 1200, 2400, and 9600. Most of the modems can adjust their speeds to accommodate slower modems. However, if your modem is able to operate at 1200 bps, you cannot deal with a modem that operates at 2400 or 9600 bps at a speed greater than 1200 bps. A modem that operates at 9600 bps can send an average of 960 characters a minute.

Full And Half Duplex

If a computer modem operates in "full-duplex," that means that it can send and receive information at the same time. Telephones are full-duplex because you can talk and listen at the same time. Most modems are able to do this. If you have "half-duplex", then you can only do one thing at a time.

If you are talking, then you can only talk. You can't be listening if you are talking. The other person has to wait to tell you something back. CB radio is half-duplex because you can't be talking to someone and listening to them talk at the same time. Most BBSes are full-duplex so that they can send and receive information at the same time.

Other Modem Standards

Several standards have been established for communication by the Consultive Committee for International Telephone & Telegraph (CCITT). These standards are used to refer to the way that data is exchanged.

Different speeds will use different standards. For instance, a 2400 bps will have different standards than a 9600 bps.

Not all of the standards are directly connected with modem speed. The standard of V.42 is used to detect and correct errors. There are standards for doing a lot of things before you send them through the modem. You can use a standard to compress your file before you send it. This will, in essence, speed up your transmittal. The details surrounding the standards used with computers are rather lengthy and hard to understand, and needn't be covered in this section. Fortunately, all you need to know about them is whether or not the computer you are dealing with matches the same kind of standards that your computer has. Most modems will work all of the communications out with themselves when they connect with each other, and the computers will select the best way to communicate.