

Optimal Relay Coordination for IEEE 9 Bus system by Using Optimal Technique.

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Abstract—For the optimised co-ordination of Over current (OC) relays using this Optimal techniques such as easiest in which i have 2 phase easiest and dual easiest are used. Second way of optimal coordination program is using AI logic system such as genetic algorithm (GA). In this paper, a new approach will be used for optimal coordination of OC relays based on genetic algorithm for consider the IEEE 9 bus system in which 3 generators,3 transformer and 9 bus we can use. In this work, we take into account time setting multiplier (TSM) and plug setting multiplier (PSM) of OC relays in optimization procedure. In this paper present the IEEE 9 bus system simulate by using E-TAP/MATLAB coding with genetic optimized techniques the answers are taken into account as a part optimization procedure, so the outputs are optimized TSM's compare to the conventional method. In other words, the novelty of the paper is taking into account to TSM to handle miscoordination problems. The results obtained are quite encouraging and optimized value will be useful as an effective tool for coordination OC relays.

Keywords - Relay protection; relay co-ordination; optimization; genetic algorithm; E-TAP/MATLAB Coding.