

08/24/22.

Measure of Signal Strength:-

→ 0.001 mW is -30 dBm, the max signal strength for WiFi.

→ -70 dBm WiFi starts to lose speed.

→ -80 dBm WiFi works poorly.

→ -90 dBm WiFi stops working.

Received Signal Strength Indicator (RSSI):

A scale of "goodness" created by the receiver manufacturer. Usually a scale of 1-100 is.

Inverse Square Law:

predicting Transmission Strength;

Ex: Consider a WiFi Router:

Assume the signal strength is 3m away is 10^{-5} mW at 'n' meters of distance, we expect $10^{-5} \times (n/3)^{-2}$ mW of signal strength.

→ If n '10' meters we would expect to have $10^{-5} \times (10/3)^{-2}$ mW
 $= 2.5 \times 10^{-6}$ mW.

→ In '20' meters we would expect to have

$$10^{-5} \times (20/3)^{-2} \text{ mW} = \underline{2.25 \times 10^{-7} \text{ mW}}$$

Collisions:-

→ Transmission is so much more powerful than receiving that the same antenna can't

transmit and receive simultaneously.

→ Radio waves from two simultaneous transmissions interfere with each other and cause info loss.