# UNIVERSITI TEKNOLOGI MARA

# CADASTRAL DATABASE GEOMETRY ENHANCEMENT: A CASE STUDY OF ANGULAR BASE DATA

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Dissertation submitted in partial fulfillment
of the requirements for the degree of
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**Faculty of Architecture, Planning and Surveying**

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# AUTHOR'S DECLARATION

I declare that the work in this report was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged a referenced work. This report 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.

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# ABSTRACT

Coordinate system is a system used nowadays to identifying the location on the earth. In 2010, the Department of Survey and Mapping Malaysia (DSMM) introduced a system that maintained the digital form of an accurate spatial database survey replacing the previous system used by DSMM, the State Digital Cadastral Database (DCDB) (Jaafar, 2015). National Digital Cadastral Database (NDCDB) enforces the Coordinate Survey concept to improve the system in Malaysia. In this system adjustment used to adjust the data was Least Square Adjustment (LSA). DCDB data and NDCDB data have their similarity and dissimilarity. The similarity between both data can be shown by using bearing, distance and area. The adjustment method used in NDCDB was Lease Square Adjustment (LSA) while in DCDB, Bowditch adjustment was used. However, the concept of adjustment in both data was the same since both data used bearing method in the adjustment. Thus, this study aims to determine the impact of angular method in adjustment data input. In addition, the value of the data might change when the adjustment method used was changes. This study helps the user to know more about the different made by using angle method and bearing method for the purpose of adjustment. By sorting out this problem, the impact of angular base method toward the database can be identify. Thus, user can learn to understand more about adjustment in cadastral system that was used in Malaysia.

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