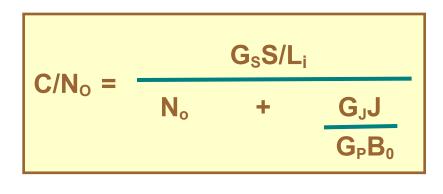
Computing C/N₀



- G_S = Antenna gain towards signal (dBic)
- S = Signal level (dBW / dBm)
- $L_i =$ system implementation loss
 - Compared to "perfect" linear, analog rcvr
 - Varies from mfr-to-mfr use 2 dB as estimate if unknown
- N_0 = system noise temperature density (dBW/Hz or dBm/Hz)
 - Essentially the Rcvr Noise Figure combined with antenna noise
 - N₀ = kT_{SYS} = typically -200 dBW/Hz or -170 dBm/Hz
 - $= k(T_{ANT} + T_0(N_{RCVR} 1))$
 - ♦ $T_{ANT} = 70-100^{\circ}K$
 - ♦ $T_0 = 290^{\circ} K$
 - N_{RCVR} = rcvr noise figure at input {10^(N/10)}
- G_J = Antenna gain towards interference (or jamming) (dBic)
 - Presumed equal to G_S for commercial systems (non-mil)
- J = Interference (jamming) signal level (dBW/dBm)
- G_PB_0 = Spread Spectrum Processing Gain
 - 60.1 dB for Narrow Band white noise (< 2 MHz)
 - **73.2 dB for 20 MHz white noise**

My Documents\Reference\Computing CNo.doc