PhD Lecture

In partial fulfillment of the terms for obtaining the PhD degree, Dimitrios Raptis will give a lecture on the following subject:

**User Experience of Mobile Devices: Physical Form, Usability and Coolness**

on Friday 30th of January 2015, 13:00, in room 0.2.13 at Selma Lagerlöfs Vej 300

Abstract

This thesis focuses on mobile devices and it specifically investigates the effect of their physical form on two perceived user experience qualities, usability and coolness. With the term mobile devices, I refer to interactive products that users interact with while being on the move, and with the term physical form I refer to the physical elements that constitute a mobile device as a whole, such as weight, size and materials. The selected research area was addressed through two research questions, one focusing on effects of physical form on usability and the other on effects on coolness.

The thesis consists of four research papers and a statement. The four individual papers provide answers to the two research questions, while the statement acts as a bridge that brings the papers together into a coherent whole. The statement initially discusses what user experience and physical form are, and it continues with related work on usability, coolness and previous studies that investigated their relation to physical form. It then presents a research classification that guided my research work, where the papers are placed in relation to their research purpose: exploration and validation. Explorative studies focus on generating enough data to map out a relatively unknown phenomenon, while validation studies confirm cause-effect relationships that have been identified from previous research. The statement continues with a discussion on the implications of my findings to the broader user experience field and concludes with the results of this thesis.

Four research papers contributed to the results, two for each research question. Two laboratory experiments, one conducted with the purpose of exploration and one with validation focused on the first research question. The explorative study showed that the overall physical form of a mobile device has a significant effect on the perceived usability of an application: the more attractive the physical form, the higher the perceived usability. The other study validated the effect of a particular physical form element on usability and showed that the screen size of a mobile device does not affect perceived usability and effectiveness, but significantly affects efficiency: the larger the screen size the better the efficiency, especially for screen sizes around 4.3 inches.

A literature review and a survey study focused on the second research question. The review paper explored what coolness is and showed that physical form evokes outer and inner coolness: outer coolness is related to the aesthetic attributes of the physical form and inner coolness to perceived personality characteristics. The survey study validated that mobile devices' perceived inner coolness can be measured using a proposed COOL questionnaire (measuring usability, desirability and rebelliousness) and suggested that perceived outer coolness can be measured by existing perceived qualities (attractiveness and classic aesthetics).

Members of the Assessment Committee are Reader Keith William Chevest from Lancaster University, Professor Kasper Hornbæk from University of Copenhagen and Associate Professor Ivan Aaen from Aalborg University. Professor Jesper Kjeldskov and Associate Professor Mikael Skov are Dimitrios Raptis’s supervisor and co-supervisor respectively. Associate Professor Jeni Paay will be the moderator.

All interested parties are welcome. After the defense the department will be hosting a small reception in cluster 5.