

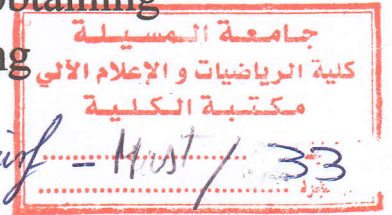


Ministry of Higher Education and
Scientific research



University of M'Sila
Faculty of Mathematics and Computer Sciences
Department of Computer Science

Dissertation Graduation Diploma For obtaining
Master in Academic Computing



Domain : Mathematics and Computer Sciences.

Branch : Computer Sciences.

Speciality : Avanced Information Systems.

TOPIC

**GIS application under iPhone
"A guide for Hajj and Umrah"**

Prepared by :
LADGHAM CHICOUCHE Manel

Supervised by :
Dr. BRAHIMI Mahmoud

Promotion : 2011 /2012

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EPROM : erasable programmable read only memory, 1.

EEPROM : Electrically Erasible Programmable Read-Only Memory,1.

EMS : Short Message Service,1.

GSM : Global System for Mobile Communications,1.

Wi-Fi : The Standard for Wireless Fidelity, 1.

GPRS : General packet radio service, 1.

GPS : Global Positioning System, 2.

CPU : Central Processing Unit, 2.

LAN : Local Area Network, 3.

PIM : Personal Information Management, 4.

Mobile OS : Mobile Operating System, 5.

IOS : iPhone Operating System, 6.

OHA : Open Handset Alliance, 6.

HTC : High Tech Computer Corporation, 6.

HTML : Hyper Text Markup Language, 6.

QML : Quick Modeling Language, 6.

AOSP : The Android Open Source Project, 8.

RIM : Research In Motion, 9.

RTOS : real-time operating systems, 12.

A-GPS : Assisted-Global Positioning System, 13.

SDK : Software Development Kit, 18.

API : application programming interface, 19.

SIM : Subscriber Identity Module, 22.

EPF : Electronic Frontier Foundation, 22.

IDE : Integrated Development Environment, 26.

NI : NetUI Interface Builder, 26.

LLVM : low level virtual Machine, 28.

ANSI : American National Standards Institute, 28.

ITT : International Telephons & Telegraph, 28.

GENERAL INTRODUCTION

Since the ancient ages, man is born with a curiosity to discover the world and all that we turn. Therefore, it causes the means and techniques to manipulate and use to gratify these needs. Man shouts methods to enter and manipulate data by geographic mapping that allows to make maps for specific aim to guide him to a clear way. mapping (cartographie in french) represents a very important component of research in geography, the intersection of this category with the computer sciences form the Geographic Information Systems

A geographic information system, as defined in the Environmental Systems Research Institute's (ESRI's) Dictionary of GIS Terminology, is a collection of computer hardware, software, and geographic data for capturing, storing, updating, manipulating, analyzing, and displaying all forms of geographically referenced information. This is a very general description for such a complex and wide ranging set of tools. GIS is, in essence, a central repository of and analytical tool for geographic data collected from various sources. The developer can overlay the information from these various sources by means of themes and layers, perform comprehensive analysis of the data, and portray it graphically for the user.

So in this area of GISs, we will propose a guide for Hajj and Umrah under iPhone.

Each year, over 2.5 million Muslims descend in Mecca, Saudi Arabia for the annual Muslim pilgrimage, or Hajj. The largest gathering of humanity in any one time or place is the culminating spiritual experience for a Muslim, as well as a logistical challenge for the government of Saudi Arabia.

The Hajj has been performed by Muslims every year for the past 14 centuries. In earlier times, the Hajj was literally the journey of a lifetime, a dream for which a person spent an entire lifetime saving up the funds. The trip itself was an arduous and difficult one, often taking months or even years on horseback or on foot, through mountain terrain and desert.

According to the Saudi Press Agency, as recently as 1950 the number of pilgrims during Hajj was less than 100,000. That number doubled by 1955, and in 1972 it had reached 645,000.

In 1983, the number of pilgrims coming from abroad exceeded one million for the first time. Due to the rapidly increasing numbers, in 1988 the Organization of Islamic Conference (OIC) passed a resolution to specify a pilgrims' quota for each country according to its population.

In recent years, Saudi Arabia has hosted over 1 million pilgrims from abroad as well as another million from within the Kingdom. The vast majority arrive by air (through the gateway city of Jeddah), with a small percentage arriving by land or sea.

This development and congestion by Muslims all over the world and their eagerness to perform the Hajj and Umrah from inside and outside the Kingdom has led us to think of a system easier for them to find the location of the rituals and how to perform the rituals step by step. Also help in the formation of a comprehensive idea of the cities, and the places available and easier access for the goal to be through the use of information provided by the guide, and the statement of the road leading to the place of his choice. And also hotels and hospitals ... Nearby. consequently the development of a process-based GIS application will be of great help to the pilgrims.

We have chosen the iPhone because it is a handheld device, so the user can take it wherever he went benefiting him, whenever he wanted and at any time. It also supports GPS technology. In addition to the Apple developers wanted too in the yard work so we wanted to be this dissertation a starting point for a future work.

our work is structured into six distinct parts:

- Part I: Embedded systems and mobile devices.
- Part II: iOS under Iphone.
- Part III: Geographic Information Systems.
- Part IV: Hajj and Umrah.
- Part V: conceptual study.
- Part VI: Realization.

CHAPTER 1

Embedded Systems And Mobile Devices

GENERAL CONCLUSION AND FUTURE WORK

The present work is within the scope of development tools for generating cartographic maps useful both in the field of training than in practice, to make their operations more efficient and cheaper.

The proposed solutions are in the form of a GIS. It is composed of a geographic database, of analysis modules and a set of user interfaces, dynamic and interactive. This assembly forms a powerful tool to enlighten, guide and assist the user during his journey in the Hajj or Umrah.

Geographic Information System (GIS) is used by multi-disciplines as tools for spatial data handling in a geographic environment. Basic elements of GIS consist of hardware, software, data and liveware. GIS is considered one of the important tool for decision making in problem solving environment dealing with geo-information.

This new paradigm of GIS moving to an open platform, where it is an equal component with other third party software, brings new avenues to common users, and application developers. The GIS products become more affordable, when no more confined to the exclusive environment of professional GIS software, which is usually quite costly, and requires training and skills. This application development is but an example of the infinite technical possibilities of GIS applications, brought about by this breakthrough.

Developing iPhone Applications have many Benefits At all levels, especially for the Business level. But there's been a sensation about Apple's iPhone recently, and much speculation as for to buy iPhone or not, its advantages and disadvantages, usefulness of developing iPhone applications and so on. Apple itself has recently begun an advertising campaign and a TV commercial featuring a dozen free and paid business apps with the tagline "Helping you run your small business one app at a time."

Why is it beneficial to have your own iPhone application?

✓ iPhone applications give employees the opportunity to access information easily from anywhere where they have access to the internet. Every week even more businesses are realizing the benefits of mobile applications and web-based access. Besides increasing overall employee productivity, mobile applications boost efficiency and internal revenues by unifying communications with entire business structure.

There are two ways of using iPhone applications: they can be your business, or they can be made to help your business.

- ✓ The iPhone market is still in the early stages and growing quickly, which makes it even more attractive for business owners. That is the reason why the popularity of iPhone applications within corporations is growing. Apple is trying to do its best to support business apps development, and the next version of iPhone software is announced to be released in June. It'll allow the developers to sell additional services within applications, and buyers – use these new features to create a better and more distinctive application.

Being an innovative first-generation device, iPhone captured hearts of a vast majority of people. Apple has reported that over five hundred million applications were downloaded and about a billion dollars was gained only in apps this year. Apple's counterparts, Google (Android), RIM (Blackberry), Microsoft (Windows Mobile), and Qualcomm (Palm) have announced launching app stores as well. Running application business is at the height of its fame.

- ✓ An iPhone application is a product that can be used to promote your business or it can be sold as a consumer product. A mobile application is a good way both to produce and invest at the present time.

For achieving more useful, helpful and beneficial services in our application, We propose as a future work to do the maps of other important areas such as inside the Masjid al-Haram to see his detailed map and doors and entrances and goings to facilitate the performance of the rituals more and more.

The search for a specific place, such as Mount Hira Mount Nour views needs a guide with the pilgrim to reach those sites, he needs often come a long way from tiredness and loss so he needs a guide with him to be able to reach them.

Also we can use a program that does not require an Internet connection when you apply the application on the iPhone such as Google Maps which is ArcGIS from Esri .

As we look forward to work an electronic devices for tourist Informations placed in airports, tourist sites and even in ways to define the region which they are located.

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ملخص

نظام المعلومات الجغرافية هو أساسا أداة للمساعدة في تصور المعلومات بطريقة مكانية (خرائط). هذه الاطروحة تظهر كيف يمكن للحجاج استخدام نظم المعلومات الجغرافية وقد أعدت لتسهيل الاستكشاف في الأراضي المقدسة كما لو كان معهم دليل ومساعدتهم على القيام بشعائهم بسهولة ويسر. ولأن الحجاج ينتقلون من مكان إلى آخر، فكرنا في تطوير تطبيق نظام معلومات جغرافية متنقل على هاتف اي فون باستخدام نظام التشغيل ماك او اس , الاكس كود و الاوبجكتيف سي كلغة برمجة

كلمات البحث: نظام المعلومات الجغرافية، الخرائط، الحجاج، الأراضي المقدسة، دليل، الشعائر، اي فون

ABSTRACT :

Geographic Information System is essentially a tool to help visualize informations in a spatial way (Maps).

This dissertation illustrates how pilgrims can use GIS and it has been prepared to facilitate to them Touring on their own in the holy lands as if they have a guide with them and to help them easily and conveniently do their rituals.

And because the pilgrims move from one place to another and are not fixed, so we thought in the development of a mobile GIS application under iPhone using Mac OS X, Xcode and objective C like a programming language.

Keywords: GIS, Maps, pilgrims, Holy lands, guide, rituals, iPhone.

RESUME :

Un Système d'Information Géographique est essentiellement un outil pour aider à visualiser les information d'une manière spatiale (Cartes). Ce mémoire montre comment les pèlerins peuvent utiliser les SIG et il a été préparé pour faciliter l'exploration dans les terres saintes comme si elles disposent d'un guide avec eux et de les aider à facilement et commodément faire leurs rituels. Et parce que les pèlerins se déplacent d'un endroit à l'autre et ne sont pas fixés, nous avons donc pensé dans le développement d'une application SIG mobile sous l' iPhone utilisant Mac OS X, Xcode et objective C comme un langage de programmation.

Mots-clés : SIG, cartes, pèlerins, terres saintes, guide, rituels, iPhone.
