

## ABSTRACT

A learning system by using a telecommunication media, make it enable to interaction in two way direction between the user. Coaxial network is one of telecommunication media that very reliable and real time. With wide frequency allocation (more than 870 MHZ), coaxial network is expected to able to transmit good signal either for voice, video and also data service.

First stage of coaxial network planning is by defining scope of network and service, to estimation of subscriber number, frequency allocation, and bandwidth can be known. Baccuse this services contain three service (voice, video and data), really need a wide bandwidth and also digital signal transmision, a great performance and most stabilitation is very needed. Because of that, the architecture of coaxial network must have a standar target that had determined. Election of pasif instrument and choosing amplifier operational level is one that very importan.

CATV coaxial network can realized the learning services that containt of voice, video, and also data in STT Telkom campus. Coaxial network performance is determined by minimum accepted level factor that accepted by subscriber in this case are class in STT Telkom. Carrier To Noise Ratio (CNR), Composite Triple Beat (CTB), Composite Second Order (CSO) and Cross Modulation (XMOD) that yielded by used network. Good network performance must fullfilled the standar that had been determine, bigger than 48 dB for CNR, 54 dB for CSO and CTB, and 45 dB for XMOD.

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