A Union Catalog of Monographs

Another Approach

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ABSTRACT

The rationale for and the production of the 1977 *TALON Union Catalog of Monographs* are described. The 158,859 records include the existing machine-readable records for six health sciences libraries plus the cataloging of six others, converted by matching other data bases and by keypunching. The method and costs of production are discussed. Use of Computer-Output-Microfiche (COM) significantly decreased the cost and time required for publication. The $.076 unit cost per entry, with both author and title access for the COM method, is almost one-half the unit cost for the previous method which offered only main-entry access.

The *TALON Catalog* compares favorably with the *Midwest Medical Union Catalog*. The addition of the title index significantly increases its usefulness. However, the unique feature of the *TALON Catalog* may be its machine-readable form which offers the potential for quantitative analyses of health sciences library collections. Such data may be essential for rational management of limited library funds.

Two elements are essential to any kind of resource-sharing agreement. First, one partner must have something that the other wants and be willing to share it; and second, the other partner must be aware that the first has it. In order for such agreements to work harmoniously, it is also useful, though not essential, that the agreement be reciprocal. These principles apply to garden utensils, kitchen condiments, or indeed to any other type of resource, including books, and have a long and honorable history among libraries, who have willingly shared their resources for many years. Now that budgets are becoming more and more stringent, librarians are turning with greater frequency toward resource sharing, but simultaneously, and chiefly for the same economic reasons, beginning to look more critically at the basic principles.

An established method of informing libraries of the existence of a particular book in a collection has been by means of the union catalog, a consolidated record of the holdings of two or more libraries. One of the primary functions of the union catalog, says Silvere Willemin, is to serve as a tool for the "rationalization" of interlibrary lending [1]. Yet the union catalog has served in the past more as a tool for facilitating, rather than rationalizing, interlibrary lending. Institutions need not share resources if each acquires the same materials. In order to rationalize resource sharing, libraries must manage their resources so that they complement, rather than duplicate, each other. Union catalogs do not usually serve this purpose except through retrospective acquisition.

With the exception of the *National Union Catalog*, most union catalogs are used as location tools rather than as bibliographic sources. If this is their primary use, then the inclusion of complete bibliographic data may compound their cost without increasing their usefulness. Only data necessary to facilitate usage and to allow for analysis of content should be included.

Instead of union catalogs, several state libraries have published numeric registers based on Library of Congress card numbers (LCNs). However, such registers are not very effective for medical libraries, which rely chiefly on National Library of Medicine (NLM) cataloging. It was with these considerations in mind that the fourth edition of the *TALON Union Catalog of Monographs* was planned and produced [2].

History

Region Nine of the Regional Medical Library Program includes five states (Texas, Arkansas, Louisiana, Oklahoma, and New Mexico) and is commonly known as TALON. Since 1970, the twelve resource libraries of TALON have submitted unit cards to the *TALON Union Catalog of Monographs* at the regional library in Dallas. The first published edition of the *TALON Catalog* was produced in 1971 on 16mm microfilm and included 41,000 entries consisting of photographs of the catalog cards, which had the library location in-

formation stamped on them. A second edition in the same format was produced early in 1973 with 23,677 added entries for a total of 64,677.

The third edition was published in November 1975 with over 85,000 entries representing the more than 110,000 cards that had been submitted since the beginning of the project. The format chosen for this edition was microfiche, produced from jacketed microfilms of the catalog cards. The filming format was one card per frame, requiring a total of 900 microfiche cards for the file.

By the spring of 1976, the Regional Library had accumulated an additional sixty thousand cards, representing a prodigious filing task. It was estimated that an additional staff member would be required for approximately six months to file the cards. The cumbersome publication format used for the previous edition prompted a search for alternative methods.

In April 1976 the TALON Regional Advisory Council, which includes the directors of the TALON resource libraries, considered three alternatives for the future of the *TALON Catalog:*

1. To discontinue the catalog;
2. To file the estimated sixty thousand catalog cards and to film these cards for distribution on microfiche;
3. To utilize the available machine-readable data bases of the TALON resource libraries and to convert the catalog cards for the other TALON libraries to machine-readable form.

The third alternative was selected. The University of Texas Health Science Center at San Antonio (UTHSCSA) Library was assigned the responsibility of completing the project.

Objectives

The following objectives were established for the project:

1. To utilize existing machine-readable records as much as possible, thereby reducing manual handling;
2. To convert the cataloging of libraries without machine-readable records to machine-readable form;
3. To produce a union catalog of monographs with minimum lag time between data submission and catalog production;
4. To increase ease of handling the *TALON Catalog* by displaying more records on each microfiche frame;
5. To generate a title index to complement main-entry access;
6. To produce the *TALON Catalog* at a cost comparable to the previous catalog;
7. To construct a data base that could provide management information about TALON monograph collections and thereby serve as the basis for evaluating future cooperative acquisitions programs.

Format

The twelve TALON resource libraries were surveyed to assess the availability and characteristics of their machine-readable data and to determine the data elements that the libraries would require in the new data base. Six of the libraries had machine-readable records in one form or another for the monographs in their collection. Two of these were in abbreviated eighty-character formats designed for circulation systems. Two libraries had complete monograph records in MARC-compatible formats. Three of the libraries had been participating in the Ohio College Library Center (OCLC) Network, the earliest since 1975. One library had entered LCNs into its state-library's numeric register and could supply that data on tape.

All libraries, with one exception, responded to queries about the information that they wanted included in the new data base. The majority of the libraries were willing to accept an abbreviated format and agreed upon the data elements to be included: main entry, title, edition, imprint date, call number, and library location.

Machine Conversion

All programming was done by TRINCO Inc., a data-processing service bureau wholly owned by Trinity University, San Antonio. TRINCO utilizes the MARCIVE Library System [3]. The computer-processing plans were similar to those used for the production of the *CORAL Union Catalog of Monographs* in 1975. This catalog was published by the Council of Research and Academic Libraries (CORAL) of the greater San Antonio area and contained six-hundred thousand records for eight libraries in the area. Varying formats had been merged to form the *CORAL Catalog.* The two-line format for the TALON catalog was adapted from the program for a microfiche catalog produced for another library in the area.

Programs were written by TRINCO to convert the libraries' machine-readable data to MARCIVE. One program was used for converting abbreviated circulation records; the second converted the variable-length complete bib-

liographic data of The University of Texas Medical Branch; the third converted the OCLC format to MARCIVE. The University of New Mexico Health Science Center Library's LCNs were stripped from the New Mexico State Library's data base and used to retrieve these bibliographic records from the MARC tapes. Altogether 90.4% of the records in the *TALON Catalog* were received in machine-readable form. Another 6.6% were retrieved from data bases, and only 3.0% were keypunched at UTHSCSA.

Manual Conversion

An estimated sixty thousand catalog cards were examined by the UTHSCSA staff. Instead of the usual union catalog approach, these records were first separated by library—those for libraries with machine-readable data being boxed and stored. Approximately sixteen thousand cards remained for processing. Approximately 15% of these records had either the International Standard Book Number (ISBN) or the LCN printed on the card. These data were keypunched and used for retrieval from the MARC tapes. Cards for serials, dissertations, and audiovisuals were not processed, thus eliminating about two thousand records. Although the initial plan had been to search for the other cards by author or title in a microfiche catalog of MARC records, it soon became apparent that there was a greater chance of finding entries in the UTHSCSA Library's collection, because a substantial percentage of medical works are not cataloged by the Library of Congress.

Approximately 50% of the cards searched for in the UTHSCSA card catalog were located and retrieved from the UTHSCSA MARCIVE data base via the UTHSCSA accession numbers. LCNs were identified for an additional one thousand records by searching in a microfiche file of MARC records. There were 4,669 cards keypunched in an abbreviated format including author, short title, imprint date, call number, and library identification. The publisher's name was also keypunched for use in subsequent analysis studies. The sources of the data and the conversion methods used in each case are shown in Table 1.

In retrospect the project staff felt that it would have been quicker to keypunch all of the data rather than to search the card catalog for matches. However, computer-center personnel could easily keypunch the ISBN, LCN, or accession number, and there were staff members available to search catalogs. Furthermore, using established data obviated the need for proofreading and guaranteed full bibliographic entries. The ideal situation would have been retrieval through on-line input such as OCLC or via the NLM tapes, but the UTHSCSA Library did not have access to these at the time of the project.

Editing

A major objective in the project was to minimize the manual handling of data. Because the primary use of the union catalog is as a locator, rather than as a bibliographic source, it was decided to make no effort to edit any of the machine-readable data bases. This is most significant in the use of circulation records of two libraries. These

TABLE 1

Sources of Data for TALON Union Catalog of Monographs

Library	No. of computer records	No. of retrieved MARC tapes	No. of retrieved MARCIVE	No. keypunched	Total	Coverage
1	42,192				42,192	Circulation
2	22,403				22,403	Circulation
3		323	843	640	1,806	1975–1976
4		934	412	746	2,092	1975–1976
5		219	34	43	296	1975–1976
6		250	1195	807	2,252	1975–1976
7	32,257				32,257	Shelflist
8		1952	1918	1247	5,117	1975–1976
9	1,571	720	465	376	3,132	1975–1976
10		434	917	810	2,161	1975–1976
11	3,426				3,426	
12	41,725				41,725	Shelflist
Total	143,574	4832	5784	4669	158,859	

PRINCIPLES AND METH OF PHYSICAL DIAG 3 ED 1965 C2			WB 200	TXHM
PRINCIPLES METHODS P E3		1965	WB 200L587P	TXDA
LEPAULMIER, CLAUDE STEPHAN, 1828-1903				
AMBROISE PARE; D'APRES DE NOUVEAUX DOCUMENTS DECOUVERTS AUX ARCHIVES NATIONALES		1887	H-M WZ 100 P227LE 18	TXUM
LEPECQ DE LA CLOTURE, LOUIS, 1736-1804				
OBSERVATIONS SUR LES MALADIES EPIDEMIQUES, OUVRAGE REDIGE D'APRES LE TABLEA		1776	WA 100 L5940 1776	TXSA
LEPENNETIER F				
ROENTGENTHERAPIE DES AFFECTIONS PEAU 1961			Y 5C	TXHM
ROENTGENTHERAPIE ET ELECTROTHERAPIE,,,1961			WR 660	TXHM
LEPESCHKIN E				
MODERN ELECTROCARDIOGRAPHY V01 1951			WG 140	TXHM
LEPETIT COLLOQUIA ON BIOLOGY AND MEDICINE, 2D, PARIS, 1970.				
THE BIOLOGY OF ONCOGENIC VIRUSES; PROCEEDINGS OF THE SECOND LEPETIT COLLOQUIUM,		1971	QR 360 .L37 1970	NMUM
LEPETIT COLLOQUIUM, 3RD, LONDON, 1971. SA=3				
CELL INTERACTIONS; PROCEEDINGS OF THE THIRD LEPETIT COLLOQUIUM, HELD IN LONDON,		1972	QH 631 L594C 1971	TXUM
LEPETIT COLLOQUIUM, 4TH, COCOYOC, MEXICO, 1972.				
POSSIBLE EPISOMES IN EUKARYOTES; PROCEEDINGS OF THE FOURTH LEPETIT COLLOQUIUM, H		1973	QH 452.5 .L46 1972	OKUM
LEPETIT COLLOQUIUM, 5TH, MADRID, 1974.				
THE IMMUNOLOGICAL BASIS OF CONNECTIVE TISSUE DISORDERS; PROCEEDINGS... 11-13 NOV		1975	WD 375 L595I 1974	TXSA
LEPETIT COLLOQUIUM, 5TH, MADRID, 1974. SA=5				
THE IMMUNOLOGICAL BASIS OF CONNECTIVE TISSUE DISORDERS; PROCEEDINGS...11-13 NOVE		1975	WD 375 L595 1974I	TXUM
LEPINE P				
DICT FRANCAIS-ANGLAI E2		1974	W 13L596D	TXDA
DICTIONNAIRE FRANCAIS-A		1952	W 13L596D	TXDA
LEPINE, PIERRE				
DICTIONNAIRE FRANCAIS-ANGLAIS, ANGLAIS-FRANCAIS DES TERMES MEDICAUX ET BIOLOGIQU	2D	1974	W 13 L55D 1974	LUMN
DICTIONNAIRE FRANCAIS-ANGLAIS, ANGLAIS-FRANCAIS DES TERMES MEDICAUX ET BIOLOGIQU	2D	1974	W 13 L596D 1974	TXSA
ENGLISH-FRENCH, FRENCH-ENGLISH DICTIONARY OF MEDICAL AND BIOLOGICAL TERMS.	2D	1974	R 121 .L39 1974	ARUM
LEPLEY, RAY, 1903-				
VERIFIABILITY OF VALUE.		1944	BD 232 L597V 1944	TXUM
LEPP I				
PSYCHOLOGY OF LOVING 1963			HQ 21	TXHM
LEPPER M H				
AUREOMYCIN 1956			V 483	TXHM
AUREOMYCIN 1956			QV 350	TXHM
LERCH C				
MATERNITY NURSING 2 ED 1974			WY 157	TXHM
WORKBOOK FOR MATERNITY NURSING 3 ED 1973			WY 157	TXHM
LERCH, CONSTANCE				
MATERNITY NURSING.		1970	WY 157 L614M 1970	TXUM
MATERNITY NURSING.	2N	1974	WY 157 L614M 1974	TXUM
WORKBOOK FOR MATERNITY NURSING.	3R	1973	WY 157 L614W 1973	TXUM
LERCHE W				
ESOPHAGUS AND PHARYNX IN ACTION 1 ED 1950			WI 100	TXHM
LERCHE, WILLIAM				
THE ESOPHAGUS AND PHARYNX IN ACTION; A STUDY OF STRUCTURE IN RELATION TO FUNCTIO	[1	1950	WI 100 L614E 1950	TXSA
LERICHE R				
NORMAL + PATHOLOGICAL PHYSIOL OF BONE 1928			F 2B	TXHM
LERICHE, RENE 1879-1955				
LA CHIRURGIE A L'ORDRE DE LA VIE. INTROD. PAR JOACHIM BEER		1944	WO 9 L615C 1944	TXSA
LERICHE, RENE, 1879-				
PHILOSOPHIE DER CHIRURGIE.		1954	H-M WO 100 L615P 195	TXUM
LERMAN, ALAN				
VOCATIONAL ADJUSTMENT AND THE DEAF.		1965		OKUM
LERMAN S				
BASIC OPHTHALMOLOGY 1966			WW 100	TXHM
GLAUCOMA 1961			WW 290	TXHM
LERMAN, SIDNEY 1927-				
BASIC OPHTHALMOLOGY		1966	WW 100 L616B 1966	TXSA

FIG. 1.—Sample page of author catalog.

are abbreviated records, often consisting of the author's surname and initials and a shortened title. As a result, particularly in the case of corporate main entries, identical works appear under variant forms of author entries, as do, for example, those entries beginning with "AMER." instead of "AMERICAN." Users are cautioned in the preface to the *TALON Catalog* to scan proximate entries in the area of the specific author they are seeking. Where differences in main entry for the same item were identified by the compilers, they were reconciled by accepting the UTHSCSA form. For example, Section 2 of the *Health Manpower Source Book* was entered by one library under "U.S. Division of Nursing" and by UTHSCSA under "U.S. Public Health Service. Division of Public Health Methods," and the latter was the form adopted. This example is one of many justifications for the title index, which serves to bring together variant main entries for the same item. Those records retrieved from MARC records had the Library of Congress (LC) main-entry form, whereas the bulk of the records followed NLM practices, which are not always the same as those of LC.

Over eight hundred records (5%) submitted for retrieval from MARCIVE or MARC records could not be located. There were various reasons for this, including errors in keypunching, transcription of retrieval keys (LCN, ISBN, or accession number), or the nonexistence of the record on the particular file. About five hundred catalog cards were submitted without a library location and therefore were not processed.

Catalog Format

The *TALON Catalog* is produced on Computer-Output-Microfiche (COM) in two sections, an author main entry section and a title section. The author section is in a two-line format, with the author on the first line and shortened title, edition, imprint date, and call number on the second line (see Figure 1). There are no title main entries in this section. Titles are grouped under identical main entries with the main entry appearing only once. The edition statement was limited to two characters; for example, third edition may appear as "3R" or "3D" and revised edition as "RE". Brackets and copyright "C"s were removed from the imprint data. There was one exception: Because of a conversion complexity, the data from one library included the edition and imprint statement following the title, rather than as a separate field.

The call number appears at the end of the title line and in most cases is that assigned by the holding library. However, if the call number was not known, the LC call number was substituted. There were other discrepancies in the call number field which affected a small percentage of the records. These call number limitations, however, have little influence on the basic objective of the union catalog, which is to identify a specific title with a specific library.

The title index is in a one-line format (see Figure 2) and consists of fourteen microfiche at the same reduction ratio (42×) as the author list. The title index is a direct benefit of the computer production, as it would not have been feasible to have filed the cards manually in two alphabets. In many ways the title index helps to compensate for the idiosyncracies of the main entry catalog. Future catalogs will include the edition and imprint date in the title index.

Costs

An important aspect of any project is the cost, both in dollars and labor involved. The costs of adding each library's records to the basic file using a uniform format are shown in Table 2. The differences in costs for entering the records of each institution are related to the number of records involved (see Table 1) and the special processing required.

The labor was contributed by the UTHSCSA Library, which did not hire additional staff for the project. Two students on a work-study program helped with the initial sorting and searching. Evening and weekend staff took advantage of the summer lull to assist in the project while monitoring their work stations. Additional personnel from the technical services department assisted in the later phases of the project. An estimated one thousand staff hours were required to separate the cards, to search catalogs, and to keypunch the data. Using an average hourly wage of $4.00, the labor costs have been estimated as equivalent to $4,000. Hence, the overall cost of the *TALON Catalog* was $12,064.

Thanks to TRINCO, which discounted computer service charges by approximately one-third, and the UTHSCSA Library, which absorbed the labor costs, the charge to each of the participating libraries was less than five hundred dollars, well within the range projected for the former manual filing and microfilming method. A comparison of costs per unit record for the projected conventional filing and microfilm format with the costs of the COM format used for the fourth edition

OPIATE RECEPTOR MECHANISMS : NEUROCHEMICAL AND NEUROPHYSIOLOGICAL PROCESSES IN O	SNYDER, SOLOMON H., 1938-	ARUM
OPIATE RECEPTOR MECHANISMS : NEUROCHEMICAL AND NEUROPHYSIOLOGICAL PROCESSES IN O	SNYDER, SOLOMON H., 1938-	ARUM
OPIATES AND OPIATE ANTAGONISTS; A REVIEW OF THEIR MECHANISMS OF ACTION IN RELATI	WIKLER, ABRAHAM	TXSA
OPINIONMAKERS 1965	RIVERS W L	TXUM
OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL; INCLUDING THE JURISDICTION AND RUL	AMERICAN MEDICAL ASSOCIATION. JUDICIAL C	TXSA
OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL; INCLUDING THE PRINCIPLES OF MEDICA	AMERICAN MEDICAL ASSOCIATION. JUDICIAL	TXUM
OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL, INCLUDING THE PRINCIPLES OF MEDICA	AMERICAN MEDICAL ASSOCIATION. JUDICIAL C	TXUM
OPINIONS CANCER PATIENTS RELATIVE FREQUENCY...1973	KEMP M G	TXUM
OPINIONS OF OVER 100 [ONE HUNDRED] PHYSICIANS ON THE USE OF OPIUM IN CHINA.	PARK, WILLIAM HECTOR, COMP.	TXUM
OPINIONS REPORTS JUDICIAL COUNCIL 1971	AMER MED ASSN	TXUM
OPINIONS REPORTS OF JUDICIAL COUNCIL 1966	AMER MED ASSN	TXUM
OPINIONS REPORTS OF JUDICIAL COUNCIL 1960	AMER MED ASSN	TXUM
OPIUM ADDICTION 1929 C2	LIGHT A B	TXUM
OPIUM ADDICTION 1929 C1	LIGHT A B	TXUM
OPIUM ADDICTION IN CHICAGO	DAI, BINGHAM	TXSA
OPIUM AND NARCOTIC LAWS; COMP. BY GILMAN G. UDELL	U.S. LAWS, STATUTES, ETC	TXSA
OPIUM AND NARCOTIC LAWS; COMPILED BY GILMAN G. UDELL	U.S. LAWS, STATUTES, ETC	TXSA
OPIUM AND THE OPIUM-APPETITE: WITH NOTICES OF ALCOHOLIC BEVERAGES, CANNABIS INDI	CALKINS, ALONZO.	TXUM
OPIUM NARCOTIC LAWS 1972	US LAWS STATUTES ETC	TXUM
THE OPIUM PROBLEM, BY CHARLES E. TERRY AND MILDRED PELLENS, FOR THE COMMITTEE ON	TERRY, CHARLES EDWARD, 1878-	TXUM
THE OPIUM TRADE: INCLUDING A SKETCH OF ITS HISTORY, EXTENT, EFFECTS, ETC. AS CAR	ALLEN, NATHAN, 1813-1899.	TXUM
THE OPIUM WAR, 1840-1842: BARBARIANS IN THE CELESTIAL EMPIRE IN THE EARLY PART O	FAY, PETER WARD, 1924-	TXSA
"OPIUM." WITH AN INTRODUCTORY NOTE FOR AMERICAN READERS.	GAVIT, JOHN PALMER, 1868-	TXUM
OPPIAN, COLLUTHUS, TRYPHIODORUS, WITH AN ENGLISH TRANSLATION BY A. W. MAIR.	HANDBUCH DER MIKROSKOPISCHEN ANAT DES ME	TXMM
OPPORTUNISTIC FUNGAL INFECTIONS; PROCEEDINGS... EDITED BY ERNEST W. CHICK, ALBER	OPPIANUS	TXUM
OPPORTUNISTIC FUNGAL INFECTIONS; PROCEEDINGS... EDITED BY ERNEST W. CHICK, ALBER	INTERNATIONAL CONFERENCE ON OPPORTUNISTI	TXLT
OPPORTUNISTIC FUNGAL INFECTIONS; PROCEEDINGS OF THE SECOND INTERNATIONAL CONFERE	INTERNATIONAL CONFERENCE ON OPPORTUNISTI	TXSA
OPPORTUNISTIC FUNGAL INFECTIONS; PROCEEDINGS OF THE SECOND INTERNATIONAL CONFERE		NMUM
OPPORTUNISTIC PATHOGENS. EDITED BY JAMES E. PRIER AND HERMAN FRIEDMAN.	AMERICAN SOCIETY FOR MICROBIOLOGY. EASTE	TXUM
OPPORTUNISTIC PATHOGENS. EDITED BY JAMES E. PRIER AND HERMAN FRIEDMAN.	AMERICAN SOCIETY FOR MICROBIOLOGY. EASTE	LNTM
OPPORTUNISTIC PATHOGENS. EDITED BY JAMES E. PRIER AND HERMAN FRIEDMAN	SYMPOSIUM ON OPPORTUNISTIC PATHOGENS, PH	TXLT
OPPORTUNISTIC PATHOGENS. EDITED BY JAMES E. PRIER AND HERMAN FRIEDMAN.	SYMPOSIUM ON OPPORTUNISTIC PATHOGENS, PH	TXSA
OPPORTUNITES AND LIMITATIONS IN THE TREATMENT OF ALCOHOLICS [A SYMPOSIUM HELD AT	HIRSH, JOSEPH 1915- ED	TXUM
OPPORTUNITIES AND LIMITATIONS IN TREATMENT OF ALCOHOLICS 1965		TXSA
OPPORTUNITIES ENVIRONME	FANNING O	TXMM
OPPORTUNITIES FOR WOMEN IN HIGHER EDUCATION; THEIR CURRENT PARTICIPATION, PROSPE	CARNEGIE COMMISSION OF HIGHER EDUCATION.	TXDA
OPPORTUNITIES IN OCCUPATIONAL THERAPY, BY MARIE LOUIS FRANCISCUS AND MARGUERITE	FRANCISCUS, MARIE LOUISE	TXUM
OPPORTUNITIES IN OCCUPATIONAL THERAPY, BY MARIE LOUISE FRANCISCUS AND MARGUERITE	FRANCISCUS, MARIE LOUISE	TXUM
OPPORTUNITIES IN PHARMACY CAREERS / BY FRED B. GABLE.	GABLE, FRED B.	TXUM
OPPORTUNITIES IN PHARMACY CAREERS REV ED 1974	GABLE F B	NMUM
OPPORTUNITIES OSTEOPATH	MILLS L	TXMM
OPPORTUNITY FAMILY	SCANZONI J H	TXDA
OPTHALMIC ULTRASOUND; PROCEEDINGS... EDITED BY KURT A. GITTER [ET AL.]	INTERNATIONAL CONGRESS OF ULTRASONOGRAPH	TXUM
OPTHALMOLOGY IN THE WAR YEARS		LSUM
OPTHALMOLOGY REVIEW BOOK	THOMAS, CHARLES I.	LSUM
THE OPTIC NERVE AND THE ACCESSORY SINUSES OF THE NOSE; A CONTRIBUTION TO THE STU	ONODI, ADOLF 1857-1920	TXSA
THE OPTIC NERVE: PROCEEDINGS OF THE SECOND WILLIAM MACKENZIE MEMORIAL SYMPOSIUM	WILLIAM MACKENZIE MEMORIAL SYMPOSIUM, 2D	ARUM
THE OPTIC NERVE; PROCEEDINGS OF THE SECOND WILLIAM MACKENZIE MEMORIAL SYMPOSIUM	WILLIAM MACKENZIE MEMORIAL SYMPOSIUM, 2D	LNTM
THE OPTIC NERVE; PROCEEDINGS OF THE SECOND WILLIAM MACKENZIE MEMORIAL SYMPOSIUM	WILLIAM MACKENZIE MEMORIAL SYMPOSIUM, 2D	TXLT
THE OPTIC NERVE; PROCEEDINGS OF THE SECOND WILLIAM MACKENZIE MEMORIAL SYMPOSIUM	WILLIAM MACKENZIE MEMORIAL SYMPOSIUM, 2D	TXSA
OPTIC NERVE TERMINAL DEGENERATION IN THE RAT, CAT AND MONKEY (AN ELECTRON MICROS	MCCLUNG, JOHN ROSS	TXUM
OPTICAE THESAURUS; ALHAZENI ARABIS LIBRI SEPTEM, NUNCPRIMUN EDITI. EIUSDEM LIBER	ALHAZEN, 965-1039	TXSA
OPTICAL ACTIVITY OF PROTEINS AND OTHER MACROMOLECULES	JIRGENSONS, BRUNO 1904-	TXSA
OPTICAL ACTIVITY OF PROTEINS MACROMOL 2 ED 1973	JIRGENSONS B	TXMM
OPTICAL ACTIVITY PROTEI	JIRGENSONS B	TXSA
OPTICAL AIDS FOR LOW ACUITY 1957	STIMSON R L	TXMM
OPTICAL DATA PROCESSING.	SHULMAN, ARNOLD ROY	TXUM

FIG. 2.—Sample page of title catalog.

TABLE 2

COSTS OF ADDING RECORDS TO BASIC FILES USING TALON CATALOG FORMAT

Library	Cost
1	$1,865
2	392
3	81
4	120
5	73
6	105
7	1,138
8	208
9	122
10	115
11	290
12	1,300
	$5,809
Merging and formating the data base	2,000
Producing the master microfiche and fourteen duplicates	275
Total computer costs	$8,064

provides a measure of the cost effectiveness. Estimated costs, using the former method, for 35,000 records were:

Filing costs (personnel only)	$3,600
Filming	1,195
Total	$4,795

This represents a unit cost of $0.137 ($4,795 ÷ 35,000). The unit cost for the COM method, calculated in the same way, was $.076 ($12,064 ÷ 158,859) and provided both author and title access. In addition, some of the COM method costs were one-time and can be prorated over the life of the system, and the potential use of the data base has been greatly enhanced; thus, the cost effectiveness of the COM method appears even greater.

Gleaves and Martin indicated in 1970 that the technology needed to produce union catalogs by computer was already available. However, they projected costs of $55,049 to program, convert, and print full bibliographic data for 40,000 catalog cards [4]. Conversion costs have dropped as more data bases become available for this purpose. In addition, the low conversion costs of the *TALON Catalog* were due in part to the abbreviated entry and the output form. Additional copies of the *TALON Catalog* can be duplicated for as little as $10.00 each, although a higher fee is charged to nonparticipating libraries to help recover the costs of publication.

USAGE

The *TALON Catalog* was distributed to the twelve resource libraries in February 1977. Interlibrary loan librarians were requested to record their use of the *TALON Catalog* for a one-month period. Statistics contributed by ten libraries indicated that it had been used 669 times in a single month, with 358 items (54%) located. Considerable differences in use were reported from library to library (see Table 3). Of the 358 items found, 156 (44%) were located by title. Had title access not been available, the retrieval rate could have been as low as 30%.

The *TALON Catalog* has also been used for verification and call number assignment. The branch library of one of the contributing libraries uses it for access to the main library's collection. The abbreviated format has not proved to be a disadvantage in the catalog's use.

DISCUSSION

Computer compilation of union lists is not new and numerous serials holding lists have been produced in this way. However, union catalogs of monographs have not been widely produced via computer, even though this has been acknowledged as a reasonable method. In 1975 the *CORAL Union Catalog of Monographs* was produced using existing machine records as well as records with known LCNs. New Mexico has produced a union catalog from OCLC holdings tape. To our knowledge, however, the *TALON Catalog* is the first to utilize varying formats along with the conversion of catalog cards to machine-readable data.

TABLE 3

USAGE OF THE TALON UNION CATALOG OF MONOGRAPHS

Library	No. of searches	No. found	% found	No. found by title
1	102	36	35.3	17
3	30	20	66.7	16
4	146	75	51.4	25
5	40	25	62.5	8
7	32	19	59.4	5
8	16	12	75.0	6
9	49	32	65.3	19
10	37	24	64.9	17
11	78	49	62.8	11
12	139	66	47.5	32
Total	669	358	53.5	156

Olson and Pletzke identified eight criteria which can be used in evaluating union catalogs: location probability, coverage, currency, speed of delivery, cost, enhancement of cooperative efforts, network interface, and survival [5]. The *TALON Catalog* is discussed below in terms of each of these categories.

Location Probability

TALON's initial location results of 53.5% were greater than the 40.2% reported by Olson and Pletzke for the *Midwest Medical Union Catalog (MMUC)*. Because the *MMUC* is updated routinely, the more recent publication date of the *TALON Catalog* should not be a factor in this difference. A more likely explanation is that because a copy of the *TALON Catalog* is distributed to each resource library, instead of being available only at a central location (as is the *MMUC*), the items sought are more easily located. One can assume that referral to the *MMUC* was for the more-difficult-to-locate items.

Previous location rates of 50% had been reported in 1971 for the first edition of the *TALON Catalog* [6]. In a sample of 293 requests, participants in the Texas Numeric Register (TNR) found an average of 47% of the books sought [7]. In this same study the UTHSCSA Library reported that only 16% of its requests were found in the TNR. When Olson and Pletzke compared the *MMUC* requests to the National Library of Medicine's *Catalog,* they found that "*NLM* holds 61.2% of the requests *searched* in *MMUC* and 77% of the requests *located* in *MMUC*."

Title access significantly increased the locating ability of the *TALON Catalog*—44.4% of the 358 requests located were found in this manner. Interestingly, title access is considered only infrequently in union catalogs of monographs. Gleaves and Martin note that adding this additional point of access is "relatively easy," but did not conclude that it should be done [4]. However, "relatively easy" for a manually produced catalog means doubling its size, whereas in a catalog produced by computer it entails a simple redistribution of the same data.

Coverage

The libraries contributing to the *TALON Catalog* are the twelve resource libraries of Region Nine of the Regional Medical Library Program. These include most of the major health-related libraries in the five-state area. Approximately two years of acquisitions are included in the *TALON Catalog* for eight libraries. The majority of the shelf lists are included for the other four libraries. Most of the holdings of these libraries are not recorded elsewhere, as only three of the twelve libraries are in OCLC.

Currency

There had been a considerable lag time in producing the *TALON Catalog* in the past. The fourth edition, published in January 1977, included all data received by October 1976. Annual supplements are projected. In the manual maintenance of the *MMUC,* cards are added to the catalog "one to two months after they are sent to the catalog." In the TALON region the filing of the cards in the union catalog had been done as special projects, with persons specifically hired for the task. Hence, it was often six months before cards were filed. The fifth edition of the *TALON Catalog,* to be published in March 1978, will include all monographs cataloged through December 1977.

On-line catalogs, with records entered as soon as catalog cards are requested, can be even more current. However, many libraries using on-line networks for cataloging continue to contribute to separately maintained union catalogs. This is probably done because of existing agreements and because the access of the on-line networks is limited to other users of the network. Another factor may be the high relative cost of consulting an on-line network, as compared to a printed or COM catalog.

Speed of Delivery

Olson and Pletzke report that it takes 20.6 calendar days for a request to be initiated, checked in *MMUC,* referred to and filled by a holding library, and received by the requesting library. They postulate that 49.1% of this time would be eliminated with a distributed catalog such as the *TALON Catalog.* TALON statistics indicate that 78% of interlibrary loans are filled or cleared within four calendar days, and all within fourteen days [8]. The amount of time required for the requesting library to receive the items is not reported.

Cost

The total cost to produce the fourth edition of the *TALON Catalog* was $8,064, with an estimated $4,000 in labor costs. The costs to libraries of producing the catalog cards and sending them to TALON and the costs of sending machine-readable records are not available. However, the

$.076 unit cost per title, with both author and title access for the COM method, is almost one-half the unit cost of $.137 for the previous method, with main entry access only.

Cost is also reflected in ease of use. The previous *TALON Catalog* had 900 fiche and 1 catalog card per frame, whereas the fourth edition has 17 author fiche and 14 title fiche. Thus, it is easier to store and retrieve information in the fourth edition.

The cost effectiveness of microfiche, versus print, is considerable. Griffith and Hayes compared the costs of printing 20 copies of a 1000-page quarterly subject supplement via COM fiche with the costs of printing the same supplement in book format. Twenty fiche copies would cost $58, whereas 20 printed copies would cost $1,700 [9].

Enhancement of Cooperative Efforts

Like other union catalogs, the primary use of the *TALON Catalog* has been, and will probably continue to be, as an interlibrary loan locating tool. However, the TALON data base has great potential for analysis of collection development within the region. Studies of these data are in progress. Of particular interest is the use of the data base to evaluate the effectiveness of a cooperative acquisition program within the TALON region.

Network Interface

The *TALON Catalog* is an example of utilizing output from several systems by converting it to one format and merging the data. Thus, a useful tool has been produced even though it may not be bibliographically perfect.

Survival

The *TALON Catalog* has an above average chance of survival, as is indicated by the decision of the resource libraries to support a fifth edition in 1978. As more libraries provide machine-readable data, the production of the *TALON Catalog* will be simplified.

Judged by these eight criteria, the *TALON Catalog* compares favorably with the *MMUC*. The sixth criterion, enhancement of cooperative efforts, shows a clear advantage of the *TALON Catalog*, because its machine-readable form enhances the capability of analysis for other purposes. Machlup, in a perceptive article, decries the lack of quantitative assessment of libraries' collections [10]. The TALON data base, with nearly complete holdings of four libraries plus partial holdings of eight others, offers a fertile area for investigation of collection development.

Summary

The fourth edition of the *TALON Union Catalog of Monographs* is an example of a computer-generated union catalog. The catalog's objectives were all met, with the addition of a title index significantly increasing the locating results of the catalog. One month's report of usage indicates the usefulness of the catalog in the TALON region.

While union catalogs of monographs are essential in facilitating interlibrary lending for resource sharing, even more important may be the data they yield regarding collection development in libraries. Such data may be essential to the process of maintaining and monitoring cooperative acquisitions programs, in order that libraries may have more resources to share.

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