Abstract

The availability of mobile phones enhanced with different sensors increased the possibility of using the mobile devices in various applications in ubiquitous computing. Mobile phones can be used as interaction device with other devices such as large projected displays. In this paper we propose a design of a cell phone pointing interface based on its embedded accelerometer sensor for interaction with large projector based displays. The main idea is to use a simple hand gestures for pointing to a certain point, for object selection, for object movement or for drawing various forms on large display screen. Rigorous and systematic evaluation of the proposed interface has been conducted and its efficiency has been experimentally evaluated on various tasks. The results have shown that embedded accelerometer sensor in mobile phones in combination with a simple hand gestures are a promising approach for interaction with large display screen and that potential users see ease of use, intuitiveness and enjoyment as advantages of this interaction technique.


**Index Terms**

Computer Science          Human-computer Interaction

**Keywords**

Cell phone  Pointing interface  Projector based display  Evaluation methodology