

COMPUTER-SUPPORTED CO-OPERATIVE WORKING CROWSOURCING USERS

Group Project

This document describes the course-work to be completed by the students who are taking the CSCW module in the academic year 2011/2012.

Mark component: Group work = 100%¹ (50% of total module mark)

Learning outcomes: the students will engage in the evaluation of a social computing artifact while trying to apply chief methodologies of CSCW. The project is designed to give students first-hand experience on crowdsourcing. The students will learn about human computation and crowdsourcing technologies, how to create a taxonomy of concepts, analyse and interpret data within the theoretical frameworks introduced in the course, and write an evaluation report..

Deadline: May 28th – the final report will be handed in to Maria Menendez – alternatively the report need to be submitted at least 2 weeks before the date the students intend to take the exam

Objectives

The assignment consists in two parts. During the first part, students will investigate different crowdsourcing applications and create a crowdsourcing taxonomy based on variables such as motivation for participation (e.g., fun, altruism, economic reward), and kind of targeted contributors (e.g., general population, communities of experts). During the second part of the assignment, students will choose one crowdsourcing application and investigate information contained in contributors' profiles. Students will investigate contributors' demographics (gender, nationality, occupation). Examples of research questions addressed by the assignment are:

- a) Who are the contributors to crowdsourcing?
- b) Do contributors' demographics have an effect on the output of a crowdsourcing task?
- c) Which are the metrics for measuring the quality of the output of a crowdsourcing task?
- d) Can users' profile information be used for improving crowdsourcing?

In order to answer these questions, students will have to obtain contributors' profile information from the selected application. The amount of collected contributors' profiles will depend on the chosen system and the methodology used for collecting the data

¹ The project will include both individual and group activities. Students will hand-in evidence of their individual work (interview transcripts and data analysis), which will be marked for completeness and accuracy and influence the student's mark in case of discrepancy with the group-work mark (+ - 5%). Students will also be invited to evaluate each group member contribution, including their own. Evidence of exceptional performance or sub-average contribution will be taken into consideration in the final mark.

(manual or automatic). Depending on the number of contributors' profile, students will perform a quantitative or qualitative analysis of the results.

Methodology

The project consists of the following activities

- I. Methodology definition. The group will do a literature review on crowdsourcing and research on the state of the art in crowdsourcing applications. This information will be used to create a taxonomy of crowdsourcing systems. The group will choose one of the applications for crowdsourcing and define a procedure for data collection. Data collection for qualitative analysis might include sampling procedures, outline of the semi-structured interviews (including question wording), and a format for activity logging. Data collection for quantitative analysis might include crawling procedure and definition of crawled variables. An indication of data analysis procedures should also be defined at this stage, although may be revised after the analyses of the first interviews or the crawling of the first dataset.
- II. Data collection. During the data collection for qualitative analysis, each student will carry out the interviews following the methodology defined by the group. It is recommended that the interviews are recorded. Transcripts of the interviews, supplemented by screen shots of the interviewee virtual space, will be prepared by each student and shared with the group.
- III. Data analysis. For the data analysis of qualitative data, interviews and logging data will be analysed by the group who will also define the outline for the follow up interviews, to be conducted by each student with one selected participant. For the data analysis of quantitative data, expected results will be hypothesized and compared with the results of statistical analysis. Raw data might need to be computed in order to obtain useful data for the study.
- IV. Report writing. The group will produce a 20 pages (max) report including the literature review, taxonomy of crowdsourcing systems and results of the quantitative and/or qualitative analysis. 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)
 - Related work (literature review on similar studies)
 - Objectives (stating and justifying the objectives of the study)
 - Methodology (clear description of the evaluation procedures)
 - Results (clear report of what was found during the study)

- Conclusion (recommendations, suggestion for further research)
- Deliverables: a paper copy of the report and a CD rom including, Interviews transcripts, and an electronic copy of the report

Help and contact information

The work will be carried out independently by the students under the supervision of Maria Menendez (<menendez@disi.unitn.it>) who will organise and participate in group meetings. 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 Prof. De Angeli (deangeli@disi.unitn.it), copying **each group** member in the e-mail. People who did NOT contribute to the group work will receive a lower mark (up to 0 in case of no contribution at all).

A reading list will be distributed separately with clearer design spec.

Marking scheme

Presentation (10%);

Background research (20)%

v Validity and reliability of methodologies and procedures applied for design (30%);

v Critical analysis of evaluation results (20%);

v Quality of design suggestions (10%);

v Reflections and suggestions for further research and new design spaces (10%).