Abstract

The rapid of technology development in mobile telecommunication, made a new problems from it. The growth of the mobile users, also caused the calls originating from mobile station (MS) increased. So one of the problems is showing themself, which is locating the position of the user when they were calling for an emergency situation. The user himself often doesn't know where they are. So the needs of mechanism to located the origin of the requesting MS. So that kind of problem can be solved. Beside that, many type of service containing location information can be developed.

Time Difference of Arrival (TDOA) is a methode to compute the position which also known with Observed Time Difference (OTD). The purposed of this final project is to study the way to implement position detection inside the system GSM 900, with the TDOA algorithm.

From the research that we conduct, the RMS error that happened in positioning at GSM network is ranging from 60m till 600m, this result very affected by the environment.