DEPARTMENT OF COMPUTER SCIENCE
UNIVERSITY OF TORONTO

CSC 318S
**THE DESIGN OF INTERACTIVE COMPUTATIONAL MEDIA**
Fall Term, 2002-3

Assignment 5
# INTERACTION DESIGN AND PROTOTYPING

HANDED OUT: Wednesday, October 30, 4 p.m.
DUE BACK IN: Monday, November 18, 4 p.m.
WORTH IN MARKING SCHEME: 12 points

## THE PURPOSE AND TASK OF THIS ASSIGNMENT

The purpose of this assignment is to give you experience in prototyping your solution to the design problem. In doing so you will be carrying out interaction design, and using it to augment the activity and information design you did in Assignment 4.

Your task is to develop one or more prototypes of your solution for the design problem. You need to do this to sufficient detail to allow usefulness and usability evaluations to be carried out in Assignment 6. Your team will then document your work in the prototypes and in an accompanying brief report (circa 5-10 pages, double-spaced).

## PROTOTYPES

Webster's Third New International Dictionary defines "prototype" as follows:

"1a(1): an original on which a thing is modeled... b: an individual that exhibits the essential features of a later individual or species... c: an individual, quality, or complex that exemplifies or serves as a standard of the essential features of a group or type..."

Prototypes should exhibit, exemplify, and make vivid and comprehensible the essential features of the system that is being designed, and of its style of user interface, i.e., its look and feel. A prototype should suggest what the application will do, what its essential characteristics are, what it will look like, and how it is to be used. It should ideally incorporate and illustrate a **very small** but **"critical mass"** subset of system functionality, in other words, its most essential functionality. You will be testing and evaluating your design and interface concepts in Assignment 6 and reviewing the suitability and viability of these concepts.

## PROTOTYPING

There are a variety of methods of prototyping. You should use a **combination** of methods that are appropriate and with which you can be maximally effective. These include:

- scenarios expressed in words
- sketches and storyboards
- physical models
- video sequences and animations

• interactive sequences expressed in computer prototyping media.

In all cases, it is **required** that a significant part of this work be done in a computer prototyping medium. We supply Macromedia Dreamweaver, Macromedia Flash, and Visual Basic for this purpose, but you may use a suitable alternative with the explicit permission of your TA. Most acceptable alternatives would likely allow your prototype to be viewable on the Web.

**PROTOTYPING TOOLS**

The three environments mentioned above are available in the following location:
Gerstein Science Information Center
CDF-PC Lab, 2nd Floor
King's College Rd
< http://www.cdf.toronto.edu/cdfpc/faq.html#GS1>
The machines are now labelled "CSC318 SW" on the monitors.

Visual Basic Version 6.0 is also available on all CDF-PC machines, including those in the Bahen building (rooms 2200, 2240 & 3224). Please note the Bahen labs are closed to general use during the day (used for instructional purposes), but freely available evenings and weekends.

Further information about these three environments may be found in the prototyping tutorial document by Daniel Wigdor located on the course web site.

**YOUR REPORT**

Your report should address the following issues (this list may suggest an outline for your report):
1. A brief summary of your system concept
2. A description of some key examples of interaction design, with justifications of any significant design decisions.
3a, 3b, etc.. A very brief statement of key points helpful in understanding **one or more** prototypes, with justifications of any significant design decisions.

**KEEPING THIS ASSIGNMENT WITHIN BOUNDS**

If you spend more than 15-21 hours per person on this assignment, you are spending too much time. To achieve this goal, it is very important that all members of your group participate actively and collaborate in the work.

Although every report will be different, it seems likely that you can do a reasonable job of dealing with each issue as follows:

| | |
|---|---|
| Issue 1: | 1 page |
| Issue 2: | 2-3 pages |
| Issue 3a, 3b, … | 2-3 pages each |

**WHAT YOU SHOULD HAND IN**

You need to hand in a diskette containing your prototype and a brief report **IN TWO COPIES**. If the files are too large to put on a diskette (see below), you need to explain in your report how to access the files.

**The report must be typed and submitted on 8.5"X11" paper. Structure and organization, spelling, grammar, word usage, and document appearance will count for roughly 15% of**

**your grade.** Sketches, diagrams, and tables should be used where appropriate to assist in conveying the concepts. **Papers submitted that are not written in minimally acceptable English will be returned for rework and resubmission.**

Each submission must include a title page with a meaningful title, your names, your student ID#s, your tutor's name, the course name and number, and the date. The second page should contain a very short one-paragraph executive summary of the document, a table of contents, and **a statement of who did what on this assignment**.

The CDF machines only have floppy drives, there are no cd burners, zip drives etc. Users have access to the same files from UNIX clients as they do from the PC clients, i.e. your home directory on a UNIX client is the "H:\" drive on a PC client. In other words, if you save to "H:\" you will be fine.

Files can also be submitted from the PC clients (or home) through the web interface to submit at https://www.cdf.toronto.edu/students/. From a CDF unix client use the 'submit' command (see "man submit" for details). The submit system will accept file uploads of up to 100 megabytes. However, there are things that you need consider before submitting files larger than 10 megabytes:

• There is a time limit of 5 hours for all uploads. If your files don't make it across the Internet in that time, your upload will be terminated.

• If you are on a dial-up Internet connection, be aware of the usual transfer speed. For example, under ideal circumstances, it would take 7 hours to transmit a 100MB file over a 33.6K modem.

• If you are on a DSL or cable Internet connection, be aware that the uploads are never as fast as the down loads. On a typical DSL connection, the uploads are transmitted at a maximum speed of 56 kilobit per second, which means that it would take around 4 hours to up load a 100M file.

A few words about the diskette if you turn one in.
1. The name of the file representing your assignment should include 318 Assignment 5 and your project name, as well as an indication of what system it utilizes (e.g., Flash).
2. There must be a paper label stuck on your disk. On it you must **neatly print your project name, the course number, the assignment number, and your tutor's name.**
3. Even if you do this on another computer or with other software tools, you must ensure that your assignment runs on a DCS machine in CDF using its version of one of the software packages, or on its version of a Web browser, or on a Web browser available to your TA.

IMPORTANT: If you are going to do this on your own machine, which for many of you is going to be the best strategy, please try submitting an early version to your TA to ensure that everything is going to work.