

ABSTRACT

PT Telkom Indonesia Tbk's Laboratory for Telecommunication Equipment certification provides services which include Quality Assurance testing, Type Approval and Voluntary Test for customers' telecommunication equipments in Indonesia.

In this laboratory testing services Fibre Optic Cables provide the largest contribution of other testing testing services. Therefore the writer conduct research object on Fibre Optic Cable testing to analyze revenue optimization on Optical fiber cables testing laboratory.

This study uses Linear Programming method and POM-QM by using the variables that affect the output of the testing process in the laboratory so as to give the right decision in order to optimize existing resources. The initial stage in the development of this model is the identification of variables measuring equipment, human resources (Test Engineer) with respect to time and then create a mathematical model. A major component in the development of a mathematical model is to setting objective function of the cost component testing, and then determine the functions of its boundary.

The output of revenue and boundary maximization model determines only the type of Loose Tube constructed Fibre Optic cable testing to be applied in Aerial Kap 4-96 Core that provides the dominant contribution. This optimization explains that some barriers that become obstacle in the process of carrying out the functions Testing Services greatly affect the results of the optimization target.

The results of the study is expected to provide input in setting the maximum revenue from the results of laboratory testing on optical fiber cable by controlling resource requirements planning which include the number of measuring instruments, the number of Test Engineer personnel and scheduling effective and efficient testing.

Keywords: Optimization, cost, validation, reliability, linear programming, POM-QM