Knowledge Media Design Institute (KMDI)
A Multidisciplinary Unit of the
University of Toronto Faculty of Information

Report to Faculty Council

September 17, 2010

Report on KMDI Collaborative Graduate Program

Acting Academic Director: Professor K.N. Plataniotis
Director of Collaborative Program: Dr. Barbara Soren

Since 2002, KMDI has delivered a graduate collaborative M.Sc. and Ph.D. program. There are 76 current students and graduates. There are nine partnering units - the Departments of Art/Visual Studies, Computer Science, Curriculum Teaching and Learning (OISE/UT), Mechanical and Industrial Engineering, Medical Science, Sociology, and Theory and Policy Studies (OISE/UT); as well as the Faculties of Information (the iSchool) and Architecture Landscape and Design. The KMD CP Program Committee consists of representatives of our collaborating units.

2009-2010 Student Enrollments in KMD CP

- Changes to our student enrollments since our November 2009 report are:
  - One PhD student from FI and one Masters student from FI graduated in November
  - Two more PhD students – one from FI and one from CS have completed their dissertations and graduated in June 2010
  - Three masters students from FI graduated in June 2010

- 40 students were enrolled in the KMD CP (academic year 2009-10):
  Masters students: 16 (ALD-3, CS-1, CTL-4, FI-7, MIE-1)
  PhD students: 24 (CTL-10, FI-7, MIE-5, SOC-2)

- 36 students have graduated from the KMD CP since it began in 2002

- The deadline for KMD CP 2010-2011 applications was May 31, 2010

Changes to Collaborative Program made in 2010-11

We typically make changes to the KMD CP on an annual basis. During 2010-2011, we have been implementing a number of changes, following the changes we detailed in our November 2009 report, that is:
1. A reduced number of requirements for students
   - One less elective for Masters level students
   - No requirements to take KMD 2000 level courses as an elective (i.e., the elective can be an affiliated course within the student’s home unit)
   - Requiring only one core course (KMD1001) and a credit / no-credit seminar (KMD1002)
2. A requirement of participation in the KMD CP student community
   - An end-of-program portfolio rather than a portfolio as part of a student’s application to the CP
   - Presentation of the portfolio at a student research fair
   - Active student committees, student organizational meetings, and online community
3. An expectation of expanded enrollment, justified by the reduced program requirements.

2. Expanded & Revised KMD Program 2010-11

Our 2010-2011 courses include:

- **KMD1001** Fall 2010 (Sept-Dec)
- **KMD1002** Summer 2011 ( May-June)
- **KMD2001** Spring 2011 (Jan-Apr)
- **KMD2002** Fall 2010 (Sept-Dec)
- **KMD2003** Spring 2011 (Jan-Apr)
- **KMD2004** TBD

**KMD1001H F:** Knowledge Media Design: Fundamental Concepts
Peter Pennefather, Colin Furness
Fall term, Sept-Dec. Thursdays 3-6 pm
1st session September 16 in Faculty of Information, Room BL 205
Public dialogue sessions in Bahen Centre, Room BA 1230
Private student workshops in Bahen Centre, Room BA 7231

**KMD 1002H F** [2010 course description] - Knowledge Media Design: Contexts and Practices
Jim Slotta, Cheryl Madeira, Hedeih Najafi
An intensive course completed during the Summer term 2010, May-June 2010. Credit course (credit/non-credit). Open to KMD CP Master’s and PhD students, and non-KMD CP students with special permission. Bahen Centre, Room BA 7231

**KMD 2001H / INF 2169H** - Human-centred Design
Andrew Clement, (Spring term, Jan-Apr 2011, Mondays 10-12 am)
An approach to design grounded in understanding the real-world practices of users and communities. The course draws most heavily from the 'participatory design' school, in which the prospective users play a vital collaborative role throughout all stages of the development process. Students work in teams with a 'real' user group developing a prototype knowledge media application. The purpose of this course is to provide students with both theoretical foundations and practical experience in developing information systems that are driven by the needs and active participation of users.

**KMD 2002H** - Technologies for Knowledge Media
Kate Sellen, Mark Chignell (instructor-of-record) (Spring term, Jan-Apr 2011)

The goal in this course is to gain experience in designing knowledge media, with a focus on case studies in communication, collaboration, and information access. The focus will be on requirements analysis, prototyping, and evaluation. We will interpret “technologies” broadly in this course to include methods as well as tools.

KMD 2003H / CLT 1926H S - Knowledge Media & Learning
Jim Slotta (instructor-of-record) (Spring term, Jan-Apr 2011)

This class works as a knowledge community to investigate various themes relating to particular knowledge media. The course investigates the implications for learning and instruction in the classroom, on the playground, in the museum, online, or anywhere else that learning may happen. It attempts to make connections to the theoretical foundations from the learning sciences and other disciplines - What is known about how people learn? How can technology expedite learning or knowledge construction?

KMD 2004H - Knowledge Media, Culture & Society
Spring 2011 Schedule - TBD

The development and widespread implementation of new technologies is frequently disruptive and controversial, at least in their early days. This course examines contemporary controversial technologies in context. Explicitly resisting the conventional but overly simplistic notion of ‘social impacts of technology’, it treats technological development as a complex socio-technical phenomenon with multiple stakeholders vying with each other to shape trajectories of development and to define ‘success’ and ‘failure’.

Note: Information on the KMD1001 Public lecture series is available at the following address: http://kmd1001public.eventbrite.com/ The first lecture, entitled The Meaning of KMD, features a panel of U of T professors Pennefather (LDFP, Sensemaking), Ron Baecker (CS, Media Infrastructure) and Gale Moore (Sociology, Design). Everyone is welcome. No RSVP necessary. Refreshments will be provided. SEPT 16, 2010 4PM-6PM in Bissell 205.
Report on current & future research activities

A. Designing Digital Media for the Internet of Things (DDiMIT)

In the fall of 2009 KMDI worked with Dr. Matt Ratto of the Faculty of Information on a project entitled Designing Digital Media for the Internet of Things (DDiMIT).

KMDI developed the following proposal to support DDiMIT:

- Ontario Media Development Corporation (OMDC) Entertainment and Creative Clusters Partnerships Fund program to fund a collaboration space and coordinator
  - $150,000 in funding confirmed (announced February 10, 2010)
  - total budget of just under $300,000
  - $77,000 raised in in-kind commitment from partners

Partners in DDiMIT include:

- University of Western Ontario - Laboratory for Humanistic Fabrication
- Interactive Ontario
- Ontario College of Art and Design (OCAD)
- Brock University
- Three S Productions - Home of BunnyEars.tv
- Aesthetec Studio Inc.
- Marblemedia Interactive Inc.
- Torch Partnership Inc.
- Emerging Methods Inc.


The NCE-KM network informing Presentation of Information in Professional Education (iPIPE-Net) will partner with Canadian centres of education innovation and regulation to assess program development pipelines feeding curricular change. It will have several goals: 1) to make explicit how KMD can influence that process, 2) create a community-of-practice around KMD mediated process innovation, and 3) to mobilize change in practice synchronized with developments in an evolving knowledge society. IPIPENet will ensure that full advantage is taken in the process of KM via pre-licensure program redesign of investments in Canadian digital economy advantage. It will develop innovative ways of sharing KMD principles there are learned as well as mobilized. It will support an important step in healthcare KM aimed at preparing the healthcare professionals of tomorrow for change needed today. Peter Pennefather, KMDI Director of Outreach, is already working closely with Bruce Stewart of the iSchool Institute on this proposal.

C. KMDI-Supported ORF - "Integrated Decision-Making Support for Sustainable Communities", (to be submitted Ontario Research Fund for Research Excellence Funding, Round 5).
This proposal is collaboration between the Cities Centre, The Business Intelligence Network (BIN) and the Knowledge Media Design Institute (KMDI) at the University of Toronto.

The goal of this initiative is to establish Ontario as a world leader in the data analytics technologies needed to drive intelligent planning and decision-making in the areas of Urban Design and Energy Management. The research will produce the tools needed to rapidly combine information from large, diverse datasets, and the models and visualizations needed to bring citizens and policy-makers together to re-invent cities as the basis for a livable, resilient, carbon-neutral society. The proposed program integrates the research of a talented team of world class researchers, and builds on the advantages Ontario enjoys as an early adopter of smart grid technologies and open data initiatives.

Research themes include:
- Data Integration and Management, Frank Tompa, Waterloo
- Privacy and Security, Andrew Clement FI, U of T, Kostas Plataniotis ECE U of T
- Modeling and Simulation, Eric Miller, Civil Engineering, U of T
- Visualization, Gerald Penn, Comp Sci, U of T
- Decision Support & Public Engagement, Steve Easterbrook, Comp Sci, U of T

In domains:
- Climate Solutions and Energy Management, Brian Karney, Engineering, U of T
- Urban Design and Planning, John Danahy, Architecture, U of T

The project will include a large database housing smart meter data and a multimedia immersive environment for collaborative decision-making. Multiple large-company partners are showing interest and support for the project including IBM.
Other

- **Summer Students**: KMDI hosted two summer high school students for 4 weeks this summer. The students assisted the Director in development of content for a website to raise awareness for the research underway in the lab. The students also assisted in the development of a vocabulary list and voice recordings for a new research initiative to assist the cognitively impaired. The research is underway in the TAGlab.

- KMDI has strengthened its ePresence webcasting team by hiring two new operators - Kohen McBride (film student) and Sara Allain (FI Masters student in archives) and coordinating webcasting operations with other organizations including DCS and the TAGlab.

- **KMDI Lectures in August**: AL SELVIN, Director of the IT Group at Verizon Communications, USA spoke at KMDI on August 5, 2010. Selvin lead the discussion on “Making Representations Matter: The Practice of Shaping Participatory Media Artifacts.” for a group of practitioners and academics. The discussion was followed by a hands-on workshop in which small groups of participants could explore the concepts and tools presented.

- **Work-study program**: KMDI has secured 4 work-study students through applications put forth by KMDI Director Plataniotis and Director of Outreach Pennefather. KMDI supported and will assist in the administration of an additional 2 work-study students to be placed within DDiMIT and supervised by Dr. Matt Ratto. Students will work in a variety of KMDI initiatives including new product design and evaluation with KMDI partner companies and multimedia development for KMDI communications.

- **Industry Canada's 2010 online consultation on the Digital Economy strategy**: At the University of Toronto (U of T), a process to encourage participation to author this submission was co-sponsored by The Faculty of Information, Knowledge Media Design Institute and Identity, Privacy and Security Institute. Through communication with our networks and affiliates, a call for participation was launched, and we recruited scholars and experts in information and communication technology (ICT) policy, broadly conceived and also open to anyone with an active interest in this field. A key requirement from all participants was the willingness to collaborate on crafting this written submission. To achieve this goal we first established a wiki environment where approximately 50 people joined in the conversation. Second, an in-person roundtable was held for 33 participants at U of T on June 14th, 2010. Individuals participating in the wiki and roundtable event came from a range of backgrounds; while primarily an academic group of professors, students and staff, participants from industry and non-profit organizations also attended and joined in. The objective for the wiki and the roundtable event was to collaboratively author this submission as a consensus document, where the prevailing opinions of a broad array of the participants could be captured.