Tutorial 9: (EIRP & ERP)

EIRP (Effective Isotrophic Radiated power):

defi. [its the total power radiated by hypothetical Isotrophic Antenna in a single direction.]

$$EIRP = +20dBm - 5dB + 10dBi = 25dBm$$

ERP :- (Effective Radiated Power)

[It is the total power radiated by the half-Wave dipole Antenna / rather theoritical Antenna]

$$ERP = +20dBm - 5dB + 7.85dBd. = 22.85dBm.$$

Relationship between: EIRP & ERP

$$EIRP(dBm) = ERP(dBm) + 2.15$$

$EIRP - 2.15 = ERP$	$dBi = dBd + 2.15$
$10dBi - 2.15 = ERP.$	$10dBi - 2.15 = dBd.$
$ERP = 7.85dBm.$	$7.85dBm = dBd.$

Why? EIRP & ERP.

RF transmitting system must adhere certain rules set by the regulatory bodies.