ABSTRACT

ESTABLISHED APPLICATION SCHEDULING ELECTRICAL MAINTENANCE AND REPAIR NETWORK IN PT PLN (PERSERO) APJ MAJALAYA USING GENETIC ALGORITHM METHOD

by

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PT PLN (Persero) is a state-owned enterprises that deal with aspects of electricity in Indonesia. PT PLN (Persero) has a long history in the electricity industry in Indonesia. Based on the results of interviews with the maintenance and repair of electrical networks in PT PLN (Persero) APJ Majalaya there are some problems in scheduling maintenance and repair of electrical networks is the high estimate of complaints caused by less optimal in performing maintenance and repair of electrical network assets due to the availability of resources humans are limited.

In the application development process scheduling maintenance and repair of electrical network uses descriptive research method with type research of case studies on companies , where data collection techniques are used , among others , that is observation , interview and literature study. The method used in the scheduling processis the method of Genetic Algorithm. For data analysis techniques using software development methods in the waterfall while system data stream method using structured modeling methods where the tools used are DFD (Data Flow Diagram). The objectives of the development application scheduling maintenance and repair of electrical networks is to facilitate managing the scheduling of maintenance and repair of electrical networks , optimize distance and working time, as well as simplify and speed up data processing.

After going through the stages in accordance with the chosen development methodhence in the implementation of application scheduling maintenance and repair of electrical networks, conducted the testing system consisting of alpha testing where this test using black box testing method that focuses on the functional requirements of software and beta testing is field testing by giving the questionnaire to the user that contains questions referring to the final destination. After alpha and beta testing, it canbe concluded that functional systems can already produce the expected output andapplication scheduling maintenance and repair of electrical networks can facilitateassessed in managing scheduling , can be learned, fairly easy to use, it can speed updata processing and generating information desired.

Keywords: Application Scheduling, Genetic Algorithm, Waterfall