WATER LOSSES IN UITM DISTRIBUTION NETWORK USING GIS

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MAC 2011

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3. Acknowledgements

We would like to extend our deepest appreciation and thanks to those who were actually lend their help and endless support towards completing the research. Those remarkable individuals are:

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Non Revenue Water (NRW) has been a long standing issue in Malaysia. Under the Ninth Malaysia Plan (RMK-9), the government has placed a great attention towards the issue and has set a target to reduce the NRW from 38 percent to 30 percent by 2010. On a smaller scale, UiTM is also having a similar issue and it is important to start a comprehensive study to address the water loss problem. It is crucial to investigate the sources of the water loss and create a GIS framework for better representation of data and detail analysis.

This research will significantly show understanding oh the sources of water loss in UiTM and develop a reliable platform for analysis using GIS tools. The GIS platform can be used as a tool for decision making, especially for replacement of old pipes. Furthermore, this research contributes in optimizing the water distribution system and significantly reduce the annual utility (water) bill for UiTM.

5.2 Enhanced Executive Summary

Many countries nowadays have problems in implementing water management strategies due to inefficient management of data. The integration of various data helps in utility management because the planning of the service is indeed time consuming. The Geographical Information System (GIS) has been selected as an element to be applied in the analysis the water distribution network of a low rise building. The implementation of GIS in water utility may improve the management in the storage and use of information. This study was conducted to develop a database using GIS application which integrates all the information related to the water distribution network of Block 5 in UiTM Puncak Perdana campus. ArcGIS 9.3 was chosen to develop a database system for the water distribution network. The water pipeline layer was created based on the AutoCAD plan of Block 5. Tools within the software were utilized to produce various maps which can help the maintenance officers to implement the work related to the water distribution network. This software will display the result in the form of graphs, equipment used, length of pipes, and reports of pipe breaks in ArcGIS. Therefore, the maintenance department can easily access all information at any time for work planning and maintenance.