

**FIX ENHANCEMENT OF ROAD CONDITION IN PERLIS
USING GIS APPROACH**

NUR ZAKIRAH RABIHA BINTI MD REJAB
2014530425



**Thesis submitted to the Universiti Teknologi MARA Malaysia
in partial fulfillment of award of the degree of the
Bachelor of Surveying Science and Geomatics (Honours)**


JULY 2017

AUTHOR'S DECLARATION

I declare that the work in this thesis/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for UnderGraduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

Name of Student : Nur Zakirah Rabiha Binti Md Rejab
Student I.D. No. : 2014530425
Programme : Bachelor of Surveying Science and Geomatics
(Honours) – AP220
Faculty : Architecture, Planning & Surveying
Thesis/Dissertation Title : Fix Enhancement of Road Condition in Perlis using
GIS Approach


Signature of Student : 

Date : July 2017

Approved by:

I certify that I have examined the student's work and found that they were in accordance by the rules and regulations of the department and university thus fulfills the requirements for the award of the degree of Bachelor of Surveying Science and Geomatics (Honours).

Name of Supervisor's : Noorfatekah binti Talib

Signature and Date :  4/8/17

ABSTRACT

The road is important public facility and transportation networks. Because of road condition, the accidents number are increased rapidly year by year. Previously, user will complain the road condition by Short Message Service (SMS) or calling *Jabatan Kerja Raya* (JKR) or any agencies. The action to respond will take a long time to process the complaints by the user. Thus, in this study, the real time complaint will be replacing traditional method which is by using Mobile Data Collection Apps. The objective of this study is to relate that land cover type that effect road condition by using Geographic Information System (GIS) approach. As we know GIS is a system that helps to keep data storage and analysis. By GIS, road damage level can be classified and clustenzed by using GIS. For data collection, Mobile Data Collection Apps is used. This Apps is freely downloaded in Play store and Apps store. Once data was taken in real time by using a smartphone, it will be saved in Cloud GIS. Besides, satellite image Spot 6 is used to performed image-supervised classification. The results will be shown by several map layout that contains road damage. By refer to these results, it will achieve all the objective that state earlier. In conclusion, it can help the department or any agencies to realize that the road condition in Perlis is in good level or need road maintenance. Thus, this study can support the Road Safety Department of Malaysia in achieving the objective which is to reduce the number of accidents related to road damage factor.

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