ABSTRACT

PT. Telkom Indonesia Network Area Tangerang has three central types, namely EWSD V.11, 5ESS and NEAX 61E. From the seven central host located in the network area Tangerang, there are three EWSD V.11 central host with the most number of subscribers.

PT. Telkom Indonesia Network Area Tangerang implementing preventative maintenance activities carried out today in the form of scheduled maintenance activity on the central. Until now, the maintenance policy that has been done is not optimal, because the frequency of damaged in the component is still frequent. In the execution, the repairmen process of damaged components is often combined into a routine maintenance activity. These activities will result longer repairmen processing time from the existing time.

The central system consists of four units: the access unit, switching units, control unit and signaling unit. Access unit functions as a central system that relate directly to the customer. Within the access unit itself, there are several sub-units namely DLU, LTG, DAS and TE. Digital Line Unit (DLU) functions as subscriber terminal equipment both analog and digital. Digital Line Unit (DLU) has major problems in performing some functions, which can cause the process of call processing is not working properly.

Maintenance policy for the sub-unit of the digital line units using Reliability Centered Maintenance (RCM) method is expected to result an appropriate maintenance policy by knowing the critical components of the system and the optimal time intervals of maintenance, so that the repairmen can be done to the systems before experiencing damaged and the maintenance cost can be minimized.

On the determination of critical systems using the selection method based on the observation result of FSCA method and frequency of damage based on pareto diagram, where the system is accordingly analyzed with the causes and consequences. Furthermore, based on data Time to Failure that has been summarized, the calculation is done by using Anderson Darling test to get the type of distribution and damaged characteristic of critical component.

Based on the RCM method, the type of distribution and damaged characteristic of each critical component, it is obtained the optimal maintenance policy applied to the critical components, namely task on-condition.

The calculation of the total maintenance cost for critical components is calculated by using maintenance costs minimization model. Maintenance carried out such as checks / inspections and repairmen done simultaneously. The interval maintenance time used is based on a comparison between existing maintenance intervals and the calculation results of PF interval method. The final result of calculations and comparisons can be seen in the table below:

The result of the proposed cost for the existing maintenance

Unit Fungsional	Kebijakan Perawatan		Frekuensi Pengecekan/Inspeksi		Total Biaya per tahun	
	Sebelum RCM	Setelah RCM	Sebelum RCM	Setelah RCM	Sebelum RCM	Setelah RCM
Central Functional Units	Maintenance Schedules	Schedule On Condition	40	12	Rp 41,334,375	Rp 30,223,959
RGMG	Maintenance Schedules	Schedule On Condition	36	4	Rp 35,640,938	Rp 5,969,722
Peripheral Functional Units	Maintenance Schedules	Schedule On Condition	40	24	Rp 41,334,375	Rp 62,727,188
Power Supply	Maintenance Schedules	Schedule On Condition	36	24	Rp 35,640,938	Rp 44,520,207
TOTAL			**152**	**64**	**Rp 153,950,625**	**Rp 143,441,076**