UNIVERSITI TEKNOLOGI MARA

THE COMPARISON OF ARCGIS AND QGIS SOFTWARE USING GEOCODING METHOD FOR POSTAL CODE ENHANCEMENT IN MAILING DELIVERY

SYED IZZAD SYAMIL BIN SYED MAHDI

Thesis submitted in fulfillment
of the requirements for the degree of
Bachelor of Surveying, Science and Geomatics (Hons)

Faculty of Architecture, Planning and Surveying

July 2017

i

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 Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

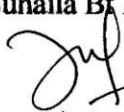|		
Name of Student	:	Syed Izzad Syamil Bin Syed Mahdi
Student I.D. No.	:	2014989697
Programme	:	Bachelor of Science Surveying and Geomatics - AP220
Faculty	:	Architecture, Planning & Surveying
Thesis/Dissertation Title	:	The Comparison of ArcGIS and QGIS Software Using Geocoding Method For Postal Code Enhancement In Mailing Delivery
Signature of Student	:	
Date	:	July 2017

Approved by:

I certify that I have examined the student's work and found that they are in accordance with the rules and regulations of the Department and University and fulfils the requirement for the award of the degree of Bachelor of Surveying Science and Geomatics (Honours).

Name of Supervisor: Suhaila Bt Hashim

Signature and date: 11|8|2017

ABSTRACT

Geocoding is the process of assigning location, basically in the form of x and y values (coordinates), to an address by comparing the descriptive location elements in the address to those present in the reference materials. Besides, the geocoding process is involving steps in translating an address entry. Postal code enhancement is not new in this world. Many countries for example United States, United Kingdom and France are always updating their postal code from time to time. Regardless until new, there is non-upgrading research being made to Malaysia's postcode system. The objectives of this study are to review the capabilities of geocoding in ArcGIS and QGIS and to compare both software in terms of completeness and positional accuracy. In geocoding process using ArcGIS reference data is needed. Data of road and proposed postcode are used as the reference data in this research. The geocoding analysis is done using a proposed postal code made for pilot study area, Kangar Perlis, which this postal code is generated by using a specific coding model that made for Malaysia. The result of each geocoding method using by each software is determines and compared based on their match rates and accuracy. The result shows both software has equally capabilities in geocoding..

TABLE OF CONTENTS

CHAPTER THREE

CHAPTER FOUR