

ABSTRACT

Together with the improvement of information technology especially in multimedia service such as *video*, *voice* and data and also the improvement of telecommunication technology based on *fiber optic network* that support multimedia service that can be provided interactively to user using *broadband fiber optic access*. This service can give many kinds of data communication service including internet and *audio-video* service. The HFC (*Hybrid Fiber Coax*) would be able to support that improvement of services.

Actually, development of HFC technology also brings effect in other aspects, include luxurious residential that is often found in the big cities. One of the luxurious housing which is located in Bandung is Pasadena Residential. To increase it service to costumer, the developer plans to build the HFC network that support TV cable and *fast internet* services. Therefore, it is expected that the build of HFC network in that housing can fulfill the costumer needs of multimedia services.

Basic design of HFC planning is area surveying that describes the space of network so that can be known the number of users, services that provided and also the allocation of *bandwitdh* used. And then tools surveying to scetch the network planned.

And the result of this HFC Network planning (*Hybrid Fiber Coax*) in Pasadena Residential shows that the planning has been matched with the performancy standard of FCC that for $CNR \geq 43$ dB, for CSO, CTB, and XMod ≥ 51 dB. The result of HFC Planning can be used to transmute signal to each user.