Customized Solutions

Wireless Interface

For

Travel Agencies

White Paper

Highlights

- **Online Mobile Internet Channel.**
- **Reservation/Cancellation, Status Tracking through mobile phone and many more features like Pay & Checkout, Location and Maps, World Timings, Currency Conversions etc. through your WAP Phone.**
- **Push Technology.**
- **Instant Messaging with SMS (Short Messaging Service).**
- **Status Tracking through SMS.**
- **Easy integration with the existing functionality.**

OBJECTIVE

CybermateInfotek aims to make the Travel industry accessible globally on a WAP enabled cell phone. The Travel industry would then be able to cater to the needs and requirements of its clients worldwide. The clients can get instant information about travel schedules, scheduled time of arrival and departures, availability of hotel rooms, city map, locate nearest ATM etc. The Travel Industry would surely be benefited from being WAP enabled. Online Travel industry caters to a wide segment of clients, but the WAP enabled industry would also cater to the needs of the mobile client. This reduces the time of the busy client, who is on a constant move. Details about arrivals and departures of trains/flights can now be obtained on the WAP phone. Status about waitlisted tickets can also be verified and confirmed. This would register a substantial growth in E-commerce and also offer more convenience to the customer.

SUMMARY

CybermateInfotek offers customized solutions to the Travel Industry. CybermateInfotek proposes to use Wireless Technologies. The Travel agent would then be able to offer a number of services to his clients globally. The customer from any part of the world, who has a WAP enabled cell phone, can make use of these wireless services. The client can have a summary of his itinerary on his WAP phone. It would facilitate booking tickets for train/flight, status of waitlisted tickets, online hotel reservations, tracking the status of his hotel reservation, Currency conversion, Travel information etc. The Travel agent also makes airline reservations and travel arrangements locally. The customer can also make use of the ATM locator, to locate the nearest ATM center. A customer who has an account with a bank, which is WAP enabled, can pay the hotel bill by transferring his funds from his bank account to the hotel account, using his WAP enabled cell phone. Numerous other features can be added to make the wireless Travel Industry more user friendly.

ABOUT THE PRODUCT

The online Travel Industry can be WAP enabled using either the Microsoft Model or the Open Model.

- The Microsoft model will be developed using the N-tier architecture. The business objects will be implemented using the Microsoft COM Technologies. The Dynamic content is generated with the help of ASP (Active Server Pages).

- The JAVA Model is similar to the Microsoft model, except that the business objects here are implemented using JAVA Beans and the dynamic content is generated using JSP (Java Server Pages).

There are two interfaces, one for the User and the other for the Administrator

FEATURES FOR THE ADMINISTRATOR INTERFACE

Administrator interface allows easy uploading of information into the website through XML, text files etc., also seamlessly connects with proprietary backend systems used by travel industry, because it follows the data structures that can be easily configured.

FEATURES FOR THE USER INTERFACE

1) Itinerary
2) Cancellations
3) Reservations
4) Status Tracking
5) Pay & Check out.
6) Important Contact numbers
7) Currency Conversions
8) ATM Locators
9) Special Announcements
10) Events in Town
11) SMS Alerts

Itinerary

This gives information about the total travel schedule, tickets booked, hotels reserved etc.

Reservations

The user can view the reservation details and procedure. User can reserve the room by viewing details like room/suite type, tariff, facilities and availability etc. He has to give his details like Name, Corporate ID, Credit card/Bank a/c No and Desired Date of reservation. He can Retrieve/Change the reservation.

Cancellations

The client can cancel or reschedule his/her reservations using his WAP enabled cell phone. This again reduces the burden for the client, as he does not have to fill in lengthy forms and applications.

Status Tracking

The User can view the status of his reservation, whether it is confirmed or waitlisted. This reduces his chances of being refused a reservation.

Pay & Check out

The user can check out from the hotel, while he is (mobile) i.e. out of the hotel premises. He can pay the hotel by transferring his funds from his account to the hotel's account using his WAP enabled cell phone.

Important Contact Numbers

Important telephone numbers like the hotel telephone number, airport/railway station numbers, numbers of emergency services like Doctor, Fire, Police etc are all listed.

Currency Conversions

The user will be able to easily compute currency exchange rate. The currency exchange calculator has more than 200 country/currency combinations.

ATM Locator

This allows the client to locate the ATM nearest to him.

Special Announcements

Important announcements about the client's travel, weather forecasts, important headlines etc can be viewed in this section.

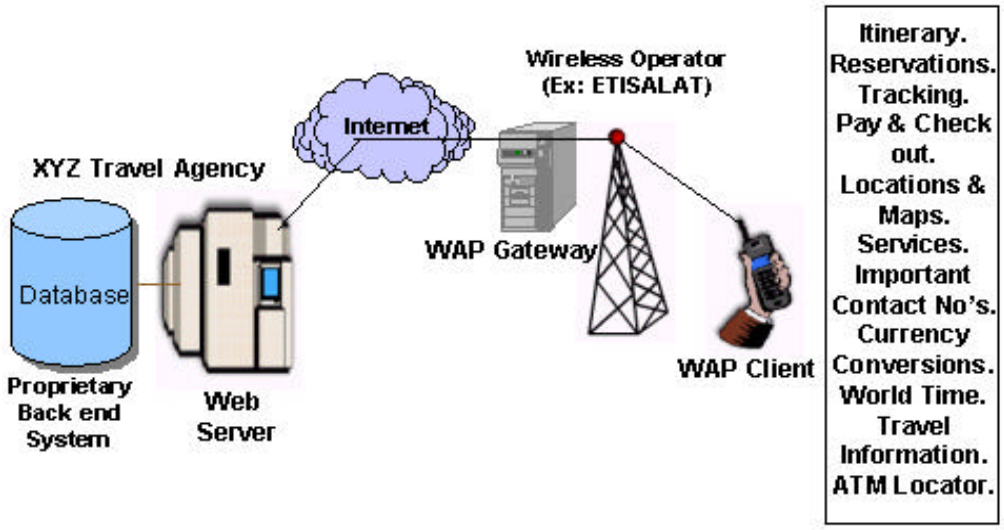
Events in Town

The client is informed about the special events being held in the town. This allows the client to know about the various events. This also is an important source of entertainment for the client in other cities.

SMS Alerts

The client can receive SMS (Short Message Service) alerts as and when he receives a message from others. SMS does not use the talk-time thereby reducing mobile phone bills.

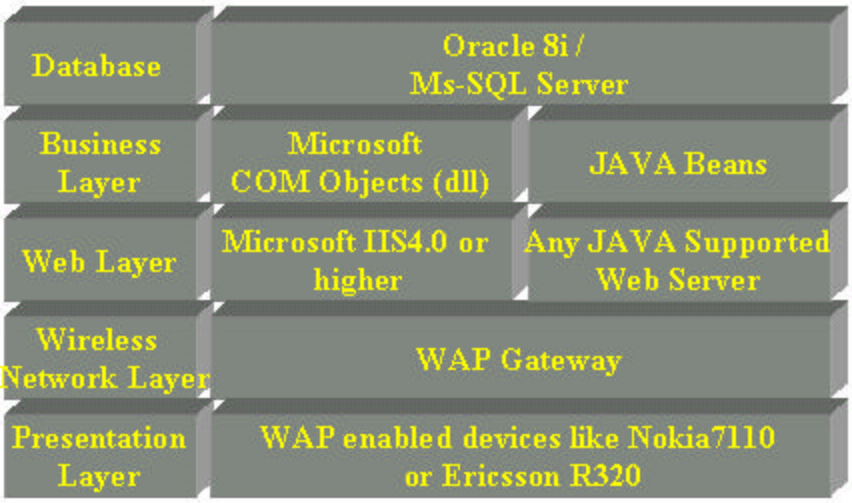
ARCHITECTURE FOR WAP ENABLING THE TRAVEL AGENCY



ARCHITECTURE FOR WAP ENABLING THE TRAVEL AGENCY

The above figure shows the WAP architecture for WAP enabling of Travel Agency. The mobile client with his WAP enabled cellular phone communicates to the wireless operator's WAP Gateway, which in turn communicates to the Web Server. The Web Server reads the data from the database and serves the dynamic WML content to the mobile client through the WAP Gateway. The WAP Gateway acts like a server between the Mobile Client and the Web Server for encoding and decoding of the content. The Mobile Client can access various features like Reservations, Status Tracking, Pay & Checkout, Location & Maps, Services offered by Hotel's, Currency Conversion, and World Time etc.

TECHNICAL ARCHITECTURE



TECHNICAL ARCHITECTURE FOR WAP ENABLING THE TRAVEL AGENCY

The Technical Architecture for WAP enabling of Travel Agency consists of various tiers.

1. **PRESENTATION LAYER**
   The client layer will have a WAP enabled device or a WAP enabled cellular phone like Nokia 7110 or Ericsson R320. The client can access Travel Agency's WAP Site through the Wireless Network Layer, which contains the WAP Gateway.

2. **WIRELESS NETWORK LAYER**
   The wireless network layer contains the WAP Gateway, where the information between the WAP Client and web server is encoded and decoded. Since WAP phones work on a virtual machine, the information served by the web server needs to be encoded and decoded. The WAP Gateway acts like a Server between the web server and the WAP Client.

3. **WEB LAYER**
   The web layer for the Microsoft Model (ASP Model) consists of a web server like Microsoft IIS 4.0 or a higher one. The ASP (Active Server Pages) provides the dynamic WML content to the client. Whereas the Web layer for Open Model (JAVA Model) contains of any Java Servlet/JSP supported web server like Apache/Microsoft IIS with Resin as Servlet Engine. Here JSP (Java Server Pages)/Java Servlet provides the dynamic WML content to the client.

4. **BUSINESS LAYER**
   The business layer for the Microsoft Model contains the business objects which are implemented using the Microsoft COM technologies. Whereas the business objects in the JAVA model are implemented using JAVA Beans technologies. These business objects communicate to the database directly or through the XML interface.

5. **THE DATABASE**
   This database consists of the RDBMS like the Microsoft SQL Server/Oracle8i to store and retrieve the data.

Operating Environment (Microsoft Model)

Travel Agency Location	Client Location
Hardware Requirements Pentium III Server with a minimum of 256 MB RAM, 18 GB Fast Access Hard Disk with Operating System like Windows NT or Windows 2000, Microsoft IIS 4.0 or higher. A WAP Gateway installed at the Wireless Operator or at the Client location. **Development Environment** ASP, Microsoft Visual Basic, COM, WML.	**Requirements** A WAP enabled Cellular Phone or a WAP enabled devices.

OPERATING ENVIRONMENT (JAVA MODEL)

Travel Agency Location	Client Location
Hardware Requirements Pentium III Server with 256 MB RAM, 18 GB Fast Access Hard Disk with Operating system like SUN or LINUX. Any Web Server that supports JSP or JAVA Servlets like Microsoft IIS, Apache, etc. A WAP Gateway installed at Wireless Operator or at the Client location. **Development Environment** Jdk1.2.1, JSP1.1, Servlets2.0.	**Requirements** A WAP enabled Cellular Phone or WAP enabled devices.