

## ABSTRACT

Today, communication development is most quick. The system of communication digital was to close to use in communication networks. One of them is satellite communication network. Satellite communication network can be used to necessity communication in Indonesia, can be used in town and in remote area.

If we see from technology development, remote communication is not complete. In my project, has designed program a system to complicate remote communication with used SCPC system. SCPC (Single Channel Per Carrier) is a good access with fork canal frequency principle. The plan of SCPC will use with characteristic Bit Rate 13,6 Kbps. And Telkom I is the satellite used with FDMA (*Frequency Division Multiple Access*) system. Every carrier brought one information. Used BER  $10^{-5}$ . VSAT diameters used 1,8 m with power needed 0.165 Watt, and HUB diameters used 10 m with power needed 0.022 Watt.

Based on the calculation on this project, this plan produce 193 paths where one path have two carriers. Amount of transponder needed 25% or  $\frac{1}{4}$  of transponder. And amount of carrier can be served on this system in one unit of time are 386 carriers. Simulations used in this thesis using Android. That can be applied using a highly developed communication media today, namely mobile phones, tablet and programs based on Android.

The Project hoped can be used and managed by government. To create the really real project, have done studied more detail.

Keywords : FDMA, SCPC, demand, satellite.