ABSTRACT

Nowadays mobile phones are no longer as a luxury, but already become public consumption things. Devices that were formerly serve as a communication tool has been transformed into something that is sought by most people. Not only adults and adolescents who have this device, even children are accustomed to using devices that could be considered a toy of their daily lives. There are so many advantages provided by mobile phones, in addition to high mobility, these devices also have considerable functionality. Another advantage is the device is traded with ease, so do not be surprised if many people have this device. Even parents give this device to their children early for being easier to monitor their children. However, most children feel that they are no longer a little child who needs to be supervised at all times so sometimes make parents worry about that problem. Mobile phones come with the solution as a device to tracking other mobile phone to facilitate parents control their children without their children attention.

Location Based Service (LBS) is a technology that provides service to find person position. In this thesis the author design a software to track a mobile phone by utilizing the internal GPS in a mobile phone that implements A-GPS method in LBS as a method to find the position of a cell phone. There are two kind of software that is designed by author, the first side that is in a user who will track (as a remote control) and the second in a user who will be tracked (as position counter). This software will be designed based on J2ME.

The test results obtained that the software will work optimally in conditions where there is no obstacle or loss condition with latitude deviation about **(+/-) 5.52 meter**, longitude deviation about **(+/-) 8.90 meters** and altitude deviation about **(+/-) 12.05 meters**. The delay for one tracking process about **23.24 s**. The cost to access the software is accordance to SMS rate each mobile operator. The cost of GPS only **Rp. 5** that used to lock one location for once.

Keywords: Assisted-GPS, LBS, J2ME