UNIVERSITI TEKNOLOGI MARA

IDENTIFYING MOVEMENT OF OBJECT IN MULTIPLE IMAGES VIA PARTICLE SWARM OPTIMIZATION ALGORITHM

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FEBRUARY 2016

STUDENT'S DECLARATION

I certify that this report and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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FEBRUARY 1, 2016

ABSTRACT

Human eyes are limited to only what they can perceived. Sometimes, there exist additional information in images that cannot be identified by simply looking at one part. Movement of objects in multiple photographs for example is very vague and can only be identified with thorough inspection. For example, similar to one game and that is a spot the difference of images. When human test this game it maybe take a few minutes to spot the difference from that images and sometimes the result is incorrect. Then this project wants to achieve better than human result. This project used one of algorithm from category Evolutionary Computing (EC) and that algorithm is Particle Swarm Optimization (PSO). Every algorithm or technique has their own process to solve the problem. EC optimize the problem by considering different criteria in order to find its optima. For image processing, EC has the potential to optimize in terms of identifying moving objects as digital images has a lot of criteria to be considered. In PSO algorithm, it solved the problem by using their own process such as particle initialization, evaluate fitness, convergence and other things. This propose of this project is to design and develop a prototype to identify moving objects in multiple images using PSO algorithm.

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