

The Development of 3D City Model for Putrajaya MPC Database

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SUMMARY

As the leading agency in Malaysia on Cadastral Survey, the Department of Survey and Mapping Malaysia (JUPEM) is responsible to further modernize the cadastral system in Peninsular Malaysia. Changes have been made technically, operationally, structurally and institutionally in Malaysia's cadastral survey system from time to time to ensure the Department's relevancy in serving the society. The motivations for these changes are mainly due to the requirement for increased service provision and efficiency, and the larger needs of clients and governments. As public expectation relating to land delivery system increases, the need to move from a single purpose cadastre (its main focus is on the issuance of Titles) to a multipurpose cadastre (MPC) environment seemed significant to meet the demands. Thus, in its bid to understand the MPC concept and its implementation, a pilot study was conducted by the Department under the 10th Malaysian Development Plan at the Federal Territory (FT) Putrajaya. This paper highlights the main component of the pilot study which is the FT Putrajaya MPC database development and basics of 3D city model generated from the 3D point-cloud data acquired through Mobile Terrestrial Laser Scanning (MTLS) technology. A general requirement for setting up an MPC database for Malaysia has been established and it was concluded that the FT Putrajaya MPC Database and its 3D city model have the potential to support spatially enable government, private sectors, and society in general and to expand computer support in the process of visualization, organization and management of useful land information based on the spatial accuracy achieved in this study.