

techniques. It discusses the processing of RS and GIS data for Sana'a 1988, 1994 and 1998 in urban pattern recognition. Spatial and temporal urban changes are discussed in the analytical process of the urban sprawl recognition. The heuristic modeling for the identification and prediction of urban sprawl scenarios in Sana'a is also discussed. Results and recommendations for the control of urban sprawl are presented at the end of the paper.

Keywords: Urban sprawl, Heuristic model, Urban pattern recognition, GIS and Remote sensing

DEVELOPING WEB-BASED MULTI-DIMENSIONAL GIS – CONCEPTUAL FRAMEWORK

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ABSTRACT

We have seen GIS software have evolved from simple to more advanced state as it is but yet able to handle applications that associated to 3D and beyond the third-dimension of real world GIS datasets. One of the main reasons attributed to the complexity of spatial data modeling and topological modeling mechanisms for such datasets and information. In this paper, we describe impediments associated with the 3D spatial data, 3D topological modeling, and discuss the possible solutions. We also highlight our initial research effort in this problem domain towards Web enabled system.

KEY WORDS: Web, Multi-dimensional (nD), 3D topology, 3D GIS

INTEGRATING GIS AND DYNAMIC SPATIAL MODEL IN PLANNING URBAN GROWTH: A CASE OF SEBERANG PERAI PENANG, MALAYSIA

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ABSTRACT

Geographic Information Systems, which provide framework for managing large amount of information on urban areas, have been utilized to evaluate and monitor the distribution of land use activities, as well as implement planning functions ranging from daily administrative operations to