Thesis Title	An Application of Combined Heuristic and Genetic Algorithms to BGP Routing Problem
Student	Mr. Tosamon Littirut
Student ID.	44067470
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Thesis Advisor	Asst. Prof. Dr. Chotipat Pornavalai

ABSTRACT

In Internet Service Provider environment, BGP is a routing protocol that used to exchange routing and reachability information between autonomous systems or domain. BGP is a path attributes protocol to determine route selection process to select the best route from multiple feasible routes. The results of routes selection process will effect to transit traffic between ASes. How to balance traffic though egress edge links to achieve the highest network utilizes is a main problem.

In this paper, we proposed a combined Heuristic and Genetic Algorithm to determine BGP routes selection. The main objective is discovery feasible solution that does not violate the bandwidth capacity of egress links and to minimize the solution cost. The simulation results shows that our algorithm discovers more feasible solutions than existing algorithms. It also can use less bandwidth capacity, while solution costs are almost the same as existing approaches.