POWER SYSTEM PROTECTION COORDINATION STUDIES

AT

UNIVERSITI TEKNOLOGI PETRONAS

(UTP)

By

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DISSERTATION

Submitted to the Electrical & Electronics Engineering Programme
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CERTIFICATION OF APPROVAL

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CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

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NUR FAZDILAH BINTI BADEROL HESAM

ABSTRACT

Power systems protection coordination is a study on protection for electrical power systems from faults caused by component failures within the systems. These failures can occur due to abnormal operating condition of the equipments such as generators, transformers, motors and bus bars. Typical faults that always occur in the systems are such as short circuit/open circuit faults, inter turn faults in windings, overload and power swings [1]. The protection can be achieved by isolating faulted equipments from the electrical network. This project is suggested to help in improving the existing protection coordination of Universiti Teknologi PETRONAS (UTP) in order to provide better protection coordination managing systems as well as to reduce operational expenses, improve efficiency to maintain the performance of electrical appliances available in UTP thus can enhance services for the organization. This report includes four main sections; (1) the introduction, (2) literature review, (3) methodology and (4) the conclusion. The introduction covers the project background, problem statement, significance of projects, the objectives as well as scope of study while in literature review section it covers about distribution protection principles, basic requirements of distribution protection, common types of distribution protection, types of protection, circuit-breaker current rating and also an overview of embedded generator. In the next section procedures and tools to be used is covered and this report ends with conclusion.

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