Evaluation of CAERUS: A Context Aware Mobile Guide

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Abstract: This paper reports on the results of a user evaluation of CAERUS, which is a complete context aware educational resource system for outdoor tourist sites and educational centres. CAERUS consists of a handheld delivery application and a desktop administration application and provides a visual interface to add new maps, define regions of interest, add theme-based multimedia tours, and deliver this information to visitors through Pocket PC devices with GPS capability. Fourteen participants used CAERUS in the University of Birmingham's Botanic Garden at Winterbourne in May 2005. Participants reported high satisfaction with the location-based content provided, particularly the audio commentary. Significant problems with positioning and navigation were experienced, especially amongst the participants using the system in "guided tour" mode. Younger and older visitors differed in opinion as to how easy CAERUS was to learn and the clarity of the user interface. The main effect of CAERUS with respect to learning was to increase the participants' engagement with their physical surroundings.
Context awareness is a property of mobile devices that is defined complementarily to location awareness. Whereas location may determine how certain processes around a contributing device operate, context may be applied more flexibly with mobile users, especially with users of smart phones. Context awareness originated as a term from ubiquitous computing or as so-called pervasive computing which sought to deal with linking changes in the environment with computer systems, which are otherwise static.