

**CENTRE OF STUDIES FOR BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA**

**THE POTENTIAL GEOGRAPHIC INFORMATION SYSTEM (GIS)
IN WATER DISTRIBUTION SYSTEM IN UiTM SHAH ALAM**

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**“I hereby declare that this academic project is the result of my own research
except for the quotation and summary which have been acknowledged”**

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ABSTRACT

GIS is a summary of the Geographic Information System considers GIS as a system involving hardware of software, data, user, organization and effective management to collect, store analyse and present information related to various area of the world. In GIS initially developed to help cartographers but now it has become a tool of modelling and key management in the field of engineering such as water supply management.

GIS capable of combining attribute data and spatial data in system and performed various analyse related with a network of water distribution system. GIS system can speed manual search for information, updates and analysis of the data. GIS capabilities compared with other CAD system and it selected to develop a water utility management. Therefore, this research conducted with the purpose the design base on GIS water distribution system at UiTM Shah Alam. Therefore, this research to study the types of layout of water distribution system, second analysis is to identify the possible application of GIS in water distribution system and third analysis to establish a water distribution system based on GIS application

The end of this research will provide suggestions to provide the database will ease the monitor and maintenance of water supply distribution pipeline system for UiTM Shah Alam Facilities Department using GIS system. GIS system implement at facilities department because it ease the water management and it can speed search for information updates and getting the data. GIS system can create a database for inventory. GIS also use to helps improve management information system and databases.

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CHAPTER 1

INTRODUCTION

1.1 STUDY BACKGROUND

Water is the resource that a very important in everyone daily life around the world. Water is basic need of mankind the most important in the lives of other creatures. Through effective water distribution system, water can be distributed to users with sufficient quantities. Piped distribution system can vary from simple to extremely complicate. According to Prabhata and Ashok (2008) a water distribution system is the pipe networks that distribute water from the source to the customer. A good distribution system the maintenance of the distribution system should be easy and economical.

In term maintenance to ensure the operation and maintenance work going well, through planning and organized is very important. Water distribution system is comprised of components parts such as tanks, pumps, valves and pipelines. All components of this system each have specific function to distribute water to users. This study should be to create and have a new method to analyse and plan for water distribution infrastructure with high quality and well-planned. The new method able to distribute large quantities of water and sufficient pressure, costs for design, operation and maintenance economical and soon.