

ABSTRACT

Providing good coverage inside the building is the important thing to attract and satisfy the mobile cellular customer. Usually, coverage from macro network can scope into the building but it has to be equipped with good in-building-system. Bigger data capacity and better capability of the 3-Generation (3G) network to give a high speed data service, increase the need for cellular network. Customers have big hope in third-generation services. Network design for 3G service at this moment is more focus for outdoor application. For in-door application, 3G service with higher data rate from the previous generation, is needed special design because the environment is relatively complex in shadowing, obstruction, reflection, etc.

In this final task, writer will design the indoor W-CDMA network and make the software to assist the design. To analysis the result of the software design, writer did case study at Universitas Jayabaya, East Jakarta.

From implementation and analisis result, known that the software can help people to calculate traffic estimation, cable network loss, *reverse pole capacity*, *maksimum allowable path loss*, *carrier frequency*, cell radius, and forward link budget, and, as well as be able to give cell coverage planning visualization.

STTELKOM