
This paper has two specific purposes: (1) to relate what has been accomplished by the U.S. National Libraries Task Force on Cooperative Activities since its establishment in 1967 and (2) to identify areas which we are currently pursuing relative to the "brave new world" just around the corner.

In June 1967 the Librarian of Congress and the directors of the National Library of Medicine and the National Agricultural Library announced their intention to work jointly toward the development of a centralized data base and the attainment of compatibility in technical and other procedures and services of the three institutions insofar as this could be achieved in terms of the national libraries' individual statutory obligations. At that time they announced the formation of the U.S. National Libraries Task Force on Automation and Other Cooperative Activities (the "on Automation and Other" part of the title has since been discarded) as the vehicle for guiding the cooperative program toward this broad goal.

Areas and products of this endeavor, envisioned from the beginning, included: (1) increased cooperative acquisitions, (2) fuller integration of cataloging policies and procedures, (3) centralized production and dissemination of catalog information in machine-readable form as well as, (4) production of catalog cards and book catalogs, and (5) the coordination of bibliographical and reference services.

The Task Force, under the chairmanship of first Stephen Salmon,
executive officer, processing department, Library of Congress (June 1967–November 1967), and then Samuel Lazerow, chief, serial record division, Library of Congress (December 1967–April 1972), identified a number of problem areas for detailed study by working groups established by the Task Force.

Members of the original Task Force included: Samuel Lazerow, LC; James P. Riley, NLM; and Bella E. Shachtman, NAL.

ACCOMPLISHMENTS

During the first four and one-half years several recommendations were made by the Task Force to the directors of the NAL, NLM and LC. These recommendations summarized the work pursued and are discussed in brief below. (For the full text of each recommendation see Appendix I.)

Recommendation No. 1: Issued on February 20, 1968, recommended adoption of the MARC II structure for the communication of all bibliographic information in digital form between LC, NLM and NAL. In addition it was recommended that the MARC II data elements for monographs be adopted, but the organization of individual records and files may be unique to each library. This recommendation was accepted by the directors.

Recommendation No. 2: On the same date as the first recommendation the Task Force also recommended a six-part action be accepted in the area of descriptive cataloging practice. These parts included:

1. Conference publication when name of conference and title of work are identical
   NAL and LC supply a bracketed additional title following the name of the conference in the title paragraph, when such a title is found in the work. NLM uses the supplied title only. There are justifications for either practice.
   Recommendation: The Task Force recommends that NLM change its practice to conform to that of the other two libraries.

2. Titles beginning with numbers
   The Anglo-American Cataloging Rule provides for spelling out in words numerals that appear at the beginning of a title in a foreign language; LC and NAL follow this rule. NLM uses a technique based on computer filing.
   Recommendation: The Task Force recommends that inasmuch as machine requirements cannot be met by the cataloging rule as it stands LC be asked to consider the problem in connection with
the MARC format requirements and that MARC submit a recommendation to the Working Group on Descriptive Cataloging Practices.

3. Publisher as author of series
LC follows the Anglo-American Cataloging Rule and gives the publisher; NAL and NLM omit it. The present MARC II format does not provide a mechanism for indicating that the author of the series is the publisher.

Recommendation: The Task Force recommends that LC arrange for MARC II to provide a mechanism to identify multiple uses of the same data in the record, in this case a tag which indicates that the author of the series is also the publisher.

4. Date
LC uses "[n.d.]." NAL and NLM do not use [n.d.]. They substitute a date, such as "[18--?]."

Recommendation: The Task Force recommends that LC follow the practice of NAL and NLM and that a change in the cataloging rule be implemented.

5. Notes: Bibliographies
LC and NAL follow the Anglo-American Cataloging Rule and identify bibliographies. NLM rarely uses this rule because almost all scientific books have bibliography notes; therefore, it is considered that there is no need to show such an inclusion. This omission was more easily justified when there were no machine-retrieval capabilities. Now that there will be the possibility of compiling subject bibliographies, this needs reconsideration.

Recommendation: The Task Force recommends that NLM change its practice and follow the Anglo-American Cataloging Rule.

6. Notes: Contents
The cataloging rule makes machine manipulation of items in contents notes impossible in many instances. NAL and NLM rarely provide contents notes; LC does in some instances.

Recommendation: The Task Force recommends:

a. That LC arrange for MARC II to provide a mechanism for tagging the individual data elements within the contents notes. When this is done the Task Force will ask the ALA Descriptive Cataloging Committee to change the rule to make it possible to present the contents notes in a format that will be machine manipulatable.

b. That all three national libraries be asked to change their policies in the direction of more liberal inclusion of contents notes.
Recommendation No. 3: The Task Force recommended in July 1968 that the directors accept a standard calendar date code to cover any form of date representation in machine-readable form. The recommendation was accepted.

Recommendation No. 4: The Task Force recommended a Standard Character Set for Roman alphabets and Romanized non-Roman alphabets. The ALA character set was in effect adopted in January 1969.

Recommendation No. 5: In February 1969 the Task Force recommended that the national libraries agree to adopt the Standard Language Code, and any subsequent addition to and revisions in the code as they become necessary for use in the communication of bibliographic information in machine-readable form.

Recommendation No. 6: In April 1969 the Task Force recommended that a National Serials System be established. The recommendation was accepted. Ramifications will be discussed below.

Recommendation No. 7: In June 1969 the Task Force recommended that the national libraries copy materials for each other without charge.

Recommendation No. 8: In October 1970 the Task Force recommended, based on their April 1969 action, that the national libraries accent funding responsibilities for the National Serials Data Project and that the Task Force retain responsibility for policy direction of the pilot project irrespective of location.

The Task Force’s development of the National Serials Data Project through the pilot stage made possible last year’s announcement of the ongoing National Serials Data Program under the sponsorship of the three libraries. This step and the simultaneous placement of the Task Force in close association with the Federal Library Committee will extend the benefits of these cooperative programs—both technical and nontechnical—to the widest possible library and information science community.

One of the most significant undertakings of the Task Force during the early years was that of the National Serials Data Project. Phase 1 of the project resulted in the identification of data elements needed for the control of serials by machine methods, and the development of the MARC serials format; Phase 2 was a project directed by Donald W. Johnson, funded by the NAL, with additional support from the Council on Library Resources, Inc., NLM, LC, and administered by the Association of Research Libraries. Policy direction came from the U.S. National Libraries Task Force. The objective of this pilot project was to create a machine-readable file of live serial titles in science and technology, to produce a variety of listings, and to report on
conclusions and results. The conclusions included the finding that a national serials data bank is technically and economically feasible; that such a bank should have its own machine-readable authority file for corporate names; that input and output should be in upper case; and that the question of entry should be resolved.

Following Phase 2 a separate effort was undertaken. The present National Serials Data Program that Paul Vassallo now heads is really Phase 3 of the original serials effort. First priority is to provide a data base for the use of the three national libraries which are supporting the program, although it is being kept separate from the internal serials operations of each of the three libraries. The needs of these libraries will be taken into consideration, but the program will not become directly involved with the specific serials problems of each institution. Each individual library will determine the point at which it wants compatibility with the national program.

The second priority will be to meet the needs of the national user community. The program will thus have a wider impact if solutions take into consideration not only libraries but also information services, indexing and abstracting services, publishers and distributors of serials.

The third major priority is international cooperation—the assignment of international standard serial numbers—to insure compatibility. This international system is the result of the combined efforts of various cooperative groups, and the numbering plan is now in final draft. Copies have been circulated and when reactions to the draft are received, a final statement will be published. It is hoped that the complete standard will be ready by fall 1973.

Paris will be the headquarters for the international center, which will have responsibility for issuance of ISSN's to national centers. The U.S. national center will be the Nationals Serials Data Program. Other national centers are currently planned for Germany, Great Britain, The Netherlands, France and the Soviet Union. They may be functioning in a year or so. The national center acts on behalf of the international center by assigning ISSN's to publications emanating from that country. The U.S. national center (that is, the National Serials Data Program) has negotiated for a block of numbers for all serials titles cumulative 1950-70.

The tasks to which the National Serials Data Program will address itself in the near future are: (1) development of a corporate authority file to take into consideration the various authorities used by the three national libraries; (2) assignment of ISSN's to U.S. prospective titles published from 1971 on and listed in New Serial Titles; (3) pulling of titles in science and technology from Bowker cumulations and assignment of ISSN's to them; and (4) working with
the international center in the development of various products in cooperation with other national centers.

CURRENT ACTIVITIES

Since my appointment as chairman of the Task Force in April 1972, a close look has been taken at the progress and program. The national libraries have now decided to place a greater emphasis on cooperative activities in all areas rather than concentrating somewhat exclusively on automation. The emphasis on cooperation generally is reflected in the name now revised to the U.S. National Libraries Task Force on Cooperative Activities. Placement of the Task Force near the Federal Library Committee has also helped in this area. The directors of the three national libraries have agreed that the Task Force will direct its attention to broad matters and function as a policy group with representation of two members at the highest policy level from each library. With this in mind, the directors named the following persons to the Task Force: from NAL, Joseph F. Caponio, currently acting director, and Samuel T. Waters; from NLM, Joseph Leiter and Elizabeth Sawyers; and from LC, Paul L. Berry and Emond L. Applebaum. The three national librarians serve as a board of directors, with the director of NLM as the first chairman of the board. The leadership will rotate among the three directors and the board will meet quarterly. Marlene Morrisey, who assisted the previous chairman in much of the substantial work of the Task Force, is even more involved in program planning and implementation of research studies.

The action plan developed has two phases:

Phase I
Redeﬁne objectives
Develop program plans
Determine ﬁnancial and other support required
Develop plan for obtaining support
Report to directors

Phase II
Develop a detailed design of each activity
Assign personnel/committees/work groups
Establish implementation schedule
Develop a reporting schedule
Define an evaluation program
Modify objectives based upon activity to date
Report to directors
Each project, or effort, involves consideration of every noted point. Discussions are based upon Guidelines For Participation developed by the Task Force, and approved by the directors. (See Appendix 2.)

Currently there are four projects, one directly related to automation, ongoing. A fifth project is approved and about to be implemented, and several additional projects are now under discussion.

Automation Policy Statement

The Task Force felt that appropriate staff working within each of the national libraries should be fully aware of automation activities which may affect their planning and operations. A knowledge of in-force, pilot, or planned operations in all three libraries will encourage concepts of compatibility. Further, it was believed that the staff should be aware of the plans for coordinated/cooperative activity held by the directors. The directors agreed that all institutional automation efforts should develop in a cooperative and coordinated manner. Thus complementary programs should be identified and close relationships cultivated as appropriate. It has been agreed that a joint policy statement should be produced to serve as a guide for future work.

Program Reviews were held at LC, NAL, and NLM to review work programs. Work toward the development of a policy statement is presently ongoing.

The schedule looks like this:
1. Policy recommendations for the directors consideration will be developed by each library—probably by late June 1973.
2. The directors and their designees will meet with the Task Force to develop policies for coordination and cooperation.
3. A combined policy statement would be issued.
4. A combined meeting of appropriate national library staffs would be held to consider the policy developed by the directors.
5. A continuing updating effort will be implemented.

The future of the Task Force hangs on success or failure in this area. Work is not awaiting the policy statement, however. Concurrently strong effort is being expended on the development of a Standard Order Form and the identification of subscription dealer performance standards.

Order Form

A Standard Order Form offers an opportunity to reduce clerical effort and errors and speed book order procedures. The concept is of potential usefulness to the library community in general.

Library order forms presently vary in size and kind. Agreement on
standard size, format, and content of an order form would simplify ordering procedures, facilitate order work, and maximize return.

Use of a Standard Order Form in the three national libraries will simplify ordering work and will assure publishers and dealers easy access to all the necessary data required for prompt filling of orders. A Standard Order Form would record data at the earliest possible point and insure compatibility of records among the three national libraries. Such a form will also be useful in internal training programs in each of the libraries. This is also an opportunity for other federal libraries to benefit from such a form. In addition, a Standard Order Form could be utilized in all aspects of acquisitions, i.e., exchange or gift work.

A study was undertaken which will lead to development of a form for use in the three libraries, with agreement sought on size, data elements, and placement of data.

This study is being pursued in-house, with a group including appropriate representatives from LC, NAL, and NLM. Jennifer Magnus of the Library of Congress heads the group.

At the same time a Standard Order Form is being developed, the possibilities of a Standard Book Order Format are being considered.

The International Standard Book Number is being used by publishers and librarians as a means of identifying books, particularly in machine applications. Both publishers and librarians may benefit from use of the ISBN as a third segment of an identification code for book orders. The first and second segments of such a code would identify the buyer and the book dealer, respectively. Thus, a Standard Book Order Form would contain three numbers—a buyer number, a dealer number, and an item number, the latter being the ISBN.

Commercial interests have encouraged use of a Book Dealer Identification Number to speed computerized order transactions. The concurrent use of the ISBN with the BDIN might assist publishers, dealers, and librarians in identifying stock, save time, and increase accuracy and ease of handling orders.

Similarly a buyer identification number might further facilitate the transaction and simplify the order process. Users might benefit from the convenience of using assigned numbers in place of tedious repetition of names and addresses in placing and filling book orders. The code might become an essential ingredient of a machine order system.¹

In the national libraries the availability of a SBOF might save time in ordering procedures and in billing. Precise billing and delivery address could be established at the time of order. A modified SBOF is of potential use in
interlibrary loan, and in union lists. A current study concerned with the SBOF will:

1. survey the publishing and library communities to define the dimensions of the task and to determine the interest in such a standard;
2. determine potential areas of cooperation for those holding responsibility for designating numbers for buyers and dealers;
3. explore with appropriate groups (American Book Publishers Association, Bowker Company, American Library Association, American Book Sellers Association) the degree of interest and potential support for, and acceptance of, a SBOF; and
4. develop a program for the SBOF with an appropriate implementation program delineated, or make recommendations for an alternative course of action.

Progress of the SBOF has been phenomenal. A draft form has been developed and, at the request of Jerrold Orne, an American National Standards Institute Committee was established (April 1973) to consider the development of a form for all types of libraries.

**Subscription Dealer Study**

William Katz, State University of New York at Albany, is working on a very important study related to subscription agents. Subscription agents are employed by the three national libraries to procure a high percentage of serials obtained through purchase. These agents are reimbursed for various services rendered such as, central placement of orders, handling of supplemental charges, alerting regarding births and deaths, claiming, speed in delivering, etc.

Few librarians are fully aware of what services subscription agents can and should provide. Further, it is believed that because of this, many services are not supplied. There is a need to: (1) review subscription agent claims; (2) review actual services rendered; (3) develop a checklist of appropriate services; and (4) develop a mechanism for insuring agency compliance. The checklist and mechanism will result in a more efficient procurement process with a resultant savings in cost to each library and an improvement in services to the public. Under contract William Katz will provide the noted documentation.

**Depository**

Alan Rees, also under contract, is developing a design for a study to consider the need for a central depository for little-used materials in the Washington, D.C. metropolitan area. Approved but not yet undertaken is a material procurement oriented project.
Cooperation in Procurement

The acquisition of library materials, including selection and procurement, constitutes for the three national libraries a cluster of very complex and costly operations individually carried out by each library. These various operations will be studied and considered for possible coordination and, where appropriate, for sharing of implementation responsibilities.

Such coordination of the acquisitions activities of the three national libraries could lead, wherever possible, to the elimination of unnecessary duplication of effort and to a reduction of unit costs. An evolutionary program of cooperation in the procurement of library materials might be made the subject of a study which could lay foundations for parameters and methodology for implementation in specific areas.

A feasibility review leading to an action plan will be undertaken to: (1) identify areas of possible cooperative activity; (2) recommend such areas in priority order; (3) gather sample data in all aspects of such areas; and (4) develop an Action Plan—if feasible.

All work would be pursued under the direction of the Working Group on Acquisitions and Collections Development of the U.S. National Libraries Task Force on Cooperative Activities. The chairman of the work group and the chairman of the Task Force would share responsibility for directing the effort.

How does the Task Force undertake work? Early in the life of the organization work groups were established and that mechanism exploited. Now we use the “contract concept” and the work group process. A working fund permits quick response to useful and potentially positive projects.

I have not summarized all the efforts of the U.S. National Libraries Task Force. I have attempted to touch the high spots and illuminate areas perhaps previously not well known. For example, work relating to subject headings has not been discussed in this paper; concern for easily utilized on-line access to bibliographic data has not been mentioned; Ohio College Library Center interest has not been identified; and current discussions regarding the NLM and NAL relationship with the MARC program have been specifically avoided.

REFERENCES

1. "Appropriate organizations should designate agencies to assign the standard identification numbers for the various forms of material. Such agencies will require the cooperation of the 'national bibliographic center' if


APPENDIX I

Task Force Recommendation No. 1: Adoption of MARC II Format (February 20, 1968)

The U.S. National Libraries Task Force on Automation and Other Cooperative Services recommends that the directors of the national libraries indicate below their agreement to adopt the MARC II structure for the communication of all bibliographic information in digital form between their libraries. In addition it is recommended that the MARC II data elements for monographs be adopted but the organization of individual records and files may be unique to each library. The MARC II format has been developed by the Library of Congress in consultation with a Working Group of the Task Force representing the three national libraries, and the format reflects the requirements of NAL, NLM, and LC.

Task Force Recommendation No. 2: Compatibility in Descriptive Cataloging Practices (February 20, 1968)

The Working Group on Descriptive Cataloging Practices has met several times since December 15 and has submitted a report in which it has identified all problem areas for which it has responsibility. The members of this Working Group are:

Emilie Wiggins, Head, Cataloging Section, NLM, Chairman
C. Sumner Spalding, Chief, Descriptive Cataloging Division, LC
Paul Winkler, formerly Assistant Chief, Shared Cataloging Division, LC
Mrs. Jeanne Holmes, Chief, Division of Catalog and Records, NAL

This group has concluded, after thorough and detailed study of all descriptive cataloging rules, that out of 43 elements, 35 present no problem, either because of no variation, or because of a variation so slight as to be inconsequential. These 35 no-problem elements are:

1. Short title
2. Title in two or more languages
3. Translation of Far Eastern title
4. Subtitle
5. Alternative title
6. Author statement
7. Author statement (Transposition)
8. Omission from author statement
9. Additions to author statement
10. Edition
11. Statement of the number of volumes
12. Illustration statement in title paragraph
13. Imprint (Order)
14. Imprint (More than one place and publisher)
15. Imprint (Printer as substitute for publisher)
16. Supplied imprint
17. Inflections in imprint
18. Fictitious and imaginary imprint
19. Place of publication
20. Collation
   (Pagination)
21. Collation
   (Extent of text in more than one volume)
22. Collation
   (Illustrations)
23. Collation (Size)
24. Atlases accompanying text
25. Phonorecords accompanying visual text
26. Price
27. Series statement
28. Works in more than one series
29. Notes: Dissertation
30. Notes: Bound with
31. Notes: Limited use
32. Notes: Others
33. Tracing of secondary entry
34. Special Rules
35. Atlases

One data element (Title Romanized) is being studied at NAL and will be reported on later.

One element (Added Entries for Joint Authors) is being referred to the Working Group on Name Entry and Authority File for further study.

We are therefore left with six elements on which there are compatibility problems and on which the Working Group has made recommendations. The Task Force considered these recommendations in detail on February 13 and requests that the Directors take the action as indicated below.

1. Conference publication when name of conference and title of work are identical
NAL and LC supply a bracketed additional title following the name of the conference in the title paragraph, when such a title is found in the work. NLM uses the supplied title only. There are justifications for either practice.

Recommendation: The Task Force recommends that NLM change its practice to conform to that of the other two libraries.

2. Titles beginning with numbers

The Anglo-American Cataloging Rule provides for spelling out in words numerals that appear at the beginning of a title in a foreign language, for example "10 [i.e. dix] années du travail." LC and NAL follow this rule. NLM uses a technique based on computer filing, i.e. "10 années du travail.=\dix..."

Recommendation: The Task Force recommends that inasmuch as machine requirements cannot be met by the cataloging rule as it stands LC be asked to consider the problem in connection with the MARC format requirements and that MARC submit a recommendation to the Working Group on Descriptive Cataloging Practices.

3. Publisher as author of series

LC follows the Anglo-American Cataloging Rule and gives the publisher; NAL and NLM omit it. The present MARC II format does not provide a mechanism for indicating that the author of the series is the publisher.

Recommendation: The Task Force recommends that LC arrange for MARC II to provide a mechanism to identify multiple uses of the same data in the record, in this case a tag which indicates that the author of the series is also the publisher.

4. Date

LC uses "[n.d.]". NAL and NLM do not use [n.d.]. They substitute a date, such as "[18-?]".

Recommendation: The Task Force recommends that LC follow the practice of NAL and NLM and that Mr. Spalding be asked to request a change in the cataloging rule.

5. Notes: Bibl.

LC and NAL follow the Anglo-American Cataloging Rule and identify bibliographies. NLM rarely uses this rule because almost all scientific books have bibliography notes; therefore, it is considered that there is no need to show such an inclusion. This omission was more easily justified when there were no machine retrieval capabilities. Now that there will be the possibility of compiling subject bibliographies, this needs reconsideration.

Recommendation: The Task Force recommends that NLM change its practice and follow the Anglo-American Cataloging Rule.

6. Notes: Contents

The cataloging rule makes machine manipulation of items in contents notes impossible in many instances. NAL and NLM rarely provide contents notes; LC does in some instances.

Recommendation: The Task Force recommends:

a. That LC arrange for MARC II to provide a mechanism for tagging the individual data elements within the contents notes. When this
That standard single representation (Calendar) could be asked to change their policies in the direction of more liberal inclusion of contents notes.

The Task Force is convinced that if these recommendations are approved a substantial step forward will have been made in the compatibility of the three library systems.

The Task Force, therefore, unanimously recommends approval and implementation of these recommendations.

Task Force Recommendation No. 3: Standard Calendar Date Code (July 30, 1968)

The Working Group on Bibliographic Codes (Language, Place, Date Representation) submitted to the Task Force in March a proposed standard for representation of calendar dates in the data processing systems of the three national libraries. The Task Force considered this recommendation in detail on March 26, 1968 and, after discussion with the Working Group Chairman, returned the proposal to the Group for further work. The Task Force asked that the recommendation be restudied to see if the standard code could be expanded to cover day, month, year; month, year; and year.

Members of the Group are:

Patricia Parker, Library of Congress, Chairman
Constantine Gillespie, National Library of Medicine
Jeanne Holmes, National Agricultural Library
Lucia Rather, Library of Congress

The Working Group restudied the matter and submitted a revised recommendation for a standard calendar date code to cover any form of date representation in machine-readable form.

Purpose of the Code: This code provides a standard way of representing calendar dates in the data processing systems of the national libraries and may be particularly useful for application in data interchange among federal agencies. General use of this standard code will eliminate the confusion caused by many different representations of dates.

Definition: Date in this standard code refers to any of the following: a single year; a single month and year; or a single day in the Gregorian Calendar.

Specification: Because bibliographic dates are frequently pre-twentieth century, a date standard for use in libraries must allow for representation of century as well as year. Other types of dates used for administrative purposes, e.g., date of entry of a record onto a file, will necessarily be current and therefore limited to the twentieth century.

The recommended standard code provides for four digits to be used in a computer field to represent the year when the date information is expected to be limited to the year only and when the field may contain pre-twentieth century dates.
Examples of 4-digit year codes are the following:

- 1865 is coded 1865
- 1729 is coded 1729
- 1928 is coded 1928

The standard provides for a six-digit code, based on proposed United States of America Standards Institute (USASI) and Bureau of the Budget standards, to be used to represent dates in a date field limited exclusively to twentieth century dates. The six digits of this code will represent, in order, year, month, day, with the first two digits (00 through 99) representing the year, the third and fourth digits (01 through 31) representing the month. If day or both month and day are missing, then that portion of the field is filled with zeroes.

Examples of 6-digit codes are:

- April 1, 1968  is coded 680401
- April 1968  is coded 680400
- 1968  is coded 680000

This code provides also for eight digits to represent a date in a date field containing pre-twentieth century dates or both pre-twentieth century and twentieth century dates. The eight digits of this code represent, in order, year, month, day, with the first four digits (0000 through 9999) representing the year, the fifth and sixth digits (01 through 12) representing the month of the year, and the last two digits (01 through 31) representing the day of the month. In this eight-digit code twentieth century dates must use a four-digit code for the year. If day or both month and day are missing, then that portion of the field is filled with zeroes.

Examples of 8-digit codes are:

- April 14, 1865  is coded 18650414
- November 11, 1915  is coded 19151111
- December 1932  is coded 19321200
- 1923  is coded 19230000

The Task Force reviewed this recommendation on July 2, 1968 and submits to the directors the following:

Recommendation: The Task Force recommends that the directors of the National Libraries indicate below their agreement to adopt the standard described above for representation of calendar dates in the communication of bibliographic information in machine-readable form. This code reflects the requirements of the National Agricultural Library, the National Library of Medicine, and the Library of Congress.

Task Force Recommendation No. 4: Standard Character Sets for Roman Alphabets and Romanized Non-Roman Alphabets (January 29, 1969)

The Working Group on Character Sets has studied the design of character sets with the basic assumption that determination of standards must involve the following aspects: (1) Consideration of all the characters any of the three national libraries might wish to use to represent bibliographic data in machine-readable form; (2) consideration of the characters that could actually be put into digital form; and (3) consideration of the ways in which these characters could be represented on output devices once they were put in
digital form. The studies have been complicated by the fact that over 70 languages in 20 alphabets are used in at least one national library and that provision must be made for certain diacritical marks and certain scientific characters.

On the basis of the Group's findings concerning the needs of the three national libraries, a standard set of 175 characters, including many diacritical marks, certain scientific characters, and other special characters, has been developed. The character set is represented in digital form in an extended version of the American Standard Code for Information Interchange (ASCII). ASCII was developed as a 7-bit code by the United States of America Standards Institute (USASI), and by executive order of the President it has become a standard for the executive agencies. For library uses, the 7-bit ASCII code has been expanded to 8-bits in accordance with suggestions from the chairman of the USASI committee on ASCII. Provision has also been made to contract to a 6-bit code for 7-level tape users. The ALA Machine-Readable Catalog Format Committee has approved the proposed character sets.

The members of the Working Group on Character Sets are:
Lucia Rather, Library of Congress, Chairman
Irvin Weiss, Library of Congress
Theodore Leach, Library of Congress
Elizabeth Sawyers, National Library of Medicine
Vern Van Dyke, National Agricultural Library
Lillian Washington, National Library of Medicine

The Task Force has reviewed the Group's findings and, after arranging for certain clarifications to be made, has voted unanimously to submit to the directors the following:

Recommendation: The Task Force recommends that the directors of the three national libraries adopt the character sets described in the attached layouts as standards for use in the communication of bibliographic data in machine-readable form.

Proposed Character Set for
Roman Alphabet and
Romanized Non-Roman Alphabets

1. Scope
The character set relates solely to languages in the Roman alphabet and romanized forms of languages in other alphabets. (Non-Roman alphabets will be considered at a later time.)

2. Criteria Governing Selection of Characters
2-1. Frequency of occurrence of character
2-2. Degree of necessity in expressing character when it occurred
2-3. Possibility of substituting one character for another or of expressing a character by writing it out

3. Technical Specifications Governing Structure of Coded Character Set
3-1. Each code of a character set will contain the same number of binary digits
3-2. The character set is structured to facilitate derivation of larger or smaller code patterns
3-3. The character set will be structured to facilitate ordering of its members in respect to usage
3-4. The composition of a character set is related to the state-of-the-art in the technology of input/output devices

4. Digital Codes

The correlation of the character set to digital form code is based upon ASCII (American Standard Code for Information Interchange) standard. In conformance with the design considerations of ASCII (7-bit code), the character set is also correlated to an 8-bit code and a 6-bit code. The basic digital form code for the character set is the 8-bit code.

4-1. The 8-bit code is an extended form of the standard 7-bit ASCII. Some of the standard ASCII characters such as the braces or the backwards slash are not proposed for the Library’s character set. However, no characters will be substituted for these code positions. Other characters such as diacritical marks will be left in their standard position (unused) and duplicated in another portion of the code set reserved for special characters and diacriticals.

4-2. The 7-bit code will be derived from the 8-bit code by removing the 8th bit. Those characters which previously had an 0 in the 8th bit will be considered part of the standard 7-bit ASCII set. Those with a 1 in the 8th bit will be considered part of the non-standard set. A SO (shift out) control character will be used to go from the standard set to the non-standard. The code will stay in the non-standard mode until a SI (shift in) control character is reached.

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<th>8-bit</th>
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<tbody>
<tr>
<td>SI</td>
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<td></td>
<td>8th bit = Ø</td>
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<thead>
<tr>
<th>SO</th>
<th>(special characters and diacriticals)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8th bit = 1</td>
</tr>
</tbody>
</table>

4-3. The 6-bit code will be derived by removing the 6th bit and the 8th bit. The 8-bit code set will be divided into 4 sets as follows:

- Columns 2,3,6 & 7 = Standard set
- Columns 0,1,4 & 5 = Non-standard set (1)
- Columns A,B,E,F = Non-standard set (2)
- Character 7B in the standard set will be used as a non-locking
shift code to reach non-standard set (1); character 7D will shift to non-standard set (2). The presence of one of these codes will indicate that the next character is in one of the appropriate non-standard sets. The code will then be automatically shifted back to the standard set.

5. Escape Codes

All subscript, superscript, and the 3 Greek alphabet characters will be in supplementary sets and will be reached by the use of the ESC (Escape) character followed by a specific character (or set of characters) to indicate which supplementary set is needed. The exact escape sequence has not yet been determined since the formula for devising escape sequence is still under consideration by the USASI committee on ASCII.

Task Force Recommendation No. 5: Standard Language Code (February 18, 1969)

The Working Group on Bibliographic Codes has submitted to the Task Force a proposed Language Code developed for use in the MARC II format. This language code is regarded as a provisional list because it will be reviewed and updated as records containing languages not previously included in the list are added to the MARC data base. The sources of the languages used in the development of this list are:

1. the languages processed by the National Agricultural Library;
2. the MARC I Pilot Project language code list and the languages processed by the Library of Congress;
3. the languages contained in the MEDLARS LANDS File (Languages and Subheading File) of the National Library of Medicine;
4. the languages studied by the Defense Languages Institute of the Department of Defense.

A primary aim of the working group was to produce a language code that would be compatible with other codes that might become national standards. To this end both the Data Elements and Codes Office of the Bureau of the Budget and the USASI Z-39 Committee on Library Work and Documentation and Related Publishing Practices were consulted. Neither of these groups, however, is developing a language code.

Characteristics of the list of languages: The languages represent the major body of published literature. The form of the language names used was based on examination of the various tools used at NAL and NLM, the language authority files of LC, consultation with various language specialists, and study of the language list of the Center for Applied Linguistics. Three-letter mnemonic codes using the first three letters of the English form of the name have been used in most cases.

The members of the Working Group on Bibliographic Codes are:

- Patricia Parker, Library of Congress, Chairman
- Constantine Gillespie, National Library of Medicine
- Jeanne Holmes, National Agricultural Library
- Lucia Rather, Library of Congress

The Task Force has studied the Working Group’s proposal, consulted in detail with its chairman, reviewed revisions in the proposal, and voted unani-
mously to submit to the directors the following:

Recommendation: The Task Force recommends that the directors of the National Libraries indicate below their agreement to adopt the Standard Language Code, and subsequent additions to and revisions in the Code as they become necessary, for use in the communication of bibliographic information in machine-readable form.

Language Code List

(developed for use in the MARC II format; the list will be reviewed and updated as records containing other languages are added to the MARC data base)

Inclusions:
Written languages only are included in the list. Where one spoken language is written in two different sets of characters, both written languages are included. (Example, Serbian and Croatian are the same spoken language but the former is written in the Cyrillic alphabet and the latter in the Roman alphabet.)

Exclusions:
Some languages have not yet been included in the list, e.g., certain East African languages, even though it is anticipated that literature in these languages will be received. These languages and others will be added to the list and coded as they are needed.

Criteria for Assignment of Discrete Codes:
Three-letter mnemonic codes using the first three letters of the English form of the name have been used in most cases. (Exceptions were necessary in some of the languages because of redundant initial letters for some languages, e.g., Arabic and Aramaic, Kannada and Kanuri, Malagasy and Malay, etc.) In the case of the modern and the older forms of some languages, the initial letters of each part of the language name were used to form the code, e.g., GMH for German (Middle High) and GOH for German (Old High).

The code MUL for Multilingual was included for the purpose of providing the option of assigning a single code to represent works published in several languages within one physical piece.

Cross-References:
The following types of cross-references are provided:

(1) for variant spellings of a language name, e.g.,
 Biluchi see BALUCHI
 Denca see DINKA
 Kechua see QUECHUA
 Pashto see PUSHTO

(2) from older forms to newer forms of a language name, e.g.,
 Middle Persian see PAHLAVI
 Siamese see THAI

(3) from lesser known and used forms of a language name to better known and more popularly used forms, e.g.,
 Castilian see SPANISH
Judaeo-German see YIDDISH

(4) to indicate the alphabet in which one spoken language may be written when several written forms exist, e.g.,
Hindustani (Arabic) see URDU
Hindustani (Nagari) see HINDI
Serbo-Croatian (Cyrillic) see SERBIAN
Serbo-Croatian (Roman) see CROATIAN

For convenience in the use of the language list cross-references are given the same code as the accepted language name to which they are referred. (Example: both Erse and Scots Gaelic are coded as GAE since this is the code for GAELIC to which both of these alternate names are referred.) Under each accepted language name cross-references are provided to indicate all the variant and sub-ordinate names which are referred to the one given accepted name. Cross-references and variant and sub-ordinate names are printed in lower case, while codes and the established language names are printed in upper case.

Format:
The list appears in two forms:
(1) in alphabetic sequence by the language name
   AFR  AFRIKAANS
   AKK  AKKADIAN
   ALB  ALBANIAN
   AMH  AMARINYA
        See AMHARIC
   AMH  AMHARIC
        x Amarinya
(2) in alphabetic sequence by language code
   AFR  AFRIKAANS
   AKK  AKKADIAN
   ALB  ALBANIAN
   AMH  AMHARIC
        x Amarinya
   ANG  ANGLO-SAXON
        x English (Old)
        x Old English


Because the national libraries of the United States share basic responsibility for the acquisition and servicing of serial literature and because national concern about the control of this voluminous quantity of significant research material is mounting, the U.S. National Libraries Task Force and its Serials Working Group have given priority consideration to alternative approaches to meeting the three directors stated objective of developing “a national data bank of machine-readable information relating to the location of hundreds of thousands of serial titles held by American research libraries.”

This task is complicated by the fact that the national libraries, and the library community in general, participate in an informal network of pub-
lishers, distributors, secondary and bibliographic services, individual subscribers, and funding agencies all of which are involved in the generation, processing, dissemination, or utilization of serials. This network is largely uncoordinated, is proving increasingly costly, and has been ineffective in meeting national needs.

In arriving at its recommendations the Task Force has been concerned not only with over-all objectives and long-range plans for a national system, but also with actions that need to be taken now, in view of the completion of phase 1 of the National Serials Data Program, for which the Library of Congress served as executive agent. The recommendations that follow include the next immediate steps as well as the long-range and the specific as well as the general.

The detailed background to the recommendations, and the alternatives to them, prepared by the Serials Working Group, is appended.

The Task Force, after consultation with its Advisory Committee and later internal discussion, submits the following:

Recommendation:

1. That the Directors of the National Libraries, acting on their own behalf, and jointly as the agent for the Joint Committee on the Union List of Serials, establish a National Serials System.

2. That the primary objective of the National Serials System be to provide to qualified requestors in the U.S. timely access to appropriate portions of the world’s serial literature.

3. That a secondary objective of the National Serials System be to provide to the management of the serials system and its several subsystems (including the directors of the National Libraries and other major federal information systems) the information which they need in order to make decisions regarding the acquisition, processing, storage, and dissemination of the serial literature.

4. That a national serials center be established to carry out the objectives of the National Serials System. The center would develop formats and data conversion techniques as required for the development of an appropriate data base, and would assume responsibility for the production of appropriate bibliographic tools.

5. That the initial data base be limited to science and technical serials including new titles in the three national libraries or any other limitation defined by the three directors.

6. That the directors of the three national libraries seek funds immediately to implement a national serials center to work in close cooperation with the National Libraries Task Force.

7. That, upon availability of funds, the directors of the three national libraries give consideration to the direction, location, and other management aspects of a national serials center to assure adequate space, personnel, etc., and ease of coordination with the National Libraries Task Force.

Task Force Recommendation No. 7: Photocopying Cooperation (June 18, 1969)
Utilization of photocopies in lieu of loans of original library materials is a well established cooperative lending mechanism. The three national libraries currently request photocopies from each other when original materials are unavailable for loan. The number of photocopies requested by any one library is relatively small. One national library currently supplies such photocopies without charge; the other two libraries charge for the copies (their photoduplication work is performed through revolving funds). These charges require time-consuming approval and payment procedures and place an administrative burden on the requesting library.

To simplify the procedure and assure an equitable photocopying arrangement, the Task Force believes that the photocopying charges should be absorbed by the library supplying the photocopy. The total cost to any one library would be small and would be more than compensated by the free copies received from the other libraries. In addition, savings in staff time would be realized through elimination of the present administrative approval and payment procedures.

For these reasons the Task Force has voted unanimously to submit to the directors the following:

Recommendation:

Recognizing the needs of each of the three national libraries for photocopies of research materials not available for loan in the original, the Task Force recommends that the directors adopt the following policy and arrange for its implementation in each of the libraries:

The three national libraries will copy materials for each other without charge, subject to the regulations each observes for copyrighted materials. A suitable mechanism shall be worked out in each library to implement this policy.

Task Force Recommendation No. 8: Continuation of National Libraries’ Serials Pilot Project (October 15, 1970)

It is the unanimous view of the U.S. National Libraries Task Force that it is imperative that the National Libraries’ Serials Pilot Project be continued at least at its present level of staffing. It will require total support of $50,000, exclusive of computer time, to carry it at this level until July 1, 1971. The Task Force believes that it should be continued under the present Project Director at least until July 1, 1971 to enable the Project Director to document adequately the experience of the Project, after which another Director should be found. He could either be furnished by one of the libraries, or consideration could be given to requesting the CLR to permit the Task Force to designate one of its systems specialists as Project Director until permanent arrangements can be made.

The Task Force therefore recommends:

(1) that the directors of the three national libraries indicate not later than November 1, 1970 the funding arrangement they wish to share to provide the $50,000, exclusive of computer time, required to continue the Project until July 1, 1971; and

(2) that the Project remain in its present location, under ARL sponsorship, until such time as the Project can be adequately supported at the
Library of Congress, with such transfer to be effected not later than July 1, 1971.

The U.S. National Libraries Task Force should retain responsibility for policy direction of the Pilot Project irrespective of location.

APPENDIX 2

GUIDELINES FOR PARTICIPATION BY U.S. NATIONAL LIBRARIES’ STAFF IN THE COOPERATIVE PROGRAMS UNDER THE U.S. NATIONAL LIBRARIES TASK FORCE ON COOPERATIVE ACTIVITIES

Background

The U.S. National Libraries Task Force on Cooperative Activities was established in 1967 by the directors of the three National Libraries of the United States (Martin M. Cummings, M.D., Director of the National Library of Medicine; L. Quincy Mumford, Librarian of Congress; and John Sherrod, Director of the National Agricultural Library) to identify, recommend, and implement policies, procedures, and programs directed at strengthening and extending cooperation in activities and processes carried on in each of the three institutions. In creating the U.S. National Libraries Task Force, the directors indicated their expectation that intensified cooperation was essential in their determination to make certain that National Library resources are adequate to cope with problems created by the “information explosion” and to assure that immediate access to research materials and information is available to the nation’s libraries. The over-all purpose of the U.S. National Libraries Task Force on Cooperative Activities, in the words of the directors, is to “improve access to the world’s literature in all areas of human concern and scholarship, so that comprehensive access to the materials of learning can be afforded to all citizens of the United States.”

The directors of the three National Libraries have requested the full cooperation of their respective staff members in the identification of new areas where cooperation among the three National Libraries merits examination and experimentation with a view to increasing productivity; accelerating, improving, or extending services; conserving manpower or other resources; developing and adopting uniform standards in National Library policies and practices where such standardization is appropriate, legal, and feasible; and building closer unity between the National Libraries and the clientele they collectively serve.

Guidelines

The following guidelines have been developed to assist in the operation of the U.S. National Libraries Task Force and its Working Groups:
1. The six members of the U.S. National Libraries Task Force, appointed by the directors (two from each National Library), shall be officers at the policymaking level in their respective libraries. The members will represent their respective libraries and act as representatives of their libraries in all Task Force operations. They will have a full awareness of the policies of their respective libraries concerning matters that may come before the Task Force, with authority to speak as appropriate for their libraries. As representatives of their libraries invited by their directors to lead this significant and extensive cooperative effort, they will explore without reservation opportunities for developing new, innovative cooperative endeavors;

2. Chairmen of Working Groups, named by the libraries, shall be knowledgeable in the areas of concern to the respective Working Groups and shall have full understanding and cognizance of their respective libraries' programs in the individual areas of study. The recommendations and products resulting from the Working Groups' efforts shall be developed with consideration of existing policies and practices of the three institutions, but shall not be limited by differences in such policies and practices;

3. Working Group members, appointed by the libraries, shall reflect the interests, policies, and procedures of the institutions they represent, but shall not be limited in their recommendations or expressions of view by existing policies or attitudes in such institutions;

4. The full structure of the U.S. National Libraries Task Force and its Working Groups at all times shall reflect the directors' objective of working toward the furthering and extending of national library cooperation in all areas of concern to national library economy, efficiency, and service.