IMPLEMENTATION OF ERLANG-B FORMULA FOR ACQUIRING QOS (QUALITY OF SERVICE) AND CALL OFFERED FORECASTING USING RADIAL BASIS FUNCTION NETWORK IN CALL CENTER BASED ON ASTERISK FOR JAVA

ABSTRACT

Call Center is main service used in telecommunication using telephone media where the customer can communicate real time with the customer service. Resources that needed in the call center such as call center media server, IP agents, and Database system[1]. That device usually produced by corporate so that the price is quite high. Furthermore, to monitor the quality of call center, the data must be calculated manually to get the QoS. So that, amount of human resources is needed to accomplish it.

In this final project, the objection is to build call center prototype based on Asterisk for Java that will be integrated with QoS calculating program based on Erlang-B formula and call offered forecasting for the future using Radial Basis Function Network (RBFN) method.

The result shows that the call center system that has been built works well. Execution time to database connection for ANSWERED call status take average time 6.8 millisecond. For BUSY call status take average time 1.4 millisecond. For calculating QoS using Erlang B program get the average error 0.0000635%. Call offered forecasting using RBFN method get the average error 7.1928 %.

Keyword: call center, Asterisk for Java, QoS, Erlang-B, RBFN