

An Integrated Multiplatform Travel Service System

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Abstract. Recently an integrated multiplatform system aiming at offering travel service over several communication channels is under development. A set of cooperating systems in completely different platforms will work together to provide integrated services to the clients anywhere and anytime. The structure, communication environment, some special issues and implementation of the system are discussed in the paper.

Keywords: cooperative applications, integrated services.

1 Introduction

As an important industry, tourism has been growing rapidly. The demand of the clients becomes more and more specific while the competition of this sector is getting higher. A better service providing all the possible resources to the clients anytime and anywhere is becoming an urgent need for the clients and the service providers.

On the other hand, travel resources are complicated to be integrated and provided to the clients due to a series of challenges. The challenges from a global view include the cross-industry needs and relationships, lack of general-purpose XML infrastructure, the key players acting individually, the need of legacy standards organizations, conflicts between the service speed and the range of resources, and the distance among service suppliers etc. From a technical point of view, the services so far have been limited to certain traditional channels. The Open Travel Alliance white paper [6] describes the former situation where each travel supply had only a single distribution channel, the travel agency and its Global Distribution System. To provide a solution to all these challenges, large scale cooperative effort becomes necessary. The Topshop project is consequence of the efforts of some travel companies and Spanish Government agencies, to join all the travel information services in a cooperating multiplatform system.

The objective of the project is to develop a complete integrated multiplatform system to offer the travel resources and personal travel packages to the clients in a comfortable, simple and efficient way. The basic solution lies on both sides of the integration of all the available travel resources and facilitating the service to the clients.

From the resource supply side, the project combines all the existing travel resources of the different platforms into an integral system that can manage all the user transactions in real time. The XML standard of the *OpenTravel* Alliance is used

to obtain multi-industrial shared information. The project integrates all the different systems into a single platform to make the cooperation possible for different environments and companies. The resource providers can therefore achieve their business goal to offer all the available resources anytime and anywhere the clients need.

On the service side to the clients, two major efforts have been made. The first is to extend the service to much more channels. The system covers the most basic and typical human communication platforms currently available: the mobile phone, personal computer via TCP-IP, interactive TV, and www support. The second is to improve the way to serve the final clients using the dynamic packaging scheme. Instead of serving the client item by item, the system will help the clients to make their own travel package according to their preferences and economical constraints. The clients can reserve and pay flights, cruisers, cars, hotels, etc. in one package.

The following will describe the designed solutions on both the resource supply side and the client service side. Some implementation issues on mobile phone and DTT platforms will also be discussed.

2 The System Structure

The system structure can be seen in and Fig. 1 and Fig. 2. As we can see, it is a centralized server based system. The whole system is built on top of a TCP/IP network as indicated in Fig. 3.

The centralized server (Fig. 2) receives travel resources from all related service providers and integrates it into a uniform, easy to retrieve format. Such resources

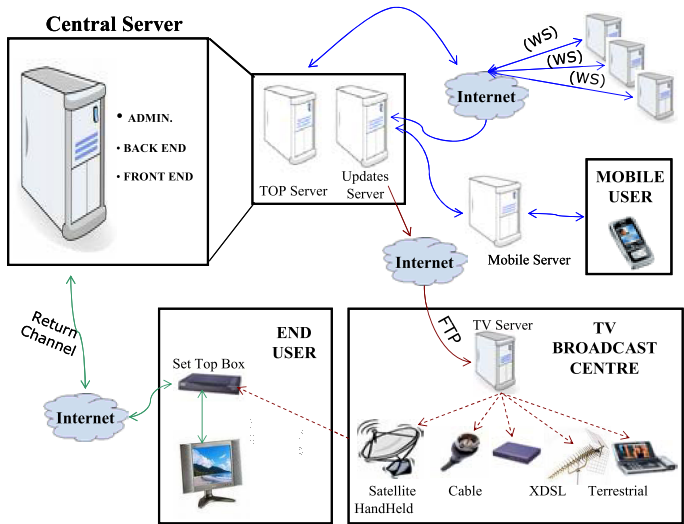


Fig. 1. The system structure