

Abstraction

The pilot pollution phenomenon which was happened in the implementation of CDMA2000-1x is the phenomenon which always we meet in CDMA2000-1x implementation. This problem cause by the presence of more three pilot signal that has equal power on the coverage area serving base station. The received pilot signal from each base station practically increase interference on the forward link side. By catching undesired pilot signal, it will decreased energy per chip over the power density (E_c/I_o) from serving base station. The otherword, it will decreased the quality of existing network performance.

On this final exam, we will simulated the pilot pollution phenomenon. Where is from this simulation, we can analyzed the influence of pilot pollution to CDMA2000-1x network performance.

On the place which it's happened pilot pollution assign by low of E_b/N_o . More lower E_b/N_o so FER more higher. So in this place happened high dropcall rate. Pilot pollution is also influence on handoff failure. Handoff failure happened cause the low of level signal quality on the pilot pollution area. So if mobile station move to this place, the call will be drop.

The changes of pilot channel transmit power, which it's predicted as one of alternative solution to handle pilot pollution problems, it didn't give significant influence to this problems. The changes of pilot channel power to more little power will cause coverage base station area will decreased, so that in the pilot pollution area will be occur more bigger of blank spot area.