

**CNM HONOURS PROGRAMME:
PROPOSAL FOR NM5660 INDEPENDENT STUDY MODULE (ISM)
Semester 2, AY2009-2010**

Name of student:

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Date of submission:

18 Jan 2010

Name of supervisor:

Timothy Marsh

Title of Project:

Investigation and critique of transparency and the development of tool to assess transparent interaction

Aim of proposed Project:

- Identify the definition and characteristics of transparency in interactions and interaction devices.
- Investigate the benefits and limitations of transparency.
- Determine the non-transparency portion of the interactions and interaction device and its categorizations.
- Examine the relationship between transparency and user experience.
- Develop tools, techniques and experiments for measuring transparency and generalize it to facilitate assessment of transparency for all aspects of interactions.

Proposed outline of the study report:

Introduction

Most software engineers who have been through HCI modules are usually educated to create software with user-friendly, minimalistic and transparent interactions, which is based on the famous dictum from Donald Norman. But in fact, there is another group of people who are claiming that the dictum may be flawed and incomplete. As suggested from the book “Windows and Mirrors” by Jay David Bolter and Diane Gromala, these two groups of people, the structuralists and designers, have their own approaches to formulate the world of digital designs.

Leading researchers in the HCI fields (structuralists) have been advocating the importance of transparency of the interaction. They drew us a future where all the computations are hidden from us. All the computers will anticipate our needs and react as if there are no explicit instructions from us. Effectively rendering the computing devices and technologies invisible.

However, designers on the other hand, claim that transparency is a myth and has been overly simplified and exaggerated. “The danger of transparency is that the interface will mask the operation of the system exactly when the user needs to see and understand what the system is doing.” They believe that interactions should be an equivalent between transparency and reflective.

These are both very interesting point of views and prompted people to think about whether they have been too obsessed with achieving transparency, the benefits and limitations of transparency, measuring transparency, and if there is an even grander theory behind this. So for this independent study module, further exploration of transparent interactions in HCI will be conducted.

Added to this, the emergence of the user experience is an attempt to inform design and evaluation has been widespread in HCI. Such that, researchers are proposing user experience encapsulating the idea of transparency. Hence, the relationship between transparency and user experience will also be examined in this ISM.

Method

This will include literature reviews on the related topics of transparent interactions in HCI, which includes the definition of transparency in interactions and interaction devices, benefits and limitations on transparency, techniques on assessment of interactions and interaction devices, and relationship between transparency and user experience. Based on the result of the literature reviews, we will design and develop a tool to measure transparency in interfaces and interaction.

Results

- A report of literature reviews on topics related to transparency and user experience.
- A tool to facilitate assessment of transparency in interaction and interaction devices.
- A report on methods to assess transparency in interaction and interaction devices.

Discussion

- What is the definition of transparency in interactions and interaction devices?
- How to measure transparency in interactions and interaction devices?
- How to design interactions that have good balance between transparency and reflective?
- Can user experience encapsulate the idea of transparency?
- How will the results from this study be beneficial to other research topics?

Mode of assessment:

- Report on the literature reviews: 40%
- Tool to assess transparent interactions and interaction devices: 20%
- Report on the assessment of transparency in interactions and interaction devices: 40%
- Total: 100%

Reading list:

- Bolter, J. D. and Gromala, D. Windows and Mirrors: Interaction Design, Digital Art, and the Myth of Transparency. MIT Press, 2003
- Dourish, P. Where the Action Is: The Foundations of Embodied Interaction. The MIT Press, 2004
- Bardram, J. and Bertelsen, O. W. Supporting the Development of Transparent Interaction. Lecture Notes In Computer Science; Vol. 1015, 1995
- Nardi, B. A. Context and Consciousness: Activity Theory and Human-Computer Interaction. The MIT Press, 1995
- Jenkins, H. Convergence Culture: Where Old and New Media Collide. NYU Press, 2006

Schedule/Plan of Work:

- 11 Jan 2010 ~ 19 Feb 2010: literature review
- 22 Feb 2010 ~ 9 Apr 2010: design, implementation, evaluation
- 12 Apr 2010 ~ 16 Apr 2010: produce final report

Supervisor's Role:

- Assist the student to contextualize these research topics.
- Supervise the design and implementation of the prototype systems.
- Broaden the perspective of the student to the trending issues of the related topics.

- Assist the student to write/revise the research papers in the level of the major international conferences in the related fields.

Contact hours:

TBA

Student Obligations:

- Write final report as drafts for the international conferences.
- Maintain a good channel of communication with the supervisor on the research topics.

Signature of student: _____ **Date of submitted:** _____