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A MOBILE MUSEUM NAVIGATION SYSTEM DESIGNED FOR VISITORS' USABILITY

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ABSTRACT

With the popularization of smartphone and the increasing use of mobile applications, the mobile navigation system has been widely used in museum. User satisfaction is correlated to information system usage and success. Thus it is essential that the mobile navigation system can meet the visitors' need and create a good user experience. According to previous studies, we classify the design factors affecting visitors' usability in museum mobile navigation system into seven main factors: connectivity, interface design, content design, user experience, marketing and promotion, exhibition space and cultural aspects. In this paper, a mobile guide system of the National Palace Museum which is designed and built on the basis of these seven factors is presented. Visitors can use the navigation system on their smartphones to read the timely information of the artifacts and the exhibitions ubiquitously, plan the desired tour routes, and share the unique experience via social media.

Keywords: Mobile Navigation System, Museum, Design Factor, User Satisfaction, Mobile Application

INTRODUCTION

The significant information need on museum Web sites includes information about recent exhibits, to search a museum collection, to find information on special events in the museum, to find direction, to find appropriate image, and to find information on research [1]. User satisfaction is correlated to information system usage and success [2]. Thus it is essential that the mobile navigation system can meet the visitors' need and create a good user experience. The key factors for promoting visitors' use of personal digital guide assistant in museum, includes connectivity, interface design, content design, marketing and promotion, user experience, exhibition space, and cultural aspects [3] [4]. Based on these design factors, we build a mobile navigation system.

For instances, the interface comprises graphical elements and maps; the content has the timely information of the exhibitions and the promotional activities; the system allows visitors to create their own customized souvenir photos and share it via social media to achieve marketing objectives of the museum; and as for the dimension of exhibition space, the route planning function allows visitors to plan personalized route according to the crowd in the exhibitions, and their favorite exhibitions and artifacts.

DEVELOPMENT

We build a mobile navigation application on android platform to implement the seven design factors in museum mobile navigation system. The system structure is depicted in Fig. 1.
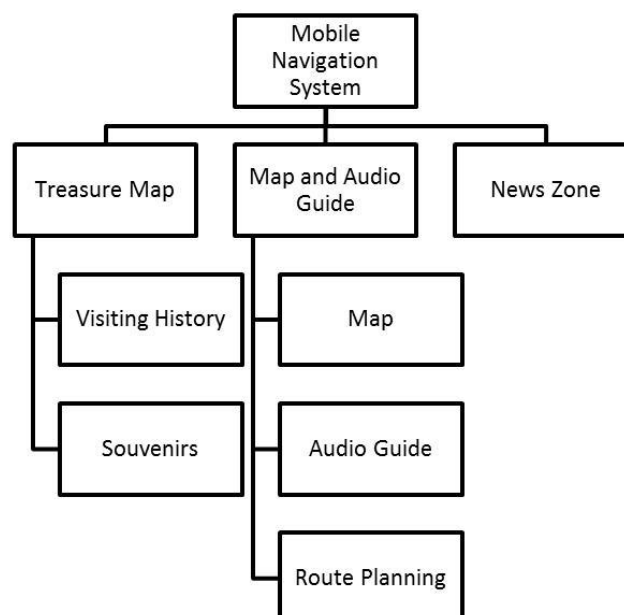
Fig. 1. System structure of the mobile navigation system

CONCLUSION

In this paper, a mobile navigation system of the National Palace Museum which is designed and built on the basis of the above-mentioned design factors affecting visitors' usability is presented. Combining with the convenience and the prevalence of mobile devices, our work makes the museum navigation system becomes ubiquitous, intuitive, interactive, and personalized. For the visitors, they can use the navigation system on their smartphones to read ubiquitously timely information about the artifacts and the exhibitions, plan the personalized tour routes, and share the unique experience via social media. For the museum, this system can serve as a promotion channel as well as a solution in escaping from the crowd.

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