ABSTRACT

A lot of satellite in outer space causing many satellite telecommunication problems because of space limitation (only 360°) and limitation of bandwidth reuse that can be used repeatedly. A serious consideration is interference. The satellite performance has decrease because of interference happened. For that have to be analyzed the level of interference that happened to solved that problem.

Interference is a disturbance in satellite communication which caused by using the same frequencies and the satellites distance are too near. Parameter indicating that interference disturbance the other satellite or not is value of margin. In order to interference that happened don't disturbance the other satellite so the value of margin can't be negative.

This Final Project analyzed the level of interference GEO satellite with case study of GARUDA-4 satellite interfering INSAT-2E82.The Calculation of interference doing based on ITU recommendation and calculation at SPU Cibinong. Satellite performance improvement by decreasing of power to minimum level. Software development to be easy the calculation of interference process by Visual Basic. Output of software is value of ?T/T, C/I, C/N, and Margin that save at Microsoft Excel. The data that we use is real satellite data from ITU database that contains all the characteristics of the satellite.

From the result of analyzed is got that interference between satellite of GARUDA-4 and INSAT-2E82 is disturbing each other. The result of margin calculation based on ITU recommendation is larger than calculation at Cibinong SPU. From the result of satellite interference calculation based on ITU recommendation, satellite performance improvement by decreasing of power getting positive margin. While from the result of calculation at Cibinong SPU decreasing of power to minimum level not yet got positive margin, so that require to changes the other parameter like antenna and frequency.