UNIVERSITI TEKNOLOGI MARA

EVALUATING THE OPERATIONAL SUITABILITY TO USE BIOMETRIC FACE RECOGNTION FOR KUALA LUMPUR INTERNATIONAL AIRPORT (KLIA) IMMIGRATION

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Thesis submitted in fulfilment of the requirements for the degree of Master of Science (Information Technology)

Faculty of Information Technology and Quantitative Sciences

May 2007

ABSTRACT

Over the pass few decades, people have been travelling around the world to enter a country from one to another. Due to the increasing number of frequent travellers, airport immigration have becomes one of the busiest place on earth for this migration of peoples, entrance check point have to be enlarged, dedicated system have to be set in many location to cater the need for clearance process, security concern based on travel documents and identity fraud has increase over a number of years raising the international alert on the security of the immigration checkpoints. Technology concern on the method to recognize individual based on their unique physical characteristic such as fingerprints, facial, iris, voice has become and alternative means to identify the identity of the travellers. Biometric face recognition for passport identification and verification has been used in many airports around the world to replace the traditional methods for passport identification and verification. KLIA is one of the first airports in the world to introduce the use of a smart passport for domestic clearance process. Traditional methods for clearance process are still used for the international clearance. This study is to find the suitability of biometric face recognition to aid KLIA immigration in the clearance process for international travellers. The suitability is focussed on the evaluation of time and accuracy performance of current face recognition methods comparing with the performance of biometric face recognition methods while evaluating effectiveness and attitudes towards current clearance and face recognition methods from travellers (foreigners) and officer's point of view. From the analysis, comparing the result for overall average processing time for both, manual and biometric system, indicate that current face recognition could not out perform biometric face recognition. Based on result also we conclude that there is a lot more improvement that could be done to increase the performance of KLIA immigration checkpoint.

ACKNOWLEDGEMENT

Alhamdulillah, praise to Allah for his Almighty and Graciousness. With His utmost blessings, I was able to finish this written report within the time duration given.

This thesis is the result of two years of work whereby I have been accompanied and supported by many people. It is a pleasant aspect that I have now the opportunity to express my gratitude for all of them.

I am deeply indebted to my supervisor, Puan Marina Binti Yusoff who kept an eye on the progress of my work and always was available when I needed her advises. Her guidance through the development of this research paper had portrayed her patience in enriching me with the research skills that can be use in the near future. Thank you for patiently responding to my enquiries and reinforcing my views. Thank you so much Mrs. I also would like to express my thanks to Ass. Prof. Dr. Norlaila Mohd. Noor for her guidance, recommendations and suggestions who had helped me complete of this thesis.

I also would like to say a big 'thank you' to the Director of Immigration Malaysia, Tuan Haji Che Mamat bin Abdullah, Deputy of Immigration Malaysia, Encik Mohamad bin Embong, Head of KLIA Immigration, Tuan Haji Fison bin Haji Yahya and Deputy of KLIA Immigration, Encik Saravana Kumar a/l Marimuthu for granting me permission to conduct my research at KLIA Immigration. Thank you very much all the cooperation and help towards the successful completion of this study.

I would like to thank all of my family members, especially my parents; Ayah and Mak , my brothers; Along, Atih and my sisters in law; Kak Long, Ziti and also to my dearest Nur Saadah for your encouragement and moral support throughout the entire day of my research. Thanks you for being the best family. Without their support, this study could not have been finished.

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