

The Design and Implementation of a Mobile Location-Aware Digital Signage System

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Abstract

The worldwide Digital Signage market has been getting increasingly popular in recent years. Nevertheless, for service providers, the Digital Signage business is still not easy to manage and time-consuming to operate. In this paper, based on the GPS and wireless infrastructure, we present a mobile location-aware digital signage system (LDSS). Through the centralized system architecture, the applications for the Digital Signage can be expanded to various advertising vehicles including buses and other mobile advertising vehicles. Also, we present an advertisement recommendation algorithm, by which the advertisement can be broadcasted in the right markets more effectively. Evidenced by simulated experiments and analysis, compared with traditional region trigger advertising, sequential advertising and random advertising, our advertisement recommendation algorithm can effectively reach to the key target audiences in planned regions, while show excellent ability to differentiate markets in unplanned regions reaching to the target consumer groups as well.

Keyword : Digital Signage, Mobile Advertising, Locationaware, Fuzzy Theory, Memory Based Reasoning