Microwave

Radio waves that provide a high- speed signal transmission from one microwave station to another; Microwave signals must be transmitted in as straight line with out obstructions between microwave antennas. Microwaves are higher frequencies and do not penetrate wall like obstacles. Earth-based reflective dish that contains antenna, transceivers, and other equipment are necessary for microwave communications. Because Microwaves travels in straight lines, both sender and receiver must be aligned to be strictly in line-of-sight.



In addition, this directionality allows multiple transmitters lined up in a row to communicate with multiple receivers in a row without interference, provided some minimum spacing rules are observed. Before fiber optics, for decades these microwaves formed the heart of the long-distance telephone transmission system.

Microwave is commonly used for both voice and television transmission. Another increasingly common use of microwave is for short point-to-point links between buildings; this can be used for closed-circuit TV or as a data link between local area networks. Short-haul microwave can also be used for the so called bypass application. A business can establish a microwave link to a long distance telecommunications facility in the same city, bypassing the local telephone company.

Microwaves transmission depends highly upon the weather conditions and the frequency it is using. Microwaves can have wavelength ranging from 1 mm - 1 meter and frequency ranging from 300 MHz to 300 GHz.