Rice University
Department of Psychology

PSYC 480/640: Non-traditional Interfaces Fall 2007

MWF 10-10:50 SH 562

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Office Hours Monday and Wednesday 2-3, or by appointment

Required Texts:

Kortum, P. (Ed) (2008). *HCI Beyond the GUI: the Human Factors of Non-traditional Interfaces*. Burlington, MA: Morgan Kaufman. (in press)

Week	Topic	Readings
8/27	Introductions, Class logistics, and the 8 Basic Principles of Design	Chapter 1
8/29	History of User interfaces	
8/31	Haptic User interfaces	Chapter 2
9/3	***Labor Day – No class***	
9/5	Haptic User interfaces – Lab tour	
9/7	Haptic user interfaces – student presentation	
9/10	Gesture user interfaces	Chapter 3
9/12	Gesture user interfaces – build interface	
9/14	Gesture user interfaces – student presentation	
9/17	Locomotion user interfaces	Chapter 4
9/19	Locomotion user interfaces – lab tour	
9/21	Locomotion user interfaces- student presentation	
9/24	Sonified user interfaces	Chapter 5
9/26	Sonified user interfaces - lab	
9/28	Sonified user interface – student presentation	
10/1	***No class – instructor at HFES*** ***Work on your projects!***	
10/3	***No class – instructor at HFES*** ***Work on your projects!***	

10/5	***No class – instructor at HFES*** ***Work on your projects!***	
10/8	Speech user interfaces	Chapter 6
10/10	Speech user interfaces – lab	
10/12	Speech user interfaces – student presentation	
10/15	***No class – Midterm Recess***	Chapter 7
10/17	IVR interfaces	
10/19	IVR interfaces – lab	
10/22	IVR interfaces – student presentation	
10/24	**Exam 1**	Chapter 1-6
10/26	Olfactory user interfaces	Chapter 8
10/29	Olfactory user interfaces Lab tour	
10/31	Taste user interfaces	Chapter 9
11/2	Impoverished user interfaces	Chapter 10
11/5	Impoverished user interfaces – lab	
11/7	Impoverished user interfaces – student presentation	
11/9	Multi-modal user interfaces MEMM	Chapter 11
11/12	Multi-modal user interfaces MEMM - lab	
11/14	Multi-modal user interfaces MEMM – student presentation	
11/16	Multi-modal user interfaces MIMM	Chapter 12
11/19	Multi-modal user interfaces MIMM - lab	
11/21	Multi-modal user interfaces MIMM – student presentation	
11/23	***No Class - Thanksgiving***	
11/26	Future interfaces	
11/28	Future interfaces	

11/30	**Exam 3**	Chapter 7-12
12/3	Project Presentations	
12/5	Project Presentations	
12/7	Project Presentations Papers Due	

Examinations: There will be 2 examinations, but no Final Exam. The 2 in class exams will be closed book/closed note and may cover any of the material assigned up to that point. This includes material from *HCI Beyond the GUI,* my lecture notes, Lab tours, Lab exercises and presentations that other students have given.

Presentations: Each student will be required to give 2 presentations during the course of the semester on a specific interface that interests them. These will not be surveys of the general interface technology, but will be an interesting example of a specific implementation. You will be required to give a 30 minute talk about the interface, talking about its technical implementation, the human factors that would/should have gone into its design, and any design deficiencies you believe still exist. Examples may be chosen from commercially available devices or research devices that are still in the laboratory, but may soon make it out to the commercial realm. The presentation should provide copious pictures or auditory example of the interface. No report is required for this presentation, but you must supply me with a copy of the presentation material after the talk. You may choose form any of the following interfaces. We will go through the selection process on the second day of class, as only 1 student may present each topic. Presentation dates are shown next to the topic.

1) Haptic interface (9/7)
2) Gesture interface (9/14)
3) Locomotion interface (9/21)
4) Sonified interface (9/28)
5) Speech interface (10/12)
6) Interactive Voice Response (10/19)
7) Impoverished interface (11/9)
8) Multimode interface MEMM (11/16)
9) Multimode interface MIMM) 11/23)

Project: Each student will be part of a 2-person project team that will build a functional non-traditional interface. Teams should meet with me early in the semester to discuss their ideas and gain approval. MEMM and MIMM systems involving traditional interface modes will not be approved. The interface must be fully operational and perform a necessary function (which may be fictional). The team should document the process of defining and constructing the interface for inclusion in the end report. The team will be required to present the interface to the class at the end of the semester, demonstrating the interface and allowing others to use the interface as well. The team report is due the last day of the semester and should include the process that was used to arrive at the interface as well as mock-ups, sketches, prototypes, drawings used in the process. Documented human factors requirements should be included as well as the final implementation. Originality of the interface and is one component of the grade.

Participation: A good deal of this class will entail open discussions of human factors issues of these interfaces, as well as discussions of student presentations and lab exercises. Active, thoughtful participation is expected from every student

Evaluation:

Exams 1 and 2	20% each (total 40%)
Project:	25%
Presentations	15% each (30% total)
Participation	5%

Disabilities:
If you have a documented disability that requires accommodation, please let me know so we can confidentially discuss your needs. You will also need to register with the Disability Support Services Office in the Ley Student Center.

Honor System Policy:
As with all endeavors at Rice, you are expected to adhere to the Honor Code and follow the guidelines given in the Blue Book. Exams are given under the honor system. Students are encouraged to work collaboratively on the projects, but each student is expected to contribute an equal share to the final project. Students are encouraged to bring any concerns involving academic integrity to the attention of the instructor.