ABSTRACT

Palapa C2 Satellite has a function as communication repeater in satellite communication system, orbited at 36.000 km of height and in the equatorial area or geostationary orbit and lay in $112,95^o$ E orbit. Considering its function and role is very vital in telecommunication system, therefore, the maintenance of satellite like position correction is needed, so that the satellite always remain to in its coverage area and not out of the earth main station's monitoring.

In its circulation, Palapa C2 will not always stay at its orbit because of the perturbation's effect. The gravitation of sun and moon cause the inclination of the satellite orbit, while the earth's triaxiality cause the satellite shift to stable point. Change of attitude and position of satellite in its circulation at the orbit needs an act from the earth station so that the satellite will always stay at its right orbit. This earth station's exertion is known as station keeping. Station keeping in the form of satellite maneuver was done in every 14 days. Maneuver divides into north/south and east/west maneuver. In each time maneuver needs fuel to activate the thruster which is causing impellent to alter the satellite position.

At this Final Assignment, analysis the requirement fuel of Palapa C2 satellite for station keeping has been done. In each maneuver, satellite needs a different fuel so maneuver period will effect to the requirement fuel. At this Final Assignment, the requirement fuel was calculated and predicted using 14 days and 7 days period of maneuver. With doing the prediction and also based on the difference of maneuver method, it's found that the use of 7 days maneuver method will require less fuel compared by the 14 days method.

Keywords: Palapa C2, Propellant, Station Keeping