Abstract—A mobile browser is simply any program that lets you access and read content on a network from a mobile device, usually the internet or some other mobile network service, is becoming more common and more easy. In this paper we are going to suggest a system to provide various services for citizens and tourists in Iraq, to provide all information that related to Iraq airlines, specially timetable (departure and arrival), all these process will be digitally to avoid the manual system (i.e. booking via travel agents). (WML) Wireless Markup Language and (ASP) Active Server Pages language will be use in this paper.

Keywords- Mobile Browser, Iraqi Airline, WML, WAP, HTML, IIS, Deck, XML.

I. INTRODUCTION AND BACKGROUND

Mobile telephones have become today part of our life style. One exciting thing about mobile devices is their ability to connect to the internet and execute web applications. Mobile applications can now be developed to deliver any types of data, to any user, any place in the world. Different mobile devices support different programming languages. Some support wireless application protocol (WAP) and (WML). Some support HTML or a limited version of HTML. Some support both or a different language. To support all types of mobile devices, developers must create one different application for each language. The mobile devices are many types such as Mobile Phones, Smartphone (Mobile phone and PDA), Low-end Smartphone, High-end Smartphone, Pagers, and Personal Digital Assistant (PDAs) [1].

Wireless Application Protocol having various components same as current-based protocol, such as Hyper Text Transfer Protocol (HTTP) and its similar to HTML [2, 3].

The WAP is a set of protocols that has inherited their characteristics and functionalities from the standards of the Internet as well as from standards developed for wireless services by some of companies specialized in telecommunications [4].

The WAP is proposed as the gateway to a new world of mobile data services. It provides a universal standard that enables users to access web-based interactive information services and applications from their mobile telephones. Common services provided by most WAP service providers include electronic mail, personal information managers (PIM) that provide subscribers with integrated calendar, address book, to-do list tools, and other functions [5].

WML has been designed having resource-constrained handheld devices in mind (e.g. small displays and one-hand navigation without a keyboard or mouse) [3].

The purpose of WAP is to provided operators, network infrastructure, terminal manufacturers, and content providers a common environment for the development of value-added services of mobile phone or other wireless devices [6].

It was developed by the WAP Forum as a standardized specification for technologies that operate over wireless networks. It is seen as an attempt to define the standard for how content from the Internet is filtered for wireless communications, thus bridging the gap between the mobile world and the Internet. The basic aim of WAP is to provide users with a web-like experience but over a handheld device rather than a PC, whilst accessing the content is readily available on the Internet. Most of the successful interactive services available on the Internet can be envisaged in a WAP environment too [7].

To make the Internet enable should be WAP-enabled and the website should be in Wireless Markup Language (WML) format instead of the prevalent Hyper Text Markup Language (HTML) format (WAP Forum, 2008) [6].

WML has a smaller set of markup tags than HTML. Unlike the flat structure of HTML documents, WML documents are divided into separate units of user interaction (termed “cards”) that are easily navigable with a micro-browser. Fig.1 shows a WML page with dynamic content as it appears when loaded on the Openwave Phone Simulator [8].

Fig.1 A WML page with dynamic content as displayed through the Openwave Phone Simulator [8]
WML pages are often called "decks." A deck contains a set of cards. Fig. 2. Cards effectively implement multiple WML screens within a single page. WAP browsers display only one card at a time, but they load a page file (a deck) that contains multiple cards in one transaction. A card element can contain text, markup, links, input-fields, tasks, and images. Cards can be related to each other with links. When a WML deck is accessed from a mobile phone, all the cards in the deck are downloaded from the WAP server. Navigation between the cards is done in the phone computer. That is why extra access trips to the server are not needed [9].

Compared to HTML documents, displaying WML documents requires less processing power and memory. Consequently, a WAP device can work with a less powerful CPU and the use of less power means that the battery can operate longer without recharging (Economic). WML provides support for limited graphics with a limited gray scale.

III. PROBLEM STATEMENT

Many citizens and foreigners are facing difficulties when they are willing to know the timetable for travelling by airplane, therefore they have to go to the travel agents to know the arrival timetables if they are willing to receive someone coming to Iraq. Furthermore, the departure timetable if they are intending to travel or getting them via calling them. The other problem while the office hours were over or during public holidays, they are (still) facing difficulties to communicate with locals since they don’t know their native language. Due to time wasting and for economic purposes, the current system has been proposed.

IV. THE SUGGESTED APPROACH AND METHODOLOGY

The system is developed by using open wave emulator to execute it, Internet Information Services (IIS) as a web server and Microsoft Access as database management. The system also used Wireless Markup Language (WML) integrated with Active Server Pages (ASP) as a scripting language. This work involves four main phases. The first phase is doing a literature review; which all software and hardware specifications needed are met. The second phase is development and programming the codes for client and administrator side. The third phase is simulation and testing into real cell phone and the last phase is writing off the report, in the meantime information and data collecting regarding the Iraq Airlines and travel agencies to involve them as a data base under this user. This program will develop on the mobile screen the company logo, welcoming sign and then move to the next screen to choose the flight (whether departure or arrival) after that the date and the country will be choose and from the processing operation.

V. INTERNET INFORMATION SERVICES (IIS)

Microsoft® Internet Information Services 5.1 (IIS) is a Web server that works with Windows XP Professional platform to deliver Web-based applications. IIS is a free, secure platform for building database-driven web page based on Active Server Pages (ASP) technologies [4].
The simulator includes the same browser, messaging, and other applications code that is embedded in real mobile phones. The phone simulator is installed with built-in WAP gateway and use Internet connection to browse WAP page in web server.

VI. MOBILE BROWSER

When the website of our proposed software is download the Well Come Airline logo will be appear in your mobile screen. This logo has the airplane image of Iraqi airlines. The site of image is about 15 KB because the mobile memory is limited, especially in 2G and 2.5G. The user may be used any site of image but he needed to convert this image to suitable size. The main screen shown in fig. 3 has two keys, first registration (login) and the second key is help process to over how the user will registered in this website of Iraqi Airlines company.

In this proposal the software has been used a timer code as in fig. 4. This code is automatically will show message within 150 sec. to advise the user to call the center of the company to make the registration for the user or to return to the main screen.

VII. PROPOSED MOBILE BROWSER OF IRAQI AIRLINES REGISTRATION

After the user allowed to register, he/she will be fill the user ID and password by using the screen as shown in fig.5.

The ID and password of user will be getting it from the Microsoft access database which is contain the user name and password. This database linked with ASP.NET to get it this step is very important because it is relating to ownership rights and publishing, so if the registration is successful the user can be go to another screen or if entered invalid user name he/she will see massage “you must register by calling the Iraqi Airlines” fig. 6 shows the screen password and database.

The welcome logo Iraqi airline appears in mobile screen fig.7 when the user name and the password is correct.
The next screen is for departure or arrival then we can select one of the two keys from mobile as shown in fig. 8.

![Welcome screen](image1)
![Departure, arrival browser](image2)

When the user choosing departure or arrival situation the screen of mobile browser will appear many choices that are the names of countries and key number after selected the country he must press the key number from keypad which indicates the name of the country as shown in fig. 9, so the other screen will be showing all information in table of time, date for departure the plane and the name of airlines company as shown in fig. 10.

![Select the country from the key](image3)
![Time, date an name of airplanes schedule](image4)

VIII. CONCLUSIONS

This system provides the following conclusions:

1. Develop good personal services for tourists and businessmen.
2. Save money and time consuming.
3. Navigate flights timetable digitally.
4. Our proposed mobile browser can be marketed to all Iraqi airports.

REFERENCES