

## ABSTRACT

Parents activities with their job make they don't have much time to give attention to their child and even they don't know where their children at. It makes the children to feel free to go anywhere without surveillance of their parents. Even things like this can trigger a criminal offence that is a child abduction. With the development of increasingly sophisticated technological gadgets, there are a wide variety of applications that are useful in helping people work, one of which is the GPS (Global Positioning System). GPS functions as an electronic compass that can give direction to the place or area that we are headed. In addition, the GPS system can also be used as a means of tracking a person. So that we can know the whereabouts of a person by using an application that uses GPS tracking, especially in children under the age who have a smartphone because of fears of parents to their children.

In this final project will be made "Analysis and Design Tracking System For Children Under The Age by Using Global Positioning System (GPS) on Android Smartphone" is an android application that is designed to help parents to know the position or the presence of their children. This application will give the position of the child who will be directly connected to their parents.

The system that use the information data from GPS will be applied to Android Operating System-based application. In checking the location of children the application not only post the data of location, but all the location data send to the database server that will be saved with complete time stamp. According to the test result, it gets the average result of network testing for sending data with 4G network 0,753 seconds, HSDPA 1,117 seconds and EDGE 4,325 seconds.

Keyword : *global positioning system, tracking, android, database.*