

Thesis Title	On-Line Signature Verification System By Genetic Algorithm
Student	Mr. Weerasak Wattanayakorn
Student ID.	35628015
Degree	Master of Science Program in Computer Science and Information Technology
Programme	Mathematics and Computer Science
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Thesis Advisor	Asst. Prof. Dr. Ouen Pin-ngern

ABSTRACT

This thesis presents an on-line signature verification by Genetic Algorithm which adapt the natural selection and genetic operation theories to solving the problems. Reference signatures are kept in the database to compare with inspected signature. Feature extraction methods are sequence, length, pen tip position in x axis, pen tip position in y axis, velocity, acceleration and direction. Genetic Algorithm is generated the initial signatures from reference database to verify with the constraints to search the optimal signature and display the result – genuine or forgery. This method is flexible the intrapersonal variability of each signature. According to the experiment using 300 signatures, the system can correctly verify about 89 %. Type I Error is 9 % and Type II Error is 11 %.