MULS TIMELINE: 40 Years of a Regional Union List of Serials

Cecelia Boone

June 30, 2012
MULS was one of the most important developments in the early years of Minitex. According to the MINITEX “Progress Report for First Year 1971-72”, Early in the MINITEX program the participants recommended the initiation of a Minnesota Union List of Serials (MULS) project. This action recognized that it was necessary, if a state library network was to be realized, that a bibliographic data base must be constructed so that resources of the State’s libraries could be known.

During Minitex’s pilot project period (1969-1971), analysis showed that 75% of requests filled from the University Libraries’ collections were for photocopies. “Therefore, it followed from that, and also from the point of feasibility, that a serials record was the first essential element of such a database.”

The following report, which is made up of text from various MULS reports and Minitex publications and documents, outlines MULS’ development from 1971 through Fiscal Year 2011. The history of MULS parallels the history of Minitex and shows the level of collaboration that developed among participating library directors and staff. It also highlights the contributions of the University of Minnesota Libraries since completion of the preliminary edition of MULS in 1972, which listed the holdings of over 38,000 different serial titles held by the University Libraries. This “… two volume record was published in August 1972 and immediately gained national recognition as one of, if not the first, comprehensive serials list available in machine-readable form based on a national-adopted format (MARC).”

The availability of MULS enhanced the ability of Minitex and its participating libraries to share resources in Minnesota and, very quickly, with North and South Dakota also. The following report recognizes the work of many staff members who contributed to MULS’ development over its 40 years and outlines how developments in automation were used to make MULS available not only to library staff but also to end users who wanted to check which libraries held which serial titles in order to find needed articles.

It shows how a well-crafted and developed project can remain operational for years to encourage library staff to collaborate to improve library services. For example, according to the first MINITEX MESSENGER, May 1974,

> With the development of the Minnesota Union List of Serials, the way has been cleared for such a program in serials, and some of the serials librarians are now meeting together in monthly conference calls to discuss new subscriptions. They attempt to evaluate the need for the new title, to determine how many copies are needed, and to assign responsibilities for its binding and retention....

This was certainly an early attempt of cooperative collection development.

I want to recognize Cecelia Boone and David Linton as the last two MULS staff members who worked for years to keep MULS updated and worked with participating MULS libraries to maintain holdings to ensure that the correct information could be located either by staff, library users, and/or by automated discovery methods.

Bill DeJohn
MULS Chronology
1971—2011
(July 1, 2011 -- end of MULS as separate Minitex program)

Summer 1971, MULS began when Minitex participants agreed to create a machine-readable database containing information about serials owned by the University of Minnesota Libraries - and, ultimately, libraries throughout Minnesota, North Dakota, and South Dakota. This decision stemmed from Minitex’s resource sharing activity, which began in 1969. Minitex and library staff soon recognized that they needed a resource, beyond Union List of Serials, New Serial Titles, and other tools, to identify locations of specific serial issues.

March 1972, Minnesota Union List of Serials, Preliminary Edition, published. Includes the holdings for serials owned by the libraries of the University of Minnesota. Quoting from the “Users Information,” the Preliminary Edition is the “first stage in the creation of a state-wide union list of serials. Also, it represents the initial stage in the development of a comprehensive catalog of serial publications in the University of Minnesota collections, and will thereby improve access to the largest single library resources in the state. This union list replaces all previous lists of serials issued by the University of Minnesota Libraries. . . .

“In addition, titles have been included for the Duluth, Morris, Crookston, and Waseca campus libraries of the University of Minnesota using their most recent lists of serials. . . .”

November 1974, Minnesota Union List of Serials, First Edition, published. The aim of this publication is twofold. “First. . ., it is intended to be used as an aid in locating serial titles throughout Minnesota. . . . Also, by showing what materials are available in which areas, it is hoped that more cooperative purchasing and retention policies can be developed by participating libraries. It should also be pointed out that these libraries have as a condition to be included in MULS, agreed to share their resources with each other.

“The second function of MULS is to supply the best possible bibliographic record for each serial title . . . entered in the list. This not only enables all participating libraries to refer to a single record for each given title, but, hopefully it also supplies cataloging information which can be utilized in each location.”
The First Edition contained 122 distinct holdings locations:

- 50 for the University of Minnesota Twin Cities and Coordinate Campus Libraries,
- 24 Minnesota state agency libraries,
- 8 CLIC (private colleges in the Twin Cities) libraries,
- 6 state college libraries,
- 9 MELSA (public libraries in the Twin Cities region) libraries,
- 9 private college libraries from greater Minnesota,
- 7 regional public libraries from greater Minnesota,
- 5 seminary libraries,
- the Mayo Clinic Library,
- North Dakota State University Library, and
- 2 Minnesota special libraries that were included in regional listings.

The entries totaled more than 71,000.

July 1975, Bibliographic Records from the Minnesota Union List of Serials were the first to be entered into OCLC to begin to build the CONSER database because MULS included 75,000 titles in MARC-like format. The end of the project was noted in OCLC Newsletter in Nov. 1975.

May 1976, Minnesota Union List of Serials, fiche update 1 published.


1977, Union list of Montana serials: a sub-set of the Minnesota union list of serials, MULS, 1st edition. Published in microfiche through a special arrangement to create a union list of Montana serials in machine-readable format.

January 1979, Minnesota Union List of Serials, Second Edition revised. Published on microfiche.

December 1980, MULS, a Union List of Serials, Third Edition published. The edition included holdings for libraries in Minnesota, North Dakota, South Dakota, Wisconsin, and Iowa. More than 120,000 entries were represented with about 60,000 added entries and cross-references. Included the holdings of 386 libraries of all types.


1983-1987, Accumulation of paper MULS updates in boxes in the Minitex office.

February 27, 1985, Decision to seek new “Online Mode” for MULS. By 1983, the number of records in MULS (128,000 titles) exceeded the capacity of the locally developed system that had been used to produce MULS since its inception. The assembly language used for the system was badly outmoded and no longer used in data processing; and the University no longer employed anyone familiar with the assembly language. Moreover, between 1972 and 1983, there had been a revolution in library automation with a number of vendors offering systems specifically designed for the complex bibliographic data bases used by libraries. When it became apparent that MULS could no longer be produced as it had in the past, the Minnesota Higher Education Coordinating Board and the
University agreed that the new system for MULS should allow access in an online mode and that an established vendor would best be able to meet this need. In keeping with past practice, we are requesting that the cost of providing MULS be covered through a state appropriation with a special one time request for the cost of installing the system and the regular Minitex appropriation to cover the ongoing costs of maintaining and updating MULS in the new system. (From “HECB, The University, and MULS,” a report to Minitex Advisory Committee)

**June 27, 1985. Vendor proposals for new MULS system received.**

RFP responses from:

- Library Services and Systems, Inc. (LSSI)
- Blue Bear Group
- SOLINET
- OCLC/AMIGOS
- UTLAS
- Biblio-Techniques
- Auto-Graphics
- Faxon

Glyn Evans of SUNY was selected as an outside consultant to evaluate the responses and prepare a report.

- Mona Carmack, Great River Regional Library
- Becky Bell, South Dakota State Library
- Gail Peloquin, Hamline University, and
- Connie Hendrick, University of Minnesota Libraries

were asked to represent MULS participating libraries in reviewing the proposals.

(From Bill DeJohn memo to Minitex Advisory Committee)

**December 6, 1985. MULS Review Committee recommends OCLC as future home for MULS.**

Regarding MULS, DeJohn said that the MULS review team had recommended that MULS be maintained in OCLC if an acceptable contract can be negotiated. The committee also recommended that LSSI be used to upgrade the current MULS tapes. Finally, the committee named an alternative to OCLC, if a contract cannot be negotiated. . . . If all goes as planned, DeJohn said, he expected MULS to be online by December 1986. (From Minitex/HECB Advisory Committee minutes)

(Editor’s note: We all looked much younger then -- “then” being the mid-1980s . . . )
June 1986, Proposed MULS migration plan announced

- OCLC is preparing the final specifications for Minitex to use in updating its current MULS tape.
- LSSI is the vendor chosen to update the current MULS tape to OCLC specifications so it can be loaded into OCLC’s Union List Subsystem.
- As soon as the MULS tape is loaded into OCLC (scheduled for Fall 1986), AMIGOS will receive the MULS backlog slips and begin updating the MULS records in the OCLC Union List Subsystem.

Late Summer 1986, MULS Contract signed with OCLC

September 1987, OCLC has loaded all holdings for smaller libraries from the source tape into the Union List component of the Serials Subsystem.

October 1988, MULS holdings for larger libraries with a subdivisions from the source tape added into OCLC.

Keying of paper MULS updates into OCLC by staff from AMIGOS & MULS begins.

Staff of participating libraries and MULS staff begin entering their serials holdings data online in OCLC. Three-state effort: Deborah Burke, Anita Branin, and Cecelia Boone traveled throughout Minnesota, South Dakota, and North Dakota providing training to staff who will maintain their libraries’ MULS holdings in OCLC.


December 1989, The last major portion of the initial MULS cleanup has been completed! A backlog of holdings for the University of Minnesota, Twin Cities Campus libraries, recorded on slips that once filled several feet of boxes in the MINITEX/MULS office and totaled thousands of titles, has now been entered into the MULS database. (“MULS Notes #5,” 12/19/89)

April 1990, Historical Societies in MN, ND, & SD enter information for US Newspaper Project and MULS. The Minnesota Historical Society has begun entering bibliographic records and MULS holdings into OCLC as part of its work for the US Newspaper Project (USNP). . . . These records join more than 1,700 North Dakota newspaper records created by the North Dakota Historical Society (HND) as part of the North Dakota Newspaper Project, which already are available online (“MULS Notes #6,” 4/25/90)

November 1990, MULS Futures Task Force named. A task force of MULS participants is named to review options for the future of MULS. Margaret Johnson, Director of the Library and Learning Resources Service, University of Minnesota, Duluth, has agreed to serve as the task force’s chair. The group will consider issues related to the future of MULS and to
access and maintenance of serials data, including:

1) How can we most effectively retrieve current information about periodicals and serials held by Minitex participating libraries?
2) How can we maintain access to this information in a cost-effective manner?
3) How can we provide multiple copies of this information effectively and at low cost?
4) Is there a currently available, viable alternative to MULS?
5) What future developments can be identified that will impact the accessing of serials data.

The group expected to complete its work in time to report to Minitex Advisory Committee's spring meeting.

April 1991, Review Committee update. Report to be presented at June meeting of PAC. The Task Force includes Margaret Johnson, University of Minnesota, Duluth; David Cole, Great River Regional Library; Jeanne DeMars, MSUS/PALS; Fran Fisher, NDSU; Deb Hagemeier, Augustana College; Shelby Harken, UND, Chester Fritz Library; David Rydberg, St. Cloud State University; Bill Sozansky, U of M - TC; and Phil Youngholm, St. Olaf College. (“MULS Notes #8,” 4/26/91)

September 1991, Minitex/HECB Advisory Committee has accepted a Minitex staff report concerning plans for implementation of the MULS Futures Task Force’s recommendations. And, voting during its September meeting, the Committee approved a resolution recommending that MULS libraries update the accuracy of their MULS serial holdings by June 30, 1993.

The Committee’s resolution grew from the Task Force’s third recommendation, which emphasized the critical importance of accurate, up-to-date MULS holdings information for resource-sharing in the Minitex region.

The Committee’s resolution reads:

Whereas, the MULS Futures Task Force recommended that MULS participating libraries should report their holdings of periodicals and annuals using the American National Standard for Serial Holdings Statements at the Summary Level (ANSI Z39.42-1980); and

Whereas, MULS in both online and fiche forms is used for resource sharing in the three-state region and is and may be used for purposes (e.g., loading into regional databases) beyond the identification of titles and holdings for ILL, the databases accuracy will have far-reaching cost and efficiency impacts for the region, groups of libraries, and individual libraries, and

Whereas, the Minitex/HECB Advisory Committee expresses its appreciation to all library staff who have updated the MULS holdings information for their libraries; therefore be it resolved that the

• Minitex/HECB Advisory Committee recommends that all participating MULS libraries update the accuracy of their MULS holdings records following NSI Z39.42-1980 by June 30, 1993 or earlier and maintain the accuracy of records on an annual basis if not more frequently. (“MULS NOTES #9,” 11/1/91)

November 1993, Plans call for a full MULS tape to be produced in February for loading into MSUS/PALS in spring 1994. Later in 1994, it is planned to load MULS into LUMINA at the University of Minnesota—Twin Cities. This access will allow library staff and patrons to search MULS online for locations and holdings information.

We also are working with MSUS/PALS staff to develop a Minitex Serials Cancellation online database that will be housed in PALS. The Serials Working Group of the Minitex/LDS Standards Task Force is helping us to determine the best access points for searching the database and what types of information should be included - such as cancellation under consideration, effective date of cancellation, retention or withdrawal of back issues, etc. . . .

We will continue to maintain the existing Serials Cancellation Database in the Minitex Office until the new one is developed. (“MULS Notes #13,” 11/5/93)
November 1995, Minitex has worked with the Univ. of MN and St. John's University/College of St. Benedict this year in a pilot project to add serials cancellation information to the MULS on PALS database. Now, we invite all Minitex libraries to submit information about their serials cancellation decisions. The new database replaces the old Minitex Serials Cancellation Database, which was maintained as an in-house database in the Minitex Office to which many MULS libraries submitted information. (“MULS Notes #17,” 11/1/95)

October 1996, MULS: a Union List of Serials has joined the World Wide Web through access via WebPALS at www.pals.msus.edu/webpals. The Web version of MULS joins MULS online in OCLC, the MULS microfiche edition, and MULS as a reference file in classic MnSCU/PALS as methods of access to the nearly 356,000 holdings for more than 200 libraries in Minnesota, North Dakota, and South Dakota that make up the MULS database. (“MULS Notes #19,” 10/25/96)

April 1996, The Minitex Serials Management Database (SMD), which is available as a subsection of the MULS file on MnSCU/PALS, continues to grow as additional libraries report new serial cancellation decisions. The goal for the two-year old experimental database, which now has more than 2000 entries, has been to provide information about serials cancellations by MULS libraries beyond that included in the enumeration and chronology data in the summary holding statements in MULS.

As of mid-March, the SMD included information about serials cancellations by staffs of libraries, including U of M, TC; NDSU; Mankato State University; University of North Dakota; Winona State University, Minnesota Arrowhead community colleges; St. John’s University; College of St. Benedict; St. Olaf College, and U of M, Duluth (“MULS Notes #20,” 4/9/97)

Microfiche updates produced annually through the 18th Edition, which was published in Aug. 2001.

May 2002, Change for MULS products – no new MULS microfiche planned
MULS libraries may choose among five forms for their offline products: printed lists, microfiche, magnetic tape, tape cartridge, or through electronic data transfer. The annual tape of the MULS database for use on MnSCU/PALS and the MnLINK Gateway will be produced Aug. 1 along with products for individual MULS libraries and groups of MULS libraries. No new MULS microfiche edition will be ordered this year, however.

Two primary reasons have led us to decide against producing a MULS microfiche this August:

• Last fall’s survey of Minitex participating libraries showed that relatively few libraries use the microfiche for MULS access.

• With the reduction in Minitex’s legislative appropriation for the next fiscal year – due to Minnesota’s budget shortfall – spending approximately $20,000 on a new microfiche product becomes particularly questionable.

So, we will continue to provide access to the full MULS database through two in-region sources (MnSCU/PALS and the MnLINK Gateway), and it will continue to be available online in the OCLC Union List and ILL systems. We ask all libraries to use these methods of access to MULS data this fall; the 18th Edition of the MULS microfiche (which was produced in Fall 2001) will become increasingly outdated as we move through the summer. Please do not rely on the microfiche for accurate holdings data after Sept. 1. (“MULS Notes #28,” 5/9/02)

November 2003, Number of libraries using automated MULS updating continues to grow
The number of Minitex/MULS libraries making use of OCLC’s Batch Processing of Local Data Records (LDRs) has grown to five with the addition of the College of St. Benedict and St. John’s University this summer. The two libraries’ MULS holdings were updated in late July – just in time to ensure that they would be up-to-date for the new MULS database product, which was created on August 1. OCLC’s Batch Processing functionality allows libraries to update their union list holdings using information extracted from their catalog, rather than staff having to update their MULS holdings title-by-title through the OCLC Union List service.

Gustavus Adolphus College and Inver Hills Community College have submitted their holdings information for Batch Processing, and we are awaiting their processing by OCLC. Other Minitex/MULS libraries that have used the service to date are Northern State University, St. Cloud State University, and Minnesota State University, Mankato. (“MULS Notes #31,” 11/14/2003)

MULS database also available in MnSCU/PALS and MnLINK Gateway. Updated annually through August 2005, Last MULS file included 166,304 titles with 380,339 holdings from more than 200 libraries throughout Minnesota, North Dakota, and South Dakota.

Spring 2006, MULS Holdings (& OCLC Union Listing) migrate to MARC Holdings Format and OCLC’s Connexion browser interface. OCLC Union List Service, one of the last OCLC systems to use the Passport software moved to OCLC’s Connexion browser in Feb. 2006. Also, more important from the point-of-view of standardization of...
holdings data, the holdings data input by OCLC Union List libraries were converted to the MARC Format for Holdings Data (MFHD). The changes necessitated a major training program to help library staff become familiar with creating and maintaining Local Holdings Records using Connexion and creating and maintain their holdings in MFHD.

**October 2008, MULS asked to provide “The Union List Perspective” for NISO National Education Seminar on Resource Sharing**
Presentation traced the history of union lists of serials and provided statistics showing the value of checking union list information in terms of time savings for staff of both borrowing and lending libraries.

**July 2009. MULS Local Holdings Record maintenance training goes national** via the OCLC National Training Portal as a Guaranteed Provider.

**May 2011, Announcement of end of MULS as a separate Minitex program.** Changing technological options and budget challenges lead to the decision to phase out MULS as a separate Minitex program. (Print and webpage announcements: http://www.minitex.umn.edu/Holdings/Muls.aspx)

**Union Lists & Their Role in Supporting Resource Sharing**

**Cecelia Boone**

**MULS: MINITEX Union List of Serials**
**MINITEX Library Information Network**

Collaborative Library Resource Sharing:
Standards, Developments, and New Models for Cooperating
A NISO Educational Forum
October 6, 2008

**MULS: A Case Study**

1971
- MULS began - 2 years after beginning of MINITEX “project”
- Print editions (1972 – 1980)
- Grew to include holdings of MN academic & public libraries as well as libraries in ND & SD

1987/1989
- Went online in OCLC
- Available also on MnPALS (1994 – 2006)
- Fiche editions (1972-2001)

Present

Dave Linton

Cecelia Boone and Dave Linton
The final Minitex/MULS team
MULS – A Look Back

The 40-year growth and development of MULS paralleled that of Minitex, as a whole, as well as that of union lists of serials throughout the U.S. MULS was conceived to meet a regional need and progressed through various stages of automation mirroring those of library automation in general. Ultimately, technological innovation and budget stringencies led to the discontinuation of dedicated staffing for MULS as a separate Minitex program on June 30, 2011. Along the way, it provided:

• valuable support for resource sharing for libraries,

• information for students, researchers, and others about the serial holdings of nearby libraries in the Twin Cities and Greater Minnesota,

• bibliographic metadata that was used as a source for CONSER and other systems,

• experience with the complexities of serials holdings data that presaged problems with sharing serials holdings at the national level, and

• an opportunity for staff members of individual libraries to see how their collections related to a regional whole – as well as to collections beyond the three-state region.

The year that has passed since the discontinuation of the MULS program has seen:

• continued use of the serials holdings statement information provided by Minitex libraries through OCLC Local Holdings Records (LHRs) for resource sharing and

• more use of LHRs for projects ranging from collection analysis for individual libraries to use of specific LHR fields to support new national efforts to share information about digital preservation. (A bit of déjà vu: in the mid-1990s, OCLC implemented a capability similar to the newly described practices for using LHRs to report digitization plans, but the procedures were not adopted widely because extra manual data input was required. Hopefully, with today’s increased interest in sharing digital preservation information – and OCLC’s greater facility for batchloading holdings data – the new effort will see greater success.)

As such, we encourage all Minitex participating libraries to continue the sharing of serials holdings information to support interlibrary collaboration projects. The work of staff of MULS participating libraries and Dave Linton and all other former Minitex/MULS workers over the years made MULS a union list that was known and highly regarded around the country.

Information about updating local holdings records is available through the OCLC website.

Cecelia Boone