

ABSTRACT

Communications link at regional Nusa Tenggara is connected by digital radio microwave system as a backbone transmission system. Circuit requirement for the band of this line has been increasing. The increase of circuit requirement cause of the telephony traffic increasing, new service of fixed cellular TELKOM FLEXI also to serve leased line service for the operator which joining with PT. TELKOM.

Link Trans Nusa Tenggara is applied by technology of multiplex SDH (Digital Synchronous Hierarchy) and it has excellence compared to PDH (Digital Plesiochronous Hierarchy) where SDH has the better management network excess compared with PDH.

This final project has analyzed planning of transmission capacities addition for the regional Nusa Tenggara backbone. This planning is in order to fulfill canal requirement up to 2009. The first analysis is calculate circuit requirement with data estimate the circuit requirement until year 2009 obtained from PT. TELKOM and the result is circuit requirement which bigger than existing capacities. So, the link must be improved with bearer addition, but the addition bearer will require a lot of new transmission peripheral. There is other solution to expand transmission capacity, the other solution is using G.729 technology. With this technology, the peripheral requirement could be lower than the addition bearer.

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