

A New Online Database System Based on Virtually Digital Mapping

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Abstract

The electronic map and the electronic commerce are two direct products from the new information technology. So our idea is to facilitate these two products interact with each other, and connect together. In this paper, we present a framework for an online shopping system, which combines digital landscape 3D model and digital 360 degree panorama picture together. Then, the paper creates the online shopping system database structure based on based on virtually digital mapping. Finally, we certify the results using multimedia electronic map, and also show how it makes our life more convenient and technical. The proposed system of online shopping is able to support many people. In the online shopping system, the customer can easily register as a user, to view the merchandise, and merchandise can be satisfied with the goods add to cart; and administrators can perform maintenance and product information management, including modifications, new product information to the existing commodity information, commodity information to date delete.

Keywords: *electronic map; virtual digital mapping; landscape 3D model*

1. Introduction

Map is an original tool to help us find the destination or the position of any places. As the world is technologically interconnected in the 21st century, virtual maps based on new media and new devices are becoming popular. Digital map data usually are extended to multimedia products using cartography. This map is called in several common names, such as by Spillinger and Parush [1] as electronic map, and by Zhongliang et al. in [2] as interactive map in the similar meaning. In this paper, the term of electronic map (e-map) will be used.

Map uses as the third language of information communication for human for a long time. It can perform in many duties, from spatial information transmission to spatial information storage medium. Recently, people are familiar with browsing maps online or using them in a navigation device in many portable devices such as smartphone. However, in fact electronic mapping began on a commercial basis since 1990s. Map vendors were started to produce vector map for the automotive industry. Whereas, the electronic map has to extent its application, to interact with the e-commerce, such as the supermarkets store inside environment display and online shopping interactive application, as explained in [3] by Shmueli and Jank. The electronic map should not only display the building's surface. Instead, the electronic map should be conformed to the current social science and technology development.

Due to the popularity of shopping online system in recent years, many systems about online database and digital mapping have been recently integrated and presented. For example, Li et al. [4] developed a data fusion algorithm of geographic information system (GIS) based on global positioning system (GPS). A similar work applying the GIS into the e-commerce was also proposed in [5]. Recently, Woodson and Wang [6] designed a database system for a clothing store using PHP code and MySQL database. VanderMeer et al. [7] developed theoretically a model for database load computation. They used this theoretical model for designing an approach for database request distribution. [8] built a vision-based method to feature point correspondence of image sequence based