ABSTRACT

Universal Mobile Telecommunication System – the 3G Mobile Network – espousing various traffic class with different Qos (end-to-end delay; jitter; loss), with the result that more complexity in network planning, especially in Access Network which has limited radio and broadcast resources.

UMTS Terrestrial Radio Access Network (UTRAN) constructed by *Asynchronous Transfer Network* (ATM) technology. ATM itself is data packet technology which supporting various class for traffic movement. Although not whole ATM features used, this technology used in transport layer between Radio Network Controller and Base Station.

This Final Project developing UTRAN simulation based on ATM. The simulator able to measures delay parameter. Finally, the results analyzed and compared to standardization and analytical computations.