

ABSTRACT

PT Telkomsel is a company engaged in the telecommunications industry. In an effort to continuously improve service quality, the company expanded service infrastructure that can reach in Indonesia. BTS is a component which plays an important role in the expansion of the service infrastructure. As one of the important components in the provision of the best services in communication, special care is needed to avoid damage. To support this, we need a spare parts inventory planning strategies available when a component or part failure.

Reliability Centered Spares (RCS) is an approach that is used to determine the spare part inventory levels based on life-costing and operational and maintenance requirements that support the inventory. The use of this method can determine the parts and components that must be available to ensure the functionality and performance of the equipment in accordance with the performance standards. RCS method will show the components and parts that have the highest criticality and become a major focus in the design of spare parts management.

In the RCS calculation results showed 6 major components which are included in the category of critically at BTS. Furthermore, the method of the Poisson process obtained the required amount of spare parts for a period of 1 year and stock levels based on service level amounts obtained for each of the components and parts. Spare parts inventory costs by considering the variable ordering cost, stockout cost, holding cost and obtained total purchasing cost is Rp 2,219,928,168.33.

Keywords - Reliability Centered Spares, Poisson process, Service Level, BTS