

ABSTRACT

Setrasari HFC Network is a PT Telkom's trial network raising by RisTi division from 1997 until now. PT. Telkom has been finished 467 homepassed with 247 house as a trial customer. The offered services are 28 channel, including TV local broadcast like RCTI, SCTV, TVRI, METROTV, ANTV, TPI, INDOSIAR, TVG, and Lativi, and analog satellite receiver such as CNN international, CNBC, and MTV, and digital satellite receiver as the rest.

This final project is going to analyze and evaluate the performance of the Setrasari HFC trial network. The parameters that influence the performance of the HFC network are CNR, CTB, CSO, Cross Modulation, Hum modulation. Those parameters are measured and then compare them of the theory result. The power link budget, services and HFC's bandwidth capacity also analyzed.

This final project result shows HFC network built from several planning parameters that PT Telkom proposed yields CNR, CSO, CTB, Xmod and Hum Modulation parameter value that fulfill HFC Network standard even on it worst condition (with much amplifier cascade). On this worst condition, HFC Network that served by fiber node Setrasari yields EOL performance value, that is : $C/N_{system} = 60,826 \text{ dB}$, $CTB_{system} = - 63,617 \text{ dBc}$, $CSO_{system} = - 60,90 \text{ dBc}$, $Xmod_{system} = - 55,255 \text{ dBc}$, Hum Modulation = - 52,96 dBc.

Bandwidth allocation on Setrasari HFC Network can serve 50 broadcast analog TV channel (PAL), 133 broadcast digital TV channel, 66 VOD channel with simultaneous user, 500 HSIA user and 112 telephony channel.