

## ABSTRACT

Relation with the development of e-government, local government oftentimes meet the constraint of the limited communication in its region. A lot of factor become its cause, start from geographical condition which still in the form of mountain, separate of wilderness or ocean, not yet the existence of electric infrastructure, up to the limited budget. As a result non bizarre matter if still a lot of area in Indonesia which not yet been touched with the telecommunications network (conventional telephone and also cellular).

To overcome the problems is hence done by adjustment of technology VSAT (Very Small Aperture Terminal). In Indonesia infrastructure use of network of telecommunications VSAT represent the choice precisely, considering Indonesia is composed from a lot of island which is gone the round of, difficult so that reached by technology of communications of microwave and also cable network.

In this designing, require to be considered to hit the geographical condition of area of West Nusa Tenggara which is not uniform. Others, economic condition and consideration of technique facet also have to be reckoned. Peripheral usage, the method access, modulation technique, and calculation of link budget serve the purpose of yardstick in the plan this.

Result of system device for the link of Pamenang-Polo exceed the energy value accepted threshold by using VSAT have diameter 1.8 meter with the power 3 watt and station HUB which have diameter to 5 meter with the power 5 watt and own the energy margin (7.91 / 13.93) dB at link inbound and (18.39 / 5.17)dB at link outbound. Difference assess the C/N tel and C/N req tel equal to 18.04 dB, and assess the C/N of data and C/N req data (dBHz) equal to 6.99 dB at link inbound, while for the link of outbound assess the C/N tel and C/N req tel equal to 26.83 dB, and assess the C/N of data and C/N req data (dBHz) equal to 15.77 dB, giving conclusion that system admit to give the margin for the possibility of worse.

Key words: *rural, VSAT, acces method, modulation, C/N, power*