

## ABSTRACT

PT. Telekomunikasi Indonesia, Tbk is one of operator of TELKOM Flexi network in Indonesia. Until 2005 years now, PT. Telekomunikasi Indonesi, Tbk continued to build new network in area that have not be covered yet. One of potential area will be covered is area of town Salatiga. The network expansion in Salatiga include addition BTS (Base transceiver Station) and certainly the link junction of BTS to BSC (Base Station Controller) and MSC (Mobile Switching Center).

In that relation, hence be needed a good network planning in order to be obtained maximum performance. From BTS side, require to be planned especially on link budget of antenna and channel capacity. For the link junction of BTS to BSC , require to be planned link budget power and rise time budget to keep loss margin standard and bit rate that have be specified by PT. Telekomunikasi Indonesia, Tbk Divre IV Semarang, another that, the link capacity of BTS to BTS also to be planned. For the link junction of BTS to BSC, PT. Telekomunikasi Indonesia, Tbk use SDH transmission system (Synchronous Digital Hierarchies) with fiber optic as transmission medium.

In this final assignment, will be made new network planning of the TELKOM Flexi, so can be expected to be reached capacity, availability, and performance that maximum. Objects that becoming parameter in this planning include BTS planning, SDH network, and also the infrastructure to build the new network. The final result in Salatiga area is needed 5 cell for urban with radius 1,41 Km and 1 cell for suburban with radius 3,5 Km will be expected to serve 16000 subscribers TELKOM Flexi in 2008.