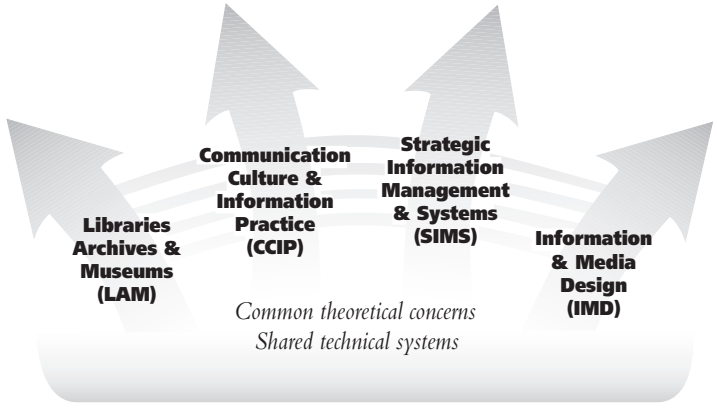
Making and doing: critical and cross-disciplinary engagement within interdisciplinary iSchools

Proposed Wildcard Session for:
iSociety: Research, Education, Engagement, fourth iSchools Conference
February 8-11, 2009.
University of North Carolina at Chapel Hill.

Organizers:
Dr. Matt Ratto, Assistant Professor, Faculty of Information, University of Toronto
Dr. Kelly Lyons, Associate Professor, Faculty of Information, University of Toronto
Dr. David Phillips, Associate Professor, Faculty of Information, University of Toronto
Dr. Andrew Clement, Professor, Faculty of Information, University of Toronto
Dr. Stephen Hockema, Assistant Professor, Faculty of Information, University of Toronto

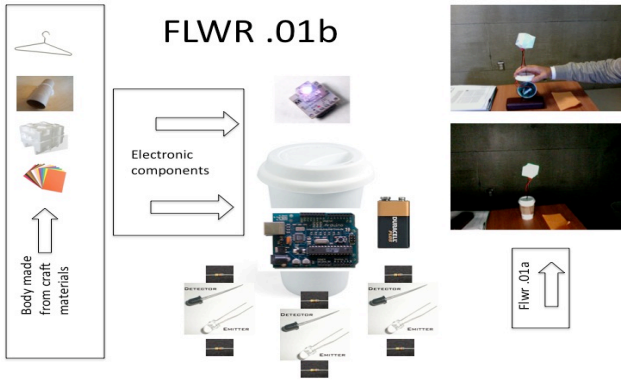
Introduction:
Like many iSchools, the Faculty of Information at the University of Toronto integrates a variety of disciplinary fields (LIS, Records Management, Information Systems and Design, Critical and Cultural theory, Policy, Technology Studies, etc.) and a diversity of institutional foci (libraries, archives, museums, universities, government, corporate contexts, etc.) Such diversity is both an asset and a challenge for the Faculty as we seek to provide professional and academic training for our masters and PhD students and look to engage in collaborative work among faculty members. Importantly, the types of skills and experiences that we collectively bring to bear and the kinds of issues and questions addressed by faculty and graduate students transgress more than just standard disciplinary barriers. In order to address the important social, cultural, and political questions posed by the continuing transformation of information practices, the boundary between material and technical work and reflexive, critical, social scholarship must be bridged. This is a crucial challenge for iSchools – how do we bring various perspectives, interests, and backgrounds to bear while staying connected through an emphasis on common theoretical concerns?



[Figure 1: Figure 2 from Faculty of Information, University of Toronto 2004-2010 Academic plan; Smith, 2004]

Goals:
One creative solution to the issues presented above is explored by this wildcard session. Using design-based research on physical computing as an adjunct to critical scholarship, we will elaborate what and how values are expressed, debated, and resisted within the development and use of information systems. The workshop thus has two goals; first, to critically explore and elaborate some of the shared issues and values between iSchool participants; second, to acquaint researchers with some of the possibilities, problems, and pedagogies that seek to connect critical reflexive thought and physical, goal-based, material work – what we term 'critical making.' (Ratto, 2008).

Format:
The particular critical making scenario which we will build and think though in this session revolves around the construction of a physical type of cellular automata. Using pre-assembled and coded components (developed jointly by Matt Ratto and Stephen Hockema,) workshop participants will build simple electronic agents that 'talk' to one another using infrared light patterns. They can be programmed in various ways - to be more open or more closed, more aggressive or more sharing - which has an effect on each agent's individual survival as well as the survival of the network as a whole. Configuring the agents to communicate with each other in various ways serves as a method for linking and expressing various perspectives on information and networks. The agents (and the network itself) thus become a kind of boundary object (Star and Griesemer, 1989) that facilitates exchange and sharing across disciplinary boundaries as well as being a mode of engagement that explicitly connects technical work and social analysis.



[Figure 2: technical components of arduino-based physical cellular automata agent]

In many ways, this session can be understood as an experiment in alternative ways to address the 'wicked problems' (Rittel & Webber, 1973) that are the bread and butter of iSchools. Given the undefined problem space marked by this class of problems, new resources and new conceptualizations need to be elaborated and explored. Using a shared process of making as a common space for experimentation encourages the development of a collective frame while allowing disciplinary and epistemic differences to be both highlighted and overcome. This is obviously an experimental format, though one that has proved useful in other academic and pragmatic contexts. (Ratto, 2008).

The organizers bring their specific expertise to bear and provide technical and conceptual resources for pursuing the themes of the workshop. Matt Ratto (PhD, Communication) will provide resources for thinking about relationship between technical work and social analysis. Kelly Lyons (PhD, Computing and Information Science) will discuss how the interactions among agents relate to intra-organizational service provisions. David Phillips (PhD, Communication) will comment on issues related to subcultures, surveillance, and spatiality. Andrew Clement (PhD, Computer Science) will engage with questions about privacy, universal access and participatory design. Steven Hockema (PhD, Computer and Cognitive Science) will explore issues of complex emergent behavior and questions of authority and credibility. These themes are representative of the diversity of perspectives and approaches that make the Toronto iSchool a rich, exciting, and challenging intellectual context. The main outcome of the session is to explore how shared practices of engagement and shared social values provide points of contact within and between this diversity.

Technical Requirements
All technologies required will be provided by the organizers. These will include pre-built 'flwrs', micro-controller based physical agents, laptops for programming and tracking agent interactions, and all necessary software. The session organizers will take the lead in carrying out the technical tasks for constructing and

configuring the flwrs, and will assist other participants in contributing and discussing possible setups and related concepts.

Schedule:
The 1 ½ hour session will be organized as follows:

Minutes	Topic
10	Introduction and setting of context (Ratto)
30	Technical setup and tutorial (led by organizers)
30	Iterative reconfiguration and reflection (all participants)
20	Insights and future research (all participants)

Participants:
The session is open to anyone interested in pursuing questions related to the relationship between social values and technological intervention as well as the meta-level discussion about alternative ways to bridge the pedagogical divide between technical and social analysis.

References
Rittel, H., Webber, M. 1973. "Dilemmas in a General Theory of Planning," Policy Sciences, Vol. 4, Elsevier Scientific Publishing Company, Inc., Amsterdam, pp. 155-169.

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Smith, BC. 2004. Stepping Up: Information Practice in the 21st Century. 2004-2010 Academic Plan for the Faculty of Information Studies, A Professional and Research Faculty of the University of Toronto. Available online at: http://www.ischool.utoronto.ca/images/documents/about/fisacademicplan.pdf. Accessed Dec. 5, 2008.

Star, S. L. and J. R. Griesemer. 1989. "Institutional Ecology, 'Translations,' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907 - 1939." Social Studies of Science 19: 387-420.