

ABSTRACT

Packet Circuit Multiplication Equipment (PCME) is one of digital channels compression equipment standardized ITU-T G.765 who can implement in terrestrial, optical fiber, and satellite. PCME used Adaptive Differential Pulse Code Modulation (ADPCM), Digital Speech Interpolation (DSI) and faximile demodulation technology to robustly compression. PCME Packetization Technic with *Link Access Procedure D channel* (LAPD) format in channels make a signaling synchronisation valid and take service save.

DSI as speech interpolation can usable channels as factor 2,5 through compression ADPCM with factor 2 to speech compression in normal condition.

ITU-T G.765 App.II , supposed PCME compression with factor gain until 5 than speech capacity input with service quality service can be accepted in compression and delay standart.

Faksimili group III with 64 Kbps capacity are demodulated to real capacity 9,6 Kbps of 7,2 Kbps in FADCOMP procedure.

Satellite as a transmission media are effective to be implement to this equipment because can support *multiple bearer* and *multiclique* operation. IDR Technic that various implement in every earth station can be minimized bandwidth capacity with this PCME .

With the compatible PCME , the goal of final thesis are to optimized capacity to any managed service include voice, voiceband data , digital data, and faximile to be computed gain coding of compression. To show this optimized , the writer implementate capacity back up through satellite media with the simulation to computation easy.