

## ABSTRACT

Access data network(ing) has become a part that is needed by community/society to support their daily activities. The speed and availability of the data network also continues to grow in line with those needs. Therefore, the construction of the fiber optic network infrastructure needs to be done to accommodate those demands.

PT. Industri Telekomunikasi Indonesia has project in field of telecommunications that uses TITO (trade in trade out) technology. This project is purposed to replace current local copper access network in to local fiber optic access network. PT Industri Telekomunikasi Indonesia uses fiber optic cable from STO to MSAN outdoor or indoor, MSAN that is stored close to existing RK, this method is called *Fiber To The Curb* (FTTC).

In designing the FTTC, collecting the existing data activities need to be perform in the beginning, survey, location boundary/data analysis, design and Bill of Quantity. The calculation result of power link budget shows the attenuation value is  $<-28$  dB according to the provision that has been set by PT. Industri Telekomunikasi Indonesia. Also the Rise time budget values showed 0.252 ns on the downlink and 0.25 ns on the uplink.

**Key words:** *Fiber Optic, FTTC, trade in trade out, MSAN Outdoor, power link budget and Bill of Quantity.*