

## ABSTRACT

GSM ( Global System For Mobile Communication ) is cellular technology, which has the fastest development and the widest market in the world. One of GSM's services is SMS. SMS is a message services with short alphanumeric message 160 characters for 7 bites and 140 characters for 8 bites. SMS is an efficient alternative communication facility with the cheaper price to be implemented. The variants of SMS are short message, MMS, EMS, and Ringtone.

SMS's Ringtone is one of facilities given by GSM operator, which also given to all MS. Ringtone is applied to all MS and can be functioning as SMS's Ringtone, reminder signal, and another signals depend on MS's quality. SMS's Ringtone sending is more likely to the general sending, it is distinguished by coding 8 bites for SMS Ringtone and 7 bites for message alert. This is due to the fact that Ringtone's file in midi form is coded by the code, which is understood by MS.

SMS'S Ringtone service have difference with general SMS in vendor MS and operator GSM. The final work will result SMS Ringtone language that can be translated by MS and improved into telecommunication technology, that is *Ringtone Transfer Text Language*. From the Ringtone language can be made the customized Ringtone. In operator side, addition *External Sort Message Entity* is needed for SMS Ringtone, so for the signaling need special protocol, that is Short Message Peer to Peer. There is two factor that cause the SMS Ringtone failed, that is temporary and permanent, the most dominant factor is *number of absent subscriber errors*. Traffic SMS Ringtone almost the same with traffic general SMS if seen in SMSC, but that make different is traffic in ESME, so *throughput* SMS Ringtone is part from the total *throughput* in SMSC.