

ABSTRACT

To attend with the rapid developments of telecommunication technology, make it possible for the operators to add the new services, not only voice, but also data and video (multimedia). But the problem is the existing networks do not support for multimedia service.

NGN concept presents as a bridge to the network convergence. Softswitch technology is the product from this concept. With softswitch technology, it is possible to integrate PSTN with IP-based network.

Media gateway is one of the network devices from this technology which has the function as an interface with several network that used.

In this final project, I try to make a planning of multimedia network based on softswitch technology at Cijawura area, concerning on several media gateways that used with the related parameters.

From the planning results, acquired that softswitch capacity for planning year 2006 is 60.474 BHCA. Trunk gateway capacity to the IP network is stated on full rate, cRTP, VAD, and cRTP+VAD. Which for the full rate, the capacity is 2.877,6 kbps, for cRTP is 1.220,8 kbps, for VAD is 2.354,4 kbps, and for cRTP+VAD is 697,6 kbps. Signaling gateway capacity to the IP network is 646,592 kbps. Residential gateway to the softswitch is 543,768 kbps for signaling, and 17.619,2 kbps to the trunk gateway for voice traffic. IAD capacity is 20,016 kbps for signaling with softswitch, 57,6 kbps for voice traffic with the trunk gateway, and 4.032 kbps for the data traffic with the VPN internet. For RAS service, signaling capacity needs 50,04 kbps, for voice service needs 6 E1, and for data service needs 17.920 kbps.