**Frequency Jamming** - transmitting a high powered signal on a particular frequency making it  
impossible to send a legitimate signal on that same frequency.  
**Frequency Hopping** - rapidly switching frequencies to make the transmission harder to detect and  
impossible to jam.

**wavelength** is the distance from peak to peak

**Frequency** is the number of cycles per second and is measured given in terms of Hertz (Hz).

**Period** is seconds per cycle and is the inverse of frequency.

**Bandwidth** is the width of frequencies that can be transmitted over a particular  
communication channel without significant attenuation of signal.

**Baseband** - frequencies from 0 to some max  
**Passband** - frequencies that are offset to be within a desired range.

**Non-Return-toZero Inverted** (NRZI), zeros are transmitted as no change in voltage, and a one is  
transmitted as a change in the voltage.

**Amplitude Shift Keying** (ASK) is simply transmitting a signal on a particular frequency, but encoding a zero as a low signal strength and a one as a high signal strength.

**Frequency Shift Keying** (FSK) is simply transmitting a signal with the same amplitude, but we  
alternate between a set of allowed frequencies.

**Phase Shift Keying** (PSK) is simply transmitting a signal with the same amplitude and frequency, but  
changing the phase when the bits change from zero to one or one to zero.

**Frequency Division Multiplexing** if dividing the available bandwidth into segregated sub-bands, where that multiple channels can be sent in the sub-bands so as not to interview with the others.

**Time Division Multiplexing** is where each channel gets to transmit using the full bandwidth in a round-robin fashion.

The Data Link Layer divides the packet into **frames.**

**flag byte** can just be a designated byte that indicates where a frame begins and ends.

**Hamming Distance** between any two binary numbers is the number of bits that differ.

**Parity** can be even or odd. What this means is that the sum of the bits modulo 2 is either zero (even) or one (odd).

**Hamming Codes** are a way to correct 1-bit errors.

**Utopian Simplex Protocol**, the sender receives a packet from the network layer, puts in in a  
frame, and sends it to the physical layer until the network layer provides an empty packet. The sender does not worry about whether the receiver has received the frame.

**Satellite Altitudes**

Lower-earth orbit

Lower Van Allen belt

Medium-Earth Orbit

Upper Van Allen Belt

Semi-synchronous orbit

Geosynchronous orbit