

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.

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 *bandwidth* used. And then tools surveying to scetch the network planned.

Based on the calculation, allocation of *bandwidth* needed shows that the *downstream* width is actually 742 MHz, that can provide some of multimedia services, such as *broadcast tv* and *fast internet*. For *broadcast tv* is available 56 channel, and the rest of *bandwidth* 319 MHz can be used for another services. For internet service needs 6 MHz (*downstream*) and 1,6 MHz (*Upstream*).

And the result of this HFC Network planning (*Hybrid Fiber Coax*) in Menara Edelweiss Apartment shows that the planning has been matched with the performancy standard of PT. TELKOM that for $CNR \geq 43$ dB, and for CSO, CTB, Xmod ≥ 50 dB. The result of HFC Planning can be used to transmute signal to each user with the equal quality.