

ABSTRACT

Capacity, efficiency, availability and reliability's system are four factors that cause reconfiguring and expanding existing SDH and PDH transmission system in Madura area should take place

Transmission system capacity that's needed in Madura Area, will be determined based on the blooming of 2 Mbps channels that were used to connect all nodes for five years ago. This matter is purposed to determine the necessity of the amount of 64 kbps channels, so the necessity of 2 Mbps channels for each node can be counted for connecting with other node. The configuration of SDH's elements and transmission capacity is counted by summing the whole of 2 Mbps channels for all the connection in a ring network. Based on demand prediction that will be done, so transmission capacity will reach 207 x 2 Mbps (STM-4) at the end of 2007.

It is also studied about simplifying existing telecommunication network in transmission side, that is centralization process two host exchanges, Sampang and Sumenep, to be hosted to Pamekasan. The reduction of amount of the host exchange from four host exchanges, that are Bangkalan, Sumenep, Pamekasan and Sampang with four gateways to Surabaya becomes two host exchanges, that are Bangkalan and Pamekasan with a pair of gateways to Surabaya are the result that will be reached.

Based on expanding and simplifying Madura Area network above, the capacity from 2 x STM-1 becomes 4 x STM-4, efficiency from four host exchanges becomes two host exchanges, the availability and reliability's existing telecommunication system will be hoped to increase.

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