## CCNP BCMSN Notes - Wireless LAN Overview

Frame Transmission Carrier Sense Multiple Access/Collision Avoidance (CSMA/CA) is used in 802.11 WLANs to avoid collisions. The Distributed Coordination Function (DCF) handles the transmission of frames. If one station is currently transmitting, a station wishing to transmit must wait for the current station to finish plus the length of the DCF Inter-frame Space (DIFS) and a random back-off timer before it may transmit. Service Sets Service Set Identifiers (SSIDs) are used to logically group related wireless clients. Service set types:

Independent Basic Service Set (IBSS) - An ad-hoc network where all clients communicate directly

Scattering - A signal is reflected in many different directions Diffraction - The bending of a signal around an object which partially blocks its path

Fresnel zones - The elliptical sphere of space which must remain clear between two line-of-sight wireless transmitters to prevent diffraction Measurements of signal strength: &#16

Semi-Directional - Produces an elongated but broad coverage area in one direction, includes Yagi antennas; medium gain &

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**802.11a** Shares the same data rates and modulation techniques as 802.11g, but is not compatible with it or 802.11b. Operates on the 5 GHz Unlicensed National Information Infrastructure (U-NII) band. The U-NII was divided by the FCC into three smaller bands: &#160