

ABSTRACT

Along with fast growth of information technology as well as high depend on the need of high communications which efficiently and effectively, there is also big requirement change of telecommunications service which will be flexible in character to growth of core network. 3rd Generation network planned migration from voice over circuit-switched become voice over packet-switched, and The Third Generation Partnership Programs have released some specification Releases to support this migration. In the future there will be requirements of core network which having the character of efficient and flexible, also high capacities.

The increasing of subscribers amount will improve the capacities of Call Attempt at burden of MSC processor and lack of Point Of Interconnection (POI) at certain area which not yet been installed by MSC will growing its complicated MSC network topology at this time. It is cause the inefficient MSC routing and extravagance to link transmission.

Implementation of MSC Server and Media Gateway technology released by 3GPP standardization enabling to support the requirement of moderation MSC network topology at this time. MSC Server will be centralized as control plane for optimizing capacities of Call Attempt and Media Gateway will be decentralized as user plane to add connectivity.

This Final Project explained the analysis of migration scenario pursuant to location of MSC Server and Media Gateway. Analysis of migration scenario consist Demand Identification, BHCA Capacity, Erlang Capacity, Number of MSC link network, Redundancy, Strength and Weakness of each scenario. The result of analysis indicate that the migration scenario of MSC Server pursuant to big islands in Indonesia will be optimized capacities of Call Attempt and distribution of POI, but to save the OAM cost at some island which have few subscribers, it is enough to put down Media Gateway without MSC Server.