

Chapter 6.1

Reality Mining, Location Based Services and E-Business Opportunities: The Case of City Analytics

José Antonio Ariza Montes
University of Córdoba, Spain

Alfonso Carlos Morales Gutiérrez
University of Córdoba, Spain

Emilio Morales Fernández
University of Córdoba, Spain

Alfredo Romeo
City 2020 Ltd., Spain

ABSTRACT

The use of internet along with other technologies that enable wireless connectivity and the expansion and dissemination of the real-time positioning (GPS) in all countries and levels of the population is a great opportunity for entrepreneurship in the field of information technology. This paper shows how the effective channeling of the available information would place decision making at different levels and, regarding different concerns of today's society, connect the online world of the Internet with the physical world. This paper has three parts. The first part shows characteristics of some applications that emerge from individual needs –geosocial networking- and those that arise to improve the functioning of society and of the public interest– like collaborative mapping and augmented reality. In the second part an example of e-enterprise–City 2020 Ltd–is described as well as its use of these sources of opportunities. Finally, the third part analyzes the main socio-ethical problems and some opportunities of location based services.

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1. INTRODUCTION

In recent decades, each technology innovation has led to new entrepreneurs, often young people with no business experience whatsoever, who have taken advantage of these opportunities, offered with a click of the mouse. Some of these entrepreneurs, young and billionaires, appear in the Forbes ranking, hobnobbing with the classic Bill Gates or Steve Jobs: Mark Zuckerberg (Facebook co-founder), Yoshikazu Tanaka (GREE), Sergey Brin and Larry Page (Google), Robin Li (Baidu, the largest Chinese search engine, with over 70% market share), Jerry Yang (Yahoo), Pierre Omidyar (eBay, founder and chairman), Jeffrey Bezos (Amazon) or Shi Yuzhu (Giant Interactive, a company focused on massively multiplayer online games).

Social informatics research focuses on the relationships between information and communication technologies (ICTs) and the larger social context they exist within (Kling & Rosenbaum, 1998). The social implications of technologies have been explored under several different theoretical frameworks, including technological determinism, social shaping of technology, critical information theory and social informatics. Just, the perspective adopted in this paper focuses on the business opportunities linked to the development of a technology such as Geolocation and Location Based Services (LBS), one of those technologies that have opened a field of possibilities unknown a few years ago.

2. GEOLOCATION: A GROWING OPPORTUNITY

The business environment of the 21st century is accelerating more and more. The consolidation of the internet as the most important shaping force in the business world has generated new business opportunities, changing traditional patterns and the speed at which decisions must be taken.

Our purpose is to show the opportunities for entrepreneurship in the field of information technology, focusing on geolocation systems. These opportunities require: a) the use of internet along with other technologies that enable wireless connectivity (such as wifi, Bluetooth...), b) a real-time positioning (GPS), and c) the expansion and dissemination of these technologies (mainly through mobile phones) in all countries and all levels of the population.

The antecedents to the use of geolocation systems are located in the first websites that adopted geocoding or geotagging features (the process of adding geographical identification metadata to various media such as photographs, video, websites, or RSS feeds) like Google Maps or photo-sharing communities such as Flickr or Panoramio. In this sense, YouTube staked in July 2007 for this technology, upgrading the service to facilitate geotagging capability. Since then, Google Earth users can choose a specific location on the planet and watch the videos related. But it is actually since 2008 when expanded geolocation technologies –including cell tower localization– have become available, and devices such as digital cameras and camera phones have integrated features such as Wi-Fi connectivity and GPS navigation into more sophisticated capabilities such as auto-geotagging.

Although the location capabilities were incorporated into mobile phones in 2000, the great turning point was determined by the appearance in the market of iPhone, which provided the users with a technology with many friendly location functions (mapping software, Flixster for showing schedules and reviews of movies, etc.). Since the inclusion of these geolocation features in the iPhone OS 1.1.3, which complemented the cell tower location technology with positioning systems Wi-Fi and Skyhook Wireless-Assisted GPS (iPhone 3G), there was exponential proliferation of location-based applications.

The main objective of this paper is to show how the effective channeling of the available

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