

ABSTRACT

Now, two things that make trend is how do combine both global and mobility. Internet technology that only can uses by PC before, through increase of people mobility and dynamically, that technology has used by cellular device.

LBS (Location Based Service) as one technology that offered services to user based object coordinate in the earth. Some service that offered by LBS are search user position, search location base cluster name and range distance, and search location base keyword, where any position are represented by digital map. By this technology, hoped can help cellular customer to get spatial information and increase business for cellular operator and businessman.

This final project will be built a Mobile LBS prototype with A-GPS (Assisted-GPS) method. This prototype is built by VB.NET as language program, Oracle 10g as spatial database, Mapinfo and MapXtreme to process digital map, Microsoft Pocket PC 2003 as emulator, PDA HP iPAQ h6365 as cellular device, and GPS eTrex as GPS Receiver.

After a test using GPRS feature from Indosat-M3 cellular card is done, it can be concluded that: position accuracy is affected by the condition around the user and linearly compared with the amount of satellite, where 6.98 meters deviation is occurred in LOS condition. Various deviation is occurred during the user is restricted by obstacles; the worst deviation with undefined value is occurred when the user is in the building. Call delay in the morning is 7.85714 seconds, 9.3571 seconds in the night, and 10.143 seconds in the daylight. The amount size of application call data is 73.653 kilobyte with total access cost is 73.653 rupiahs. 83.33 % respondent assumes that Mobile LBS is important, effective, beneficial, and feasible to be a new content. On the other side 70 % respondent has not been satisfied with access delay.

Keywords: *LBS (Location Based Service), GIS (Geographic Information System), A-GPS (Assisted-GPS), GPRS (General Packet Radio Services)*