

## ABSTRACT

The deployment of optical fiber access network replacing coaxial local access network is one of the solution to fulfill telecommunication services needed, which is increasing in sum, variety, and quality. The SDH (*Synchronous Digital Hierarchy*) with ring loop topology is chosen for optical fiber local access network because it has many advantage from technical side and business side. In order to get a qualified telecommunication network, efficient and in accordance with customer need then it is required to replant the existing network.

In this final project, a replanning of SDH ring at STO Darmo has been done. This replanning was based on total sum of link needs, 2 Mbps, which is gained from traffic measuring result analysis in SDH ring at STO Darmo. From the 2 Mbps link calculation result of the traffic measuring analysis in SDH ring, more efficient 2 Mbps link need has been found for STO Darmo