

ABSTRACT

The traffic of digital data and voice communication grow every year or even everyday along with the human culture development. Because of that, technology which can exchange data with big transmission capacity, fast, efficient and high performance is needed. This technology development has been felt in Java and Sumatra island. But nowadays, the growth of technology touches Kalimantan and Sulawesi. The raising of technology need cause PT. Telkom build SDH network which called T21 Kalimantan-Sulawesi Project.

Synchronous Digital Hierarchy (SDH) is a multiplexing hierarchy which based on synchron transmission that was recommended by ITU-T. SDH is able to give new flexibility in network design. It's not new news that SDH is able to be used for big capacity optical transmission, traffic communication management, and network restoration. SDH is one of digital transmission hierarchy which begin to be used for. SDH is used for transmission between STO. The transmission media which is used is either optical fiber or copper or radio

There are 23 city included in T21 Kalimantan Project, but in this Final Project will talk about the implementation of SDH Siemens Network in T21 Kalimantan Project link Balikpapan-Muarajawa along 89,9 km. The analysis is about link characteristic, such as equipment, network architecture, protection, availability, maintainability, power link budget dan rise time budget.