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## **DESIGN FACTORS OF MUSEUM NAVIGATION SYSTEM ON THE MOBILE SMART-PHONE APP**

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### **ABSTRACT**

Due to the integration of cultural tourism and digital technology, tourists are no longer passively content with pre-arranged tours. As a system developer, one should concern about how to embed a mobile navigation system into smart phones to increase the learning experience of tourists. This study uses the visitors of National Palace Museum as research subjects and categorizes 7 design guidelines with 38 influence factors base on review of literature and analysis of personal digital navigation systems in various domestic and foreign museums. After the use of AHP (analytic hierarchy process), this study identifies that improving information quality in the mobile navigation systems and enhancing the convenience of communication between user and the system not only improve the tourist's willingness to use the system but also enhance the user's level of knowledge. Furthermore, when users realize the potential of enhancing knowledge by the system, they will increase the system use.

*Keywords:* Museum navigation, design factors, smart phone, mobile navigation system, analytic hierarchy process.