Delivery Exercise A: UNIK4150

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March 28, 2016

1 a)

$EIRP$ stands for effective isotropic radiated power. It is the measure of how much power is radiated by an antenna equally in all direction in reference with an isotropic antenna. For a transmitter it is denoted as P_{TI}, known as effective isotropic transmit power and for a receiver it is denoted as P_{RI}, known as effective isotropic received power. In case of the transmitter, it is given by

$$EIPR = P_{TI} = \frac{P_T G_T}{L_T}$$

And in case of the receiver, it is given by

$$EIPR = P_{RI} = \frac{P_R G_R}{L_R}$$

where:

P_T/P_R = transmitted/received power
G_T/G_R = gain of transmitter/receiver
L_T/L_R = feeder loss of transmitter/receiver

1 b)

Some of the important characteristics of antenna are as follows:

Radiation intensity

Directivity

Effeciency

Power gain

1 c)

1 d)

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