

**UNIVERSITI TEKNOLOGI MARA**

**RELIABILITY OF ANGULAR ADJUSTMENT  
APPROACH TO REDUCE ERROR IN CADASTRAL  
DATABASE**

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of the requirements for the degree of  
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## **AUTHOR’S DECLARATION**

I declare that the work in this disertation 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.

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## **ABSTRACT**

Cadastral survey in Malaysia is implemented the bearing as main data for cadastral adjustment, the bearing is been produced by the mathematical calculation based on angle in the survey equipment. However, the mathematical calculation for producing the bearing having an issue on systematic error due to indirect measurement. This will approach to error propagation in the data acquisition and will issue low positional accuracy in cadastral databased. To reduce systematic error in the calculation, angle measurement is an option for direct measurement in data acquisition implement to cadastral survey and cadastral adjustment. Therefore, the purpose of this research is to study of angular adjustment approach to improve the accuracy of cadastral databased. The method that been use for this study are converting bearing to angular. The angular adjustment results will be analysed based on statistical analysis such as residuals (i.e. observations and adjusted parameters) and standard deviations. This study focuses on redesign observation record to implement the angular in observation for cadastral data adjustment. It is expected that the result of angular adjustment will reduce the propagation of errors in observation, which eventually increase the accuracy of positional in the cadastral databased.

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