AVAILABLE TRANSFER CAPABILITY COMPUTATION
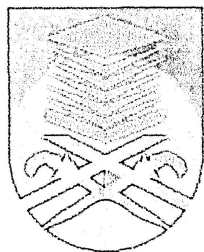# BASED ON GENETIC ALGORITHM

Thesis is presented in partial fulfillment for award of the

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UNIVERSITI TEKNOLOGI MARA

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ABSRACT

The application of Genetic Algorithms (GA) to compute the Available transfer capability (ATC) problem is proposed in this thesis. Determination of the ATC is one of the important issues in the deregulated power system. The ATC in the power system is a measure of the maximum amount of additional MW transfer between two parts of a power system. The objective of the proposed GA is to maximize a specific point-to-point power transfer without system constraint violation in order to determine ATC through a global optimal search. The suggested of GA is simple to implement and can easily incorporate various constraint such as line limitation and voltage violation. Analytical analysis was carried out on the IEEE 9 RTS bus system. The results are compared with that obtained from the Iteration Newton Raphson power flow (INRPF).

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