Overview

Progress on objectives for 2014-2015

- Initiate funded research activities
- Start the establishment of a dedicated space for collaboration
- Firmly establish the DCI lecture series as part of the social intellectual life at the faculty, reaching out beyond the iSchool
- Renovate the DCI’s web presence and turn the website into a live information hub
- Build a core local team
- Get local visibility at the iSchool and UofT
- Build local connections across the university
- Build international connections

Lecture series 2014-2015

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Summary and Outlook

Overview

Digital curation is the active involvement in the management, including the preservation, of digital resources for future use. The DCI's vision is to be a focal point for digital curation and a world-class center of expertise in digital curation showing international leadership in interdisciplinary digital curation research, innovation, education, and advice.

The DCI promotes innovative multi-faceted research projects that involve collaboration among faculty, students, practitioners, and researchers both nationally and internationally. It encourages research that bridges the field of critical information studies; library and information science; archives and record management; information systems, media, and design; cultural heritage; museum studies, knowledge management and information management.

This report provides a brief overview of activities since July 2014. Please visit dci.ischool.utoronto.ca for all information related to the DCI.
Progress on objectives for 2014-2015

The first major objective was to establish a vision for the Digital Curation Institute. I completed this over the summer 2014: The vision, perspective and strategy of the Digital Curation Institute is available at http://dci.ischool.utoronto.ca/wp-content/uploads/201410-DCIVision2014.pdf. The document describes a perspective on digital curation to scope the discussion and, based on this, formulates a vision for the Digital Curation Institute. It describes what the DCI can and will do and how this will benefit the iSchool community, the Faculty of Information, the University of Toronto, and a local and international community. It also describes short- and medium-term objectives and core activities.

The vision document defined the following objectives for this year:

1. Initiate funded research activities
2. Start the establishment of a dedicated space for collaboration
3. Firmly establish the DCI lecture series as part of the social intellectual life at the faculty, reaching out beyond the iSchool
4. Renovate the DCI’s web presence and turn the website into a live information hub
5. Build a core local team
6. Get local visibility at the iSchool and UofT
7. Build local connections across the university
8. Build international connections

I will briefly outline below how each of them has been accomplished.

Initiate funded research activities
Over the summer 2014, I have enabled the DCI to become an official funded partner of the international research initiative BenchmarkDP involving the United Nations Food and Agriculture Organization, the Austrian State Archives, Vienna University of Technology, INESC-ID Lisbon and the Fraunhofer Institute for Experimental Software Engineering. See http://benchmark-dp.org/ and http://dci.ischool.utoronto.ca/?page_id=13
We have since initiated focused research on methods to enable memory organizations to assess and improve their ability to preserve digital materials. This is an ongoing study which will continue and expand over the coming 12 months. Student researchers at the faculty who are involved in the project have also helped establish http://sustainabilitydesign.org/, an international initiative for sustainability principles for software systems design.

Start the establishment of a dedicated space for collaboration
A proposal has been submitted to the Canada Foundation for Innovation for the establishment of a digital preservation lab. The proposal is still under review.

Firmly establish the DCI lecture series as part of the social intellectual life at the faculty, reaching out beyond the iSchool
We have had three lectures this year from international leaders in the field with inspiring ideas; these have also had significant visitors from outside the faculty and beyond UofT. We have
started broadcasting the lectures online; and we have organized seminars that bring the visitors together with our PhD students. A detailed report on the lectures is provided further below.

Renovate the DCI’s web presence and turn the website into a live information hub. I developed and rolled out the **new website of the DCI** in August 2014 and have actively maintained it since.

![DCI Website Screenshot](image)

**Build a core local team**

Several student researchers are now playing key roles in the research of the DCI, funded through the project BenchmarkDP. (See the “team” page on the website.) I have also requested input of others at the faculty who are involved in research and education activities related to digital curation. The Input received from several colleagues and PhD students will be made visible on the website, in coordination with our colleagues, to demonstrate the excellent work relevant to digital curation that others at the faculty carry out. (See the section on future steps.) This will also provide a starting point for conversations with those interested in digital curation.

**Get local visibility at the iSchool and UofT**

Considering the ongoing discussion topic of the ischool website, visibility is a challenging subject in times where online means have become the primary source of information for many.
The lectures have of course played a major role in increasing the visibility of the DCI; and the ischool website now has links to the institutes at the front web page at the very bottom.

The DCI supported the Snowden Archive, launched on March 4 2015 with CBC presence and a live link to Edward Snowden, based on an initiative of Prof. Andrew Clement. The Archive was designed and built by George Raine, a graduate of this Faculty’s Master of Information program (including the Introduction to Digital Curation and Preservation class) with the assistance of Jillian Harkness, currently a student in this program. It is the first fully indexed and searchable archive of documents leaked by Edward Snowden and subsequently published. The archive was recently featured in the UofT news (http://news.utoronto.ca/edward-snowden-archive-university-toronto-project-gives-you-access-all-leaked-nsa-documents).

Build local connections across the university
A key partner for the DCI at UofT can of course be the UofT library as ScholarsPortal. Steve Marks, the new digital preservation librarian at UTL, is a regular guest speaker in the digital preservation class and very interested in identifying ways of collaboration through case studies and other modes of research. The initial study of assessment methods conducted in BenchmarkDP has resulted in concrete options to collaborate on, for example through pilot case studies. We will continue to pursue this in the coming year.

Build international connections
Through the partnership in the BenchmarkDP grant, the DCI is collaborating with an initial set of organizations - see the DCI website (http://dci.ischool.utoronto.ca/?page_id=45):

![Partners](https://example.com/partners.png)
Lecture series 2014-2015

Three lectures were organized (http://dci.ischool.utoronto.ca/?cat=6). A fourth lecture was planned but in a very unfortunate turn of events had to be cancelled due to US visa regulations. All lectures are open to the public.

Margaret Hedstrom: CyberInfrastructure for Digital Curation - Some Lessons from SEAD
http://dci.ischool.utoronto.ca/?p=281

Abstract: Countless examples of standards, tools, and shared practices for digital curation exist, but do these puzzle pieces add up to a scalable infrastructure for Big Data? SEAD (Sustainable Environment: Actionable Data) is building a suite of services for end-to-end capture, sharing, analysis, publishing and preservation of data for researchers in sustainability science. Margaret Hedstrom, SEAD PI, will discuss SEAD’s efforts to align the needs and interests of diverse scientists with an evolving infrastructure for data preservation and access in the “long tail” of scientific research.

Biography: Margaret Hedstrom is a Professor at the School of Information, University of Michigan. Her current research interests include digital preservation strategies, sharing and reuse of scientific data, and the role of archives in shaping collective memory. She is PI for SEAD (Sustainable Environment: Actionable Data), an $8 million project funded by the US National Science Foundation, that is building cyberinfrastructure and developing new practices for data sharing, preservation, access and reuse. She also heads a NSF-sponsored traineeship (IGERT) at the University of Michigan called “Open Data” in partnership with faculty and doctoral students in bioinformatics, computer science, information science, materials science, and chemical engineering that is investigating tools and policies for data sharing and data management. She currently chairs a study committee for the National Research Council, National Academy of Science, on Digital Curation Workforce and Education Issues.

Following the lecture, we organized a small seminar with our PhD students.

Jon Ippolito: Digital Preservation and the Search for Renewable Culture
http://dci.ischool.utoronto.ca/?p=358

Abstract: Dead links, delaminated CDs, and demagnetized hard drives are all signs of a cultural heritage system in peril from technological obsolescence. Yet even if we managed to save our bits for eternity in the Cloud, that’s no guarantee that posterity would be able to reconstruct their original software and hardware environments—and thus the experiences and meanings these bits conveyed for us.

Fortunately, more adaptable preservation paradigms are waiting to be discovered far outside the walls of archives and museums. From the Amazon rainforest to videogame forums, creative culture is being re-performed rather than stored. While professional conservators and archivists wring their hands over digital works decaying in climate-controlled warehouses and libraries, a global community of amateurs has been reanimating extinct artworks, video games, and even spacecraft.
Drawing on themes from his 2014 book Re-collection (http://re-collection.net) co-authored with Richard Rinehart, Jon Ippolito examines how a few intrepid institutions have begun to apply the lessons of such crowdsourced preservation to everything from emulation testbeds to 3D scanathons. Accompanying the talk will be a dialogue with moderator Prof. Costis Dallas and the audience on how techniques from performative culture can help rescue digital culture from the throes of technological obsolescence and institutional amnesia.

Biography: Jon Ippolito is Professor of New Media at the University of Maine, where he co-directs the Still Water lab and the Digital Curation program. Re-collection, his most recent book on the threat that technological obsolescence presents for digital culture, was published in 2014 by MIT Press.

Jon Ippolito hopes building networks will help keep digital culture alive and kicking—but he has his hands full in today’s climate of unfettered media monopolies, accelerated obsolescence, and looming co-optation by academia. He is the digital doyen of The Variable Media Network, an international consortium of museums and archives that devises medium-independent strategies to preserve new media art. As grand vizier of The Open Art Network, Ippolito works with a growing number of prominent digital artists to promote an open architecture for the Internet and digital media. As chief constable of the Still Water lab at the University of Maine, he works with Co-director Joline Blais to enforce an expansive definition of networked art in the academy and the art world, as argued in their 2006 book At the Edge of Art. The recipient of Tiffany, Lannan, and American Foundation awards, he has exhibited artwork with collaborative teammates Janet Cohen and Keith Frank at the Walker Art Center, ZKM/Center for Art and Media Karlsruhe, Harvard’s Carpenter Center, and the Yale Art and Architecture Gallery. As Associate Curator of Media Arts at the Guggenheim Museum, he has curated Virtual Reality: An Emerging Medium and, with John G. Hanhardt, The Worlds of Nam June Paik. Ippolito’s critical writing has appeared in periodicals such as the Art Journal, Artforum, Flash Art, the Washington Post, and in his regular column for ArtByte magazine. He and his work have been cited in a dozen New York Times and a dozen Wired articles, but that didn’t stop his tenure committee from asking why he hadn’t published in more academic journals. His book Re-collection, co-authored with Richard Rinehart, argues that digital heritage of the last 30 years will be lost to history without a revolutionary approach to preserving culture

Stephen Abrams: Curation Semiotics - Foundational Theory and Practice
http://dci.ischool.utoronto.ca/?p=411

Abstract: Digital curation is a complex of actors, policies, practices, and technologies that enables meaningful consumer engagement with content of interest across space and time. The UC Curation Center (UC3) at the California Digital Library (CDL) supports a growing roster of innovative curation services for use by scholars across the 10 campus University of California system. However, recent initiatives in the area of research data curation have led to a significant change in UC3’s target audience. While UC3 continues to support its traditional campus stakeholders – librarians, archivists, and curators – it is now also engaging directly with faculty, researchers, and students.

In response, UC3 has embarked on a comprehensive review of its systems and services to ensure that it is meeting its goals most effectively. In doing so, however, a number of seemingly
simple, yet deceptively difficult to answer questions cropped up almost immediately. What constitutes the full spectrum of scholarly activities for which curation support may be usefully offered? What does “preservation” mean for the new genre of research objects (or indeed, for “traditional” content)? While curation practitioners can draw upon a number of useful frameworks for specific areas of concern, for example, the Open Archival Information System (OAIS), Trusted Repositories Audit and Certification (TRAC), Preservation Metadata Implementation Strategies (PREMIS), etc., it is not clear how, or indeed whether, their underlying conceptual models cohere into a comprehensive and unified view of the curation domain. For example, many of the concepts at the heart of these standards, perhaps most problematically, “digital object”, remain woefully over­loaded and under­formalized. UC3 has developed a new model of the curation domain to provide a comprehensive, self-consistent conceptual foundation for the planning and evaluation of its activities (https://wiki.ucop.edu/display/Curation/Foundations). While drawing from many prior digital library efforts, it also incorporates relevant concepts from other disciplines. Most notably, the model considers digital content in terms of five semiotic dimensions of semantics, syntactics, empirics, pragmatics, and dynamics. This presentation will examine UC3’s role as a curation services provider within a digital age research university and the use of its domain model in decision-making processes regarding its programmatic mission, services, and initiatives.

**Biography:** Stephen Abrams is the associate director of the University of California Curation Center (UC3) at the California Digital Library (CDL), with responsibility for strategic planning, innovation, and technical oversight of UC3’s services, systems, and collections, including initiatives for repositories, web archiving, data management planning, and data curation. He has participated in a leadership, governing, and advisory capacity for many digital library projects and organizations, including DataONE, Federal Agencies Digital Guidelines Initiative, International Internet Preservation Consortium, ISO 19005-1 (PDF/A), Jewish Women’s Archive, JHOVE/JHOVE2, PLANETS, and the Unified Digital Format Registry, and on conference program committees for the iPRES, IS&T Archiving, and Open Repositories conferences. His most recent work focuses on economic cost modeling for long-term sustainability of digital library services and curation domain modeling. Prior to joining the CDL in 2008, Mr. Abrams was the digital library program manager at the Harvard University Library. He holds a BA in Mathematics from Boston University and an ALM in the History of Art and Architecture from Harvard University.

For the first time, we broadcasted the event on a Google Hangout and published the recording on youtube. Following the lecture, I organized a lively small seminar with a few of our PhD students focused on the curation model that Stephen Abrams has developed. An engaging discussion resulted in a number of follow-up ideas and revisions to the curation model.

**Next steps: Objectives 2015-2016**

The objectives for the next two years, 2015-2017, as provided in the vision document are

1. Complete the setup of a physical space
2. Establish a mechanism for the affiliated status of faculty to be recognized
3. Consider moving from an EDU:D to an EDU:C status
4. Establish international visibility of the DCI in the digital curation community
5. Establish concrete collaboration programs with selected partner organizations
6. Consider carefully a collaborative program in Digital Curation at UofT

For the coming year, the focus will be on the first two of these, identifying ways of collaboration across the faculty and establishing the setup of a physical space. Additionally, I intend to continue the lecture series, and I have initiated conversations with the Data Carpentry - the ‘sibling organization of Software Carpentry designed to teach basic concepts, skills and tools for working more effectively with data’ (http://datacarpentry.org/) - for a data carpentry workshop in early 2016. Hence, key objectives are as follows:

1. Complete the setup of a physical space
2. Identify ways and modes of collaboration across the faculty
3. Continue the lecture series
4. Expand workshops and seminars associated with the lecture series
5. Complete the research on organizational assessment funded through BenchmarkDP

What the DCI brings to the iSchool

The table below highlights selected specific, tangible objectives and outputs of the DCI and how the DCI in particular contributes to the Faculty’s priorities to innovate, inspire, and shape the future, as outlined in the iSchool Strategic Plan. It is adapted and updated from the DCI vision.

<table>
<thead>
<tr>
<th>Strategic Goal: Innovate</th>
<th>How the DCI contributes to achieving this</th>
<th>Expected outcomes</th>
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<tr>
<td>Nurturing collaborative research and scholarship that embraces pluralistic approaches.</td>
<td>Initiative specific research efforts and demonstrate their value through publication, outreach, seminars and lectures. The preservation lab will provide the space for such collaborative research, bringing together areas such as ISD, ARM, and others.</td>
<td>Specific research projects (such as BenchmarkDP) and their results. See the publications page on the DCI website. The digital preservation lab</td>
</tr>
<tr>
<td>Promoting long term, sustainable growth in external funding for iSchool research</td>
<td>The DCI provides a platform for digital curation research and a name for continuity, and will actively seek external funding. The DCI website will highlight particular achievements, partnerships, and ongoing initiatives.</td>
<td>External funding for research projects and facilities, starting with BenchmarkDP. Explicit partnerships that can be promoted and demonstrate international visibility.</td>
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<tr>
<td>Strategic Goal: <strong>Inspire</strong></td>
<td>Developing and participating in local, national, and international research partnerships.</td>
<td>This is a core objective of the DCI itself and is being pursued correspondingly.</td>
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| Strategic Goal: **Shape** | Achieving greater visibility for iSchool research and scholarship. | 1. Funded research published in top-tier venues  
2. Cooperation with particular international stakeholders will demonstrate visibility.  
3. Cooperation with local partners will be sought.  
4. The DCI website will showcase research results.  
5. The lectures will continue to attract an audience beyond the iSchool.  
6. We have started to record the lectures on video and release the material publicly. | - Publications (on website)  
- Projects (highlighted on web)  
- Activities with local partners  
- Lectures (tracked attendance)  
- Growing email list (summer 2015)  
- Lecture recordings |
| Strategic Goal: **Inspire** | Engaging our students in experiential, experimental, and empirical learning. | Digital curation and preservation courses such as INF2122 and INF2308 actively partner with content stakeholders. The seminars and workshops at the DCI lectures provide an environment of interdisciplinary experimentation. | Courses, DCI Lectures, workshops and seminars (listed on web) |
| Strategic Goal: **Shape** | Enabling the life-long intellectual growth of our graduates, supporting them as they participate in shaping the information society. | The research efforts at the DCI engage students in research in innovative environments and spaces. | Research assistantships funded by DCI research |
|  |  | The DCI lectures are open to alumni of the iSchool, and an email list will be set up to facilitate our graduates to stay informed about the events and activities of the Institute. | Email list; graduates attending DCI lectures and workshops |
...iSchool students

Courses, lectures, workshops and seminars. Existing courses directly connected to the DCI include INF2122, Introduction to Digital Curation and Preservation, and INF2308 Special Topics: Preservation Planning. Additional courses are highly relevant and are being added to the website. DCI lectures regularly feature graduate workshops and seminars on topics specifically selected for how relevant they are for the iSchool students. Seminars will provide unique opportunities for intimate discussions with leading experts in these topics, enabling our students to dive deep in particular areas that interest them and build personal connections with digital curation leaders.

Opportunities for research. The research projects to be carried out at the DCI will focus on providing specific opportunities for PhD and Master students to engage in challenging research questions, bringing in their specific background and experience to address open research questions in an interdisciplinary internationally connected team, including international organizations with mandates to curate and preserve digital resources.

Visibility to employers. A hub for exchange and a platform for discourse and activity, the DCI will also boost the visibility of our students to employers, as the next generation of digital curation experts prepares to graduate in the iSchool.

...iSchool alumni

Through its lectures and events, the DCI will provide an intellectual forum and a connection to faculty life, providing a welcome excuse to visit iSchool for lectures and workshops and retaining the ability to connect to recent graduates with specific digital curation expertise.

Summary and Outlook

The Digital Curation Institute has tremendous potential as a focal point of research, innovation and education in digital curation. We have now taken initial steps to establish a baseline on which to build future activities and collaborations. These steps were taken without initial funding beyond the costs of guest lectures.

Taking some of the next steps will require resources the DCI does not currently have, and so it will only be possible if we find the right resources and partnerships. The DCI is on a good track to making this happen, but it still requires a substantial amount of effort.

Christoph Becker, Director