



The Center for Research Libraries

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Repository Profile

ProQuest UMI Dissertation Publishing

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About the Long-Lived Digital Collections Case Studies

With funding from the National Science Foundation, CRL is engaged in a two-year project to analyze eight established, “long-lived” collections of digital data and content. These case studies will build upon the TRAC criteria for trustworthy digital repositories and the audits of the Portico, LOCKSS and ICPSR repositories conducted by CRL in 2006-2007 to test and refine those criteria.

The CRL case studies serve a different purpose than the aforementioned audits. While the audits probed the soundness of repository organizational and technical infrastructure, the case studies will identify practices, strategies and mechanisms that have enabled repositories to sustain massive digital collections over substantial periods of time.

ProQuest’s UMI Dissertation Publishing service is the subject of one of the studies. A basic fixture of academic research for over fifty years, UMI is the largest repository of theses and dissertations produced at U.S. and Canadian universities, and is a source of essential information to scholars worldwide. It is also, in effect, the official repository of dissertations and theses for the national libraries of Canada and the United States.

The present profile of ProQuest LLC and its UMI Dissertation Publishing service will be updated in future months, as CRL further examines ProQuest’s archiving practices and strategies, past and present.

A Note on Sources

As a privately held entity ProQuest LLC, the parent company of UMI Dissertation Publishing, is not required to disclose operational or financial information. The present report is based on information voluntarily provided by ProQuest, articles about UMI and ProQuest in trade publications, available data compiled by third-party business information aggregators, materials on ProQuest's own Web site (www.ProQuest.com/) and those of partner organizations, and information supplied by specialists at CRL member libraries.¹

1) Overview

UMI Dissertation Publishing is a business unit of ProQuest LLC. ProQuest LLC provides a variety range of services to the scholarly community. Among them is access to scholarly content through several Web based electronic platforms. ProQuest LLC products include, for example, ProQuest *Historical Newspapers*, a digital collection of the back runs of U.S. newspapers including *The New York Times* and *Wall Street Journal*; and its *ABI/INFORM* online business databases. Libraries constitute ProQuest's primary market, and subscribe to many of its major products and services.

The UMI Dissertation Publishing unit of ProQuest produces the *ProQuest Dissertations & Theses (PQDT)* database, which gives users access to indexed PhD dissertations and masters theses (henceforth referred to as "graduate works") produced at universities in the U.S., Canada, United Kingdom, and Europe. UMI has been publishing graduate works since 1938, and at present claims to have more than 700 university publishing partners, which supply UMI with more than 60,000 new graduate works each year.

In 2007 alone UMI published approximately 85,000 dissertations. These were a mixture of newly published dissertations and "retro" titles, i.e., older titles added to the PQDT database for the first time.²

¹ The authors gratefully acknowledge the cooperation of Austin McLean of ProQuest LLC and Ingrid Parent of Library and Archives Canada in its work on this project. In addition, information from Colleen Mullarkey (Dissertation Specialist) and Ellen Bryan (Head) of the University of Chicago Dissertations Office was invaluable.

² Austin McLean Director, Scholarly Communication and Dissertations Publishing, ProQuest., telephone interview with the author, Feb. 18, 2008.

2) **History and Mission**

ProQuest LLC's mission statement for its graduate works is "As the primary publisher of dissertations and theses, our mission is to support higher education by meeting the university's need to provide a record of scholarly productivity and ensuring that graduate works remain significant contributions to the primary literature"³

ProQuest LLC began as University Microfilm International (UMI), which was founded by Eugene B. Power in 1938 in Ann Arbor Michigan. Power began the business with the idea of using microform technology to serve the low-demand publishing requirements of the scholarly community. One of UMI's first areas for content acquisition was doctoral dissertations. At the time, U.S. doctoral students were required to pay the not insignificant cost of self-publishing, producing multiple copies of, and often binding their dissertations. Within a year UMI was microfilming dissertations and publishing the abstracts in *Microfilm Abstracts*, a catalog of the dissertations available for sale from UMI issued annually.

In 1951 the UMI initiative gained considerable momentum when the Association of Research Libraries (ARL) voted to approve publication of doctoral dissertations on microfilm and to endorse distribution of those dissertations through UMI.⁴ ARL urged universities to begin submitting paper copies of the dissertations produced by their doctoral candidates to UMI for distribution in micro-format and paper reprint. UMI would microfilm the dissertations and publish the abstracts of each in *Dissertations Abstracts* (previously *Microfilm Abstracts*). ARL libraries then agreed to discontinue the practice of interlibrary loan of paper copies of dissertations that were available to universities on microfilm through UMI.⁵

UMI and Xerox

In 1962 UMI was sold to the Xerox Corporation for \$8 million. Eugene Power continued to run the company as a subsidiary of Xerox until he retired in June 1970. Xerox introduced some changes, creating a designated sales force, and expanding the sale of reprints of publications from the company's

³ Austin McLean Director, Scholarly Communication and Dissertations Publishing, ProQuest., Personal interview. 18 Feb. 2008.

⁴ Ellsworth, Ralph E. "Toward Publishing Doctoral Dissertations." *Journal of Higher Education*, 23(1952) : 241-244.

⁵ Power, Eugene B. Edition of One. Ann Arbor, MI: University Microfilms International, 1990.

microfilmed collections⁶. In 1971 UMI changed its name to Xerox University Microfilms and in 1976 reverted to University Microfilms International.

UMI and Bell & Howell

In 1985 UMI was sold to Bell & Howell. In 1999 the name was changed to Bell & Howell Information and Learning. In 2001 Bell and Howell created the ProQuest Company out of two of its business units, Bell & Howell Information and Learning and Bell & Howell Publishing Services. In June 2001, "PQE" began trading on the New York Stock Exchange when Bell & Howell sold a minority of shares to the public.⁷

National Archive Publishing Company

In 2005, ProQuest divested of some of its assets to the National Archive Publishing Company (NAPC), a corporation formed by former members of ProQuest management. Under a long-term contract with ProQuest, NAPC serves as a producer and supplier of microfilm and digital content for ProQuest. Under the agreement NAPC stores ProQuest microform masters and fulfills microfilm requests for content retained by ProQuest such as dissertations, newspapers and research archives.⁸

ProQuest LLC and Cambridge Information Group (CIG)

ProQuest's difficulties as an independent public company began in 2006, when its 2005 financial information was determined to have been incorrectly stated by the Securities and Exchange Commission. Independent auditors determined that ProQuest had "certain deficiencies in internal controls." At that time it was found that "there was no evidence of undue pressure from corporate management to attain certain results, but that one individual was responsible."⁹ In early May of 2007 the ProQuest Company's stock was removed from listing and trading on the New York Stock Exchange because of the company's failure to file its 2005 annual report, Form 10-K, and certain of its fiscal 2006 Form 10-Q filings.¹⁰ As a result of the accounting irregularities, several shareholder lawsuits were filed against ProQuest in 2006.¹¹

⁶ Power, Eugene B. Edition of One. Ann Arbor, MI: University Microfilms International, 1990.

⁷ ProQuest. "ProQuest Company Launched from Base of Bell & Howell e-Businesses." ProQuest Webcast. 5/6/07. 5/3/2008 <<http://phx.corporate-ir.net/phoenix.zhtml?c=93447&p=irol-newsArticle&ID=340979&highlight=>>

⁸ National Archive Publishing Company. "About NAPC." NAPC Webpage. 2008. 2/27/2008. <<http://www.napubco.com/about.html.>>

⁹ Hane, Paula J. "ProQuest Reports Completion of Audit Committee Investigation." Newsbreaks. Information Today. 7/8/06. 5/3/08 <<http://newsbreaks.infotoday.com/nbReader.asp?ArticleId=17326.>>

¹⁰ SEC. "25-NSE New York Stock Exchange Inc." 4/24/07. 3/5/08. < [>](http://www.secinfo.com/dOX3q_uch.d.htm).

¹¹ ProQuest. "ProQuest Provides Business Update" 7/3/07 PRNewswire-FirstCall. 3/5/08. <<http://www.prnewswire.com/cgi-bin/stories.pl?ACCT=104&STORY=/www/story/03-07-2007/0004542031&EDATE=>>

In June 2007 ProQuest changed its name to Voyager Learning Company and its ticker symbol from PQE to VLCY. Voyager re-located corporate operations to Dallas and has since concentrated on K-12 products. Prior to the name change, in Dec 2006, the unit of ProQuest then called ProQuest Information and Learning, which included UMI, was sold to the Cambridge Information Group (CIG). Alan Aldworth, ProQuest Company's chairman and CEO, said, "This pending transaction . . . will significantly improve ProQuest Company's capital structure."¹² CIG merged ProQuest with CSA, a scientific database provider and named the new company ProQuest LLC.¹³

Cambridge Information Group (CIG) is a private, family owned company that has been in operation since 1971. It was founded by Robert N. Snyder and Philip E. Hixon. Philip Hixon has since retired, but Robert N. Snyder continues as the Chairman of CIG. The three original operating companies owned by CIG were CSA, Disclosure Incorporated (sold in 1987 to VNU, a Dutch publishing conglomerate), and National Standards Association (sold in 1993 to Information Handling Services, Inc.).

In addition to ProQuest LLC, CIG currently owns the publishing company Bowker; Navtech, a supplier of flight operations information and aeronautical charts to the airline industry; GWDI, a company that provides communication and data management to the aeronautics market; Sotheby's Institute of Art, which offers postgraduate degrees and undergraduate study abroad programs in art scholarship, connoisseurship and art business; and Bach to Rock (B2R), a chain of music schools designed for students from pre-school through adulthood. CIG also holds equity in Jin Yun Wan Xiang, a chain of "retail establishments located in historic sites in and around Beijing that sell gifts inspired by cultural icons" and MetaMetrics, a company that develops products and services that focus on improving teaching and learning in grades K-12.¹⁴

3) Content and Services

UMI Dissertation Publishing offers not a single product or service but rather provides related products based on single works, and performs a set of services for different clients and stakeholders. UMI

¹²ProQuest "ProQuest Provides Business Update." ProQuest Press Release. 12/15/06. 3/18/08
<<http://phx.corporate-ir.net/phoenix.zhtml?c=93447&p=irol-news>>

¹³ Cambridge Information Group. "Cambridge Information Group Announces Agreement to Acquire ProQuest Information and Learning." CIG Press Release. 12/15/06. 3/7/08 <<http://info.csa.com/enews/CIGAcquiresProQuestPR.shtml>>

¹⁴ Cambridge Information Group. "CIG Operating Companies".2007. 3/7/08.
<<http://www.cambridgeinformationgroup.com/companies.htm>>

publishes and distributes graduate works in microform, paper and electronic formats; registers many of those works for copyright in either the United States or Canada, and makes citations and abstracts of the works available for discovery through on-line databases.

Citations and Abstracts

The main UMI product is the *ProQuest Dissertations and Theses (PQDT)* database. *PQDT* is a Web-based subscription database, a single platform for search and discovery of citations for all UMI dissertations and theses. As of March 2008 2,119,392 doctoral dissertations and 342,452 master's theses were listed in *PQDT*.

In the U.S. the database is considered to be a nationwide clearinghouse of graduate works, to which the vast majority of U.S. graduate works are submitted. The dissertations listed in the database date from 1861 through the most recent academic year; master's theses began to be added selectively in 1962. Since 1988, the database includes citations for dissertations from 50 British universities that have been collected by and filmed at the British Document Supply Centre.

PQDT also includes 350-word abstracts for dissertations published from 1980 forward, written by the authors; and 150-word abstracts for master's theses from 1988 forward. Abstracts for dissertations and theses in the database dating from before 1980 are found in earlier UMI print publications: *Dissertation Abstracts International*, *American Doctoral Dissertations*, *Comprehensive Dissertation Index*, and *Masters Abstracts International*.

Access to Full Texts

Access for subscribers is provided through *PQDT A&I*. For universities who have submitted graduate works to UMI there is a secondary database, known as *PQDT Full Text* which provides full text access to their submitted graduate works. *PQDT A&I* provides, citations, abstracts and for newer publications a 24 page preview. It also gives users the opportunity to purchase access to the full text of graduate works produced since 1997, in PDF digital format. UMI estimates that the full texts of a million graduate works are included in *PQDT A&I*.

The *PQDT* database subsumed the contents of an earlier stand-alone platform called *ProQuest Digital Dissertations*, which existed from 1997–2007. (In 2007, *Current Research@*, a separate distribution platform that gave contributing university's access to their full text dissertations, was also migrated into

the *PQDT* database.) 1,750 of the electronic graduate works contain supplemental files in a variety of formats, among them digital audio, video and electronic spreadsheet.

Some graduate student authors opt to make the full texts of their works openly accessible on the Web. At the time of this report 124 open access graduate works were available through a UMI Web page called *PQDT Open*.

Full interoperability exists between *PQDT* and other products on the ProQuest platform, such as ABI. There are a number of other online distribution channels for the graduate work abstracts and index terms. Among these channels are OCLC and Dialog, the STN database, and Chemical Abstracts, which includes subject-specific graduate works. Other subject-specific indexes that include graduate works published by UMI include: *ABI*; American Psychological Association's *PsychInfo*; ABC-CLIO's *American History and Life*; *Historical Abstracts*; Modern Language Association's *MLA* database; CSA's *Sociological Abstracts*; American Mathematical Society's *Mathematical Abstracts*; CINAHL; *Chemical Abstracts*; *ProQuest Nursing and Allied Health* and *ProQuest Health Management*.

In addition, Google has been permitted to crawl and index bibliographic data for UMI graduate works published from 2005 forward. As of March 2008 there appeared to be 23,000-25,000 UMI dissertation citations available through *Google Scholar*. The link from *Google Scholar* to an internal UMI page provides the name of the author, the author's graduate advisor, school, source, source type, publication number and a persistent link to the *PQDT* database. Sometimes an abstract is also provided.

For a time UMI had an arrangement with Amazon whereby users could purchase and download full-text electronic copies in PDF format of recent UMI dissertations from U.S. universities through the online bookseller. That arrangement was discontinued in 2006, and the dissertations were removed from Amazon.com early in 2007.

A separate UMI database, *Dissertations Express*, is available on the Web to both subscribers and non-subscribers to *PQDT*. It provides online discovery of citations of the nearly 2.4 million UMI dissertations and theses, and is searchable only by author and title. *Dissertations Express* is simply an ordering and fulfillment tool, through which users can identify and purchase unbound print copies of graduate works for \$41 each.¹⁵

¹⁵ ProQuest. "PQDT Database Search." ProQuest. 2/14/08. < <http://ProQuest.umi.com/login> >

4) Users, Clients and Other Stakeholders

UMI Dissertation Publishing serves three distinct user or client communities: a) graduate student authors of graduate works and their universities; b) other scholars and researchers, and the libraries through which they obtain access to *PQDT*; and c) the national libraries of Canada and the United States, for which UMI serves as official repository for graduate works.

Services to Authors and their Universities

For graduate students who contribute their works to UMI this submission is often the last phase of the degree process. Authors submit to their university's dissertation office a full-text copy of their dissertation and pay a fee (at the time of this report, \$55.00; \$95.00 for open access electronic publishing of the work), to make the dissertation available for sale through *PQDT* in paper, microfilm and electronic formats. Authors must observe specified formatting requirements for submission. The author, also signs a publishing agreement with UMI that gives UMI the non-exclusive right to distribute their graduate work. In addition, UMI pays royalties to the author on the sale of paper and microform copies of his/her graduate work. Currently, authors are paid royalties on sales generated above \$10.00 in a given year. This policy is scheduled to change in 2009, when author's will receive royalties on all sales after the first \$25.00.

Copyright in the work continues to be owned by the author, although the author must secure authorization for inclusion of third party-produced content used in the graduate work prior to submitting the work to UMI. UMI asserts that it will not distribute a dissertation that contains content created by a third party where permission to reproduce has not been obtained from that party.

Authors can also request that distribution of their work be embargoed for a limited period. Restrictions of various durations can be imposed and are placed at the request of the author (and with the approval of the graduate school), such as six months, one year and two years.

Under an arrangement with the Library of Congress (see below), UMI will register an author's work with the US Copyright Office for an additional \$65.00. In 2002 ProQuest submitted approximately 500

electronic registrations per week for university dissertations, the largest number from any single submitter.¹⁶

University participation in the UMI program is voluntary, there is no formal agreement. Currently, universities receive free electronic access to full texts of all dissertations submitted by their students. This access is provided through the *PQDT Full Text* database. UMI also produces and offers to the university MARC 21 records for submitted graduate works for use in the university library OPAC. UMI is active in the academic community, providing nearly \$150,000 each year in the form of sponsorships and dissertation awards to be distributed through university affiliated organizations. University's help UMI by collecting, editing and submitting the graduate works to UMI through their dissertation offices.

Open Access Graduate Works

Since Fall 2006 UMI has offered authors the option of publishing their graduate works with UMI on an open access basis. Unlike those who submit their works to UMI under the traditional publishing model, open access authors do not receive royalties when their work is accessed by users. In addition, there is a \$95.00 fee to publish a dissertation under UMI's Open Access program, to defray the cost of publishing the work in a separate database.

Services to National Libraries

UMI also serves the national libraries of Canada and the United States. Under an agreement between ProQuest and the National Library of Canada signed in 1997, and renewed with Library and Archives Canada in 2000, UMI became the authorized worldwide distributor of graduate works from all institutions participating in the Canadian Theses Service. The Canadian Theses Service, now Theses Canada, is a national program based at Library and Archives Canada. Whose purpose is to preserve and provide access a comprehensive collection of Canadian graduate dissertations and theses. Approximately 4,000 dissertations and 7,000 theses are produced annually at participating colleges and universities in Canada.¹⁷ (See *Appendix A, Publishing Agreement between UMI and the National Library of Canada.*)

The agreement authorizes UMI to produce and distribute paper, microform, and electronic editions of the works. The agreement stipulates a minimum annual royalty payment UMI is to pay to the Crown for the

¹⁶ U.S. Copyright Office. "Annual Report of the Registrar of Copyrights, 2002." Feb 27, 2008.

<<http://www.copyright.gov/reports/annual/2002/automation.html>>

¹⁷ PR Newswire. "UMI and National Library of Canada Sign Major Agreement" PR Newswire 12/12/1997.

<<http://www.prnewswire.com/cgi-bin/stories.pl?ACCT=104&STORY=/www/story/12-12-97/377386&EDATE=>>>

distribution right, and the percentages of net revenue on the sale of graduate works UMI must pay in royalties to both the author and author's university. The Canadian agreement also sets the prices UMI is permitted to charge for the sale of microform, hardcover and paperbound copies of the graduate works. In return UMI is required to provide to Theses Canada and Library and Archives Canada three archival quality microfilm copies of all Canadian graduate works distributed under the agreement.

UMI executed a second agreement, with the Library of Congress and the U.S. Copyright Office, in January 1999. The LC agreement provides for electronic copyright registration and deposit of graduate works over the Internet to the U.S. Copyright Office. (See *Appendix B, Publishing Agreement between UMI and the Library of Congress.*) The agreement designated *ProQuest Digital Dissertations* as the official repository for more than 150,000 graduate works converted by UMI to digital form since 1997, and for such works to be produced in the future. The agreement was the first in which the Library of Congress designated an "official off-site repository" for digital materials required to be deposited with the Library.¹⁸

Both agreements provide authors and their universities incentives for depositing their graduate works with UMI. The UMI agreement with the Library of Congress provides authors a convenient way to register their works for copyright, and grants UMI special relief from depositing copies of the works it registers on behalf of the authors. The Canadian agreement designates UMI as the primary distributor of graduate works produced at universities in Canada, and requires Canadian universities participating in the Canadian Theses Service to submit to UMI all dissertations and theses produced.

5) Funding Model and Business Activity

[This section under development]

¹⁸Library of Congress. "Library of Congress and Copyright Office Sign Landmark Agreement with UMI." LOC Press Release. January 22, 1999 2/27/08 <<http://www.loc.gov/today/pr/1999/99-007.html>>

6) Databases and Systems

Workflows

Submission

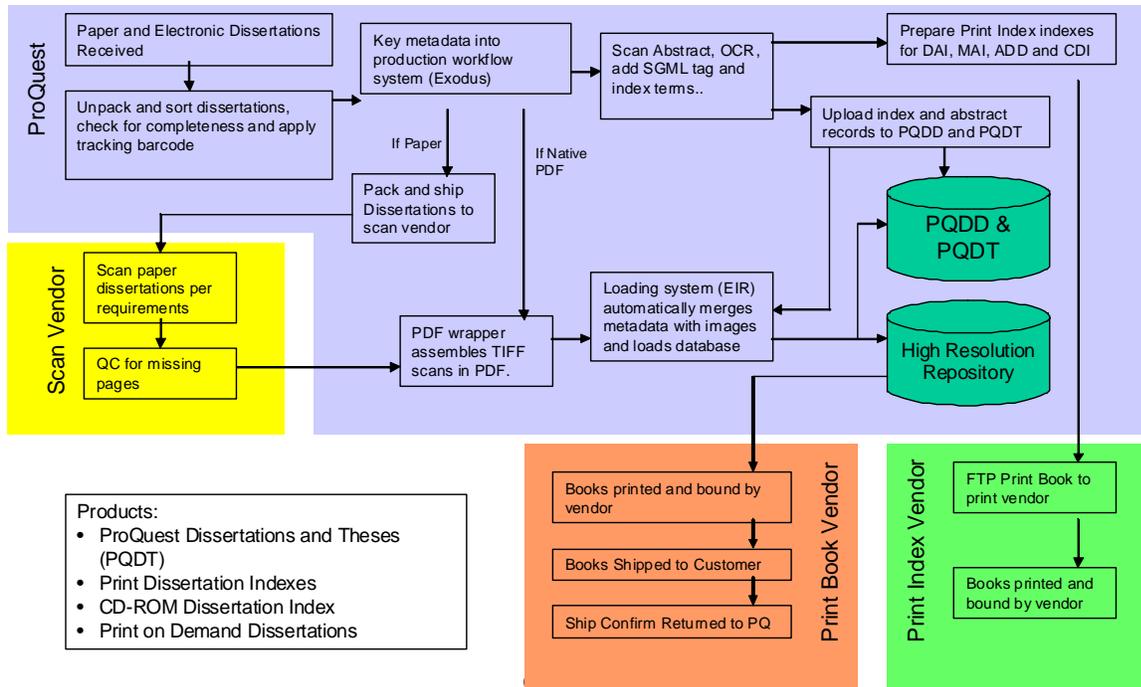
UMI receives all graduate works in either hard copy or electronic format through a university's dissertation office. The university's dissertation office is responsible for reviewing the dissertation, ensuring that it conforms to UMI formatting requirements and verifying that all the accompanying materials are available.

Along with the graduate work; UMI requires an abstract, which must accompany the agreement forms signed and submitted by the author, and the author's payment. The agreement, between ProQuest and the author is entitled: *ProQuest UMI Publishing Agreement*. (See *Appendix C*.) The agreement authorizes UMI to publish the dissertation and, if the author chooses, to act as their agent for copyright registration with the Library of Congress.

For electronic submission, UMI creates a submission Web page for each university. The author submits his or her graduate work in PDF format, via the Web page to the university's dissertation office. The dissertation office checks the dissertation and accompanying materials and then submits an electronically approved version to UMI. UMI provides an easy to use utility to convert Word files or RTF files to PDF's. If a graduate work is over 100 MB UMI advises the author to submit the PDF file and any associated supplementary files on a CD or DVD.

The editing of the format by both the university's dissertation office and UMI results in a uniform document which can be better managed by the ProQuest database system. This is important to UMI as it makes the works easy to reproduce in a microfilm, hard copy or digital format. For archiving purposes, it creates uniform documents that are highly desirable for migration to new systems.

Dissertation Publishing Process Flow



Flowchart courtesy of Austen McLean Director, Scholarly Communication and Dissertations Publishing, ProQuest.

Once UMI receives the content from the university's dissertation office, the material is sent through the dissertation publishing process workflow. First, all graduate works have a metadata file produced using the in-house developed Exodus system. The Metadata itself is created in MARC 21 format. If the graduate work is submitted in paper form, it is forwarded by UMI to a scanning vendor for processing and quality control. The outsourcing company scans the hard copy in TIFF images, and then wraps these images with the metadata in a PDF file wrapper. Once the graduate work is in PDF format it is microfilmed using ProQuest's Electron Beam Camera. The PDF file is loaded along with the metadata into the *PQDT* database and a second, separate high resolution repository. Both are located in ProQuest's Ann Arbor facilities.

Abstracts and Indexes

In a separate process, the author's abstract is saved as a file. Optical Character Recognition (OCR) is performed on the file and it is given SGML tagging. Index terms are extracted from the abstract. The abstract and index terms are added to the *PQDT* database. A separate process takes the indexed terms and incorporates them in a number of print indexes produced by UMI.

Distribution

Information about UMI dissertations is available to users in a variety of online and print publications. The most common method for accessing dissertations is through *PQDT*, ProQuest's searchable database of abstracts which is available to subscribers. Subscribers can access their university's dissertations for free in full text, or they may order other dissertations for instant viewing online or order hard copy in a variety of formats. As of March 2008 prices ranged from \$39.00 to \$101.00, with the instantaneously available digital copy being the least expensive format.

Authors can also choose to publish their work through an open access UMI Web site. This Website is called *PQDT Open*. Currently it is a simple standalone Web page listing the open access works contributed in 2006 alphabetically by the author's last name. UMI plans to further develop the Web site as more works designated as Open Access are received.

ProQuest Database and Database Center

ProQuest's Database Center houses all ProQuest information products. This includes the *PQDT* database of graduate works. The amount of content currently held within the ProQuest database system is over 125 billion digital pages.

The ProQuest Data Center is located in Ann Arbor Michigan. In 2000 ProQuest LLC migrated to a Red Hat Enterprise Linux environment¹⁹ All of the company's online database products were combined into one Oracle database back end. This system utilizes 295 HP ProLiant BL35p blade servers powered by AMD Dual-Core Opteron processors. If there is a need for more capacity, it can be quickly supported by adding additional HP ProLiant servers. The system uses one third the number of processors and half the memory of the systems they replaced in 2000.²⁰

The New Data Center

ProQuest is planning to relocate their main data center to Virginia. They are additionally building a small data center on the lower level of its Eisenhower Parkway office in Ann Arbor, Michigan. It will be used for computer equipment and pre-production housing and testing of new products. The new data center in

¹⁹ Redhat. "ProQuest CSA - 2007 Red Hat Innovation Award Winner." Redhat Press Release. 2007. 2/27/08
<<http://customers.press.redhat.com/2008/01/10/ProQuest-csa-2007-red-hat-innovation-award-winner>>

²⁰ ProQuest. "ProQuest CSA - 2007 Red Hat Innovation Award Winner." ProQuest Press Release. 2007.2/27/08
<<http://customers.press.redhat.com/2008/01/10/ProQuest-csa-2007-red-hat-innovation-award-winner>>

Ann Arbor is projected to cost \$6.5 million. ProQuest plans to hire an additional 303 employees in 2009 to staff the facility.

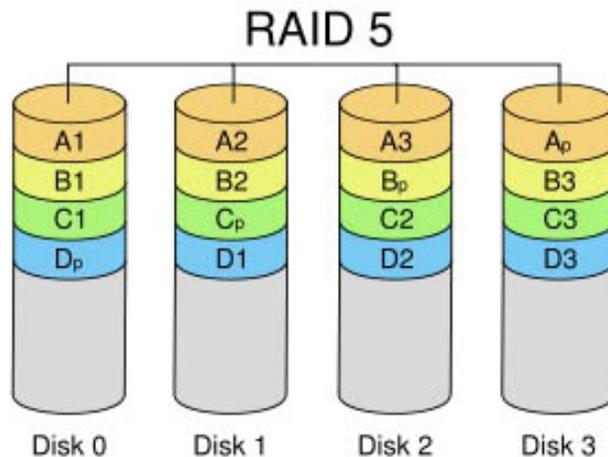
ProQuest is receiving a \$10 million state tax credit from the Michigan Economic Development Corporation, the State of Michigan's economic development agency. Additionally they expect to receive a \$1.2 million property tax abatement from the city of Ann Arbor.²¹

Archiving Arrangements

Microform continues to be a strong part of UMI's preservation program. All graduate works are archived on two copies of microform. UMI creates both a master negative and a print negative of each work. The master negative is not used and is held for archival purposes; the print negative is used to generate print and digital copies. Each microform is stored in a separate vault. These vaults are climate and humidity controlled according to the industry standard and they meet all Library of Congress qualifications. The microform created follows the ANSI/AIIM specifications that UMI helped establish as an industry standard. Even "born digital" graduate works are archived on microform. All page-based material (e.g. material that can be printed out as either 8.5 x 11 or A4 paper formats) is captured using a state of the art Electron Beam camera, which converts both born digital and digitally scanned files of graduate works into microform.

In addition to microform, two digital backup copies are created. Dissertations are converted to TIFF's and wrapped in a PDF. These files are then stored in online electronic vaults housed within ProQuest facilities in Ann Arbor. One copy is available in Ann Arbor in a mirrored storage set up, where two or more drives in a RAID-5 (redundant arrays of inexpensive disks) system hold the file. The second back up copy is kept on a Spinning Disk system located in Sterling, VA. Spinning disk systems are often used as an inexpensive, long-term storage solution. They are designed for fast writes and rewrites of data, and are a good choice for archiving purposes.

²¹Crain's Detroit Business. "ProQuest to add 300 jobs, data center." Crain's Detroit Business, December 18, 2007.2/27/08: <<http://www.craindetroit.com/apps/pbcs.dll/article?AID=/20071218/SUB/222948854>>



Model of a typical RAID 5 set up. Found at: http://commons.wikimedia.org/wiki/Image:RAID_5.svg

In addition to ProQuest's other storage solutions, a back up tape is kept at an undisclosed location in the Ann Arbor area.

One real world demonstration of ProQuest's ability to recover from a disaster was during the Great Northeastern Power Blackout of 2003. Around four PM on August 14, 2003 the largest power outage ever to hit the U.S. cut the power to the Ann Arbor area. Power was not fully restored to the area until seven PM the following day. According to Austin McLean, Director of Scholarly Communication and Dissertation Publishing, ProQuest LLC's systems were temporarily shut down. However, ProQuest had back up generators and once they were turned on, service was restored to customers worldwide. Other than a temporary halt in service, there was no loss or damage to the system.²²

Logs

ProQuest maintains logs of application retrieval failures. These failures are investigated and corrected on a regular basis by ProQuest staff. The vast majority of errors are logical errors (application errors or configuration problems), rather than media errors (data integrity errors on disk). ProQuest maintains that these errors are corrected as they are discovered.

ProQuest LLC Preservation Program

In December 2005, ProQuest convened an advisory group to recommend strategies for the organization to adopt to conform to digital preservation best practices. The advisory group included:

Sheila Anderson, Arts & Humanities Data Service, King's College

²² Austin McLean Director, Scholarly Communication and Dissertations Publishing, ProQuest. telephone interview with the author, February 18, 2008.

Mark McFarland, University of Texas at Austin

John Ober, California Digital Library

Mark Sweeney, Library of Congress,

Perry Willett, Digital Library Production Service, University of Michigan

The group recommended that ProQuest take the following measures:

1. Create an audit and risk assessment [process]
2. Document current processes and assess gaps
3. Identify person(s) responsible for digital preservation management
4. Utilize the OAIS Reference Model as chief model of guidance
5. Utilize widely accepted preservation formats
6. Utilize widely accepted metadata standards in our information packages
7. Utilize platform independent, open systems wherever possible
8. Provide as much transparency into preservation processes as possible

A preservation policy was subsequently developed, and is available on the ProQuest Web site²³. ProQuest designated a group of staff members to be responsible for digital preservation management, and asserts a commitment to migrating content as necessary. This commitment was demonstrated by their migration to a Linux-based system when it became necessary.

7) Successful UMI Strategies

There are a number of reasons why UMI has been able to sustain and grow its holdings of graduate works over a period of seventy years, and even achieve pre-eminence as supplier of dissertations and theses from North American universities. UMI was able to identify early on an important category of scholarly materials that was problematic for libraries and authors, and to use innovative technologies to create a cost-effective solution. Graduate works tend to be encumbered by intellectual property restrictions and other constraints, and are infrequently used. Before UMI, moreover, graduate students bore the cost of self-publishing multiple copies of their degree documents, as there was little incentive for publishers to invest in producing small editions of works of limited interest. UMI was able not only to provide in

²³ ProQuest. "UMI Dissertation Publishing Preservation Policy" 2007. 2/24/08
<http://www.ProQuest.com/products_umi/dissertations/preservationpolicy.shtml>

microform and later in digital format a low-cost publishing solution for authors, but to centralize and bring to scale the cataloging, storage, conversion and delivery of such works.

UMI was also able to distribute its production and service costs among both the library and student communities, charging authors for publication and copyright registration and libraries for access to abstracts, citations and full texts.

Formal agreements with the National Library of Canada (now Library and Archives Canada) and the Library of Congress negotiated by UMI in 1997 and 1999 respectively designated UMI as the official repository for dissertations and theses produced at Canadian and U.S. universities. On the strength of those agreements the statutory authority of the national libraries ensures a continual flow of content to the UMI collection. Moreover, the Library of Congress agreement exempted UMI from the costly requirement to deposit in the national library copies of the dissertations as a condition of copyright registration.

UMI has also succeeded in imposing a high level of uniformity on the production of dissertations and theses. By rapidly achieving market dominance in the publication of dissertations and theses, the service in effect set the standard for formatting graduate documents by a large population of authors. In 1951 the members of the Association of Research Libraries moved to accept microform as the medium for distributing of graduate works, and designated UMI as the primary source of these works by agreeing to no longer circulate on interlibrary loan works available from UMI. This has enabled UMI to exercise greater control over its production and content management costs.

UMI and its parent company ProQuest LLC have continued to maintain a close working relationship with the suppliers of their content: university graduate schools, who in turn communicate with faculty and graduate students regarding the UMI Dissertation Publishing program. ProQuest invests heavily in direct marketing to the academic community, engaging as advisors scholars, bibliographers, and other specialists in the humanities, and promoting ProQuest and UMI products at academic and library conferences.

8) Potential Vulnerabilities

While the market share and pre-eminence that UMI Dissertation Publishing has achieved may well endure, the service could face a number of challenges to its position, particularly as a source of graduate

documents in electronic form (EDT's). In the digital realm self-publishing has become almost cost-free, giving rise to a growing number of open access repositories for these kinds of materials, established by individual universities using D-Space, Fedora and other institutional repository software. Efforts such as the Networked Digital Library of Dissertations and Theses to federate these individual repositories and to provide authoring tools and standards may eventually offer graduate students alternative ways to expose their works to Web discovery and to gain access to the works of others. The growth of institutional repositories and open access dissertation efforts in the U.S. and abroad could thus make inroads on UMI's market.

Aggregators like ProQuest have lost ground to open access projects on other fronts. Major newspapers, like *The New York Times*, have moved from distributing their digitized back-files through subscription packages to mounting them directly on the Web and exposing them through search engines like Google and Yahoo!

The increasing diversity and complexity of the digital media in which graduate documents are created today may also challenge UMI's ability to impose uniformity on the production and intake of EDT's. UMI has in fact seen a recent increase in dissertations and theses that include supplementary digital materials, such as audio, video, and spreadsheets. ProQuest's recent migration of its systems to more efficient platforms and its creation of a new data center in Ann Arbor will help mitigate the upward pressure such content growth will inevitably exert on UMI storage and content management costs.

UMI's parent ProQuest LLC is owned by a private equity group as part of a portfolio of eight "operating companies." The other seven holdings in the portfolio, aside from Bowker, do not appear to offer much potential for synergy. They include companies specializing in aeronautics and flight information, K-12 and art education, and gift retail.

Should the PQDT database fail or become unavailable, some level of protection would be afforded U.S. and Canadian libraries by the cooperative agreements made between the National Library of Canada and Library of Congress. (See *Appendices A and B*.) That level of protection, however, differs under the two agreements. The Library of Congress agreement provides only limited protection to libraries other than LC. For example, it does not provide for access to the full texts of dissertations and theses included in the *PQDT* for submitting universities or libraries in the event of a UMI failure, as the Canadian agreement does. Nor does it protect libraries from price volatility, i.e., from price increases that might be imposed arbitrarily by UMI on the *PQDT* database or its related services. The trigger events that require UMI to provide serviceable copies of the dissertations to the Library of Congress include unavailability of the

database to the Library and transfer of its control out of the hands of UMI, but not interruptions in access to other libraries or extreme increases in the price of subscription to the database.

The Library and Archives Canada agreement, on the other hand, establishes both the prices UMI may charge for copies of Canadian graduate works and the prices UMI is permitted to charge student authors for services and others for copies of the works.

Services Bibliographiques DEC 23 1997 National Library Bibliothèque nationale FILE NO.: EN498-7-0010	002/019 3570-5 ✓
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THIS PUBLISHING AGREEMENT MADE IN DUPLICATE THIS 19th DAY OF December, 1997.

B E T W E E N: HER MAJESTY THE QUEEN IN RIGHT OF CANADA (HEREINAFTER REFERRED TO AS "HER MAJESTY") ACTING THROUGH AND REPRESENTED BY THE MINISTER OF PUBLIC WORKS AND GOVERNMENT SERVICES CANADA (HEREINAFTER REFERRED TO AS THE "MINISTER")

OF FIRST PART

A N D: UMI COMPANY, A COMPANY INCORPORATED UNDER THE LAWS OF DELAWARE AND HAVING AN OFFICE IN ANN ARBOR, STATE OF MICHIGAN, U.S.A. (HEREINAFTER REFERRED TO AS THE "LICENSEE")

OF SECOND PART

WITNESSETH THAT:

WHEREAS THE NATIONAL LIBRARY OF CANADA REQUIRES SERVICES SUPPORTING THE ACQUISITION, MICROFILMING, PRESERVATION AND OTHER SERVICES FOR THE SUPPORT OF THE CANADIAN THESES SERVICE PROGRAM;

WHEREAS THE NATIONAL LIBRARY OF CANADA ALSO REQUIRES THE DISTRIBUTION OF COPIES OF SUCH THESES; AND

WHEREAS THE LICENSEE IS PREPARED TO PERFORM SUCH SERVICES.

NOW, THEREFORE, THE PARTIES, IN CONSIDERATION OF THE PREMISES AND THE TERMS AND CONDITIONS HEREIN CONTAINED, AGREE AS FOLLOWS:

ARTICLE 1 - DEFINITIONS AND ATTACHMENTS

1.1 In this Licence, unless the context requires otherwise,

- a) "Abstract" means an author-written summary of the thesis or dissertation submitted concurrently with the Work. The Abstract may be submitted in either English or French;
- b) "Agreement" means these Articles of Agreement;
- c) "Author Department", "NLC" or "National Library" means the representative of the National Library of Canada for those duties and functions assigned in this Agreement to the Author Department;
- d) "Copy", "Copies" or "Copies of the Work" mean the Copies of the Work which are to be produced and published by the Licensee hereunder;
- e) "Contract" or "Licence" means this Agreement and all attachments and annexes and all other documents or materials incorporated by reference;

- f) "General Terms and Conditions" mean the attached Annex "B", which forms part of this Agreement;
 - g) "Licensee" means the Party of the Second Part of this Agreement;
 - h) "List Price" means the suggested retail price of a Copy of the Work as set out in this Agreement;
 - i) "Minister" means the Minister of Public Works and Government Services Canada and any duly authorized representative of the Minister, the Party of the First Part of this Agreement;
 - j) "Net Price" means the price at which a copy of the Work is actually sold by the Licensee (after discount);
 - k) "Non-Exclusive Licence to Reproduce Theses" means the form signed by all authors participating in the Canadian Theses Service Program. Each signed form grants the National Library of Canada a non-exclusive licence to reproduce, loan, distribute or sell copies of theses in microform, paper and electronic formats, as well as to sub-license or sub-contract any of the mentioned acts. The Non-Exclusive Licence to Reproduce Theses is attached as Annex "D";
 - l) "Territory" means worldwide;
 - m) "User" means third parties that have purchased Copies of the Work from the Licensee;
 - n) "Work" shall mean each thesis as delivered to the Licensee under the terms of this Agreement.
- 1.2 The following listed documents form part of and are incorporated into this Agreement as fully and effectively as if they were set forth at length herein:
- a) these Articles of Agreement;
 - b) Annex "A"- "Copyright Notice";
 - c) Annex "B"- "General Terms and Conditions";
 - d) Annex "C"- "List Prices and Pre-publication Prices";
 - e) Annex "D"- "Non-Exclusive Licence to Reproduce Theses".

In the event of any discrepancy, inconsistency or ambiguity between the wording contained in one contractual document with the wording of another contractual document, the wording of the Contract document that first appears on the above list shall prevail.

ARTICLE 2 - DESIGNATIONS OF REPRESENTATIVES

- 2.1 The Licensee's Representative shall be:

William E. Savage
 Director, Academic Relations
 UMI Library Division
 UMI Company
 300 North Zeeb Road, PO Box 1346
 Ann Arbor, Michigan 48106-1346
 U.S.A.

Telephone: 1-800-521-0600 ext. 3810
Facsimile: (313) 973-9145

- 2.2 The "Minister's Representative" shall be:

Nicole Hudon, Licensing Officer
Electronic Publishing & Licensing Division
Canadian Government Publishing
Public Works and Government Services Canada
350 Albert Street, 4th Floor
Ottawa, Ontario
K1A 0S5

Telephone: (613) 993-6922
Facsimile: (613) 947-6949

- 2.3 The "Author Department's Representative" shall be:

David Balatti
Director, Bibliographic Services
National Library of Canada
25 Eddy Street
Hull, Quebec
K1A 0N4

Telephone: (819) 994-6882
Facsimile: (819) 997-7517

- 2.4 All questions relating to the performance of or any proposed amendments to this Agreement shall solely be directed to the Minister's Representative.
- 2.5 The above officials and their addresses may be changed by written notice.

ARTICLE 3 - LICENCE TO PUBLISH

- 3.1 Subject to the rights granted by each author of a thesis, or by the Universities, as the case may be, the Crown hereby grants to the Licensee, subject to all the terms and conditions set out in this Agreement, a non-exclusive licence to produce and publish the Abstract and the Work, in paper and microform (microfilm and microfiche) formats, as well as to market, distribute and sell the Abstract and the Work within the Territory.
- 3.2 Subject to authorization from the Universities or from each author of a thesis, as the case may be, the Crown further grants to the Licensee, subject to all the terms and conditions set out in this Agreement, a non-exclusive license to produce and publish the Abstract and the Work in electronic formats (on-line databases and CD-Rom), including transmission via the Internet, as well as to market, distribute and sell the Abstract and the Work within the Territory.
- 3.3 The term of this non-exclusive licence shall be from the date of signature of this Agreement and ending on March 31, 2000.
- 3.4 Theses and dissertations in a language other than English and French shall include an English or French language Abstract provided by the author of the original document to the Licensee.

- 3.5 The Licensee shall print once at the beginning of all Copies of the Work produced in paper, microfiche and electronic formats, the copyright notice and other information as set out in ANNEX "A" - "COPYRIGHT NOTICE" of this Contract. The Licensee shall not indicate to readers that readers are to refer to the Licensee for permission to reprint or copy excerpts or any portion of the Work. The discretion to issue any such permission vests solely in Her Majesty. All inquiries for permission to reprint or copy excerpts or any portion of the Work shall be directed to the Minister's Representative.
- 3.6 Upon expiry or termination of this Agreement, the Licensee shall cease publishing the Work. In such event, all Copies of the Work, all works comprised in the Work and all excerpts thereof in the Licensee's possession shall be returned to NLC. The Licensee shall further provide an electronic copy of all theses created under this Agreement to the NLC.

ARTICLE 4 - MICROFORM AND ELECTRONIC PUBLICATION SERVICES

Microform Publication Services:

- 4.1 Subject to the terms of Article 3.1, the Licensee is hereby granted a non-exclusive licence to produce and publish the Abstract and the Work, in paper and microform (microfilm and microfiche) formats, as well as to market, distribute and sell the Abstract and the Work within the Territory.
- 4.2 NLC shall act as coordinator of the Canadian Theses Service Program and, as the publisher of the theses, will manage all copyright agreements with the authors of the theses. NLC shall further be responsible for creating and distributing the bilingual form entitled "Non-Exclusive Licence to Reproduce Theses" supporting the Canadian Theses Service Program, which form is attached at Annex "D".
- 4.3 The Licensee shall arrange for and receive regularly scheduled shipments of theses in paper and digital formats from participating institutions.
- i) Both parties shall encourage and facilitate digital submission of Masters' theses and dissertations wherever possible.
 - ii) Both parties shall encourage individual institutions to provide paper manuscripts that can be recycled after processing. In that case, the Licensee shall pay for shipment from the participating institution to UMI Company
 - iii) Those institutions that require the return of paper manuscripts submitted for microfilming and publication, payment for inbound shipments will be borne by participating institutions. The Licensee shall bear the cost of payment for return shipments of processed manuscripts.
- 4.4 The Licensee shall process received manuscripts in a timely manner, checking for previously copyrighted materials, pagination and collation and assign ISBNs as provided by the NLC. The Licensee shall also be responsible for routine contacts with graduate schools that facilitate processing. NLC shall be responsible for contacts that relate to policy questions or more problematic issues.

- 4.5 The Licensee shall create catalogue records for all manuscripts received from participating institutions and include those records in its bibliographic products and services including its paper publications *Masters Abstracts International* and *Dissertation Abstracts International* and all derivative on-line and CD-Rom electronic databases. At its own cost and expense, the Licensee shall provide NLC with a machine-readable copy of the MARC catalogue records for each manuscript received. Catalogue records created for NLC must include the following fields: 020, 082, 100, 245, 260, 502 (theses note) and 520 (abstract note).
- 4.6 The Licensee shall place images of all manuscripts received from participating institutions on archivally permanent silver halide microfilm. The Licensee shall reformat on to silver halide microfiche through its own proprietary process. All microfilm and microfiche products will conform to ANSI/AIIM standards for archival permanence.
- 4.7 The Licensee, at its own expense and cost, shall provide NLC with a second generation silver halide negative fiche and two positive silver halide service copies of each manuscript filmed and each university with one positive silver halide service copy of each manuscript it submits for filming under this contract.

Electronic Publication Services:

- 4.8 Subject to the terms of Article 3.2, the Licensee is hereby granted a non-exclusive licence to produce and publish the Abstract and the Work in electronic formats (on-line databases and CD-Rom), including transmission via the Internet, as well as to market, distribute and sell the Abstract and the Work within the Territory.
- 4.9 The Licensee shall reformat into Adobe PDF or equivalent digital format all documents received through the Canadian Theses Service Program (i.e. theses and dissertations).
- 4.10 (i) The Licensee shall make available to institutions and end-users, world-wide access over the World Wide Web the most current three months of its Dissertation Abstracts Database. Any title that has a PDF file associated with it will also be linked to a freely accessible twenty-four page preview file.
- (ii) The Licensee shall provide each participating Canadian institution with free on-line access to Adobe PDF or equivalent files of each thesis or dissertation submitted by that institution.
- (iii) Institutions that wish to gain access to their theses and dissertations shall notify the Licensee of the IP address range of the networked servers authorized by that institution. The Licensee's World Wide Web server shall verify the address of the client servers seeking access and will provide theses and dissertations on the basis of those IP addresses.
- 4.11 (i) The Licensee shall provide each participating Canadian institution with a free machine-readable copy of the MARC catalogue record for each manuscript submitted by that institution via Web access.

- (ii) In order to promote access to Canadian scholarship on the World Wide Web, the Licensee shall provide each Canadian institution with its own Web URL, in order to showcase citations, abstracts and previews of that institution's current theses and dissertations through the World Wide Web, free of charge.
- 4.12 (i) The Licensee shall provide NLC with free on-line access to the full text Adobe PDF or equivalent files of all Canadian theses and dissertations submitted under this agreement for on-site usage.
- (ii) the Licensee shall provide NLC with a Web URL containing a comprehensive file of Canadian citations, abstracts and previews, free of charge.
 - (iii) The Licensee shall provide NLC with an electronic Copy of all Canadian theses created under this Agreement, if requested by NLC at any time during the term of this Agreement.
- 4.13 Web URLs provided under this agreement shall be updated by the Licensee on a quarterly basis. On-line ordering, express document delivery through the Licensee's Dissertation Express service and file downloading for digital document delivery shall be components of the Web URLs provided by the Licensee to NLC and graduate institutions.
- 4.14 The Licensee shall, wherever possible, print out and microfilm electronically submitted documents following the same publication procedures as set out in articles 4.2, 4.4, 4.5, 4.6 and 4.7 of this Agreement.

ARTICLE 5 - PRE-PUBLICATION SERVICES TO MANUSCRIPT AUTHORS

- 5.1 As part of its role as publication agent for the Canadian Theses Service Program, the Licensee shall have the right to provide pre-publication services to manuscript authors. Pre-publication services shall include providing discounted paper and/or microform copies directly to the manuscript authors at the time of publication. Pre-publication prices are set out in Annex "C". Pre-publication copy sales shall not be subject to royalty payments.

ARTICLE 6 - FEES AND LIST PRICES

- 6.1 NLC shall pay to the Licensee a maximum fee of fifty five dollars Canadian (\$55.00 CDN) for both Masters theses and Ph.D dissertations regardless of manuscript length throughout the term of this Agreement. Fees shall be invoiced by the Licensee to NLC on a quarterly basis.
- 6.2 The List Price and Pre-publication Prices of Copies of the Work are set out more fully in Annex "C" of this Agreement. The Licensee shall provide the List Price for digital Copies once they become available.
- 6.3 The Licensee has the right to change the list prices for its good and services and shall inform Her Majesty of any changes to the List Price(s) at least thirty (30) days prior to the intended date of change.

ARTICLE 7 - PAYMENT OF ROYALTIES AND ACCOUNTING

7.1 In consideration of this licence being granted to the Licensee pursuant to Article 3 entitled "Licence to Publish", the Licensee shall pay to the Crown:

(i) Date of Signature to March 31, 1998

a minimum royalty of thirty four thousand five hundred dollars Canada (~~\$34,500~~ CDN) plus ten percent (10%) of net revenues from copy sales above the minimum royalty;)*

(ii) April 1, 1998 to March 31, 1999

a minimum royalty of forty thousand dollars Canadian (\$40,000 CDN) plus ten percent (10%) of net revenues from copy sales above the minimum royalty;)*

The royalties received during 1997/1998 and 1998/1999 will be applied against the publishing fees incurred by NLC through the Canadian Theses Service Program.

(iii) April 1, 1999 to March 31, 2000 *D. A. J. L.*

The Licensee shall invest ~~the~~ revenues generated from the Canadian Theses Service Program in 1999/2000 as follows:

- (i) seven and one half percent (7.5%) royalty to source institutions on all sales of that institution's titles; and
- (ii) ten percent (10%) royalty to qualifying authors of theses. Qualifying authors are those whose works sell seven or more copies in a given calendar year.

7.2 The Licensee shall render to the Minister on a semi-annual basis as of January 31 and July 31 in each year, commencing with January 31, 1998, a written account of sales of the Work(s) which account shall contain a statement of the number of Copies of the Work(s) sold and the List Price for each such Copy. This statement shall also include:

- (a) the format (hard copy, soft cover, diskette, on-line, microform, etc.) and if these sales are based on List or Net Prices;
- (b) the sale price per copy; and
- (c) the title of the Work (indicated only as Canadian Theses);

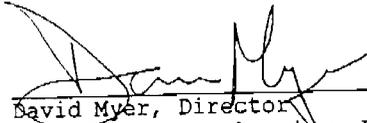
There shall be a written account of sales for each period, regardless of the amount of actual sales. Each account shall contain a computation of the amount of royalty (if any) payable to Her Majesty for such preceding period, which amount shall become due and payable no later than thirty (30) days of the end of such period. The written account as well as the royalty payment (if any) shall be sent to the attention of the Minister's Representative as stipulated in Article 2.2. The royalty payment shall be made payable to the Receiver General for Canada.

- 7.3 (i) The Licensee shall provide on a monthly basis, to the National Library of Canada, the following statistics/information:
- (a) number of theses processed/filmed;
 - (b) list of theses in ISBN order for each university shipment processed;
 - (c) list of theses arranged alphabetically by author for each university shipment processed;
- (ii) The Licensee shall also provide on a semi-annual basis, to the National Library of Canada, the following statistics/information:
- (a) number of theses sold and total revenue generated from these sales; and
 - (b) number of theses sold by author.

IN WITNESS WHEREOF THIS AGREEMENT HAS BEEN EXECUTED ON BEHALF OF HER MAJESTY THE QUEEN IN RIGHT OF CANADA BY THE REPRESENTATIVES OF THE MINISTER OF PUBLIC WORKS AND GOVERNMENT SERVICES CANADA DULY AUTHORIZED IN THAT BEHALF, AND HAS BEEN EXECUTED BY UMI COMPANY BY THEIR DULY AUTHORIZED OFFICERS.

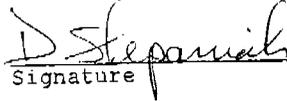
SIGNED AND DELIVERED:

MINISTER OF PUBLIC WORKS AND GOVERNMENT SERVICE CANADA:

PER: 
David Myer, Director
Communications Planning, Expositions and Special Events
Public Relations and Print Contract Services Sector
Supply Operations Services Branch
Public Works and Government Services Canada

UMI COMPANY:

PER:  December 1, 1997
Signature
John Riedel, President, UMI
Print Name and Title

PER:  12/9/1997
Signature
Dennis Stepaniak, Chief Financial Officer, UMI
Print Name and Title

ANNEX "A"

COPYRIGHT NOTICE

NOTICE:

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

ANNEX "B"

GENERAL CONDITIONS FOR PUBLISHING AGREEMENTS

**ARTICLE 1 -
INTERPRETATION**

1.1 Time shall be of the essence of this Agreement.

1.2 Neither Party is an agent of or for the other for any purpose of this Agreement and nothing in this Agreement shall be construed to enable either to act as such.

1.3 This Agreement shall constitute the entire and sole agreement between the Parties with respect to the subject matter of this Agreement and shall supersede all other communications, negotiations, arrangements and agreements of any nature between them prior to the Effective Date of this Agreement.

1.4 This Agreement, including all matters relating to its validity and performance, shall be interpreted, construed and governed by, and all relations between the Parties shall be fully determined in accordance with, the laws in force in the Province of Ontario, Canada.

**ARTICLE 2 -
REPRESENTATIONS**

2.1 The Licensee represents and warrants that:

(a) it is incorporated, validly existing, in good standing and has the corporate power and authority to carry out its obligations under this Agreement;

(b) it has, or has the capabilities to obtain, or will provide: the personnel, experience, qualifications, equipment, facilities and all other skills and resources necessary to design, edit, produce, test, verify, and deliver the Work

and to perform its obligations under this Agreement;

(c) it has not entered into any license, arrangement or understanding with any other person that does or will impair, diminish or vitiate its ability to perform its obligations under this Agreement;

(d) there is no understanding or anticipated litigation or proceeding before any court or tribunal relating to any matter that may affect its ability to perform its obligations under this Agreement; and

(e) it has maintained and will continue to maintain throughout the term of this Agreement, the capability to publish and produce the Work in accordance with the terms and conditions of this Agreement. The Licensee agrees to carry out the publication, production, marketing and distribution of the Work diligently and to provide efficient supervision and inspection thereof and ensure that the Work will be of proper quality, material and workmanship and in full conformity with all other requirements of this Agreement.

**ARTICLE 3 -
ADVERTISING APPROVALS**

3.1 All advertising and promotional materials created for use by the Licensee in relation to the Work and which makes reference to any federal government institution shall be subject to the prior and timely approval of the Minister. Failure of the Minister to notify the Licensee of its refusal to approve the materials, within seven (7) days of receipt thereof shall constitute ipso facto a deemed acquiescence. Such deemed acceptance

shall only be applicable if the Licensee first notified the Minister of the amount of time available to take a decision and referred the Minister to this Sub-Article of this Agreement.

ARTICLE 4 - PAYMENT

4.1 Payment by Canada for services rendered or for goods delivered by the Licensee or as otherwise required under this Contract, shall be made within:

(a) thirty (30) days following the date on which, the performance of each obligation of the Licensee is being carried out in a manner fully satisfactory to the Author Department.
or

(b) thirty (30) days following the date on which an invoice and substantiating documentation are received according to the terms of the Contract and have been verified by the Author Department;

whichever is later.

4.2 The Minister shall notify the Licensee, within 15 days of receipt of an invoice, of any inadequacy of the invoice or of the supporting documentation, and where any such notice is given within that period the date for payment of the amount invoiced shall be postponed until the Licensee remedies the inadequacy to the satisfaction of the Minister. Failure by Canada to act within fifteen (15) days will only result in the date specified in paragraph 1 of the Article to apply for the sole purpose of calculating interest on overdue accounts.

4.3 Where a delay referred to in Article (Excusable Delay) has occurred, the Minister may, at the Minister's

discretion, withhold all or a portion of any payment due to the Licensee until a "work-around" plan approved by the Minister has been implemented in accordance with that article. Article (Interest on Overdue Accounts) shall not apply to any amount withheld under this sub-article.

4.4 Despite anything contained in this Contract, if the Minister or the Author Department has determined that the Licensee has failed to perform or discharge any term or condition of this Co-publishing Agreement, then Her Majesty may reduce or suspend any payment otherwise payable to the Licensee, until the cause of such reduction or suspension has been resolved to the satisfaction of Her Majesty.

4.5 Her Majesty may, when making any payment to the Licensee, deduct from the amount payable any amount which is payable to Her Majesty by the Licensee under this Contract.

ARTICLE 5 - INTEREST ON OVERDUE ACCOUNTS

5.1 For the purposes of this article:

"Average Rate" means the simple arithmetic mean of the Bank Rates in effect at 4:00 p.m. Eastern Standard Time each day during the calendar month which immediately precedes the calendar month in which payment is made, where the "Bank Rate" means the rate of interest established from time to time by the Bank of Canada as the minimum rate at which the Bank of Canada makes short term advances to members of the Canadian Payments Association.

"date of payment" means the date of the negotiable instrument drawn by the Receiver General for Canada and

given for payment of an amount due and payable;

an amount is "due and payable" when it is due and payable by Canada to the Licensee in accordance with the terms of the Contract; and

an amount becomes "overdue" when it is unpaid on the first day following the day upon which it is due and payable.

5.2 Subject to the Contract, Canada shall be liable to pay to the Licensee simple interest at the Average Rate plus 3 percent per annum on any amount that is overdue, from the date such amount becomes overdue until the day prior to the date of payment, inclusive. Interest shall be paid without notice from the Licensee except in respect of payment which is less than fifteen (15) days overdue. No interest will be payable or paid in respect of payment made within such fifteen (15) days unless the Licensee so requests after payment has become due.

5.3 Canada shall not be liable to pay interest in accordance with this article if Canada is not responsible for the delay in paying the Licensee.

5.4 Canada shall not be liable to pay interest on overdue advance payments.

ARTICLE 6 - INTEREST ON LATE ROYALTY PAYMENTS

6.1 The Licensee shall be liable to pay to the Minister simple interest at the Bank Rate, plus one and one quarter per cent (1.25%), on any amount of royalty which is overdue from the date such amount became overdue until the date prior to the date of payment, inclusive.

6.2 For the purposes of Sub-Article 6.1:

(a) an amount is "due and payable" when it is due and payable by the Licensee to Her Majesty pursuant to the Payment of Royalties Article of this Agreement;

(b) an amount is "overdue" when it is unpaid on the first day following the day upon which it is due and payable;

(c) "date of payment" means the date on which the cheque to the Receiver General for Canada for the royalty payment is received by the Minister's Representative; and

(d) "Bank Rate" means the discount rate of interest set by the Bank of Canada and shall be the one that is prevailing at the opening of business on the date the amount of royalty became overdue.

ARTICLES 7 - TAXES

7.1 Municipal taxes are not applicable.

7.2 Provincial Taxes

(a) Excluding legislated exceptions, federal government departments and agencies are not required to pay any ad valorem sales tax levied by the province in which the taxable goods or services are delivered. This exemption has been provided to federal government departments and agencies under the authority of one of the following:

(1) Provincial Sales Tax Exemption License Numbers, for the provinces of:

Newfoundland
32243-0-09
Prince Edward Island
OP-10000-250
Nova Scotia
U84-00-03172-3
Ontario
11708174G
Manitoba
390-516-0
British Columbia
005521

(2) An Exemption Certification, for Quebec, New Brunswick, Saskatchewan, the Yukon Territory, and the Northwest Territories, which certifies that the property and/or services ordered/purchased hereby are for the use of, and are being purchased by the federal government with Canada funds, and are therefore not subject to provincial/territorial sales and consumption taxes.

(b) Currently, in Alberta, Saskatchewan, the Yukon Territory, and the Northwest Territories, provincial sales taxes do not apply to goods or services delivered to the federal government.

(c) The Licensee is not exempt from paying provincial sales tax under the above Exemption License Numbers or Exemption Certification. The Licensee is required to pay Provincial Sales Tax on taxable goods or services used or consumed in the performance of the Contract (as per appropriate provincial legislation), including material incorporated into real property.

7.3 Goods and Services Tax /Harmonized Sales Tax

The Goods and Services Tax, (GST) or Harmonized Sales Tax (HST), whichever is applicable, will be incorporated into all invoices as a separate item and will be paid by Canada to the Licensee. The Licensee agrees to remit to Revenue Canada any amounts of GST and HST paid or due.

ARTICLES 8 & 9 - RESERVED

ARTICLE 10 - GOVERNMENT SUPPLIED MATERIALS

10.1 All manuscripts, texts,

artwork, computer tape, diskette, audio, tape, print design, plates, engravings, negatives, positives and any other materials either supplied by Her Majesty to the Licensee or paid for by Her Majesty shall remain the property of Her Majesty and shall be collectively referred to as Government Supplied Material (GSM). All property, title to which is with, or vests in Her Majesty, shall be returned immediately on request of the Minister.

10.2 Upon any payment being made to the Licensee for or on account of materials, parts, work-in-process, or finished work, either by way of progress payments or otherwise, title in and to all materials, parts, work-in-process and finished work so paid for by such progress payments or otherwise shall vest and remain in Her Majesty and the Licensee shall be responsible therefor. It being understood and agreed that such vesting of title in Her Majesty shall not constitute acceptance of Her Majesty of such materials, parts, work-in-process and finished work and shall not relieve the Licensee of its obligations to perform the work in conformity with the requirements of the Contract. Any material or work-in-process paid for by Her Majesty is to be known as Government Supplied Material.

10.3 All items comprised in any GSM shall be used by the Licensee solely for the purposes of this License and shall always be and remain the property of Her Majesty and wherever feasible the Licensee shall maintain adequate accounting records of all GSM and shall mark the same as being Her Majesty's property.

10.4 All GSM (except such as are installed or incorporated in the work) shall be returned to Her Majesty upon demand, in the same condition as when supplied to the Licensee; provided the Licensee shall not be responsible for any loss or damage resulting from ordinary wear and tear, or causes beyond the Licensee's control.

10.5 Except as otherwise provided in this License, no additional insurance shall be carried by the Licensee on any GSM. The Licensee shall take reasonable and proper care of all property, title to which is vested in Her Majesty, while the same is in, on or about the plant and premises of the Licensee or otherwise in his possession or subject to his control and shall be responsible for any loss or damage resulting from his failure to do so other than loss or damage caused by ordinary wear and tear.

ARTICLE 11 - RECORDS TO BE KEPT BY Licensee - AUDITING

11.1 The Licensee shall keep proper accounts including the invoices, receipts and vouchers, which shall at reasonable times be open to audit and inspection by the authorized representatives of the Minister who may make copies and take extracts therefrom.

11.2 The Licensee shall afford facilities for audit and inspection and shall furnish the authorized representatives of the Minister with such information as the Minister or they may from time to time require with reference to the documents referred to herein.

11.3 During the life of this Agreement and up to twelve months following its

termination, the Licensee shall not dispose of the documents referred to herein without the written consent of the Minister, but shall preserve and keep them available for audit and inspection at any time.

ARTICLE 12 - INDEMNITY AGAINST CLAIMS

12.1 The Licensee shall indemnify and save harmless Her Majesty and the Minister from and against any and all claims, damages, loss, costs and expenses which they or either of them may at any time incur or suffer as a result of or arising out of,

(a) any injury to persons, including injuries resulting in death, or loss of or damage to property of others which may be or be alleged to be caused by or suffered as a result of the carrying out of the Licensee's obligations or any part thereof;

(b) any liens, attachments, charges, encumbrances or similar claims upon or in respect of any property vested in Her Majesty under this Agreement; and

(c) any use or infringement of copyright of a Work not supplied to the Licensee by Her Majesty, in performing this Agreement or as a result of the use by Her Majesty of the Work performed or provided by the Licensee and originating in copyrighted material belonging to a third party and not provided by Her Majesty.

12.2 The Licensee's liability to indemnify or reimburse Her Majesty under this Agreement shall not affect or prejudice Her Majesty from exercising any other rights under law.

ARTICLE 13 - TERMINATION FOR DEFAULT

13.1 The Minister may terminate, upon Notice to the Licensee, the whole or any part of the Contract:

(a) in the event that the Licensee fails, refuses or neglects or is unable to perform or discharge any material obligation stipulated in this Contract; or

(b) in the event that the Licensee fails to respect any of the delay periods stipulated in this Contract; or

(c) to the extent permitted by the laws of Canada, in the event that the Licensee is in a situation where it:

(i) applies for or consents to the appointment of a receiver, receiver-manager, trustee or liquidator for itself or any of its property; or

(ii) is unable, or admits its inability, to pay its debts as they become due; or

(iii) makes a general assignment for the benefit of creditors; or

(iv) is adjudicated bankrupt or insolvent; or

(v) files a voluntary petition in bankruptcy or a petition seeking reorganization or arrangement with creditors or takes advantage of any insolvency law or admits to the material allegations of a petition filed against it in any bankruptcy, reorganization or insolvency proceeding, or initiates a corporate action for the purpose of effecting any of the foregoing, or if an order is made or resolution passed for the winding up of the Licensee; or

(d) in the event that any written account of sales reports are overdue by three (3) months; or

(e) in the event that any royalty payable by the Licensee to Her Majesty under the Contract is overdue by six (6) months.

13.2 The Licensee shall have no claim for any further payment save as provided in this Article, but shall remain liable to Her Majesty for all loss and damage which may be suffered by Her Majesty by reason of the default or occurrence upon which such Notice was based.

13.4 This Contract shall terminate, without notice, upon the occurrence of any event detailed above under paragraph 13.1(c).

ARTICLE 14 - TERMINATION BY THE PARTIES

14.1 Notwithstanding any other provision of this Agreement, either party may terminate, upon sixty day notice to the other party, the whole or any part of this Agreement. Any amounts paid in advance will be refunded.

ARTICLE 15 - RESERVED

ARTICLE 16 - SUB-CONTRACTORS

16.1 The Licensee may sub-contract without prior written consent of the Minister such portions of his obligations as is customary in the carrying out of similar Agreements.

16.2 No sub-contract entered into by the Licensee shall relieve the Licensee from any obligations under this Agreement or impose any liability upon Her Majesty or the Minister to the sub-contractor. In particular, no act or omission of the Licensee shall have the effect of rendering any monies payable by Her Majesty under this Agreement payable to any person or corporation other than the Licensee

unless Her Majesty consents thereto. The Licensee shall bind each sub-contractor by the terms and conditions of this Agreement as far as applicable to the sub-contract.

**ARTICLE 17 -
SUB-LICENSES/
ASSIGNMENTS**

17.1 This Agreement shall not be assigned, sub-licensed or otherwise encumbered by the Licensee or by operation of law, in whole or in part, without the prior written consent of the Minister and any assignment, sub-license or other encumbrance made without that consent shall be void and of no effect; except for the Licensee's normal course of business of contracting out for publication services. Any assignment without the Minister's written permission shall constitute a default of a material obligation on behalf of the Licensee, and such assignment will be of no effect.

17.2 No assignment, sub-license or other encumbrance of this Agreement shall relieve the Licensee from any obligation under this Agreement or impose any liability upon Her Majesty or the Minister.

**ARTICLE 18 - AGREEMENT
TO ENURE**

18.1 This Agreement shall enure to the benefit of and shall be binding upon the Parties hereto and their lawful heirs, executors, administrators and successors.

**ARTICLES 19, 20 & 21 -
RESERVED**

**ARTICLE 22 -
CERTIFICATION -
LOBBYISTS**

22.1 The Licensee certifies that it has not paid or agreed to pay and covenants that it will not pay a

contingency fee for the solicitation, negotiation or obtaining of this Agreement to any person other than an employee acting in the normal course of the employee's duties.

22.2 In this section:

"person" includes an individual or group of individuals, a corporation, a partnership, an organization and an association and, without restricting the generality of the foregoing, includes any individual who is required to file a release with the registrar pursuant to section 5 of the Lobbyist Registration Act R.S.C. 1985 c. 44 (4th Supplement) as the same may be amended from time to time.

"employee" means a person with whom the Licensee has an employer-employee relationship;

"contingency fee" means any payment or other compensation that is contingent upon or is calculated upon the basis of a degree of success in obtaining a Government Contract or negotiating the whole or any part of its terms.

22.3 All accounts and records pertaining to payments of contingency fees shall be subject to the Accounts and Audit provisions of the Agreement.

22.4 If the Licensee certifies falsely under this section or is in default of the obligations contained therein, the Minister may either terminate this Agreement for default in accordance with the termination for default provisions of the Agreement or recover from the Licensee by way of deduction from the Contract Price or otherwise the full amount of the contingency fee.

22.5 The Licensee warrants,

(a) that no bribe, gift, or other inducement has been paid, given, promised or offered to any official or employee of Her Majesty for, or with a view to, the obtaining of this Contract by the Licensee, and

(b) that it has not employed any person to solicit or secure this Contract upon any agreement for a commission, percentage, brokerage or contingency fee.

**ARTICLE 23 -
INTERNATIONAL
SANCTIONS**

23.1 From time to time, in compliance with United Nations obligations or other international agreements, Canada imposes restrictions on trade, financial transaction dealings with a foreign country or its national. These sanctions may be implemented by regulation under the United Nations Act (UNA), R.S.C. 1985, c. U-2, the Special Economic Measures Act (SEMA), S.C. 1992, c. 17 or the Export and Import Permits Act (EIPA), R.S.C. 1985, c. E-19. The Licensee agrees that it will, in the performance of the Contract, comply with any such regulations that are in force on the effective date of the Contract and will require such compliance by its first-tier subcontractors.

23.2 The Licensee agrees that Canada relies on the Licensee's undertaking in subsection (1) to enter into the Contract, and that any breach of the undertaking shall entitle Canada to terminate the Contract under the provisions of the Contract relating to default by the Licensee, and therefore to recover damages from the Licensee, including

reprocurement costs arising out of such a termination.

23.3 As of this date, sanctions are in place against the following countries:

Yugoslavia (Serbia and Montenegro) - UNA, United Nations Federal Republic of Yugoslavia (Serbia and Montenegro) Regulations, SOR 92-342 as amended by SOR 93-211

Haiti - SEMA, Special Economic Measures (Haiti) Regulations 1993, SOR 93-499

Iraq - UNA, United Nations Iraq Regulations, SOR 90-531 as amended by SOR 90-694, 91-185, and 93-343

Libya - UNA, United Nations Libya Regulations, SOR 92-222 as amended by SOR 93-521

Canada will use reasonable efforts to make the text of any such regulations available on its electronic bulletin board on a reasonably current basis by the way of assistance to the Licensee, but the Licensee agrees that only the text as published in the Canada Gazette, Part II, is authoritative and the Licensee waives any claim against Canada, the Minister, or their employees or agents for any costs, loss, or damage whatever that results from the Licensee's reliance on the text of a regulation as reproduced on the electronic bulletin board.

ARTICLES 24 & 25 - RESERVED

ARTICLE 26 - NOTICES

26.1 When either Party is obligated or entitled to give any notice, request, approval, demand, consent, direction or other communications (hereinafter "Notice") to the other, such Party shall first

communicate its substance as rapidly as possible. Such Notice, however, shall only be effective as stipulated below.

26.2 Any notice pursuant to this Agreement shall be in writing and is effective if delivered in person, sent by registered mail, by telegram, by facsimile or by telex to the appropriate official at the address stipulated in ARTICLE 2 of the Agreement entitled "DESIGNATIONS OF REPRESENTATIVES". Any Notice shall be deemed to have been given if by registered mail, when the postal receipt is acknowledged by the other party; by telegram, when transmitted by the carrier; and by telex and facsimile, when transmitted.

ARTICLE 27 - AMENDMENTS

27.1 No amendment of this Agreement shall have any force or effect unless reduced to writing and signed by representatives of the Minister duly authorized in that behalf and duly authorized representatives of the Licensee.

ARTICLE 28 - SEVERABILITY

28.1 If any provision of the Contract is declared by a court of competent jurisdiction to be invalid, illegal or unenforceable, such provision shall be severed from the Contract and all other provisions of the Contract shall remain in full force and effect.

ANNEX "C"

LIST PRICES AND PRE-PUBLICATION PRICES

All prices are in U.S. dollars

Academic Customers

Microfilm/fiche	Softcover	Hardcover	Dissertation Express Unbound
\$32.50 ea	\$36.00 ea	\$43.50 ea	\$29.50 ea

Non-Academic Customers

Microfilm/fiche	Softcover	Hardcover	Dissertation Express Unbound
\$46.00 ea	\$57.50 ea	\$69.50 ea	\$51.00 ea

International Customers (outside North America)

Microfilm/fiche	Softcover	Hardcover	Dissertation Express Unbound
\$46.00 ea	\$57.50 ea	\$69.50 ea	\$57.50 ea

Digital Formats

The List Price for digital Copies of the Work shall be provided once available.

Pre-Publication Copies to Authors

Prices for pre-publication services to authors within Canada shall be the Canadian equivalent of current U.S. prices:

Microfilm/fiche	Softcover	Hard Cover
\$12.00 ea	\$23.00 ea	\$29.00 each

Goods and Services Tax (GST) shall be added to the pre-publication sales price.

NON-EXCLUSIVE LICENCE TO
REPRODUCE THESES

ANNEX D

LICENCE NON EXCLUSIVE DE
REPRODUIRE DES THÈSES

Surname — Nom de famille		Given names — Prénoms	
Date of birth — Date de naissance		Canadian citizen? — Citoyen canadien?	Yes/No Oui/Non
Permanent address — Résidence principale			
Full name of university — Nom complet de l'université			
Faculty, department, school — Faculté, département, école			
Degree for which thesis was presented — Grade pour lequel cette thèse a été présentée		Date degree awarded — Date d'obtention du grade	
Supervisor — Directeur de thèse			
Title — Titre			
Language of text — Langue du texte			

In consideration of the National Librarian making copies of my thesis available to interested persons, I,

hereby grant a non-exclusive licence to Her Majesty the Queen in right of Canada as represented by the National Librarian:

- (a) to reproduce, loan, distribute or sell copies of my thesis (the title of which is set forth above) in microform, paper or electronic formats;
- (b) to authorize or procure any of the acts mentioned in paragraph (a).

I undertake to submit a copy of my thesis, through my university, to the National Librarian. Any abstract submitted with the thesis will be considered to form part of the thesis.

I represent and promise that my thesis is my original work, does not infringe any rights of others, and that I have the right to make the grant conferred by this non-exclusive licence.

I retain ownership of the copyright in my thesis, and may deal with the copyright in my thesis, in any way consistent with rights granted by me to Her Majesty in this non-exclusive licence.

I further promise to inform any person to whom I may hereafter assign or licence my copyright in my thesis of the rights which I have conferred on Her Majesty by this non-exclusive licence.

Je, en considération du fait que le Directeur général de la Bibliothèque nationale du Canada désire mettre des exemplaires de ma thèse à la disposition des personnes intéressées, accorde par les présentes à Sa Majesté la Reine du Canada, représentée par le Directeur général de la Bibliothèque nationale, une licence non exclusive pour:

- (a) reproduire, prêter, distribuer ou vendre des copies de ma thèse (dont le titre est mentionné ci-haut) sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique;
- (b) autoriser ou engager toute mesure mentionnée à l'alinéa (a).

Je m'engage à ce que ma thèse soit remise au Directeur général de la Bibliothèque nationale par mon université. Tout résumé analytique soumis avec la thèse sera considéré comme faisant partie de la thèse.

Je déclare sur mon honneur que ma thèse est mon œuvre originale, qu'elle n'empiète pas sur les droits de quiconque et que j'agis de plein droit en accordant cette licence non exclusive.

Je conserve la propriété du droit d'auteur qui protège ma thèse et peux disposer de ce droit de toute manière compatible avec les droits accordés à Sa Majesté par les présentes.

Je promets également d'informer toute personne à qui je pourrais ultérieurement céder mon droit d'auteur sur ma thèse ou à qui je pourrais accorder une licence, des droits accordés à Sa Majesté par les présentes.

Signature

Date

NLBN 81 (90-09)

COOPERATIVE AGREEMENT

This Cooperative Agreement is between the Library of Congress (the Library or LC), and the U.S. Copyright Office (the Office), both located in Washington, DC, and UMI Company, a for-profit corporation located in Ann Arbor, Michigan and incorporated in Delaware.

1. BACKGROUND

1.1 UMI annually acquires approximately 45,000 dissertations and masters' theses from U.S. degree-granting institutions (collectively referred to in this Agreement as "dissertations"); obtains certain exclusive or non-exclusive rights to publish these dissertations in microform; creates a master microfilm of each one (when possible); indexes them; and publishes a comprehensive database of the abstracts of all dissertations (the Dissertation Abstracts Database) which is marketed to the public so that individuals or organizations may search the database, order and pay for copies of any dissertations listed. Beginning with 1997 titles, UMI is building a comprehensive digital archive of every dissertation submitted to it for publication, regardless of the format in which it was submitted, in order to provide the scholarly community with online access to both the Dissertation Abstracts database and the full content of all new dissertations submitted to UMI through a new package of value-added services called ProQuest Digital Dissertations. UMI plans to continue to create microform versions (except in those cases where the dissertation exists only in digital form), identical in content to the digital version of all dissertations capable of being microfilmed and maintain this permanent microfilm archive in support of ProQuest Digital Dissertations for preservation and archival purposes.

1.2 The U.S. Copyright Office receives annually from UMI approximately 17,000 claims for copyright registration and deposit of dissertations at the author's request and expense under §408 of the U.S. copyright law and receives microfiche of the non-registered dissertations under mandatory deposit requirements of §407 of the copyright law. The Copyright Office prefers to have copyright applications and deposits submitted electronically through its CORDS System which permits copyright claims and deposits to be transmitted securely in electronic form over the Internet. UMI is willing to submit copyright applications and deposits electronically to the Copyright Office on behalf of its clients (the dissertation authors), using the electronic filing capability and enhanced tracking offered through the CORDS system, instead of submitting paper claims and microfiche deposits.

1.3 The Library's policy is to select all U.S. dissertations and to acquire these under the copyright registration and mandatory deposit provisions of the U.S. copyright law (17 U.S.C. §407 and §408). The Library currently considers a microform version as the "best edition" for copyright deposit purposes, according to regulations issued by the Copyright Office on behalf of the Library of Congress. The Library has been paying UMI annually for a subscription to all dissertations in microfiche form for copyright deposits (which are specially produced for the Library on microfiche to accommodate the Library's preferred storage and access needs) rather than to acquire copyright deposits of dissertations on microfilm. The Library is developing its electronic services and is willing to have on-going Library access to the digital archive of dissertations stored by UMI in order to serve its authorized users instead of maintaining its own digital archive of dissertations. The Library still considers a microform version of all dissertations as the "best edition" for archival purposes and is willing to continue subscribing at a special price to a specially-produced microfiche version for the Library's archive under a separate subscription order until the Library decides it no longer wishes to acquire dissertations in that format.

Now, therefore, in consideration of the mutual agreements contained herein, the parties agree to the following cooperative arrangements which are mutually beneficial, as follows:

2. RESPONSIBILITIES OF THE COPYRIGHT OFFICE

2.1 Electronic filing of copyright claims. The Copyright Office will provide UMI with client software and initial technical assistance as needed so that UMI may file copyright claims and submit deposit copies electronically using the CORDS system. The Copyright Office will process claims filed by UMI via CORDS in accordance with the copyright law and Copyright Office regulations and practices, applying the same rules as for all other copyright claims. Completed records, including records of any correspondence, will be maintained in the CORDS system.

2.2 Registration Deposits. Deposits of dissertations in digital form will reside in the CORDS system during and after the registration process. These copyright deposits are considered published works. The Copyright Office will not annotate the registrations individually to show that special relief was granted, pursuant to Section 3.3 of this Agreement.

2.3 Public access to deposits through the Copyright Office. The Copyright Office will provide on-site inspection of registered dissertation deposits in digital form through the CORDS system; reproduction of registered works will be provided only in accordance with the Copyright Office regulations (37 C.F.R. 201.2).

2.4 Secure storage by the Copyright Office. The Copyright Office will provide "secure storage" (as defined in Section 9.9) for digital dissertations submitted by UMI for copyright registration through its CORDS system. The Copyright Office will store the deposit copies of registered works securely in the Copyright Office repository for the appropriate copyright retention period under 17 U.S.C. §704, as implemented in the Copyright Office regulations or until such time as the Office determines that UMI's repository is sufficiently reliable and permanent for Copyright Office purposes as described in Section 5.

3. RESPONSIBILITIES OF UMI

3.1 Deposit Account. UMI will maintain a Deposit Account with the Copyright Office with sufficient funds to cover the filing fees of claims it submits for copyright registration.

3.2 Electronic filing for copyright registration. For each claim submitted for copyright registration under 17 U.S.C. §408 by UMI on behalf of the dissertation author, UMI will file an electronic application through the CORDS system with a request to debit the filing fee from its Deposit Account and a digital copy of the dissertation to be registered, which will be retained in the CORDS system during copyright processing. If it chooses, UMI may develop software to facilitate batch preparation and submission of claims and may send batches of claims to the Copyright Office for processing through CORDS.

3.3 Special relief. Though the Library still considers the microform version as the "best edition" (as described in Section 4.1), the Register of Copyrights, in consultation with the Library, agrees to grant "special relief", as provided in 37 C.F.R. 202.19(e), 202.20(d)(e), and accept permanent access to the digital version of each dissertation in ProQuest Digital Dissertations in lieu of microform deposits, relieving UMI of its responsibility to deposit dissertations in a microform version while this Agreement is in effect. Under the grant of special relief by the Register of Copyrights, UMI agrees to provide the Library with this permanent access at no charge, unless (or until) access to ProQuest Digital Dissertations (or its successor) is unavailable to the Library for any reason. Should this occur, UMI agrees to the requirements described in Section 3.10 which would then become effective. This grant of special relief applies only to this Agreement and has no precedential effect.

3.4 Deposits for registration. Copyright deposits for examination and registration purposes will be dissertations in digital form. These will be transmitted to the Copyright Office by UMI, using the special applicant software provided by the CORDS system. Under the grant of "special relief", the Register of Copyrights will accept digital deposits for examination and registration purposes in lieu of microform.

3.5 Mandatory deposit. To satisfy the requirement for mandatory deposit of all copyrighted dissertations published in the U.S. (17 U.S.C. §407) which UMI offers to the public but does not submit for copyright registration, UMI will transmit a notification of each dissertation in digital form for which mandatory deposit is required instead of registration. This electronic notification will be sent by separate email until the completion of the CORDS mandatory deposit component or via CORDS when the capability exists. The electronic notification will be made within three months of publication and will include the title and author of the work, imprint, date of the work, and number of pages.

3.6 Library access to digital dissertations in lieu of transfer of copyright deposits. UMI's deposits for copyright registration will not be transferred by the Copyright Office to the Library after registration has been completed. Instead, UMI will provide the Library with on-going access to ProQuest Digital Dissertations at no charge, in order to fulfill the responsibilities for both registration deposits (§408) and mandatory deposit (§407), unless (or until) access to this database is not available to the Library for any reason, as specified in 3.10.

3.7 Access to deposits by Library's authorized users. UMI will provide authorized users including Library staff, LC contractors or Congressional Members and staff, and on-site Library patrons with Internet or web-based access (or successor wide area network) to ProQuest Digital Dissertations in accordance with Library policies, practices and procedures; access to Library staff or LC contractors for authorized purposes will be controlled and access to on-site patrons will be at public access workstations in the Library of Congress.

3.8 Permanent access by the Library. UMI will make reasonable efforts to provide continuous availability of the dissertations database online, subject to periodic limited unavailability due to maintenance, installation or testing of software, and technical support as required. The Library will have permanent access at no charge to the copyrighted dissertations in UMI's repository, either in digital form or, if unavailable, in microform. For all dissertations made available in UMI's ProQuest Digital Dissertations (or its successor), UMI will (1) provide secure, permanent storage for dissertations submitted during the term of this Agreement, and (2) will provide on-going access to the Library for its authorized users on a permanent basis.

3.9 Alterations to dissertations after publication. UMI agrees to notify the Copyright Office and the Library in writing of any decision that affects the content or availability of a dissertation in ProQuest Digital Dissertations for which either copyright registration or mandatory deposit has been made. For both registered dissertations and mandatory deposits, UMI will transfer a copy of the dissertation in the version originally registered or deposited to the Copyright Office CORDS database for archiving before UMI alters or discards the copyrighted work.

3.10 Library's alternatives for access to UMI's Digital Archive. In the event that UMI discontinues its microfilm archive or its digital archive of dissertations (1997 and later, or any portion thereof) or control of the database is transferred out from UMI or otherwise made inaccessible to the Library and/or the Copyright Office for any reason in the future, UMI will notify the Library in writing. Because the Library has a statutory right to all published copyrighted dissertations, should access to UMI's digital archive of ProQuest Digital Dissertations (or its successor) no longer be available to the Library for any reason in the future, UMI agrees to permit the Library and the Copyright Office to make arrangements for alternative means of storage and access equivalent to that provided under this Agreement before UMI's digital archive is discontinued or transferred out of UMI control to another organization or entity or is otherwise made inaccessible to the Library and/or the Copyright Office for any reason. UMI agrees to give its cooperation and best efforts to provide the Library with the capability and sufficient time to copy and relocate UMI's dissertations database to a location to be determined by the Library, so that this occurs in a timely manner with no (or only minimal) interruption of access by the Library. In the alternative, if the Library chooses, UMI agrees to deliver to the Library preservation quality microform (i.e. microfiche or microfilm, depending on the Library's preference) as the "best edition" copies of all dissertations added to ProQuest Digital Dissertations from the date on which the Library no longer subscribes to microfiche copies. The format of the microform (i.e. either microfiche or microfilm) and reasonable costs to provide this (which are generally consistent with the current costs), may be negotiated by UMI with the Library at that time as described in Section 7.4. For those dissertations maintained only in electronic form, UMI agrees to deliver electronic copies to the Library in lieu of microform.

4. RESPONSIBILITIES OF THE LIBRARY

4.1 Best Edition. The Library considers the microform version, where one exists, as the "best edition" of dissertations published by UMI and subject to the deposit requirements of 17 U.S.C. §407 and §408, published in the Federal Register, Vol. 54, No. 198, October 16, 1989 (pp. 42299-42300) 37 C.F.R. §202.19 and 202.20. However, for purposes of this Agreement the Library agrees to accept permanent access to the identical version in digital form of dissertations published in ProQuest Digital Dissertations under an ongoing grant of special relief by the Register of Copyrights (as described in Section 3.3), in lieu of the "best edition", unless (or until) access to this database would not be available to the Library of Congress for any reason. Should this occur, the Library may demand the deposit of microform copies as the "best edition" of those works previously registered or deposited under the grant of special relief. The Library reserves the right to change its definition of the best edition from the microform version to another format at some future time and such a change would be applicable to UMI unless special relief is granted by the Register of Copyrights.

4.2 Library's collections. Published dissertations either registered electronically through the CORDS system, or made available to the Library in fulfillment of mandatory deposit requirements, as described in Section 3.5, will be considered part of the Library's collections, since the Library selects for its collections all U.S. dissertations. As such, UMI's ProQuest Digital Dissertations will constitute a Library collection, stored at a remote location.

4.3 Public access to deposits in the Library's collections. The Library will provide access via UMI to the digital dissertations in ProQuest Digital Dissertations only to authorized users as defined in Section 9.1 of this Agreement in accordance with the Library's policies, practices and procedures.

4.4 Dissertation Abstracts. The Library agrees to continue accepting from UMI two copies of the print version of *Dissertation Abstracts* in fulfillment of its mandatory deposit responsibilities under the Library's current deposit requirements for "best edition" (currently the print copies are being deposited as part of UMI's claims for copyright registration). Contingent upon the availability of funding and by separate subscription order from the Library's Anglo-American Acquisitions Division, the Library will also maintain a paid subscription for web-based access to *Dissertation Abstracts* online until such time as the Library may modify its current "best edition" requirements for copyrighted works which are available online, including automated databases.

4.5 LC's Microfiche-based Archive. At the Library's request, UMI will continue to provide the Library with an ongoing microfiche-based archive of all dissertations published by UMI, until the Library determines that it no longer needs a microfiche archive. This archive will serve as a backup to the electronic dissertations to which the Library has access through ProQuest Digital Dissertations as part of this Agreement. Copyright claimants will bear the cost for microfiche deposits of dissertations that are submitted for registration. Until further notice and under a separate subscription order which is contingent upon the availability of funds, the Library will continue its annual subscription to the microfiche version of dissertations for the sum of \$3.60 per dissertation for all dissertations not submitted for copyright registration on behalf of the authors by UMI (approximately 28,000 per year or @ \$100,800 per year, including shipping and handling). The Library's Anglo-American Acquisitions Division will issue an annual subscription order to UMI for acquisition of the microfiche until further notice from the Library to UMI, after which this subscription will cease and the Library will rely instead on permanent access to ProQuest Digital Dissertations as defined in this Agreement.

4.6 Interlibrary loans to U.S. federal government agency libraries. In accordance with the Library's policies governing loans of dissertations to U.S. government agency libraries (LCR 910, Section 4.D), the Library's authorized loan staff may copy or download individual dissertations in electronic form from UMI's dissertations database into a physical format, such as a diskette or successor technologies, that can be lent under the same conditions and subject to the same rules as Library loans of dissertations in microform to federal agencies. When that physical format is returned to the Library after the loan period, the electronic contents will be deleted or written over. These procedures are intended to replicate, using available technology, the Library's interlibrary loan policies and practices as they apply to U.S. federal government agency libraries. At a later

time, different technology may be used by the Library that accomplishes the same purposes of providing an equivalent protection to both dissertations' rightsholders and federal agency library users without further notice to UMI or amendment of this Agreement.

5. PERMANENT COPYRIGHT OFFICE ACCESS TO UMI'S QUALIFIED PERMANENT DIGITAL REPOSITORY

The following provisions will apply when and if the Copyright Office determines that it considers UMI's digital repository for the dissertations database sufficiently reliable and permanent for Copyright Office storage requirements and has provided UMI with reasonable advance written notice of such.

5.1 So long as this Agreement is in force, UMI will provide permanent and secure storage of registered digital dissertations for Copyright Office purposes for the appropriate term of retention as determined by the Copyright Office and will provide unrestricted access to these dissertations to the Copyright Office for the Office to carry out its responsibilities under the law, including providing inspection on-site or certification of registered works for litigation purposes. If and when the Copyright Office agrees to rely on UMI's digital repository for access to deposits, the Copyright Office may expunge from its CORDS database the digital deposits for copyright claims once registration has been completed, and UMI will provide access to Copyright Office staff as needed to carry out its responsibilities via UMI's repository. The Copyright Office reserves the right to maintain in the CORDS system the deposit for rejected claims and claims submitted but not registered by the Office for other reasons.

5.2 If the Copyright Office elects to remove the registered dissertation (i.e. the digital object) from its own repository and rely on UMI's digital archive, the Office will retain the digital signature that was received with the deposit through the CORDS system that went through the copyright examination process. This will ensure that when the Office retrieves a copy of the registered digital dissertation from the UMI repository later, it will always be able to compare the digital signatures. This will also permit the Copyright Office to verify that the digital object in UMI's depository is exactly the same as the work that was originally received for examination, and registered for copyright purposes, that it remains unaltered, and . This will also permit the Copyright Office to authenticate that the digital object is in fact from the source that initially provided the digital signature. It will ensure that the deposit copy available to the Library of Congress in the UMI database is in fact the one that was originally registered for copyright and that it remains unaltered.

5.3 Both the Copyright Office and UMI will retain the digital signatures for the deposits in their systems so the Copyright Office can validate later, when necessary, that the copy in the UMI database remains unaltered and is the work that was registered under 17 U.S.C. §408.

6. EFFECTIVE DATES

The initial term of this Cooperative Agreement will be for five (5) years and will automatically renew annually thereafter unless it has been revised or terminated in accordance with Section 7. The effective dates of this Agreement are January 1, 1999, through December 31, 2003. UMI will begin to submit electronic applications for copyright registration through CORDS during January or February, 1999, and will provide the Library with access to the ProQuest Digital Dissertations thereafter under the terms of this Agreement.

7. REVIEW OR TERMINATION OF AGREEMENT

7.1 **Review of Agreement.** Because of the impact of rapidly changing technologies and other unforeseen circumstances, either party may request and initiate review of the terms of this Agreement during the agreement period by written request to the other party and subject to the general provisions in Section 8.

7.2 Written Notice of Termination. Either party may, at its discretion, terminate this Agreement upon written notice of 6 months. In such event, UMI agrees to support any copyright claims currently in process or provide alternative means for the Copyright Office to complete the process with the copyright applicant. The Copyright Office agrees to complete processing on any copyright claims in process at that time.

7.3 Library's Right to Dissertations. Nothing in this Agreement affects or alters the Library's statutory right under 17 U.S.C. §407 and §408 to the copyright deposits of published dissertations on microform, where they exist, or the electronic archival versions retained by UMI in the ProQuest Digital Dissertations. If at any time or for any reason UMI determines that it can no longer continue to provide secure storage and access for the Library and the Copyright Office to its digital database under these terms, UMI agrees to give the Library and the Copyright Office sufficient advance written notice and adequate time to permit the Library and the Copyright Office to make appropriate arrangements with UMI for an alternative means of storage and access equivalent to that provided under this Agreement as described in Section 3.10. This includes the time to copy and relocate the dissertations database to a location to be determined by the Library, and/or to obtain copies of dissertations not already in the Library's collections on microform (or in electronic archival form where no microform copy has been made) from UMI as the "best edition" if the Library chooses. If the Library chooses the microform version, the reasonable costs to provide this (which are generally consistent with the current costs) may be negotiated by UMI with the Library at that time, as described in section 3.10.

7.4 Continued Rights and Access by the Library and Copyright Office. The parties agree that the Library and the Copyright Office shall retain and may fully exercise all of their rights and elections under the Bankruptcy Code (in addition to any remedies available under the U.S. Copyright Act). The parties further agree that, in the event of the commencement of a bankruptcy proceeding by or against UMI under the Bankruptcy Code, the Library and the Copyright Office shall be entitled to a complete duplicate of (or complete access to, as appropriate) any dissertations for which copyrights are claimed and any of UMI's databases which include the storage of such dissertations. If not already in the possession of the Library and the Copyright Office, such a complete duplicate of the dissertations for which copyright is claimed and that are the subject of this Cooperative Agreement shall be promptly delivered to the Library and the Copyright Office on their written request (a) upon any such commencement of a bankruptcy proceeding, unless UMI elects to continue to perform all of its obligations under this Cooperative Agreement; or (b) if not delivered under (a) above, upon the rejection of this Cooperative Agreement by or on behalf of UMI. This complete duplicate shall be delivered at no cost to the Library or the Copyright Office if the digital database is transferred, or as described in Sections 3.10 and 7.3 if the microform version is chosen by the Library. The provisions in this Section shall be triggered by any of the following events: (1) UMI ceases doing business, (2) UMI declares bankruptcy, seeks protection of the bankruptcy laws, or is forced into bankruptcy by its creditors, (3) UMI discontinues maintenance of any of the databases or products that are the subject of this Cooperative Agreement or fails to adequately maintain the same, (4) UMI's digital dissertations archive is transferred out of UMI control to another organization or entity or is otherwise made inaccessible to the Library and/or the Copyright Office for any reason.

7.5 Non-renewal of Agreement. Within three months after termination of this Agreement, if the Agreement has not been renewed or replaced, UMI will deliver to the Library microform copies of all dissertations added to the database since January 1, 1998 for which microform can be produced, and electronic copies of those dissertations for which UMI's archived version exists only in electronic form, in accordance with Section 3.10.

8. GENERAL PROVISIONS:

8.1 Entire Agreement (Modifications, Amendments, Assignments). This Agreement sets forth the entire understanding of the parties and supersedes all prior communications, understandings and agreements relating to the subject matter of this Agreement, whether oral or written. No modification or claimed waiver of any provision of this Agreement is valid except by written amendment signed by authorized representatives of the Library, the Copyright Office, and UMI. Neither party may assign or transfer, directly or indirectly, all or part of its rights or obligations under this Agreement without the prior written consent of the other party, which

consent shall not be unreasonably withheld or delayed. Any approved assignee of UMI must assume UMI's duties under this Agreement unless otherwise agreed to in advance in writing by the Library and the Copyright Office.

8.2 Force Majeure. Neither party shall be liable or have the right to cancel this Agreement for any delay or failure in performing caused by conditions beyond its control including, but not limited to Acts of God, Government restrictions (including the denial or cancellation of any export or other necessary license), wars, insurrections, strikes, fires, floods, work stoppages, unavailability of materials, carriers or communications facilities, and/or any other cause beyond the reasonable control of the party whose performance is affected.

8.3 Performance. The parties agree to execute, acknowledge, and perform all acts as may be necessary or appropriate in order to carry out the intent and purposes of this Agreement.

8.4 Authorized Representatives.

• *For the purposes of Agreement interpretation matters*, dispute resolution, or for modification of the terms or scope of this Cooperative Agreement, the Library shall be represented by the **Winston Tabb, Associate Librarian for Library Services, Library of Congress**; the Copyright Office shall be represented by **Marybeth Peters, Register of Copyrights, U.S. Copyright Office**; and UMI shall be represented by **Dan Arbour, Vice President, UMI Company**.

• *For purposes of liaison*, providing guidance and direction in daily operational matters and for general coordination as described in this Agreement, the Library shall be represented by **Nancy Davenport, Director for Acquisitions, Library Services**; the Copyright Office shall be represented by **Mary Levering, Associate Register for National Copyright Programs, U.S. Copyright Office**; and UMI shall be represented by **Jeffrey R. Moyer, Director of Dissertation Marketing, UMI**.

8.5 Notices.

• *For formal agreement matters*: All formal notices under this Agreement shall be sent by U.S. certified mail, postage prepaid, return receipt requested or other method evidencing receipt to:

<u>Library</u>	<u>Copyright Office</u>	<u>UMI</u>
Winston Tabb Associate Librarian for Library Services Library of Congress Washington, D.C. 20540-4001 Tel: 202-707-6240 Fax: 202-707-6269	Marybeth Peters Register of Copyrights U.S. Copyright Office Library of Congress Washington, D.C. 20540-6001 Tel: 202-707-8350 Fax: 202-707-8366	Dan Arbour Vice President, Library Division UMI Company 300 North Zeeb Road Ann Arbor, MI 48103 Tel: 734-761-4700, ext. 2214 Fax: 734-973-9145

• *For liaison and project coordination matters*: Informal notifications and communications may be directed to:

<u>Library</u>	<u>Copyright Office</u>	<u>UMI</u>
Nancy Davenport Director for Acquisitions Library Services Library of Congress Washington, D.C. 20540-4100 Tel: 202-707-5137 Fax: 202-707-6269	Mary Levering Associate Register for National Copyright Programs U.S. Copyright Office Library of Congress Washington, D.C. 20540-6007 Tel: 202-707-8350 Fax: 202-707-8366	Jeffrey Moyer Director, Dissertation Marketing Library Division, UMI Company 300 North Zeeb Road Ann Arbor, MI 48103 Tel: 734-761-4700, ext. 3287 Fax: 734-973-9145

8.6 Use of the Library's Name. UMI recognizes the great value of the prestige, publicity, and goodwill associated with the name of the "Library of Congress" (and the name of any of the Library's programs or special activities including the U.S. Copyright Office) and logos associated therewith (hereinafter referred to as the "Library's Name") and in such connection acknowledges that such goodwill is the exclusive right of the

Library. UMI agrees that it will not knowingly harm, misuse, or bring into disrepute the Library's Name, and will reasonably assist the Library as it may reasonably request in preserving the integrity and dignity of its Name in conjunction with UMI's activities under this cooperative agreement. The Library hereby grants to UMI permission to use the Library's Name solely in connection with advertising and promotion of the activities described in this cooperative agreement, provided that all uses of the Library's Name shall be approved in writing in advance by the Library. Subsequent uses of the Library's Name in approved materials in the same media and context do not require additional approvals. Requests for approvals shall be sent to:

Ms. Jill Brett Tel: 202-707-2905
Public Affairs Officer Fax: 202-707-9199
Library of Congress
Washington, DC 20540

Other than as specified herein, UMI agrees not to refer to the Library or any of its divisions or programs in any manner. UMI will include appropriate notice on any online, web-based, or other similar media utilized under this Cooperative Agreement, indicating that UMI is responsible for the site and its contents.

9. DEFINITIONS:

9.1 Authorized Users - means (a) persons who are authorized to use all the Library's facilities, specifically those acting in their official capacities who are LC employees, LC contractors, Congressional Members and staff or (b) Library patrons who are physically present on-site in Library premises.

9.2 Best Edition - has its usual meaning under the Copyright Act, 17 U.S.C. §101, *et seq.*, and related regulations. "The *best edition* of a work is the edition, published in the United States at any time before the date of deposit, that the Library of Congress determines to be most suitable for its purposes". 37 C.F.R. §202.19(b)(1)).

9.3 CORDS - is the "Copyright Office Electronic Registration, Recordation and Deposit System".

9.4 Library Patrons - means all users of Library facilities physically present on-site, including Library staff acting in a non-official capacity. Patrons of the Library must be physically present in the Library and may not access ProQuest Digital Dissertations remotely from outside the Library premises.

9.5 Library Staff - means Library employees acting in their official capacity and others under management control of the Library.

9.6 Library Contractors - means employees of contractors of the Library who are engaged in their official duties for the Library.

9.7 ProQuest Digital Dissertations - is UMI's current name for a comprehensive digital database and archive of every dissertation and master's thesis submitted to UMI for publication, beginning with 1997 titles, regardless of the format in which it was submitted. All References to ProQuest Digital Dissertations in this Agreement refer to UMI's current dissertation database and any successors.

9.8 Public Access Workstation - means a computer workstation located in the Library of Congress on which the Library provides access to ProQuest Digital Dissertations to those authorized users who are physically present in the Library.

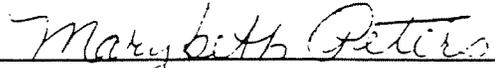
9.9 Secure Storage - means safe, reliable, and redundant electronic storage intended to preserve the stored contents for the long term and to protect them against loss, corruption, and unauthorized access.

IN WITNESS THEREOF, the parties listed below have duly executed this Cooperative Agreement as authorized representatives.

LIBRARY OF CONGRESS

U.S. COPYRIGHT OFFICE

BY: 
Winston Tabb, Associate Librarian for Library Services
Library of Congress

BY: 
Marybeth Peters, Register of Copyrights
U.S. Copyright Office

DATE: January 20, 1999

DATE: January 20, 1999

UMI COMPANY

BY: 
Joseph Reynolds, President
UMI Company

DATE: January 20, 1999