

Homework

1. What is the uplink Erlang capacity of a CDMA system with the following parameters: bandwidth 4 MHz, bit rate 10 Kbps, E_b/I_0 5 dB, I_0/N_0 10 dB, operating without voice activity, if the sustainable outage is 2 % ? Assume intercell interference factor 0.6.
2. A system with the same parameters operate in a cellular network consisting of a central cell and its 6 neighbours. The intercell interference between the cells f_{ij} is 0.1. The current load is 70 users in the central cell and 50 in each of its neighbours. What is the residual capacity of the central cell, i.e. how many users you would still admit to the central cell.