

UNIVERSITI TEKNOLOGI MARA

**UNDERGROUND UTILITY DATA
MANAGEMENT USING GEOGRAPHIC
INFORMATION SYSTEM**

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Thesis submitted in fulfillment
of the requirements for the degree of
Bachelor Science of Geomatics

Faculty of Architecture, Planning and Surveying

January 2018

AUTHOR'S DECLARATION

I declare that the work on this project / dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. The project / dissertation are original and it is the result of my own work, unless otherwise indicated or acknowledge as referenced work.

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ABSTRACT

Department of Surveying and Mapping (JUPEM) is the responsible authority in maintaining a repository of underground utility data from various utility agencies. Orderly management of utility data between JUPEM and utility agencies requires the establishment of agreed mechanisms, procedures and specifications, then Standard Guideline for Underground Utility Mapping were created and embark the creation and maintenance of National Underground Utility Database called PADU. PADU is the main component of the utility mapping system in JUPEM. It is a seamless database consisting of four major components which is 1:500 base maps, cadastral data, utility data and imageries in order to produce a complete utility mapping. This study will help to improve the creating of the utility mapping which is easy to be update in the PADU system. However, this guideline had not been properly followed by the utility agencies. Therefore, the purposed of this study is to identify the adherence of utility data provided by the related agencies as compared to the standard existing guideline and framework. Underground utility data from Syarikat Air Darul Aman (SADA) is taken as a sample study case for this research which located in Taman Arked, Sungai Petani, Kedah. In order to identify that, the studies of the existing framework help to better understand the concept of the framework. In conclusion, this research proposed a sample of framework database for underground utility that can be easily followed by the entire utility provider. . Then, the benefit from this research is the framework that has been provided by the responsible authority must be follow by all the various agencies as that will help JUPEM in order to centralize the database between the agencies.

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