ABSTRACT

PT.TELKOM as one of cellular operator in Indonesia who have a mission to be the leader in infocom players in Indonesia, in order to give attention for Quality of Service aspects to win the competition and to give a worth guarantee for its customers, have to concern in Quality of Service of Flexy's network. One of the most important parts in Flexy's architecture is BTS. If BTS down, will cause the loss of potential revenue even earn to result the loss of consumer belief. Therefore be required an efficient and effective maintenance method so that could keep condition of BTS remain to be good.

In order to improve the Quality of Service of cellular phone, qualitative and quantitative analytic are done. Qualitative analytic is done by using Reliability Centered Maintenance (RCM) to determine a proper preventive maintenance task for each component based on its reliability characteristic. In RCM method, several stage of analysis is done such as: system selection and information collection system description, function and functional damage, failure mode and functional damage, logic tree analysis and task selection. Quantitative analytic is done to determine time interval of preventive maintenance. Qualitative analytic in this research is only done for critical arranger component of BTS and the task done is based on qualitative analysis.

Result get from qualitative analysis by using RCM method for arranger component for BTS in deciding preventive maintenance policy are *Condition Directed* task, 4 *failure finding,* 1 *Time directed,* and 3 *Run to Failure* components. Whereas, based on qualitative analysis, are determined 5 most critical components, they are *Battery*, CSM, GLI, MCB and Router. Time intervals of preventive maintenance are 1 week for MCB, 2 weeks for *Battery,* GLI and Router, and 1 month for CSM.

From data-processing result, be obtained the failure characteristics from each component Battery and MCB have Exponential distribution, while CSM, GLI and Router have Weibull distribution. Based on RCM analyze on this research, be yielded the preventive maintenance policy that can be improve reliability. So that can also improve the QoS and customer satisfaction.