

## ABSTRACT

Indonesia is a manufacturer and exporter of palm oil in the world, with production of more than 18 million tonnes of palm oil per year, and will continue to increase. This increase is accompanied by the role of workers in each palm oil processing. Of existing problems, it is known that many found to mainly Migrant foreman who is not in the garden at work. While the structure of the company, the foreman is one important tool in the supervision of a journeyman, and is spearheading the company's achievement of targets. In addition, it is often found to forget the foreman did not even know the schedule of crops and plant life in each area.

To improve the performance of workers, foremen and abdeling, hence made an application "GIS-Based Information Systems and Management of A-GPS for Palm Oil by Using Android". This application provides four major features of the monitoring, which serves to serves to monitor the foreman in the plantation area. Maps of land, which features displays of plantation land. This map can change color according to plant age and harvest time, otherwise it is equipped with a map feature information such as land, plant population, the number of workers and the age of oil palm. The report, which functions facilitate abdeling and foremen in the report to the admin who was in the garden office. And finally, notification that serves to remind the staff, especially abdeling and foremen, related to the harvest of palm oil by using SMS gateway.

The results of this final project is on testing the MOS (Mean Opinion Score) values obtained for interesting view 4.566667, 4.366667 feature for completeness, clarity of features to 4.2, for ease of use of 4.266667, and the value 5 for the further development up. On testing the accuracy of the obtained difference in distance from the position data obtained in the field with position data should be, obtained  $4.66 \times 10^{-3}$  km, 0.015 km, and  $8.4175 \times 10^{-3}$  km.

**Key words: oil palm plantations, GIS, A-GPS, android, SMS Gateway**