

Developing a Web-Based GIS for Hajj Traffic Plan (HajjGIS.Net)

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Abstract

A major challenge facing urban planners and designers in the city of Makkah, Saudi Arabia, is planning the movement of vehicles and mass transit during the period of Hajj (Islamic Pilgrimage) when a huge number of people come from all over the world for religious activities. Every year, local authorities need to provide a traffic awareness plan that can be implemented during Hajj to avoid traffic congestion. A traditional means to distribute awareness of the traffic plan is to publish hard copy maps and distribute them to local authorities and the public before each Hajj season. This method requires extensive time and resources.

This paper demonstrates how the web-based Geographic Information System (GIS) can be utilized to provide broader and easier distribution of the traffic plan. Such a system will facilitate understanding and ease the following of the traffic plan. Awareness of the plan will help implementation and reduce traffic congestion due to unawareness. In addition, urban planners and urban designers can easily access the annual Hajj traffic plans to support research and investigation.