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ORIGINAL ARTICLE

The influence of social networks in visiting, planning and living in cities. *Alexplore*: A pilot project in Alexandria

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Abstract The presented work aims at identifying the potentials of mobile social networking and geo-coding to promote cities, as well as to test their usefulness as decision support systems for planners. *Alexplore* is an application that was developed by planners rather than IT specialists using emerging web 2.0 technologies. Penetration rates of mobile internet access, as well as smartphone usage ensure a solid base for such applications worldwide as well as in Egypt. This paper traces the influence of social networks on tourism and city planning through the past decade and pinpoints its contributions and constraints. It highlights the potentials of social networks for tourists, planners, and citizens. Through the paper, the concept, technology, functionality, and limitations of *Alexplore* are thoroughly explained. In spite of current shortcomings, *Alexplore* provides solid benefits for its different stakeholders. Few concerns occur due to the proper application of ethical rules to social networking as well as due to fear of over dependency on such techniques. It is believed that with the development of the technology, many currently functional issues will be alleviated. Last, *Alexplore* should not be regarded as a replacement for traditional planning methods, but rather a useful augmentation to it.

1. Introduction

By now social networking (SN) has become part in the daily life of Internet users in many different ways. SN is not merely a platform to keep in contact with one's old school friends, but rather has become much more. There exists hundreds of subjects, thousands of networks, and millions of users. The exchange of information lies within the focal point of any social network. The domain of urban planning is no exception. Cities are being planned, lived in, as well as visited. All these functions orbit around the notion of the exchange of information and hence can profit to a great extent from the boom of SN. With the great leaps within the domain of communication and information technology (CIT), the access to information is made very trivial. Most of currently used hand-held mobile phones can provide as much information, as large desktop computers do.

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A great possibility emerges from the extensive use of social networks, which offer huge, daily increasing geo-databases. These data sets describe and analyze thousands of cities all over the world every minute of the day. Hence, it will be a great loss, if planners do not make use of such enormous, free, and up-to-date information to enhance their cities both for locals, as well as for tourists.

Regarding tourists, social networks play an increasing role to share experiences with each other. It became a habit to look in online services like tripadvisor before making a hotel reservation, as well as to look up pictures, videos and 360° – views in GoogleEarth to get an initial idea of the holiday destination. By now, online information about the destination is decisive for the number, type, and cause of the tourists that will visit. Hence, the awareness of this information and the clever optimization of it have to be a permanent element of the destination management.

The goal of the developed application could be inferred from its title "*Alexplore*". *Alexplore* – the name is a blend of Alexandria and the verb "to explore" – is an experiment taking place in the Egyptian port-city of Alexandria and makes use of different potentials arising from social networks in the fields of tourism and city planning. Most applications that use SN either focus on public participation to engage citizens within the planning process [1–6], or on the provision of information to either citizens [7] or city visitors [8–11]. In contrast, *Alexplore* focuses on the interplay between all three stakeholders and the exchange of information among them. On one hand, the application facilitates the exchange of information between residents and tourists visiting the city. On the other hand, it provides the city planners with qualitative information gathered from the visitors and the residents. This leads to a win–win situation for all city stakeholders. *Alexplore* functions as a mobile-based web application, as well as a standard PC-based one.

2. State of research

Background research on using social networking to develop applications for public participation and for tourists' provision and exchange of information has been conducted by several research groups during the past years. Several researches cover applications that make use of real-time and in situ user responses to questions posed by city planners [2,3], where the flow of information is one directional from citizens to the local government and city planners. In other applications, the flow of information is reversed, i.e., from local government to the citizens. WikiCity is an MIT project that aims "to create a common format for interchange of real-time location-based data and distributed platform able to collect, manage, and provide such data in real time" [7]. This agglomeration of data is provided to the public via big screens located in urban areas as a decision support tool for citizens to base their actions in a better informed manner. Another set of applications provide an interactive, networked environment, where citizens and planners can exchange ideas, move things around and get involved in role playing. Such applications make extensive use of *Second Life* to create the virtual workshops where participants can as well enjoy asynchronous communities' interaction [1,4–6].

Very few applications target both city visitors as well as citizens. MyCityWay [12] is a mobile application that creates real-time, location based apps. It gathers information from many other "trusted" content partners, cross-references it, and then provides it to the user according to pre-set preferences, location, and history. It serves residents by providing them with real-time information about the weather, local news, and special offers going on in the city and serves visitors by providing them with attractions and tours, insider tips, special stores, restaurants, events, etc.

However, the majority of applications that provide information about cities are tourists oriented. They integrate location and social networking and enable public participation in the production of data sets [13,14]. The use of social media enables users to share their experiences in different ways, ranging from posting stories, rating places, adding comments, videos, and pictures (tripadvisor.com, virtualtourist.com, mytravelguide.com, myspace.com, lonelyplant.com, to list just a few). The up-to-date nature, relevance of their contents and the level of connectivity with other sites on the Internet make such applications appealing to tourists.

3. Methodology

Through an exhaustive search of touristic-based social networks, it was possible to learn about the different types of data that are stored and exchanged between users in the different gateways. It was also noticed that two major trends are present in this domain, namely: geo-coding and mobile social networking.

In addition, a study on who and how different users can benefit of such applications was carried out. A proposed application should take into consideration the different points of view of its users: tourists, planners and municipalities, in addition to the general public as a whole.

Taking the city of Alexandria as a case study, this research investigates the potentials of using smartphones within the domain of tourism, as well as highlights the importance of smartphone users as information providers, rather than only data consumers. It looks into the different roles social networks and smartphones can play to visit, plan, and live cities in a smart way.

4. Background

4.1. Definitions

As most lexical dictionaries define it, tourists are travelers who visit places away from home for pleasure [15]. The definition focuses on the act of traveling, as well as its intention of being for *pleasure*. Unlike residents in a foreign city, most tourists tend to travel light, want to learn about interesting places to visit, and do not have excess time to waste looking for information. Such characteristics need to be taken into consideration, when designing an application that targets tourists.

Social networks are generally defined as web-based services that allow users to construct public or semi-public profiles, as well as communicate with other users who share their interests. Via social networks, users can provide and share their own, as well as foreign contents, in the form of photos, videos or information, i.e., user generated content (UGC) [16,17]. Social networks describe "a new set of internet tools that enable shared community experiences, both online and in person. A