X0051

BORANG ERGS – P3(R)

Code Project :

KEMENTERIAN PENDIDIKAN MALAYSIA

FINAL REPORT
EXPLORATORY RESEARCH GRANT SCHEME (ERGS)

Laporan Akhir Skim Geran Penyelidikan Eksploratori (ERGS) IPT
Pindaan 1/2015

A

RESEARCH TITLE: The development of an algorithm and a model through image processing and remote sensing techniques for assessing environmental impacts of routine carbon footprint in Peninsular Malaysia

PHASE & YEAR: 1 / 2012

START DATE: 1 Ogos 2012
END DATE: 31 Julai 2014
EXTENSION PERIOD (DATE): RMC LEVEL: 31 Julai 2015
KPM LEVEL: 31 Julai 2015

PROJECT LEADER: Professor Dr. Mohd. Zubir Bin Mat Jafri
I/C / PASSPORT NUMBER:

PROJECT MEMBERS: (including GRA)
1. **Assoc. Prof. Dr. Lim Hwee San**
2. En. Wong Chow Jeng
3. Assoc. Prof. Dr. Khiruddin Abdullah
4. En. Sim Chong Keat

PROJECT ACHIEVEMENT *(Prestasi Projek)*

B

ACHIEVEMENT PERCENTAGE			
Project progress according to milestones achieved up to this period	**0 - 50%**	**51 - 75%**	**76 - 100%**
Percentage			✓

RESEARCH OUTPUT		
Number of articles/ manuscripts/ books *(Please attach the First Page of Publication)*	**Refereed Journal**	***Non-Refereed Publication***
	3	
Conference Proceeding *(Please attach the First Page of Publication)*	**International**	***National***
	12	
Intellectual Property *(Including Paten,Copyright, Industrial Design,layout Design of Integrated Circuit & Trademarks)*		

HUMAN CAPITAL DEVELOPMENT

Human Capital	Number				Others (please specify)
	On-going		Graduated		
Citizen	Malaysian	Non Malaysian	Malaysian	Non Malaysian	
No. PHD STUDENT	1		1	1	
Student Fullname: IC / Passport No: Student ID:					
No. MASTER STUDENT					
Student Fullname: IC / Passport No: Student ID:					
No. UNDERGRADUATE STUDENT			6		
Student Fullname: IC / Passport No: Student ID:					
Total					

EXPENDITURE *(Perbelanjaan)*

C

Budget Approved *(Peruntukan diluluskan)* :
Amount Spent *(Jumlah Perbelanjaan)* :

Balance *(Baki)* :
Percentage of Amount Spent :
(Peratusan Belanja)

ADDITIONAL RESEARCH ACTIVITIES THAT CONTRIBUTE TOWARDS DEVELOPING SOFT AND HARD SKILLS
(Aktiviti Penyelidikan Sampingan yang menyumbang kepada pembangunan kemahiran insaniah)

D

International		
Activity	Date (Month, Year)	Organizer
(e.g : Course/ Seminar/ Symposium/ Conference/ Workshop/ Site Visit)	SPIE Photonics Europe, 14 -17 April 2014, Munich Germany	SPIE

National

Activity	Date (Month, Year)	Organizer
(e.g : Course/ Seminar/ Symposium/ Conference/ Workshop/ Site Visit)		

E PROBLEMS / CONSTRAINTS IF ANY *(Masalah/ Kekangan sekiranya ada)*

Budget constraint

F RECOMMENDATION *(Cadangan Penambahbaikan)*

Increase the budget allocation

G RESEARCH ABSTRACT – Not More Than 200 Words *(Abstrak Penyelidikan – Tidak Melebihi 200 patah perkataan)*

This research develope the prediction models which analyze and compute the CO_2 emission in Malaysia. Each prediction model for CO_2 emission is analyzed based on three main groups which is transportation, electricity production and consumption as well as residential and industry. The prediction models was generated using data obtained from World Bank Open Data. Partial least square and best subset method were used to remove irrelevant data and followed by multi linear regression to produce the prediction models. From the results, high R-square (prediction) value was obtained and this imply that the models are reliable to predict the CO_2 emission by using specific data. The results of the prediction model with the measured data showed a high correlation coefficient (adjusted R2=96.75%) with predicted R2=94.19%, indicating the model's accuracy and efficiency. These results are encouraging and accurate and can be used in early warning of the population to comply with air quality standards.

Date : 10/8/2015
Tarikh

Project Leader's Signature:
Tandatangan Ketua Projek

H COMMENTS, IF ANY/ ENDORSEMENT BY RESEARCH MANAGEMENT CENTER (RMC)
(Komen, sekiranya ada/ Pengesahan oleh Pusat Pengurusan Penyelidikan)

Maklum Bandahari Baki Geran Hygaht

Name:
Nama:

Signature:
Tandatangan:

Date:
Tarikh: