AMICO

&

THE UNIVERSITY OF TORONTO

A PROPOSAL TO BECOME THE HOST INSTITUTION

FOR AMICO

26 March 2002

The University of Toronto recognizes the substantial benefits of hosting AMICO and is eager to negotiate a mutually beneficial partnership. For its part, the University would bring to the relationship an exceptional range of computing resources and services which would be more than adequate to meet AMICO's stated technical requirements. But in addition, AMICO would be encouraged to participate in an extremely rich research and teaching environment which includes more than 2,200 full-time faculty and over 54,000 students (of which roughly 10,000 are in graduate programs). Indeed, the University has a great deal to offer, not the least of which are the resources of the third ranked academic research library in North America, and advanced digital library programs and related research.

Given the myriad opportunities for collaboration, the following proposal highlights obvious directions for discussion without trying to be exhaustive. In addition, as far as possible it answers specific questions suggested in AMICO's guidelines for a response to its RFP.

1. **Nature of the relationship**:

   On behalf of the University, the University of Toronto Library (UTL) proposes a tenant relationship for an initial period of five years. During this period both parties would review the terms of the agreement, negotiate revisions, and likely renew the relationship for an additional period. We would be interested in working towards a cash neutral agreement; that is, an arrangement wherein in-kind contributions made by the two parties would balance. This of course assumes the interest of AMICO in being an active participant in the life of the University – without in any way losing its independence as a world-class organization.

   Please note, specific costs listed below are in American dollars and reflect typical University rates. They are offered as a basis for discussion of appropriate value of in-kind contributions.

2. **Specific costs, benefits and options for AMICO**:

   A. *Office Space*:

   UTL will make available 1800 square feet of open concept office space on the seventh floor of the Robarts Library. The standard University rental rate is $15.75 per square foot for an annual rental fee of $28,350.00. The cost of renovations and equipment is additional. The potential for sharing meeting space and computer facilities exists and may reduce the office space required.

   The general and specific advantages of this location deserve comment. The building for the Robarts Research Library for the Humanities and Social Sciences, 130 St. George St., is in downtown Toronto at the centre of the University, with convenient access to public transportation. It is accessible 24 x 7 and has a high level of security

services. The proposed office space on the seventh floor is ideally suited for collaboration with potential partners on the same floor such as the Information Technology Services group of UTL, and several other digital projects. These include the Text Analysis Portal for Research TAPOR (lexical analysis group), a research project comprised of faculty from English, Information Studies, and the Dictionary of Old English; the Research Data Centre (RDC) of Statistics Canada; Iter, a large database project of Medieval and Renaissance materials, described in the enclosed letter from the Director; and research projects associated with the Adaptive Technology Resource Centre. The Museum Studies program is located only one floor below the proposed site. In addition, the Faculty of Information Studies, which is connected to the Robarts Library, offers an array of research activities in the area of digital cultural heritage.

B. *Computer Applications and Network Access*:

The University of Toronto is an ideal location from the perspective of applications services and network access. For the former, the Library's Information Technology Services is an experienced service provider for computer applications and is well placed to serve AMICO's needs, if desired. For the latter, the Computing and Network Services manage the backbone connection for the Ontario research community and maintain the high-speed international connectivity required by AMICO. More detail is provided in the following sub-sections.

Computer Applications:

The Library's Information Technology Services Department currently provides support for a number of University Departments (e.g., Faculty of Medicine Web Site) and to outside organizations (e.g., Renaissance Society of America) on a contract basis. The Library's Web Services Group supports not only the Library but also many major university faculties, departments and research units. For a selected list of major digital projects supported by the Web Services Group see Appendix A. In addition, the application / information services of the Ontario Information Infrastructure are provided to the Ontario universities on a contract basis. The Library is willing to explore similar service contracts with AMICO and can provide a wide range of support in the areas of web and application development, database services, and hardware and network support. There is more than adequate expansion space in our server facility to provide needed service. Alternatively, AMICO could continue to provide its own services. We would suggest a site visit for a more detailed exploration of the alternatives.

In response to AMICO's interest in Open Archives Initiative metadata harvesting, the Library can report that as part of the implementation of Endeavor's ENCompass system in support of Ontario Information Infrastructure initiatives, the Library will be exploring the use of the OAI metadata harvesting protocol (OAIMH). It is expected that this will develop into a service for all Ontario universities.

The following paragraphs provide an overview of some of the Library's and University's computing capabilities.

The Library's information services are supported through an extensive computing and network environment. The Library currently operates or is installing the following systems:

DRA/Sirsi:
    2 DEC Alpha 7730s
    1 IBM RS6000/G40
    1 IBM RS6000/J40
    1 IBM RS6000/S70
Electronic journals & Web of Science:
    4 SUN E3500s
    2 SUN E6800s
Resource Sharing:
    2 NT web servers
    3 NT application servers

Web Services:
    2 NT web servers
    2 NT application servers
Digital Library services:
    4 NT servers
WinFrame / MetaFrame services:
    7 NT servers
Other public and staff functions:
    13 NT servers

The Library is currently migrating its data storage to an 8 terabyte storage area network based on 2 IBM FAStT500 systems. This installation will be completed in April. Backup will be managed through an IBM 3584 LTO Ultrascaleable Tape Library with four Ultrium drives and 141 cartridge slots.

As the foundation for its internal operations and for its public access catalogue the Library currently operates the DRA system and will have completed the transition to the Sirsi system in August. The library database contains over 6 million bibliographic and authority records.

Through Cambridge Scientific Abstracts, Ovid/SilverPlatter, and other locally operated and remote systems, the Library provides access to over 400 electronic indexes and abstracts. The local systems include the Web of Science, ScienceServer, and a wide range of CD-ROM titles accessed via WinFrame/MetaFrame servers.

In its developing role as a digital repository, the Library loads about 20% of the 13,000 licensed electronic journals locally through the ScienceServer/ENCompass system. This includes all of the journals from Academic, Elsevier, Kluwer, Springer and Wiley. The Library extends the electronic journal services to nine other universities including the University of British Columbia, the University of New Brunswick, and seven Ontario universities. Through the Ontario Information Infrastructure program, access to the electronic journal services as well as to the Web of Science will be extended to all of the Ontario universities in July.

The Library supports resource sharing activities through the Fretwell-Downing VDX interlibrary loan and document delivery system. This service is operated by the Library on behalf of the Ontario Council of University Libraries and is currently being implemented in all of the Ontario universities.

Within the Library there are three isolated networks for public workstations, for staff workstations, and for systems and servers. The major systems and servers reside behind a firewall.

Network Access:

University of Toronto Computing and Network Services manages the University's backbone network (see http://madhaus.utcs.utoronto.ca/info/routers.jpg) and its external network connections (see http://onet.on.ca/GigaPoP/). The Library's access to the backbone network is via two redundant gigabit network links. The trunked gigabit speed backbone provides on-campus connectivity between all its major buildings.

External connectivity is a total of 60 Mbps, consisting of 45 Mbps to the commercial Internet and 15 Mbps to CA*net3, which is an optical backbone network running coast to coast through Canada, connecting all post-secondary educational institutions, as well as to the Internet2 and Abilene networks in the US, via the Startap in Chicago.

The commercial Internet connectivity costs approximately $500/Mbps/month. With the advent of ORION, the Ontario Research and Innovation Optical Network, expected late this year, the costs of this Internet connectivity is expected to drop significantly. Moreover, ORION will provide gigabit access to Ca*net4, which will be an OC-48 (2.48 Gbps) backbone network, with similar high-speed access to Internet2 and Abilene. The costs of ORION are not speed dependent, so there is no additional marginal cost to accommodate the AMICO proposal's connectivity to Internet2 and Abilene. If AMICO's users are among the institutions reachable via Abilene, Internet2 and CA*net3/4, there would be no additional connectivity cost to AMICO. If some of the users are on the commercial Internet, then additional bandwidth could be procured at the $500/Mbps/month cost, which is expected to drop to the order of $378 Mbps/month once ORION is deployed.

C. *Facilities for AMICO employees*:

AMICO staff would be considered part of the University community and would therefore have full access to its resources. This would include, for example, a wide range of courses and programs relevant to their work, and our research libraries (including licensed electronic materials such as the U of T's 20,000 electronic journals, books, indexes and abstracts: see http://eir.library.utoronto.ca/eir/EIRsummary.cfm). In addition the staff would have the opportunity to participate in the many conferences, seminars, lectures, exhibitions and performances that take place on campus. In a broader context the proximity of the Art Gallery of Ontario and the Royal Ontario Museum offers additional opportunities for collaboration, research, and intellectual stimulation.

For qualified AMICO staff, there are mechanisms in place that would enable a direct involvement in teaching and research. The former might range from status-only appointments and stipendiary teaching to more regular appointments on the university faculty or institutional staff. Similarly, qualified staff would be eligible not only to collaborate in various research projects, but also to apply for research funding. Such opportunities might be explored in the first place with the departments, faculties, and projects that sent letters in support of the U of T's proposal to AMICO. In addition, there are opportunities for membership in various colleges within the U of T.

D. *Staffing*:

It is assumed that AMICO staff will work directly for the Consortium, in accordance with its own hiring and compensation policies, though there are precedents for other arrangements. In some instances, there may be good reason to share employees or to contract certain services (e.g. administrative support functions). These should be considered in a site visit. In any case, Toronto offers a highly favorable setting for attracting and retaining staff who enjoy an intellectually stimulating urban environment. In what has been described by the UN as the most culturally diverse city in the world, Toronto has an ample number of highly skilled people with strong international interests and superior language skills.

AMICO would be able to take advantage of various programs that provide matching funds for students in the University's academic programs. These include work-study opportunities for the fall and winter terms, and summer internships (May through September). Moreover, there are precedents for matching funding between research projects and the individual departments, research centers, and faculties within the University. The Iter project is an obvious example of the success of this kind of arrangement.

For comparative purposes, the following figures present an overview of salary ranges at the University of Toronto.

1. Project Manager
   A similar Project Manager at the University of Toronto has a salary of approximately $26,500.

2. Executive Secretary
   The minimum starting salary is $26,000.

3. Junior Programmer
   The minimum salary is $22,900.

4. Cataloguer
   The minimum starting salaries for librarians rank I, II, and III are as follows:
   Librarian I: $22,400; Librarian II: $24,000; Librarian III: $28,000.

5. Graduate Students:
   Graduate students from the Faculty of Information Studies are available at rates ranging from $7.50 to $9.50 per hour.

6. Assistant Professor
   The salary range in arts and humanities runs from $25,700 to $43,700.

3. **Expressions of interest and proposals for collaboration**:

The numerous letters of support (see Appendix B) expressing interest in collaboration with AMICO represent a variety of Arts and Science programs, professional Faculties and Graduate School centres. These are only a small proportion of the opportunities available, and the Library would be able to facilitate exploration of further collaboration of interest to AMICO. This may seem an unusual role for the Library. However, at the University of Toronto, the Library's mandate is wider than most, including support and coordination of academic computing for instruction and provision of access to digital resources for research and teaching. In the words of the Provost, Adel Sedra, the Library provides "one stop shopping for information and information technology." Through its digital and print library resources, its Information Commons access services, and its Resource Centre for Academic Technology support for teaching, the Library works with all Faculties to integrate resources for user convenience. The University, which is among the largest in North America, with a strongly entrepreneurial faculty culture and common interests in exploring utilization of new media and technology, has developed a number of successful ventures which have a high degree of overlap with AMICO's objectives.

The following units offer strong potential for creative new collaboration with AMICO, and many have described in more detail their interests and capabilities in their enclosed letters.

Digital library/information science theory and practice

• Faculty of Information Studies – Dean Lynn Howarth and faculty member, Wendy Duff, speak for a strong research faculty which combines Archives, Information Systems and Library Science programs. The Faculty has an outstanding track record in theoretical research as well as practical application in areas of information design and interface engineering. The Faculty is enthusiastic about working with AMICO and can offer faculty expertise, a pool of skilled students for projects, facilities for usability studies, and educational opportunities for AMICO staff.

• Knowledge Media Design Institute – The Institute is an interdisciplinary institute in the School of Graduate Studies with a newly established collaborative graduate program in "the design, development, and evaluation of media intended to support

an enhance the ability of individuals and groups to think, learn, communicate, and create knowledge." The Institute draws upon the intellectual heritage in communications established by Harold Innis and developed by Marshall McLuhan at University of Toronto. The range of active faculty members includes an interdisciplinary mix of faculty with many overlapping interests. The Director represents Architecture and Landscape Architecture, and his work includes state-of-the-art three dimensional visualization projects for design. Others are drawn from the Faculties of Medicine, Information Science, Education, Engineering, and Arts and Science. The faculty from Mechanical and Industrial Engineering have long-standing research interests in information retrieval and database construction, and the Computer Science group, in human-centered design. All are involved in funded research projects with international partners, as well as those in the Institute. More information about the various interests is available on their website: www.kmdi.org/nsindex.html.

Training and evaluation of the university use of AMICO

• Members of the Faculty of Arts and Science, with its outstanding Humanities centres, are strong supporters of AMICO and are already users of the AMICO database. As noted in the letters from the Dean and the Chair of Fine Arts, the Faculty is eager to contribute to the development of AMICO and to improving tools that would enhance its utility in the teaching environment. The Dean is committed to the development of tools and image resources that will serve more than one department and will be maintained according to established standards by the Library. At present, the Library and the Dean jointly fund a position to assist the Department of Fine Arts in moving to an online teaching environment. There is an excellent and timely opportunity for AMICO to provide expertise in assisting the U of Toronto to move this project from a local effort by a dedicated few, to the desired program of international significance.

• The Museum Studies Program is housed on the sixth floor of Robarts Library and represents another user group keenly interested in working with AMICO. In his letter, the Director outlines several specific possibilities for collaboration. The program has close ties with Royal Ontario Museum, and faculty are frequently cross-appointed to the Museum as well as having home appointments in subject departments such as History or Fine Art.

Both of the above offer excellent opportunities for further training and evaluation of AMICO for university purposes, and potential financial support for development. In addition, the Faculty of Information Studies and the Library have in the past collaborated on joint evaluations of database use, for example, the Early Canadiana Online study under Wendy Duff. The Library is keenly interested in participating in such studies to understand the needs of its users and would welcome the opportunity to work with AMICO in a jointly supported project.

Education (primary, secondary and graduate) research and implementation

- The Ontario Institute for Studies in Education of the University of Toronto (OISE/UT) would provide a partner without equal in this area. The Institute combines an outstanding research program with strong international connections in Europe, Asia, Australia, and the Caribbean, with a large K-12 teacher-training program. In addition to a major emphasis on the study of educational theory and curriculum development at all levels, OISE/UT has placed a high priority on the advancement of an arts focus for initial teacher training and graduate programs. With the Institute's provincial, national and international status and connections, there is great potential for realizing the increased utilization of AMICO in the K-12 educational environment. Added to this is a long-standing centre of excellence in the delivery of e-learning at all levels. Collaboration with OISE/UT offers enormous research and educational opportunities for AMICO.

Integration with other professional schools

- Opportunities in the faculties of Engineering, Architecture and Landscape Architecture, and Medicine have been briefly mentioned under KMDI. This Institute gives AMICO easy access to faculty in a variety of disciplines with interests similar to AMICO objectives. In addition, there are definite opportunities in our Faculties of Law and Management. Both have dynamic leaders in their deans. Already ranked among the leading programs in their fields, both are expanding in areas of interest to AMICO.

- The Faculty of Law has established a new Centre for Innovation Law and Policy, with recent appointments in Intellectual Property and New Media. International Law is a continuing area of strength. The Dean has recently led a campus-wide effort to develop new intellectual property policies relating to new media. The Law Library is leading a project to ensure the preservation of digital legal resources in Canada.

- The Rotman School of Management, as well, has research strengths in international business and outstanding new appointments in strategic management, which would provide opportunities for joint research or educational programs for AMICO. Students are available for projects such as the development of business models.

Special opportunities

- Iter: Gateway to the Middle Ages and Renaissance offers a truly unique opportunity. This highly collaborative project, with a U of Toronto home, has some strong similarities to AMICO. The letter from the Director, William Bowen, speaks for itself on the project's remarkable success. At a minimum, the project would be of interest in terms of sharing different successful business models. The

complementary nature of the two projects could also be a basis for development of both.

- The Multilingual Translation Centre (on the fourth floor of the Robarts) and Toronto's expertise in digital services in a variety of Roman and Non-Roman languages may be of assistance in achieving AMICO's international goals.

- The University of Toronto Press and the Library have several collaborative initiatives in e-publishing and could also offer potential for joint activities in publishing and rights management.

Because of the wide range of possibilities from theoretical research to assistance on practical projects, the full potential for collaboration will emerge when AMICO staff engage in one on one discussions with the many researchers on campus with relevant interests.

4. Conclusion

The University of Toronto would be delighted to host AMICO in a mutually beneficial partnership. We urge AMICO to give careful consideration to the many strong reasons for selecting the University of Toronto that we have presented in our proposal. Ideal office space in a prime location is available. Extensive support for computer applications exists and all network communication requirements are met. By locating in the third ranked research library in North America, which itself is centrally located in the top research university in Canada, both AMICO and AMICO staff will receive an exceptionally wide range of benefits deriving from this rich and diverse research environment. As indicated in the letters of support, faculties, departments and research projects would enthusiastically welcome AMICO to the University of Toronto. The same letters provide an initial impression of the wide range of mutually beneficial collaborative efforts and research projects that would be available to AMICO at the University. We invite AMICO to join us in pursuing what we consider to be the mutual goal of enabling educational use of museum multimedia through the advancement of research on digital cultural heritage.

APPENDIX A

MAJOR DIGITAL PROJECTS SUPPORTED BY THE

LIBRARY'S WEB SERVICE GROUP

Anatomical Plates: (under development, for release in early 2003)

    This is a collection of anatomical plates from early (pre 1800) medical texts. Descriptive metadata, providing subject descriptions, information about the artist and technique used, and a full bibliographic description of the text in which it was published accompany each high-quality plate image. The metadata for this collection is being captured in a relational database, with a Cold Fusion interface to the web. The collection is fully searchable, with the options of fielded and Boolean searching, and digital objects will be presented as jpeg images, together with the associated metadata.

Banting and Best collection: (under development, for release in early 2003)

    This site documents the discovery of Insulin at the University of Toronto, 1920-1923. The digital archive draws on materials from the Thomas Fisher Rare Book Library, University of Toronto, and includes images from original notebooks, correspondence, photographs, newspaper clippings and charts. The metadata and OCR for this collection are being captured in a relational database, with a Cold Fusion interface to the web. The collection is fully searchable, with the options of fielded and Boolean searching; digital objects will be presented as jpeg images, together with the associated metadata.

The Barren Lands — J.B. Tyrrell's Expeditions for the Geological Survey of Canada, 1892-1894: (http://digital.library.utoronto.ca/Tyrrell/)

    This site documents two exploratory surveys of the Barren Lands region west of Hudson Bay, in northern Manitoba and Saskatchewan and the area now known as Nunavut. Drawing on materials from the J.B. Tyrrell, James Tyrrell and related collections at the Thomas Fisher Rare Book Library, University of Toronto, it includes over 5,000 images from original field notebooks, correspondence, photographs, maps and published reports. Metadata for the Barren Lands is encoded using both EAD (encoded archival description) and a modified version of TEI-lite XML DTDs. The Barren Lands collection is made available on-line by the MultiText search engine that was developed by a team from University of Waterloo in order to simultaneously search text with various mark-up formats. The collection is fully searchable, with the options of fielded and Boolean searching; digital objects are presented as jpeg images, together with associated metadata.

Canadian Poetry and Poets: (http://www.library.utoronto.ca/canpoetry/)

> This collection contains poetry, biographies, and bibliographies of more than seventy Canadian poets. Also provides information about literary events and awards, Canadian poetry journals and magazines, other poetry sites, and other related resources. Edited by Sophia Kaszuba, University of Toronto Libraries. The Canadian Poetry collection is currently maintained as a static web page collection.

The Champlain Society: (http://www.canadiana.org/cgi-bin/ECO/mtq-champlain)

> Thirty-three of the Champlain Society's most important volumes (approximately 8,000 printed pages) dealing with exploration and discovery over three centuries. It includes first-hand accounts of Samuel de Champlain's voyages in New France as well as the diary from Sir John Franklin's first land expedition to the Arctic, 1819-22. Metadata for the Champlain Society collection is encoded using a modified version of the TEI-lite XML DTD. It is made available on-line by the MultiText search engine that was developed by a team from University of Waterloo in order to simultaneously search text with various mark-up formats. The collection is fully searchable, with the options of fielded and Boolean searching; digital objects are presented as jpeg images, together with associated metadata.

Early Canadiana Online: (http://www.canadiana.org/)

> A full text collection of more than 3,100 primary sources documenting Canadian history from the first European contact to the late 19th century. Housed at the University of Toronto on behalf of the Canadian Institute of Historical Microreproductions, the digital collection is particularly strong in literature, women's history, native studies, travel and exploration, and the history of French Canada. Early Canadiana Online was developed in partnership with the National Library of Canada, Université de Laval, and Bibliothèque Nationale du Québec. Metadata for the ECO collection is encoded using a modified version of the TEI-lite XML DTD. It is made available on-line by the MultiText search engine that was developed by a team from University of Waterloo in order to simultaneously search text with various mark-up formats. The collection is fully searchable, with the options of fielded and Boolean searching; digital objects are presented as jpeg images, together with associated metadata.

G8 Information Centre : (http://www.g7.utoronto.ca/)

> This project contains G7/8 summit and ministerial meeting documents from 1975 to present; G7-related news articles; G7/8-related scholarly articles. Developed together with the University of Toronto G8 Research Group, under the direction of Prof. John Kirton, the G8 Information Centre is currently maintained as a static web page collection.

Patrons and Performances, Records of Early English Drama (REED): (under development, for release in April 2002)

This project develops, for public educational and research use, the very large database of information about patrons, their companies and performances that has been assembled during the course of Records of Early English Drama research into provincial play performances before 1642. The material is presented using both textual displays and maps. The collection is fully searchable, with the options of fielded and Boolean searching. The web interface, provided by Cold Fusion and ArcView, is supported by relational database and ArcIMS backends.

Pollyclave: (http://prod.library.utoronto.ca/polyclave/)

This database contains generalizable web-based multiple entry species identification key. Current Pollyclave databases: Carolinian trees, seed flora of La Perouse Bay, Ontario Ericaceae, Leaves (a teaching database of 21 vine and tree leaf types), and Phalaenopsis species. Developed as an ANSI-C cgi program, PollyClave can be used as a web interface for any DELTA-format polyclave database.

University of Toronto English Library: (http://www.library.utoronto.ca/utel/)

The English Library contains a sizable full text collection of poetry, drama, and prose and non-fiction works, together with criticism and theory resources, glossaries, a history of English, and English composition resources. Works are selected for their usefulness to the university English student. Developed, maintained, and edited by Prof. Ian Lancashire, University of Toronto Department of English. UTEL is currently being migrated from a static web page collection to a relational database backend, with a Cold Fusion interface to the web.

APPENDIX B

LETTERS OF SUPPORT