

ABSTRAC

Data packet service with high speeds transmission can present new mobile application for customer. One of service that offered is application for data at cellular network to optimize packet data network is half duplex service or famous with Push To Talk over Cellular (PoC) that identical with “walkie-talkie-type” that implementation at cellular network. PoC can make communication one-to-one and one-to-many.

In this final assignment, steps that used in planning process including planning a number of cell, radius of cell, number of channel based on node B ability, coverage area and plotting area. Plan analysis can be done with link budget, path loss with COST 231 model and high antenna base station, so PoC network system can produce good capabilities for voice packet.

In this PoC system plan need data rate 30,25 kbps. Estimate PoC subscriber until 2009 for urban area about 37.836 subscriber with traffic data load factor is 46,7 Mbps and number of channel is 365 channel whereas for sub urban area about 9.459 subscriber with traffic data load factor is 11,67 Mbps and number of channel is 92 channel. PoC dimensioning need 22 unit node B, 3 unit RNC, 6 unit PCU, 1 unit GSN (integrated SGSN and GGSN), 2 unit control switch, 1 unit active directory, 3 unit element manager and 3 unit web server. serta tinggi antena *base station* sehingga diperoleh suatu jaringan layanan PoC yang mampu memberikan jenis layanan paket suara yang baik..

STTELKOM