ABSTRACT

Tourism is one of the largest growing industry worldwide. A tourist will naturally keep on travelling to different countries and sub-continents. Several researchers have addressed and proposed Mobile applications to facilitate Tourist and Tourism in different areas. A Mobile application to assist nightblind tourist is still one of the unaddressed issues by the researchers. This paper proposes a Mobile application model for the Tourist who faces difficulties in vision during dark times, referred to as night blindness. The proposed application model is based on the difference of current time with sunset time. The application module uses mobile technology and difference of time function to proactively alert the night blind tourist to reach its safe place or destination before sunset. This model also provides an alternate path and distance with respect to time and user location. This proposed mobile application is very useful for the apprehensive night blind tourist who feels fear in travelling during the close of day times.

Keywords: M-Health, Mobile Technology, Night Blindness, Tourist

INTRODUCTION

The world now has 6 billion mobile phone users. Latest figures indicate that mobile phone penetration rates stand at almost 45 percent in low-income countries and 76 percent in lower-middle-income countries (Debashis & Mukherjee, 2003).

Consequently, a lot of people in the world, especially the people living in developed countries use mobile technology and its supportive application in performing their daily routine task (Aharon, 2010). Mobile technology has improved people’s lives with its vast range of applications which makes people become much closer to each other through texting, social networking applications, video or voice phone calling and other social activities. The mobile technology and its applications provide an easy way to satisfy the needs and demand of the people. This technology also helps professional and business related person to
continuously remain in contact with their colleagues and officials.

There are several other benefits of Mobile technology as people can get real time weather updates, can be used for purchasing, money transfer, e-banking, access data banks. The improvements in technology also bring changes in the tourism. It can be observed that the most of the tourists hold a map on the street, while a Mobile technology tourist uses GPS and tour guide applications (Abowd, et al., 1997). Generally speaking, people have benefited a lot from with the advanced mobile technology.

The Mobile Technology and its application provide remote monitoring of the patients physiological changes and access to the health care facility in the remote areas such as village in central Africa (Mahad., 2009). The Mobile technology also helps tourist to find out enormous services like accommodation, emergency or safety, gastronomy, navigation and orientation, news, transport, cultural and heritage sights, weather forecast, shopping places and language translator etc. (Jaraba, et al., 2011; Sebastia, et al., 2009).

Significance of Mobile Technology

The significance of Mobile technology and its applications can be analyzed by the fact that several mobile applications have been developed and in use from the personal to commercial capacity. There are several other benefits of Mobile technology and its applications involved in our daily life like real time weather updates, online purchasing, funds transfer, and e-banking ((Yeonjeong, 2011; Louise & Valerie E., 2011) and tourism. The following section speaks about the overall structure of the proposed model followed by technical section having some application screen shots. The following sections present the survey results, the discussion about various aspects of the proposed application and the last section present some concluding remarks.

BACKGROUND AND RELATED WORK

The tourist faced several issues during traveling in different countries like facing different cultures, knowing the rights, finding places of interest, hotel reservation etc. The researchers have already addressed several issues related to health care and tourism.

Health Care Applications

In (Lopes, et al., 2011)they present a “SapoFitness”, a mobile health application to prevent user from obesity. This application was based on the user Personal Health Records (PHR). The PHR helps to evaluate the nutritional state of the user. “SapoFitness” uses web services to communicate with server database for continuous monitoring of its user weight and nutritional state regardless of time and place. The main objective of this application is to motivate the present, we have observed that the things available to support night blind person is to take white cane or Night mobility devices. There are several mobile applications developed for assisting tourist (Zhou, et al., 2010; Guo, et al., 2009) and patients suffering from different diseases (Chang, et al., 2011; Li, et al., 2011) but unfortunately no supportive application for tourists or people which deals with night blindness. In this paper we develop a mobile application model for a night blind tourist to help the tourist to reach its destination before dusk. The proposed application model also provides tourist safety in terms of providing various alternatives to reach its destination.

In next section, we describe about night blindness disease and presently available assistive methods or devices for night blind people. The following section speaks about the overall structure of the proposed model followed by technical section having some application screen shots. The following sections present the survey results, the discussion about various aspects of the proposed application and the last section present some concluding remarks.
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