

DEPARTMENT OF COMPUTER SCIENCE  
UNIVERSITY OF TORONTO

CSC 318S  
**THE DESIGN OF INTERACTIVE COMPUTATIONAL MEDIA**  
Winter Term, 1997-8

Assignment 2

**BRIEF DESCRIPTION AND PROPOSAL FOR TERM PROJECT**

HANDED OUT: Monday, January 12, 1:10 p.m.  
DUE BACK IN: Thursday, January 22, **4 p.m. !!! (paper, also to newsgroup)**

WORTH IN MARKING SCHEME: 2 points

This term all students will work in multidisciplinary 4-5 people teams on a semester-long course project to carry out the user-centred, iterative design of prototypes of computational tools or systems appropriate to the needs of the elderly. The job of each project team is to conceive, design, prototype, and evaluate a novel approach to this design problem.

**THE PURPOSE AND TASK OF THIS ASSIGNMENT**

The purpose of this assignment is to help you crystallize an idea for your term project and to force you to form the teams of 4-5 people that will be required for carrying it out.

Your task is to articulate in 3-6 paragraphs the basic idea for your term project. Describe the kinds of users and/or tasks and/or situations for which your idea is intended. Indicate what you believe is novel about your approach.

**BRAINSTORMING HEURISTICS**

If you have trouble coming up with ideas, you might use any or all of the following approaches to stimulate idea development.

- 1) Think about interesting opportunities for the elderly, e.g., increased leisure time and opportunities for recreation, reflection, travel, and contact with family.
- 2) Think about critical problems facing the elderly, e.g., declining health, deteriorating physical capabilities, failing memory, increased need for security, loneliness, lack of meaningful work, and worries about all of the above.
- 3) Think about typical tasks carried out by the elderly, e.g., grooming, dressing, eating, taking medications, walking, exercising, shopping, conversation, communication, recreation, financial management, and learning.
- 4) For various needs and tasks, think about relevant technologies and applications, e.g.,
  - health — monitors for specific conditions, treatment advisors and reminders
  - loneliness — email, computer conferencing, video conferencing

- learning — large-print electronic books.

5) Focus on the spaces within which the elderly typically are found, e.g., homes or apartments, senior citizen's homes or centers, doctor's offices, and specially-equipped vehicles.

6) Focus on instruments or aids used by the elderly, e.g., canes, glasses, hearing aids, wheel chairs, and cardiac monitors.

7) Focus on sensory modalities, e.g., sight, sound, touch, and mobility.

8) Consider devices used by all people, such as refrigerators, ovens, bath tubs, sinks, radios, televisions, automobiles, buses, and imagine such computerized machines of the future.

Also see the idea generation heuristics in the article by Mountford assigned for last Friday.

## **GROUP FORMATION HEURISTICS**

The following are useful suggestions as you try to form your groups:

1) Team up with people with whom you have successfully worked in the past.

2) Team up with people whom you know to be bright, hard-working, and resourceful.

3) Team up with people whose skills complement your own. For example, each team would ideally contain

- a person knowledgeable in the problem domain, i.e., the needs of senior citizens and the elderly
- a person who is skilled in programming
- a person skilled in articulating ideas and expressing them in English
- a person skilled in visual thinking, sketching, or graphic design, which can be applied to user interface envisionment and prototyping
- a person skilled in the behavioural sciences, e.g., psychology or sociology, which can be applied to interviewing prospective users and carrying out usability tests.

4) Consider compatibility of working styles. There could be problems if some people like working ahead and others prefer to wait until the last minute (which of course is very bad for this course), or if some prefer working during the day and others during the night.

No matter how well you form your group, working together will be a challenging process. Wednesday's lecture will deal with problems that may arise and strategies for dealing with these problems. To start your thinking about these issues, look at the list of questions on page 3.

## **WHAT YOU SHOULD HAND IN**

Carry out the task described above and write it up on roughly 2 sheets of 8.5" X 11" paper. This is to be handed in to Prof. Baecker's office, SF4306, and posted to the computer conferencing system.

Include the names and email addresses of all team members. Indicate what special skills are possessed and which roles will be assumed by team members.

**FOR YOUR INFORMATION — QUESTIONS ABOUT GROUP PROCESS AND DYNAMICS ASKED TO STUDENTS IN CSC428 AND CSC454 LAST SEMESTER**

1. What were the major interpersonal problems, if any, encountered by your group over the past semester. Circle the letter of any that apply:

- a) difficulty contacting group members
- b) feeling that your opinions were not considered
- c) feeling that you had to take the leadership role to get anything done
- d) difficulty taking or receiving feedback from team members
- e) insufficient brainstorming
- f) inflexible positions on the part of team members
- g) defensiveness on the part of team members
- h) misunderstandings due to unclear expression of ideas
- i) misunderstandings due to poor listening
- j) other:

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2) What were the organizational problems, if any, encountered by your group:

- a) difficulty agreeing on a shared vision
- b) failure to clearly define responsibilities
- c) failure to divide tasks equitably
- d) failure of some individuals to carry out what they had promised
- e) difficulty adjusting to change when reevaluating plans seemed advisable
- f) other:

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