

HCI

Group Project (sem. 1)

This document describes the Group Project to be completed by the students who are taking the module on HCI design in the academic year 2011/2012.

Time scale

This group project will be conducted over 5 weeks of semester 1 starting on Monday 17th October 2011 and ending on December 20th (deliverable due to Zeno Menestrina, at the end of the lecture).

Learning outcomes

The course-work is designed to give students first-hand experience of an interaction design project. The students will undergo the entire design cycle (requirements, alternative design and evaluation) up to the development of a prototype, applying techniques and methodologies introduced in the course. Prototyping will be used to support the communication of design ideas between the designers' team and to support user testing. The project includes both individual and group activities. Students are exposed to typical group work dynamics, and will learn how to share information and co-ordinate activities in a typical interaction design project.

Background and rationale

The coursework is designed around Smart-Campus, an existing ICT project funded by TrentoRise, a newly funded research institute including the University of Trento and FBK. TrentoRise strives to achieve the idea of "Smart Territory", the development, adoption, integration, deployment and evaluation of advanced ICT solutions capable to support a plethora of applications in different fields related to human and social development. The objective of the Smart Campus project is to kick-off the "smart territory" vision, where students and researchers are regarded as a scaled-down, but complete, model of "smart territory. This will allow studying the evolution and exploitation of the "smart territory" concept in a more controlled and easier setting, before applying it to the more ambitious setting of the whole territory.

The focus of the coursework will be on the identification, definition and prototypical implementation of value-added services that can help students in their daily life. These service can be made available not only through the traditional Web channel, but also through mobile or self-service terminals, exploiting the specific capabilities of these devices to deliver contextualized and personalized services. The course-work will require building a set of prototypes of innovative systems which are necessary to students of the University of Trento.

Objectives and Procedures

Project objectives and procedure

The project is aimed at delivering prototypes of services for students, following a strict user centred design. The level of fidelity of the prototypes is a decision of the students, but it should be good enough to convey a clear idea of user, social and technological requirements.

The project will be organised around the following activities

Requirements elicitation; Design; Evaluation.

Specific steps are described below

- I. PACT ANALYSIS. Following a PACT analysis for the smart-campus environment, each group will identify a specific stakeholder, context of use, and a set of activities they

wish to support with their project, and broadly defining the interaction technology required. Once the stakeholder is identified, each user member will conduct *5 contextual interviews* following a methodology defined by the group to elicit user requirements and identify needed projects. It is recommended that the interviews be recorded. Transcripts of the interviews, supplemented by screen shots of the props used, will be prepared by each student and shared with the group. The analysis of the context and activities will also be supported by observation (supported by videos, pictures whenever possible) and task analysis.

- II. Analysis of existing products: once some design ideas start to emerge, the students will analyse the existing services (if any) aimed to fulfil them, and collect interaction ideas from similar services in different contexts (each group is meant to deliver a design library of interesting interaction methods for specific services)
- III. Design phase. Each group will implement different prototypes of the idea, including scenarios, personas, story board etc.
- IV. Evaluation phase. Each student will evaluate their proposed design in a user testing with at least 5 participants. Data will be analysed by the group.
- V. (Phase III and IV are expected to be iterated at least twice)
- VI. Report writing. The group will produce a 20 pages (max) report of the project and a prototype of the service. Report writing is both an individual and a group activity. All members are expected to contribute to it and the report will be marked as a group deliverable not as a collection of chapters authored by different people. The report will be composed of:
 - Executive summary (1 page stating the main findings and recommendation form your study)
 - PACT analysis (rich description of requirements with implications for design and requirements)
 - Design description (presentation and justification of main design choices)
 - Evaluation Results (final user study)
 - Conclusion (recommendations, suggestion for further research)

- Deliverables: a paper copy of the report. All other materials (observational data, interview transcripts, etc.) stored on a CD. Prototype(s) of the services

A.1 Help and contact information

The work will be carried out independently by the students. However, special sessions will be held in the class, to discuss and review the work. It is of utmost importance to the success of the project that each member of the group contributes to the work. In case of problems and conflicts which students are unable to deal with independently, they are invited to e-mail Zeno Menestrina (zeno.menestrina@studenti.unitn.it), copying **each group** member in the e-mail. People who do NOT contribute to the group work will receive a lower mark (up to 0 in case of no contribution at all).

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Marking will be based on the assessment of

- ❖ Presentation (10%);
- ❖ Validity and reliability of methodologies and procedures applied for data collection (30%);
- ❖ Critical analysis of results (30%);
- ❖ Quality of design suggestions (20%);
- ❖ Reflections and suggestions for further research (10%).