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# GEOPOSTCODE STRUCTURE ENHANCEMENT BASED ON NATIONAL DIGITAL CADASTRAL DATABASE : PILOT STUDY IN PERLIS


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**in partial fulfilment for the award of the degree of the**
**Bachelor of Surveying Science and Geomatics (Honours)**

**JULY 2024**

## DECLARATION

I declare that the work on this project/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA (UiTM). This project/dissertation is original and it is the result of my work, unless otherwise indicated or acknowledged as referenced work.

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## ABSTRACT

Existing address system that have been implemented in Malaysia are specifically focused on mailing delivery across the country without any further enhancement such as in regards to standardisation that actually hold crucial roles in uplifting the accuracy of postal codes and database in general. Perlis, located on the northern part of Malaysia with distinguish structure of address system stands out the most in experimenting new proposed structural geopostcodes. This research is focusing on testifying the current database used which is NDCDB, enhancing the database of proposed geopostcode in UPI structure and geocode the proposed geopostcode structure system by using match rates address. The framework of evaluating the suitable geo-postcode structural framework is by using ArcGIS 10.4 for exploring the variables of powerful tool with the use of address locator, geocoding process and extract the match rates address analysis. The current database which is NDCDB assigning UPI as key finder in locating address, producing the highest percentages of match rates with only 0.06% tied result, while match rates of full address format indicates 3% success rate with 11% tied matched and 86% of failed match due to several factors such as incomplete address and inconsistent address formatting. The assigned proposed UPI and proposed geopostcode both uphold the percentages of 100% success rate due to standardisation of address system and NDCDB elements. This finding is a pathway for researcher to continue the urgency of standardisation in database for better accuracy purposes.



**Keywords:** postcode; geopostcode; NDCDB; UPI; address system; match rates; geocoding; database

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