ABSTRACT

Performance Analysis of Pasteur Toll Gate
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Queues are a regular occurrence in everyday life. Waiting in front of the booth to get train tickets or theater tickets, toll booths, bank, supermarket cashiers, and other situations that we often encounter. Queues occur due to the need for services exceeds the ability (capacity) services or facilities, so that users of the facility can not receive immediate care services due to busyness. Queuing theory can be used to evaluate the phenomenon from the viewpoint pelanggang queue and service providers, so it will produce the optimal solution. Where service providers still make a profit and customers do not complain a long queue times.

The object of research conducted by the authors are at the toll gate Pasteur Pasteur branches located in the shade PT. Jasa Marga (Persero). Tbk. This study aims to reduce long queues and can also improve performasi toll booths.The data was collected by observing and recording the number of vehicle arrival time and service vehicles. In pengamantan that has been done, the toll booths there are two lines of lane entrance and exit where 13 active substation, five substations substation entrance and 8 exit.

At the toll gate pasteur common good of a passing car when I shift, shift II and III except during shift. To improve the work performance of the toll booths need to be done the right solution is to use a method of queuing theory with Multi-channel Multi-Channel Server is M / M / c / GD / ∞ / ∞. By using this method is first tested the data to determine whether the data follows the Poisson and Exponential distribution.

From the results of data processing that has been made that the test data obtained through Test Kolmogorov Smirnov Test to follow Poisson distribution and Exponential distribution. Then from the processing of data obtained by utility shift queuing theory I, II shift shift ± 30% and III = 7403% with an active substation substation by 8, so that given the proposal to add a substation at the time shift I and II and III parse the substation on the shift and also increase the service time

Keywords: Queuing theory, Utilities.