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ABSTRACT

The 29 participants in this meeting on retrospective conversion included research and public library administrators; representatives from the Library of Congress, the major bibliographic utilities, and the regional networks; librarians with experience in planning retrospective conversion projects; three authors of the "Issues in Retrospective Conversion (RECON) Report"; and Council on Library Resources (CLR) staff. This report of the meeting opens with a description and summary of the RECON Report and an exploration of its basic assumptions, followed by an outline of the retrospective conversion activities of the bibliographic utilities--WLN (Washington Library Network), RLG (Research Libraries Group), and OCLC (Online Computer Library Center)--and a discussion of RLAC (Research Library Advisory Committee of OCLC) RECON-related activities. Next, the RECON Report is critiqued by Richard De Gennaro and David Bishop and a three-member panel addresses the topic "What It Would Take to Make Things Happen." Recommendations for action resulting from four small group discussions are reported, refined by the entire group, and presented as a set of priorities for council action. Summaries of the recommendations and of the Meeting on Retrospective Conversion for Music Materials are included. A meeting agenda and a list of participants are appended. (THC)

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RETROSPECTIVE CONVERSION

**Report of a meeting sponsored by the
Council on Library Resources**

**July 16-18, 1984
Wayzata, Minnesota**

**Compiled and Edited by
Dorothy Gregor**

**Bibliographic Service Development Program
Council on Library Resources, Inc.
1785 Massachusetts Avenue, N.W.
Washington, D.C. 20036**

September 1984

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PREFACE

Time and again when library leaders come together to talk about an important matter, we are impressed by the high level of common sense that prevails. The discussion of retrospective conversion reported here is a case in point. The topic is an easy one to explain--it concerns the initial conversion of existing bibliographic records to machine-readable form. It is less easy to deal with, however, because of the sheer number of records to be processed and the complexities of library life, what with a maze of rules governing bibliographic description, varying institutional priorities, and the variety of unconnected computer systems through which libraries do their work.

But the discussion largely ignored the problems and concentrated on the goals. As a result, the reasons not to act receded and the basic objectives prevailed. The recommendations proposed here for review and action are sound and sensible. As is always the case, CLR is grateful to all who contributed to the result.

Warren J. Haas

CHAPTER 1

INTRODUCTION

In the spring of 1983, the Bibliographic Service Development Program of the Council on Library Resources initiated an assessment of the current level of retrospective conversion and an exploration of the primary issues needing attention if libraries are to convert their bibliographic files to machine-readable form effectively and economically. That assessment was published in a report by Jutta Reed-Scott entitled Issues in Retrospective Conversion,¹ hereafter referred to as the RECON Report. The RECON Report was used as the focus for a CLR-sponsored Retrospective Conversion Meeting held at Spring Hill Center, Wayzata, Minnesota, July 16-18, 1984. Additional background reading was provided in the form of a summary report of the CONSER Project. The task of the participants at the meeting was to assess the recommendations of the RECON Report, but not to be bound by them. The Bibliographic Service Development Program Committee was convinced when it commissioned the RECON Report that it was not too late to develop a national strategy for retrospective conversion, at least for the research library community. The goal of the Retrospective Conversion Meeting was to determine whether or not it was desirable to develop a strategy for the creation and standardization of a national database and, if so, to suggest the steps necessary for achieving that end.

The 29 participants included research and public library administrators; representatives from the Library of Congress, the major bibliographic utilities, and the regional networks; librarians with experience in planning retrospective conversion projects; the three authors of the RECON Report; and CLR staff. The meeting thus brought together the people with the management perspective and the expertise to discuss the prospects and problems of a national retrospective conversion effort. Several participants in the Retrospective Conversion Meeting also participated in the Retrospective Conversion of Music Materials Meeting on July 18-19 in order to provide a link between the planning of a national strategy and the planning for the conversion of one segment of the national database.

The meeting opened with a description and summary of the RECON Report and an exploration of its basic assumptions, followed by an outline of the retrospective conversion activities of the bibliographic utilities. The RECON Report was critiqued and a panel discussed "what it would take to make things happen." Small groups then met to discuss the issues and develop a set of recommendations for action. The collective recommendations of the small groups were refined by the entire group into a set of priorities for Council action.

¹Jutta Reed-Scott, Issues in Retrospective Conversion; report of a study conducted for the Council on Library Resources, by Jutta Reed-Scott, with contributions by Dorothy Gregor and Charles Payne (Washington, D.C.: Bibliographic Service Development Program, Council on Library Resources, 1984).

CHAPTER 2

BACKGROUND

2.1: Description and Summary of the RECON Report, by Jutta Reed-Scott

Simply stated, for each library, retrospective conversion can be regarded as a twofold problem. The first is how to obtain the most economical and effective access to existing machine-readable records for the purpose of converting bibliographic files, and the second is how to create quality records at a realistic cost when there is no existing machine-readable record.

With these two problems as a framework, the Report focused on a number of different themes. Rather than merely summarizing the Report this morning, I will highlight a few of those themes.

One theme is a phenomenon to which we have all become accustomed over the last few years--the enormous growth in the number of machine-readable records available on the national, regional, and local levels. Much of the driving force behind retrospective conversion stems from the interest in developing online catalogs, but it is also coming from other library automation developments as well as from statewide and regional efforts to build multi-institutional databases.

The growth in the number of machine-readable records available has expanded the options for RECON available to libraries. An obvious option is

the use of the bibliographic utilities, but we have also seen regional utilities taking a much stronger role in the provision of retrospective conversion services. Perhaps more importantly, we have seen commercial vendors entering the RECON market. The vendors have brought both competition and expansion to RECON activity, and they have also brought entrepreneurship in the sense that they are willing to tailor their services to various libraries' needs.

The growth of RECON projects and activity provides a lot of opportunities, but it also provides as many problems. Because of the lack of a national database and the lack of national planning and coordination of retrospective conversion, we've seen what we call in the Report--borrowing a Jim Haas phrase--a kind of "database anarchy." We have seen a decentralization of many data files. We've seen duplication of records, and we have certainly seen a lack of consistency in applying standards.

Work on the Report also made us realize that there is probably only a very short time frame for developing some coordinated action. As Lee and Henriette have pointed out, the efforts to develop a national strategy for retrospective conversion go back a long way, but the goal has proved elusive. The history underscores the importance of recognizing that the need is urgent and the time frame for action very short.

Another focus, or theme, of the Report is the economics of retrospective conversion. In many cases one can regard economics as the force

that directs many libraries in making decisions on the methodology chosen for retrospective conversion. Short-term cost considerations are frequently an overriding concern. For most research libraries the costs of RECON are enormous and, although there are some sources of outside funding, the total has been rather limited. The HEA Title II-C Program has contributed to RECON, additional federal funding has been available through the Library Services Construction Act, and several states have funded RECON projects.

It is against this background of the enormous growth of available machine-readable records, the marketplace expansion and competition, and the limited funding available to libraries for RECON that a number of points emerge from our analysis. The first is that we anticipate that the current growth in the number of machine-readable records will continue and probably won't start to taper off until the end of this decade. At that time all but the smallest and the largest libraries will have completed the conversion of most, if not all, of their files.

The second point is that, for most large research libraries, the enormity of the task and the complexity of some of the records has led to decisions to convert partial, rather than full, records and to convert only part of the file. Full RECON for these libraries is a very difficult goal to achieve.

A third point is the very high price of RECON for the national resource collections that are so important to scholarship at the national level. For many of these collections there are no machine-readable records

available. The records for these collections require extensive and expensive authority work and, in many cases, the items are in foreign languages and present difficult cataloging/conversion problems. Furthermore, the current national bibliographic system, if we can call our decentralized environment a "system," carries with it the enormous cost of duplicate effort, both in the conversion of bibliographic records and in the accompanying authority work.

Considering the costs of retrospective conversion, coupled with the cost of continuing the present system, we evaluated options that would allow for a more planned and structured approach than the current ad hoc strategies. We found five that we were willing to include and discuss in the Report, and we listed them in ascending order of feasibility of implementation. The first option is the establishment of a central, national-level agency to coordinate retrospective conversion. At this point in time, it is probably no longer desirable or cost effective to look to a national agency. We are all too accustomed to going our own way. Also, given the fate of the National Periodical Center, it would probably be difficult, if not impossible, to achieve the establishment of such an agency.

The second option suggests the establishment of a central data resource file for pre-MARC LC records--which translates into loading the Carrollton Press, Inc., REMARC file as a national resource file. This option has a lot of attractions--the file is large and it is LC based. However, there are so many proprietary problems and quality questions about REMARC that we felt we could not recommend this option for the national-level RECON project we are discussing without much more analysis than we could do at this

time. Dorothy Gregor examined the questions surrounding REMARC, and she may want to add to these comments.

The third option is represented by the direct online connection to LC that is currently enjoyed by the University of Chicago in its RECON work with the former John Crerar collection and that Harvard is employing for some portion of its current cataloging. But it is not feasible for a large number of research libraries to tie in to LC, so this option is not a real possibility. Charles Payne was responsible for this section of the Report and may want to add to these comments.

In option number four we looked at the current efforts toward linkage between the bibliographic utilities and the Library of Congress as exemplified in the Linked Systems Project. Clearly, online system linkage offers a lot of possibilities, but it is not here yet, and it does not solve all the problems of retrospective conversion.

So we come to option number five, which states that there should be a planned, coordinated program by the major research libraries and the Library of Congress to convert research collections in a cooperative mode using a subject-based approach. The last part of the report tries to develop this option in more detail. And because we do recommend a subject approach to assigning RECON responsibilities and because the music library community seems ready to begin major RECON work, we also recommended that we use music as a model for a subject-based, decentralized, but coordinated retrospective conversion project.

Thinking about a national strategy for retrospective conversion raises the familiar problem of providing open access to existing machine-readable records. While we believe that system linkage will provide a long-term solution to this problem, in the short term we recommend a tape loading process to provide access to records that have been converted on different utilities.

On the standards question we felt we had to recommend that for a national project we use existing national standards.

Our recommendation to develop a fund raising plan recognizes that large-scale cooperative conversion projects will require some outside funding. We certainly were aware of the difficulties of the funding problems.

In order to give the recommendations some substance we also tried to provide a preliminary implementation strategy. The first part of that strategy is the meetings here this week. Another part suggests identifying a subject that could be used as a demonstration project, and we suggest a music project. The issues of providing organizational support are touched on only briefly in the Report; a lot of work will need to be done in that area.

In summary, we looked at the enormous momentum for retrospective conversion and felt that the only feasible approach was to build on existing institutional activity and goals among the individual research libraries, the bibliographic utilities, and the Library of Congress, and to provide a

structure for a coordinated program that would make better use of the existing momentum and activity and achieve complete conversion of the vast, but distributed, research resources. †

DISCUSSION

Before proceeding to the next presentation the other two contributors to the Report mentioned several points relevant to their particular investigations. Dorothy Gregor reminded the group that REMARC was not only a very large database, but also a cost effective record capture system that has been used successfully by many libraries. Charles Payne made a distinction between two aspects of RECON. On the one hand there is the problem of obtaining machine-readable records for a particular catalog or database and, on the other, the first-time conversion of a record from printed to machine-readable form according to some standard. The first kind of RECON describes what local libraries do to create a file for their online catalog or other application. The second is a national problem, the kind of problem that should be addressed by this group, that is, how do we organize the one-time, first-time creation of machine-readable records converted to a national standard of usefulness. Charles pointed out that the Chicago-LC Project is really a research and development effort, with the primary benefits being the lessons learned about fitting records into the national database. The Project has shown that it can be done, but that no library could afford to undertake such a project as a means of creating its own machine-readable database. The cost of doing work at the level that is adequate and satisfactory to the

Library of Congress simply costs too much and exceeds the level a local library would want for its own catalog.

2.2: Basic Assumptions in Retrospective Conversion, by Tina Kass

There are a number of assumptions either explicitly stated or implied in the 1984 Reed-Scott/Gregor/Payne paper (RECON Report). While I was identifying those assumptions and evaluating them it became clear that few, if any, were new, and that it would be interesting to look again at the assumptions in studies carried out over ten years ago by the RECON Working Task Force and as part of the RECON Pilot Project, familiar stuff to many of you, but new and rather interesting to those of us who were not involved in retrospective conversion then. As a result, I thought that I should, in the interests of fair advertising, rename this discussion "The History of Assumptions in Retrospective Conversion or, RECON Then and Now." It is tempting to be irreverent and add "so what else is new?" but, of course, a great deal is new. Not only is full RECON a real possibility for most libraries, it is almost a necessity for libraries trying to keep pace with the possibilities now presented by integrated systems and with the expectations of their users. I think that the force of these two factors--the expanding set of POSSIBILITIES and the growing EXPECTATIONS of users--has resulted in some adjustment of the operating assumptions of the RECON movement of the early seventies, and I would like to investigate those adjustments now.

The major assumptions of the 1984 RECON Report are as follows:

1. RETROSPECTIVE CONVERSION IS A GOOD THING.

Although such a statement does not appear in the Report, the document's very existence indicates that RECON is important enough to warrant our attention. In the RECON Report, the reasons for RECON include:

- a) Support for online catalogs, circulation systems, serial lists, and other library applications
- b) More efficient file and catalog maintenance
- c) Security for a library's bibliographic files
- d) Improved collection management¹

In the 1969 report of the RECON Working Task Force:

A prime reason for converting catalog records to machine-readable form is to achieve greater flexibility in manipulating the data. This flexibility will facilitate searching and retrieval; it will lessen the effort of updating the records; and it will contribute to production of a wide variety of cataloging products (cards, book catalogs, special lists, book labels, etc.). Although initially most of the applications will be along traditional lines, computerization of cataloging data should give an added dimension to bibliographic control that may materially alter familiar patterns of use.²

The benefits of RECON--already well understood in 1969--are even clearer now with the availability of systems that are within reach of most large libraries--and many small ones--that can manipulate data efficiently and in ways that were not possible 15 years ago.

1a. THE BEST RECON IS THE MOST RECON OR, SOMETHING IS BETTER THAN NOTHING

This is more a corollary than a full-fledged assumption, and I include it, not because it appears in this RECON Report or any other, but because it is a fairly widely held opinion. Perhaps the only thing that should be said about this is that it is important that it is clear in advance, to both staff and the public, what the results of any RECON project will be--that is, what records will be available in machine-readable form and what the content of those records will be. We have all been faced with cases in which something is NOT better than nothing--remember the MULS file, brief serial records, stripped MARC records, etc. Be careful out there.

2. THERE ARE BENEFITS ON THE LOCAL AND NATIONAL LEVELS TO BE REALIZED BY SHARING RESPONSIBILITY FOR BUILDING A NATIONAL STORE OF RECORDS FOR RECON

We know today that the benefits of building a "national database" by means of intersystem links between various and distributed systems are great. As stated in the RECON Report, "...the conversion of bibliographic records is also a crucial step toward effective access to the vast but distributed research resources found in American libraries."³ Today there is a common understanding that, given the sheer size of retrospective conversion efforts

and given the reality of a distributed national bibliographic file, any large-scale retrospective conversion project must be shared. The benefits of sharing the burden of cataloging by using resource files of bibliographic utilities have been proven--original cataloging in large libraries has been reduced from 50-60% of the total local output to 20-25% or less in some cases. CONSER participants have built a reliable and authoritative serials database to meet the needs of library patrons on a cooperative basis. NACO participants have more recently begun to share responsibility with the Library of Congress for building authority records. Technology has already provided us with the ability to share data within the same system and now gives us the promise of sharing such information across the boundaries of specific systems and databases. The assumption that there are benefits to be realized by sharing RECON work is so important that four of the RECON Report's six recommendations address the matter of coordinated retrospective conversion.

In 1969 the RECON Working Task Force recommended that:

Large scale conversion should be accomplished as a centralized project. Decentralized conversion would be more costly and unlikely to satisfy the requirements for standardization. The project should be under the direction of the Library of Congress.⁴

Conversion of the LC Official Catalog was recommended. By 1973, after the RECON Pilot Project, the view of a centralized project was modified somewhat. Although the RECON Working Task Force still recommended that a centralized agency should be established to undertake large-scale RECON, part

of the responsibility of that agency would be to "... (adapt) machine-readable records from libraries other than LC."5

Since then, however, more and more libraries have gone their own way with RECON, and decisions about standards, editing, size of the record, etc., have become almost exclusively local decisions, as opposed to the broader view suggested by the RECON Working Task Force. As noted in the 1984 RECON Report, "The path pursued by libraries since then (i.e., since COMARC) is characterized by a shift from national planning to local initiatives."6 One reason for that shift has been the limited role that the Library of Congress has been able to play in building a retrospective database in the last decade. Another reason is that projects with exclusively or primarily local goals are always less expensive. It's always easier to compromise if you're only arguing with yourself. The matter of centralized versus decentralized RECON is related to standards, which brings us to the next assumption.

3. IT IS POSSIBLE AND DESIRABLE FOR LIBRARIES TO DEVELOP AND ACCEPT COMMON STANDARDS AND GUIDELINES FOR INPUT OF RECORDS AND, THEREFORE, TO ACCOMPLISH DECENTRALIZED, BUT COORDINATED RECON

On the basis of this assumption there will be a meeting later this week of various components of the music library community. Libraries have learned to compromise on standards as they have become more and more dependent on cataloging created by agencies other than LC. Bibliographic utilities have defined levels of standards for current cataloging. Although reaching agreement on standards for retrospective records will certainly be more difficult and complicated than reaching agreement on current cataloging

because of the history reflected in most old cataloging records, there is now precedent for such agreements.

Standards have two parts: the cataloging content of the record, that is, the data within the fields, and the extent of the record, that is, how much information is contained in the entire record.

Ten years ago, the difficulty of achieving consistency of cataloging was discussed at length by the RECON Working Task Force. The reasons for cataloging inconsistency were described as follows:

a) Cataloging at any one institution is performed in relation to the body of cataloging data which it has developed through the years of its existence and incorporated into its own cataloging record.

b) The cataloging product is governed by codes and guidelines that were at that time in "an evolutionary process."

c) The final record is also influenced by human judgment and competence.⁷

These problems remain, of course, but the motivation for reaching agreement on cataloging practice has increased. There is also now an assumption that technology may be able to help somewhat with the imposing of consistency. For example, there will be discussion at the meeting later this week about the realities and possibilities of post-input authority work, and

the effect on retrieval and use of RECON records (and current cataloging, for that matter) that assumptions about post-input authority work may have on machine-readable files. "In a world of unlimited time and resources, all records undergoing retrospective conversion would be recataloged to follow AACR2 rules, in order to be fully integrated with machine-readable records since 1981. Since none of us happens to be living in that utopia, decisions must be made about whether and how to achieve authoritative data in machine-readable records that have been created from pre-AACR2 records."⁸

With regard to the extent of the record, the 1934 RECON Report and the 1973 recommendations of the RECON Working Task Force are the same:

While creating non-standard records provides short-term savings, many libraries have learned through expensive and painful experience that it does not pay to settle for anything less than full MARC records in retrospective conversion projects. They have also learned that it is prohibitively expensive to upgrade to full MARC short records.⁹

This leads us to the next assumption.

4. RETROSPECTIVE CONVERSION IS A FAIRLY SIMPLE PROCESS;
COROLLARY, THE SIMPLICITY OF THE PROCESS DEPENDS, HOWEVER, ON
THE SPECIFIC GOALS OF A PARTICULAR RECON PROJECT

The 1984 RECON Report provides a deceptively simple description of RECON in the first section. Retrospective conversion of a record consists of locating and adapting existing machine-readable records to a specified form,

or preparing original machine-readable input from already existing cataloging records.

The experience of the last ten years indicates that relatively low-level staff can be trained to perform routine tagging and keying of RECON records, and that experienced catalogers usually need to be involved only when problems occur. In fact, RECON vendors have had varying degrees of success with tagging and keying of RECON records using foreign labor, English-speaking and otherwise. Saztech, for example, provides high quality keying of English and foreign language titles using staff in Manila. Carrollton Press uses Scottish labor. It is important to provide adequate training in the tagging and keying processes and to provide close supervision in order to answer questions and maintain production flow during the process. RECON vendors have also provided services in addition to the tagging and keying of records. The REMARC service, for example, provides for search key building and matching against the machine-readable MARC and REMARC files.

The RECON Pilot Project made similar assumptions about the level of staff and type of supervision needed to conduct RECON. The feasibility study prepared by the RECON Working Task Force in 1969 proposed that a staff consisting primarily of non-professionals (GS-4 Typists, GS-6 Editors, GS-6 Catalog Editors) prepare most of the RECON copy, with GS-9 Verifiers carrying out the quality control work. The RECON Pilot Project also made use of a contractor for some of the pilot project input.

The problem with the assumption that RECON is a fairly simple process is that it is not quite true. Whether or not it turns out to be simple depends on the decisions an institution makes about the amount of editing and upgrading to be done as part of the RECON project. The reality is that few libraries--few large libraries, in particular--are able simply to transform existing data from cards to tape or online files. Attempts to edit problem records introduce complexity into the process: checking of authority files is often done, checking of other bibliographic records, checking of the item on the shelf in some cases. And yet, in many cases, it is impossible to ignore the need to plan for editing and upgrading, given the age of many of the files that are now being used for conversion. "While the input of existing records without modification undoubtedly lowers costs DIRECTLY attributable to retrospective conversion, it is more difficult to quantify the effects that such a decision will have upon subsequent searching, retrieval, and sharing of bibliographic records."¹⁰

This brings us to the last assumption.

5. RECON IS (OR REMAINS) EXPENSIVE

This is an assumption about which there is little, if any, disagreement. RECON work is usually not covered by ongoing operating budgets. Estimates today range from less than \$1.00 per record for vendor conversions to more than \$4.00 per record for in-house conversions that involve authority checking and upgrading of headings. The RECON Working Task Force estimated per record costs ranging from \$1.51 to \$1.87, depending on the amount of

editing and the method of editing involved. RECON is no exception to the "you get what you pay for" adage.

There is no doubt that RECON of large collections will cost a great deal of money; that is indeed a reason to consider seriously decentralized input--with all of its disadvantages--and to work toward the establishment of a national database built on system-to-system links in order to share data. Development of a linked national file, however, will take time, and many libraries feel that they must act quickly. An important local decision in such an environment will always be to determine how much effort to put into creating consistent, high-quality records, given financial constraints and given the uncertainty of national programs.

For many years the issues and problems of standards, coordinated input, and optimizing local priorities have been dealt with in reaction to the cost of RECON. We still do not have an answer to the problem of paying for something that everyone agrees needs to be done, but we still have an opportunity--although probably not for long--to be active in planning for it.

To conclude, this review of assumptions shows that most of our understandings today are consistent with those of a decade ago. The emphasis, however, has changed, as technology and the pressure of the POSSIBLE have changed. Systems and vendor services exist today that were not available in the early seventies. The Library of Congress and other research libraries now have a longer history of cooperative bibliographic work. In general, decentralization is viewed more positively in libraries and other

organizations. But we pretty much agree with the recommendations and plans that were developed 15 years ago. The need to convert catalogs remains.

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- ⁴RECON Working Task Force, Conversion of Retrospective Records to Machine-Readable Form, 10-11.
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- ⁶RECON Report, 6.
- ⁷RECON Working Task Force, National Aspects of Creating and Using MARC/RECON Records, 35.
- ⁸Edward Glazier, "Post Input Authority Work for Retrospective Conversion of Bibliographic Items for Music: What are the Possibilities?" in Retrospective Conversion of Music Materials, report of a meeting sponsored by the Council on Library Resources at Spring Hill Center, Wayzata, Minnesota, July 18-19, 1984, ed. Dorothy Gregor (Washington, D.C.: Council on Library Resources, 1984), 53-54.
- ⁹RECON Report, 28.
- ¹⁰Glazier, 53.

DISCUSSION

Two questions were raised in response to the opening background papers: Is a full MARC record really necessary in a RECON effort? Would it be possible to organize a RECON project by imprint rather than by subject?

Discussion revealed some shared concern about the cost of full MARC, but there was a general consensus that a national standard should be agreed upon prior to launching a national RECON effort. RLIN's standard for record creation "without book in hand" was mentioned as a possible model, as was the minimal level cataloging standard used by the Library of Congress. The primary emphasis was the need to provide for standards in regard to the access points on a record. LC representatives reported that preliminary in-house discussions about RECON standards indicated that LC could live with something less than the standards applied to current cataloging activity, but there had been no further definition of a potential RECON standard.

It was pointed out that in a national effort participants would be contributing only part of the RECON work and, as a consequence, might be able to contribute records at a higher standard than if they were contributing all of their converted records. If projects are limited to only a few libraries, however, then the economic burden of the contribution, if there is no external funding, might be more than a library could take on.

Other comments relating to standards: One of the lessons of the CONSER Project is that no single institution can bear the brunt of quality

control over the size of file and record creation activity involved in a national RECON project. Another lesson is that it took several years for CONSER participants to become comfortable with the standards set for the CONSER database. One way of enforcing the use of a RECON standard is to tie continued funding to maintaining the standard within funded projects.

Discussion of the question of organizing RECON in some way other than a subject-based approach did not reveal acceptable alternatives. Since most conversion projects use shelflists as source files and since the LC classification scheme was seen as probably the best way of dividing up the bibliographic universe to avoid duplication, there seemed to be general agreement that the predominant way of approaching RECON should be by subject (as exemplified by LC classification).

CHAPTER 3

CURRENT ACTIVITY

3.1: Description of WLN RECON Plans, by Gwen Culp

From the discussion so far it sounds as though the focus of this meeting will be on the contribution that large research libraries can make to develop a retrospective database. We do not have a lot of large research libraries in WLN, but the WLN system has several features that support retrospective conversion in our libraries.

I think it is useful, as Charles Payne suggested, to distinguish two kinds of RECON: one is adding holdings to existing records and the other is creating new records. Our libraries have a couple of options for adding retrospective holdings to existing records. They can search the database online and, if they find a record, they can add holdings online. However, there is an economic incentive not to add retrospective holdings that way; we charge \$1.55 to add holdings online.

We have a batch RECON system that libraries are encouraged to use by the pricing scheme. The library enters brief search keys and call numbers either into the Wylbur text editing system, which is available on all WLN terminals, or into an Apple microcomputer or an IBM PC. The brief RECON keys are matched against the WLN database quarterly. A hit costs \$0.21; if there is no hit, the charge is \$0.04. Call numbers and library holding symbols are

added to the database for hits, and lists of multiple hits and non-hits are provided.

We have recently signed an agreement with Carrollton Press that allows us to pass the non-hits against Carrollton's REMARC database. The WLN agreement with Carrollton is somewhat different from the usual REMARC contract in that Carrollton has agreed to use our RECON search key to search the REMARC file. Carrollton returns to us the records that matched our search keys, including the call number of the requesting library and lists of multiple hits and non-hits.

Our price to the library for loading the Carrollton Press REMARC records includes the cost of the REMARC record from Carrollton and the cost to WLN to upgrade the headings on REMARC records to the form used in the WLN database or to the current AACR2 or subject heading form. We are aware that the REMARC records lack some of the data that we would like to have in the records. We are willing to live without some of the descriptive data, but we decided to upgrade the access points.

Our practice of upgrading access points to agree with the WLN Authority File is, I think, an important point. When AACR2 was first implemented, we decided that every heading that went into the database had to be in AACR2 form. It took about six months for us to realize the folly of that decision. Now our standard for current cataloging and retrospective conversion records is that if the heading exists in the database, then the library can use that form even if it is not AACR2 or the current subject

heading form. A library always has the option of upgrading or not upgrading the heading to AACR2.

Our upgrade of the REMARC record consists of adding the record to our database and obtaining a listing of all of the headings that are new to the file; then our bibliographic maintenance staff upgrades the heading. Our system assists in the upgrading by preventing the linking of unauthorized headings in bibliographic records to the Authority File headings. If a bibliographic heading has an unauthorized heading, it is returned for user review, and then the user will upgrade the heading to the authorized form in the Authority File.

The University of Missouri and Biblio-Techniques, Inc., two of our software licensees, have taken this capability one step further. Those systems change the incoming heading from the unauthorized to the authorized form. We intend to implement that capability.

We are in the process of implementing another alternative to keying full records. Libraries use another vendor to have their records keyed, and we load their records with holdings. We get a sample tape of records from the vendor and load them into a WLN working file. WLN staff review the records to determine whether or not the descriptive cataloging and access points meet the WLN standards. Based on that analysis, we determine how we will process the records into the database.

We are currently working on records for Washington State University keyed by Saztec. When the WSU records match records in our database, we add the holdings to our records. When the records do not match, we load them to the Working File. The owning library reviews the records for conformance to WLN standards before they are added to the database with holdings. If the owning library does not have the expertise to do this type of review, to review and upgrade the headings and descriptive cataloging, then WLN plans to do it on a contractual basis.

Another option for RECON that avoids keying full records is to make use of machine-readable records a library may already have, for example, circulation system records. WLN extracts brief RECON keys from these records that can be used in our batch RECON subsystem. These source records are generally not full enough to consider adding them to the database--the upgrade would simply be too expensive.

A library has two choices for inputting a RECON record on WLN. A full MARC record can be input, and we encourage our libraries to do so. We have also defined an "r" encoding level for RECON, so that libraries that cannot input full MARC records can input their retrospective records. The RECON input standard allows a somewhat briefer description, but all access points must be present and must be upgraded to AACR2 or to the current form of the LC subject heading or to the form in the WLN database.

The WLN "check" command facilitates RECON record input and the review of records loaded from external sources. It can be used on any record in the Working File. It searches all the headings in a record against the Authority File. The system reports new or unauthorized headings and displays the authorized form. The user merely reviews the results and deletes the unauthorized headings, leaving the authorized form.

WLN considered the possibility of establishing a separate RECON database, but we rejected it because the separate database would not be subject to the same level of maintenance as the regular database. We also considered the issue of whether to accept less than a full MARC record. We decided we would because some libraries would not be able to input full MARC from their shelf lists and we wanted the records to be accessible to users.

We have purchased the CANMARC retrospective book records and are in the process of licensing the CATLINE retrospective records. We are planning to put them in a separate database and move them into the main database as they are used. Our objective is that once a record is used by one of our libraries, it is maintained by WLN staff.

All of these activities have helped us build a larger database for RECON and to support current cataloging of retrospective material. We have data sharing agreements with our software licensees and with the Biblio-Techniques licensees, and WLN is willing to enter into sharing agreements with other agencies.

WLN is participating in the Linked Systems Project (LSP). When we implement the authority application, WLN members will be contributing name authority records to the Library of Congress file. In return, we will receive daily distribution of new name authority records and updates to existing records. And although this is not a RECON application, it will improve the quality of the WLN Authority File and thereby improve the quality of the bibliographic records, including REMARC and other RECON records.

The analysis of the LSP bibliographic application is not yet complete. But in the authority application, we have developed generalized facilities on which we can draw for the bibliographic application. Our libraries are particularly interested in the exchange of bibliographic records through the LSP link. It is not yet clear how we will use the contribution/distribution facility in LSP. There are a couple of possibilities: we could have a kind of passive contribution of records, for example, sending newly created records or records with new holdings to the NUC in response to a profile option. Another possibility is what could be called active contribution, in which a library opts to contribute a specific record to a particular remote file. Either could include contribution of current and retrospective cataloging records.

DISCUSSION

The description of WLN's use of REMARC records raised a question about their ability to share those records with other libraries in the WLN network. Ms. Culp explained that REMARC records could not be returned as a "hit" in the

WLN RECON subsystem. A library would have to send the RECON key to be matched against the Carrollton REMARC file, so that Carrollton does not lose the revenue. Libraries can add holdings to REMARC records using the online transaction rather than the batch system.

Another question was raised about the possibility of upgrading an "r" (RECON) level record. WLN permits the upgrading of records; the upgrade is reviewed by WLN staff, and the new version of the record is on the database the next day. Most libraries go ahead and use the "r" level record, but there are some WLN users who upgrade them to full MARC.

One of the participants was not sure that an "r" level record would really save an inputting library much time and money if the only difference is in less rigorous requirements for description. Most cost savings result from a library not having to provide data beyond that available on the source record. The heading upgrade is additional work, but it is supported by WLN with its linked authority system and check command.

3.2: DESCRIPTION OF RLG RECON PLANS, by Tina Kass

The Research Libraries Group (RLG) has, over the course of the last four years, discussed retrospective conversion with a growing sense of interest and urgency. Changes in technology have both increased the demand for retrospective conversion and multiplied the number of approaches. Whereas four years ago only the smaller RLG libraries considered full conversion possible, almost all RLG libraries now consider it an essential component of

their local system development. And whereas four years ago relatively few methods were available for RECON--other than in-house keying--a number of vendors and networks have developed attractive alternatives to in-house RECON. As interest in RECON has grown within libraries in general, it has also grown within RLG.

RLG libraries, however, have, by their very membership in the organization, agreed to consider not only the very strong local pressures for RECON, but also the effect of various RECON alternatives on the goals of the partnership as a whole. RLG members have developed and now operate a number of cooperative programs that depend on an ability to share bibliographic data; at the present time, such data is added to and made accessible by means of the Research Libraries Information Network (RLIN) central database. The interlibrary loan program, for example, requires up-to-date, accurate, and easily retrieved information about item holdings and locations among RLG members. The RLG Preservation Microfilming Project depends on data in RLIN records about filming status in order to avoid duplicate filming efforts.

The interest of RLG members in the continuing growth and usefulness of the database, therefore, has resulted in consideration of a variety of ways to support RECON in RLIN, including reduced rates for RECON input, establishment of book-not-in-hand input standards, acquisition of resource files to increase RLIN hit rates for RECON, and, most recently, development of a subject-based, subsidized program of RECON. Without eliminating the possibility of acquiring large resource files for RLIN, the RLG Board this spring approved a staff

recommendation for a coordinated, subject-based RECON program, linked to collection strengths of member libraries in the following subjects:

Science (LC classes Q-QR, R, S, T)

History: Western Europe

History: United States

Literature and Languages (LC class P)

Music

Law (Public International Law, Legal History, Criminology)

Art and Architecture

All forms of material are eligible for the program.

PROGRAM COMPONENTS

The components of the program are as follows:

1. Individual project proposals were prepared by RLG member libraries according to a set of guidelines that called for:

- a) Specification of the subject category to be included with an indication of the institutional collecting levels for the subject. RLG members have described collecting levels for LC classes as part of the Conspectus development. The RLG Conspectus is an online database in RLIN that

describes a comprehensive, subject-based assessment of existing collections and collecting practices in RLG member libraries.

b) Anticipating rate of conversion and identifying reasonable milestones to be met during the course of the project.

c) Specification of the total number of titles to be converted during the project.

d) Proposals that covered periods of up to three years.

2. All activity funded as part of the program is to be done using RLIN.

3. Original input carried out as part of the program must meet the RLG standard for item-not-in-hand, that is, conversion and full coding of all information possible without handling the item itself.

4. Participating institutions will be reimbursed on a per-record basis for each title converted, upon completion of mutually acceptable milestones. Reimbursement covers:

a) 100% of RLIN online costs

b) Local staff costs at \$0.50 for copy recon and \$2.50 for original RECON

CRITERIA FOR PROPOSAL EVALUATION

RLG staff used the following criteria for evaluating the proposals submitted:

1. The project contributes to substantial coverage of a subject area of interest, that is, a subject area listed in the RLG project guidelines.
2. The proposal involves conversion of a strong collection as reflected in the Conspectus data.
3. The proposal involves conversion of large numbers of titles (especially titles original to the database), a factor that is generally useful to other members and RLIN users, contributes to substantial coverage of a subject, and is easier for RLG staff to administer.

RESULTS OF THE PROPOSAL EVALUATION

Fourteen RLG members submitted proposals for funding. Projects proposed by twelve of the fourteen were approved for funding. The subjects covered are:

Titles to be converted

Science (LC class Q-QR)

81,107

Literature (LC class PE, PR, PT, plus all others at Iowa)	151,759
History (LC class E, DC-DJ)	28,983
Music Scores	29,112
TOTAL	285,961

All of these proposals are for multi-year projects.

CONCLUSION

RLG has decided to concentrate for the time being on a particular kind of program for retrospective conversion, with a clear understanding of its advantages and shortcomings. It will not, of itself, accomplish everything its members need. For example, it does not necessarily mesh cleanly with the highest local priorities for RECON, although we are assuming that its tie to collection strengths keeps projects more or less in line with long-term priorities. It does not, at least initially, provide support for conversion of full collections quickly; we do not know, however, how this kind of targeted RECON will, in a few years, change hit rates for the subjects covered. By tying the program to strong collections we are expecting that the value (defined in terms of hit rate, among other things) of the RLIN database

for RECON will grow rapidly, beginning with fields in the humanities and in science. We think that the benefits of such a program are clear, however:

1. It provides dollars to offset staff costs of RECON.
2. It will result in conversion of describable subject groups of materials; for example, we will be able to say that three large and important collections of English literature are fully reflected in the RLIN central file.
3. It makes records easily available to other members and RLIN users for additional RECON, for shared cataloging, for interlibrary loan, and for other activities.
4. It is a voluntary program that allows an institution to participate or not, depending on local interest and priorities.

RLG members do not regard this program as the ultimate answer to all their RECON needs; RLG central staff are still investigating ways to expand the central resource file, for example. Members do, however, consider it an important step in the right direction, and one that is consistent with other RLG programs and activities.

3.3: Description of OCLC RECON Plans, by Mary Ellen Jacob

I will begin by talking about our current activity and then explain a little about what we plan for the future. On the current side there are three kinds of activity. There is the retrospective conversion activity undertaken by our member libraries; there is the activity from the contracts in which OCLC staff does the conversion; and there is the RECON activity of the groups contracting with one of the regional networks to do conversion.

Our member libraries converted over 10 million records in 1983-84 by adding their holdings to already existing records in the OCLC database. In the last four years 37 million library holding symbols have been added through RECON projects. In 1983-84 the projects represented the work of 1,317 institutions.

The contract operation has been in place since 1976. Our original contracts were with the State Library of Ohio to convert records for eight public libraries. Our activity has expanded so that we now either have done or are doing projects for 96 institutions representing a total of about nine million records.

Twenty-seven percent of those were special libraries, 39% were academic, and 27% were public libraries. Eleven percent of the total were research libraries, so we were involved in a number of research library projects. Roughly half the records were Dewey classification and about half were LC, with a smattering of NLM classification. In support of the contract

work we have input over 600,000 original records. This means, however, that original input was required for only about 8.4% of the records. And that means that 91-92% of the time, the record was already on the file.

Any time we are converting a record in the contract operation that is fuller than the one already on the database, the record on the database is upgraded to the fullest possible form. The contracting has thus enabled us not only to enter original data and add holdings information, but also to upgrade records in the process.

We require our institutions to check the authority file and to use AACR2 forms for headings whenever possible. We also require that records be input at what we call a "k" level standard, which was developed before the National Level Bibliographic Record--Minimal Level standard existed. (Level "k" records include all descriptive cataloging information, but do not include subject headings.) We have discussed with our members the possibility of changing the "k" level to bring it into line with other standards, but so far we have gotten largely negative feedback from our user community. We do have a group studying the question to identify the issues and alternatives and to make recommendations on what we can do about minimal level standards, but there is no resolution at this point.

We have studied the imprint dates on the file and discovered that over a million records are for imprints prior to 1900, so the file contains not only current imprints, but a lot of older material as well.

Our networks are involved in retrospective conversion activity that is undertaken largely in two different ways. One way is for the network to undertake contract conversion services in much the same way that our contract activity is undertaken, that is, the networks convert records for their libraries on OCLC. Recently they have also undertaken other conversion services by loading a subset of the OCLC database and using that subset as a basis for conversion on their own systems in attempts at bringing down the cost of RECON. We expect RECON activity to grow in all three of the ways I have outlined.

A number of projects have been undertaken on OCLC that overlap with the RECON activity, but are separate from it. One of these is the Major Microfilm Project, which has included a number of Title II-C-funded projects. OCLC libraries have just finished cataloging the Lyle Wright American fiction series, which was a landmark effort in that it was a cooperative project among 13 libraries with no outside funding or grant support of any kind. It was solely subsidized by the participating libraries and by OCLC through waiving its system usage charges. The U.S. Newspaper Project also has a heavy conversion element in that the Project is trying to convert not only current newspapers, but ceased titles as well.

We are working to develop an offline system that will enable us, through a microcomputer, to do conversion projects similar to the ways Gwen described for WLN's batch service. We hope this offline-microcomputer approach will be attractive to very small libraries, although we do not have a lot of margin in pricing. The main advantage to the micro is that it will

allow the libraries more convenience in hours of operation. From a cost standpoint the micro approach will not be substantially cheaper than what we are currently offering online. We hope the offline approach will also reduce some of the telecommunications costs associated with RECON projects.

We are also looking at packaging subsets of the database by type of library. For example, for law libraries, medical libraries, and small public libraries we can identify characteristics of records most needed by those types of libraries.

We recently introduced the ENHANCE function, which has impact on RECON as well as general quality control because it will allow us, in working with projects like the Major Microforms Project, to upgrade records as libraries process them. We upgrade them now, but it is done after the projects are complete. The ENHANCE capability will allow us to upgrade records as they are used.

That covers, briefly, the various RECON activities in which OCLC is involved and gives you an idea of the scope of the RECON activity in OCLC. Thirty-seven million records in four years with over 1,300 libraries is not a small effort, and the numbers keep growing every year.

DISCUSSION

Interest in the potential of microenhancer-type techniques for cross-database searching was reflected in a question about the technical

difficulties that might be obstacles to such a development. Mary Ellen responded that a microenhancer that could operate as a dial-up terminal would be able to search multiple databases in dial-up mode without any particular modifications.

The packaging of subsets of the database was further described as using one of the newer storage technologies, for example, compact disk. OCLC plans to include both the files and the indexes on the same disk and is looking at some of the high capacity compact disks now on the market. Nothing will be marketed until the costs are reasonable.

Because recent studies of online catalog use have revealed a high percentage of subject searching, there was some concern about the lack of subject headings on a level "k" record. Mary Ellen was asked if there were a great deal of level "k" RECON taking place. Interestingly enough, libraries that contract for conversion services with OCLC usually contract for the input of the entire record. Less information is available about projects undertaken by individual libraries, but libraries are likely to enter all the data that appear on a shelflist (or other) source record, so there is probably not as much "k" level work as one might expect.

Mary Ellen's statement about OCLC's requirement that libraries search the authority file before inputting headings on records provoked a question about whether or not libraries were really doing that searching. There is no good way to measure the conformity to the requirement because OCLC's only indication that libraries are not inputting current forms of access points is

the number of error reports submitted, and error reports are limited to records used by other libraries. Feedback from the Cataloging Advisory Committees indicates that libraries are concerned about the quality of their records and want consistency in their own catalogs. In general, libraries seem to be taking fewer shortcuts than might be expected. Since the subject headings are not yet available for online checking, OCLC does not require that subject headings be checked prior to input.

3.4: RLAC RECON-Related Activities, by Elaine Sloan

RLAC is the Research Library Advisory Committee of OCLC. It was formed four years ago by a research library director who was interested in improving communication between OCLC and the research library community. RLAC began as an ad hoc committee, but two years ago, in 1982, it became a formal advisory group with 15 members appointed by OCLC. RLAC has two primary goals: first, advising and informing OCLC management about the priorities of research libraries, and secondly, trying to stimulate cooperation among research libraries.

RLAC does most of its work through task forces. Its Task Force on Cooperative Retrospective Conversion has prepared an action paper on the subject, but since it has not been discussed by either the Task Force or RLAC, I think it is premature to discuss RLAC RECON goals at this time. I can say, however, that the potential of RLAC is great and that there is a commitment to engaging in cooperative efforts both within the RLAC framework and with other research libraries.

DISCUSSION

Elaine's sketch of RLAC's mission was followed by discussion of the RECON activities of the two regional networks represented at the meeting, AMIGOS and SOLINET. Lou Weatherbee indicated that AMIGOS had loaded a subset of the OCLC database called SHARES (Shared Resources System), which currently has about 1.2 million records online and available as a source file for RECON. AMIGOS also provides conversion services, using both its own database and OCLC, for those libraries who prefer that approach. AMIGOS plans to develop the capability of doing batch searches against its file, probably using the microcomputer model that OCLC is considering and that commercial vendors have been using for some time.

Dawn Lamade reported that SOLINET services parallel those of AMIGOS. SOLINET staff provide conversion services on OCLC, and about 1.5 million records have been loaded on the SOLINET system to support online catalogs and RECON. Most of the libraries who contract with SOLINET are interested in having their holdings reflected in the OCLC database as well, and SOLINET is working with OCLC on an agreement to tape-load records from SOLINET to OCLC. A microcomputer-based system for batch searching of the SOLINET database has also been developed. The primary advantage in using SOLINET (or AMIGOS) rather than OCLC is reduced rates.

One of the participants asked about problems with synchronicity between the files of the regional networks and the file at OCLC, and the

network representatives agreed that there was, indeed, a problem, which was being addressed in negotiations with OCLC. The negotiations are attempting to balance the regional network goal of reducing conversion costs to their members with the legitimate needs of OCLC to recover costs to support their operations. At the moment, a library using one of the regional networks and desiring to maintain its records in both the regional database and OCLC would have to maintain the record in both files.

CHAPTER 4

ISSUES AND PROBLEMS

Lee Jones opened the Tuesday morning session by reminding the participants of the importance of the general RECON meeting for the music RECON meeting, which would follow on Wednesday and Thursday. He introduced Richard Jones and Michael Keller and asked them to explain briefly their respective music RECON organizations and plans.

Richard Jones explained that the name of his group, REMUS, was an acronym for the RETrospective conversion of MUSic. His library director had suggested calling the group the University Network for Cataloging Library Entries with Respect to Music, which would allow the acronym UNCLEREMUS, but Rick is relieved that, so far, no one has taken this suggestion seriously.

In early 1980, the OCLC Music Users Group formed a Committee (REMUS) to investigate the reasons for the lack of bibliographic information in machine-readable form about music, particularly scores and sound recordings. Books about music were not a primary concern of the Group. REMUS was also charged with writing a proposal for music RECON, seeking funding, and selecting project participants. In 1983, out of a group of 149 applicants, 12 were chosen for membership in REMUS. REMUS members had to agree to use REMUS standards and procedures and, in addition, participants were selected on the basis of the quality of their music cataloging, in order to achieve a balance of types of collections and, lastly, on the basis of the size of the

collection. The 12 participants selected were the music libraries at the University of California, San Diego, Oberlin College, New England Conservatory, University of Louisville, University of Illinois at Urbana-Champaign, Indiana University, Eastman School of Music at the University of Rochester, University of Texas at Austin, University of New Mexico, University of Virginia, and the Universities of Wisconsin at Madison and Milwaukee.

Jones was appointed Director in May of 1983 and the group began the development of three separate but interrelated projects. The first project was to enhance the music data in the OCLC database. "Enhancing" is the upgrading of the existing machine-readable record to include every appropriate field completely and accurately, no matter what it takes to achieve that fullness of record. It means coding all fixed fields, upgrading all access points to AACR2 form, and checking to make sure that all subject headings are in current LCSH form--a full National Level Bibliographic Record for Music. In June of this year 7 of the 12 REMUS libraries were authorized to begin ENHANCE work on OCLC.

The second REMUS project is to assist the Library of Congress in building a national name authority catalog for music. Jones had spent two weeks in training at the Library of Congress in early June working with the NACO staff and the staff of the Music Cataloging Section. Once he has attained independent status in NACO he will train the other REMUS members. REMUS work with NACO is different from other NACO projects in that 12 institutions are being treated as one. All authority work from the 12 REMUS libraries will be submitted to LC through Jones. He anticipates that all 12

libraries will be fully operational for NACO by the end of a year. He is hopeful that the work will be done online through the Linked Systems Project at some point, but its beginnings are based on manual procedures.

The third project is to increase the number of music records in machine-readable form in the OCLC database through the development of various RECON projects. Three of the REMUS libraries are doing summer pilot projects in order to ascertain the resources and procedures needed to get the work done. The University of Wisconsin, Milwaukee, Oberlin, and the Eastman Conservatory are each devoting a portion of the work day to RECON.

Funding for REMUS projects has come from a variety of sources. The ENHANCE project is being supported by OCLC and by the OCLC Music Users Group. NACO work is supported by LC in the form of training and the input to the Name Authority File of all the authority records contributed by REMUS. The Council on Library Resources is supporting travel and per diem expenses associated with training. The RECON project is still looking for grant support, but has the commitment of major funding from the institutions in staff salaries and overhead expenses.

Michael Keller began his remarks with the regret that the Associated Music Libraries Group (AMLG) had come into being after the REMUS group and lost the opportunity for such a trendy acronym. The goal of AMLG is the development of a national database to support online catalogs and shared resources for music materials. It is formed of the seven largest academic music libraries in the U.S.--Stanford University, Harvard, Eastman School of

Music, University of Illinois, University of Indiana, and the University of California, Berkeley. Converting the music catalogs of these institutions will require the conversion of approximately one million records and approximately half a million unique titles. It is not yet known what percentage of these records may already be in machine-readable form.

Keller pointed out that the institutions involved make the project "trans-utility" because both OCLC and RLIN are being used as cataloging systems at these institutions. AMLG is planning a CONSER-like project and is thinking of CONMUS or MUSCON as an acronym for their conversion activity. AMLG is very much interested in coordinating its work with that of REMUS, particularly in the area of authority record creation.

Keller mentioned that he was also the Chair of the RLG Music Program Committee and that RLG will be one of the initial participants in the Linked Systems Project. AMLG is hoping that the LSP link will permit online coordination with REMUS and, at the same time, remove some of the burden at LC for inputting work.

Keller spoke next of the advantages of using music RECON as a pilot project in a national RECON program: Music includes many different formats-- books, serials, printed music, recorded music, and manuscripts. Music materials represent most of the language groups. Music materials also represent virtually every kind of cataloging problem and were severely affected by the introduction of AACR2, which introduced an enormous number of changes, particularly in the area of uniform titles. And the music community

is relatively well-defined and composed of committed, informed, enthusiastic, and well-organized librarians. Music RECON is manageable.

Keller hoped that the Wednesday and Thursday meeting would result in a consensus on standards for music RECON, which, in addition to funding, is the last major piece of the picture needed to get large-scale music RECON under way.

After the description by Jones and Keller of the music RECON efforts, Lee Jones returned the meeting to its appointed agenda.

4.1: The RECON Report: Critique and Reaction #1,
by Richard De Gennaro

Yesterday we debated whether RECON was a religious experience as Jim Haas has suggested.... Well, I agree with Charles Payne that there are two kinds of RECON and we should not confuse them. The first is when a library uses records that have already been converted. That is not a religious experience. The second is when a library or other agency converts a manual record to machine-readable form for its own use and the use of others. That is a religious experience because it involves converting the unconverted--and that's what this meeting is all about. We must be very careful to distinguish between these two different meanings of the word RECON in the next two days. One way to maintain the distinction is to call them RECON #1 and RECON #2.

I am going to play the devil's advocate in the first part of my remarks and question the validity of the assumptions and directions of the

RECON Report. I will state some of the arguments that librarians who are not here will make about what is being proposed. These arguments may or may not have validity, but people will make them and they will have to be addressed. Then I will go on to a more constructive line of criticism and commentary in the second part.

I could spend the 15 minutes that I have praising the excellence and comprehensiveness of the RECON Report, particularly the first three parts, which provide a good review of the state of the art of RECON, but I won't. I will note that it is, on the whole, a first-rate job and then get right to my critique of it.

Point no. 1. The report carries an unstated assumption or bias: namely, it assumes from the beginning that the library community needs and wants a centralized or coordinated RECON capability based on a national database of high quality and, probably, under full authority control. It further assumes that this is desirable and possible and addresses itself to the how rather than to the why or the whether.

I don't think it is self-evident that an additional RECON capability and a single national database is either necessary or possible now. The evidence in the Report is inconclusive. On page 11 it says that RECON costs are dropping dramatically and that a growing number of libraries are converting and that all but the largest will be converted within five years. On page 12 it says that RECON has become a booming business, but then cites Henriette Avram to the effect that the community is paying heavily for this

uncoordinated approach. Clearly, libraries are finding the resources to do RECON #1 on a local basis. The library community has been unable to find the resources to mount a large-scale, coordinated effort, although there are some coordinated efforts within RLG, OCLC, WLN, etc.

Point no. 2. Speaking of RECON as a booming business makes this a good place to make another point, namely, to ask rhetorically whether the agencies presently selling "uncoordinated RECON" will go along with the efforts that are being proposed here to do it in a more coordinated and economical way that would, in effect, kill the business of those involved, including SOLINET, WLN, OCLC, RLG, CPI (Carrollton Press International), and others, who are depending on this income stream. Why should we expect these agencies and firms to quietly bow out of this booming and presumably lucrative business? I don't think they will bow out. They might well oppose the efforts that are being proposed or, at least, withhold their support.

If RECON is booming now, it is because organizations and businesses like OCLC, CPI, and other vendors are providing the capability at an affordable price. They created the market for RECON and are now exploiting it. Now we are proposing to take it away from them by providing other collective and less expensive means, and I am not sure that we can develop those means in a timely manner. By the time we develop the new collective capabilities a large part of the need may already have been met.

Point no. 3. The RECON Report states, "The disparity between the enormous momentum of RECON projects and the slowness of forming a nationwide

strategy raises the question of whether it is not too late to develop a coordinated approach."¹ I think it may very well be too late, but the Report says that it is a fact that there is a growing consensus on the need for more systematic RECON and that there is widespread support for new initiatives. I don't see any such growing consensus, nor do I see widespread support for it.

My reading of the library field is that the interest in cooperative, collective, and centralized approaches to addressing the problems of individual libraries is on the wane. In the 1970s librarians wanted to use the new technology and the collective approaches that it made possible to work cooperatively to build networks and to solve their problems. But in the 1980s they want to use the new technology to solve their problems locally. They want to convert their catalogs and implement local systems and they want to do it when they are ready and not when a collective approach is available. The field will not sit still and wait for us to develop new and more effective collective approaches. Librarians think they have an effective approach in the networks and with the vendors that is good enough and available now.

Point no. 4. Regarding the national database of high quality and under authority control.... Here again it is my reading that the field no longer believes this to be an achievable objective, no matter how desirable they think it may be. I would like to have a single national database of high quality under authority control, and I can believe that it would be neater, cheaper, and better than all our disparate, uncoordinated databases. But I

know what we went through to achieve what we have and how unrealistic it is to think that we can ever achieve the ultimate high-quality national database.

There might have been a moment in time back in the early 1970s when, if the Library of Congress and the research libraries had pulled together, we could have built a national network with a national database, but we didn't, and for many good reasons. We didn't then and we won't now or in the future, given the number of vested interests in the current way things are done and are developing.

Point no. 5. RECON #2 is not a problem for small- to medium-sized libraries, but it is a serious problem for libraries with large, old, and specialized research collections. As the Recon Report makes abundantly clear, large numbers of small- to medium-sized libraries have already converted their catalogs, are converting them now, or plan to convert them in the next five years. With all the capabilities available now--OCLC, WLN, REMARC, and other commercial RECON services--RECON is no longer perceived as a serious obstacle. RECON #1 is manageable and affordable and inevitable. These libraries are not looking to or waiting for a new centralized RECON #2 capability to assist them, nor do they have any particular interest in building a quality national database with authority control. Most are quite content with what they are getting from OCLC and the other utilities. The librarians of these libraries constitute a large percentage of the people in our field. They may not actively oppose an effort to build a coordinated RECON capability and a national database, but we cannot assume that they will support it enthusiastically either. They are the same people who were either opposed to

or lukewarm in their support for the National Periodical Center idea and thought of it as something to meet the needs of a small number of elite research libraries. The more thoughtful among them will understand that a national database that contains the records of our great research libraries will give them easier access to those collections. However, its creation is a task for the elite research libraries in their use of new technology. The RECON Report says, "By 1990 all but the largest research libraries will have completed the retrospective conversion of their catalogs."² So who needs an additional capability and what kind of capability do they need?

Point no. 6. RECON #2 is a major problem for the libraries with large, old, and specialized collections. For the largest and oldest research libraries it used to be considered, by most, to be an impossible task. I am thinking about libraries with collections that exceed four to five million volumes. Many of these libraries have come around to thinking that they can convert portions of their catalogs, but few are ready to embark on projects to convert all their catalogs, including those for rare books and other special collections. These are the libraries--the top 25 in the ARL statistics--that really need the coordinated, centralized RECON capability and database. That is where we should look for the support and leadership that would be required to build this capability.

For those libraries and their collections, the problem is not just RECON, but also RECAT and, sometimes, RECLASS. With the exception of the Library of Congress most of the cataloging done by most large research libraries prior to 1950 was inadequate and incomplete and nowhere near the

current standards that we have set in the last 20-30 years. (This conclusion is based on my experience with the Harvard and Penn catalogs and the older collection in NYPL with which I am familiar. But if it is true of those libraries, it is probably true of most of the others; standardized LC cataloging is a post World War II development.)

Point no. 7. Of all the large research libraries in the United States, LC was and is in the best position to serve as the foundation and driving force for the creation of a national database and RECON capability. Its retrospective catalogs come closest to achieving the quality and standards required for a national database. Compared with the catalogs of other large research libraries, the LC printed catalog is the most ready for conversion to machine-readable form. The proof of that statement is that the entrepreneurs in CPI, unlike the rest of us, including LC, didn't know that it couldn't be done and simply went ahead and did it. And by converting the five million records in the LC catalog CPI either did the cause of RECON and the creation of a national database a great service or a great disservice, depending on how you view it.

It did us a great service by demonstrating the feasibility of converting a massive catalog. Having converted it, it is de facto beginning to serve as an important national RECON capability for over 60 libraries, with many more to come.

On the other hand, the CPI REMARC effort can be viewed as a great disservice because it takes those records in that great catalog out of the

public domain where they belong and puts them into the hands of a commercial vendor. And because the CPI REMARC file exists, it precludes LC from undertaking an effort to convert its catalogs to form the nucleus of a national database and a RECON capability. The LC/CPI contract can be regarded as one of the "seven blunders" of the library world.

In effect, the existence of REMARC explains why there is a missing option in Part IV of the Recon Report where the five strategic options are listed. The missing option and, in my view, the best one would be for the entire research library community to get behind and support an effort by LC to convert its retrospective catalog to machine-readable form in order to form the nucleus of a national database and RECON capability. This would give us a combined database of 5 million REMARC and 1.2 million MARC records in the public domain. This would be the database to which all the other large research libraries could add their data in the University of Chicago mode.

If LC had had the vision and the determination to go after the resources to do its own REMARC in the 1970s or if it had negotiated a more favorable contract with CPI and kept the REMARC file in the public domain, we would be having a different kind of meeting today or, perhaps, no meeting at all, because we would be well on our way to solving the problem. But REMARC is now the property of CPI and we must deal with that reality. What is to be done?

My last point will be to create what I will call Option 6, i.e., to base the national database RECON capability squarely on the LC MARC and REMARC

3. It uses the MARC distribution service to share the records.

¹RECON Report, 31.

²RECON Report, 14.

DISCUSSION

Henriette Avram of the Library of Congress pointed out that the Library of Congress does have its catalogs converted and available at LC in a resource file called PREMARC (the REMARC file).⁹ The PREMARC file is very useful to LC in its Loan Division, circulation activities, and reference and research work. But LC could not go back and convert those more than four million records again. Unfortunately the REMARC records are going to be upgraded over and over again in libraries around the country and by LC as the need arises for a fuller record. Carrollton Press is now converting the LC law catalogs, so there will be between 200,000 and 300,000 more records in the same format. The law conversion is taking place under the same conditions as the conversion of the main catalogs. LC cannot change the contractual conditions with Carrollton at this point. If there is a coordinated RECON effort, participation should be limited and should not include every library engaged in retrospective conversion. Avram did feel that some kind of cooperative effort is possible.

LC has had some experience with optical scanning equipment, which was used to capture the data on the set of LC master cards used to fill card orders. The data was stored using laser technology and is not in machine-readable form, nor is there a complete set of records at LC anymore. The records are stored in digitized form and could be printed out on paper and re-read, but Avram reiterated her thought that it is not feasible to look to LC to re-do the conversion.

Further discussion centered on the possibilities of using the REMARC file as a basis for a cooperative effort. DeGennaro felt that the potential use of optical scanning techniques might provide a basis for negotiating better arrangements with Carrollton for distributing the records. The possibility of upgrading the records as a way of transferring them to the public domain was also mentioned, but Avram reminded the group that LC was limited to distributing 15,000 records per year through the MARC Distribution Service, and this number would not support large-scale RECON in other libraries.

Some members of the group were concerned that the discussion was not progressing within a context of better definition of the kind of RECON being discussed and that there were many unknowns about the records already existing in machine-readable form that would be useful in any planning effort. For example, we do not know what the overlap is between RLIN and REMARC or between OCLC and REMARC. Until we have that kind of information we may continue to talk about converting data (in the REMARC file) that has already been converted.

Against this set of needs and questions the meeting proceeded to David Bishop's presentation.

4.2: The RECON Report: Critique and Reaction #2,
by David Bishop

I would like to begin by adding my congratulations to Jutta and Dorothy and Charles for what I think is a very thoughtful report. The Report is an important document, not only in looking at retrospective conversion, but also in placing retrospective conversion in the larger context of overall bibliographic control and resource sharing. In addition it demonstrates the value of having a group of knowledgeable practitioners look at a problem in a systematic way as a means of helping us come to more reasonable judgments. One of the things we might want to result from this meeting is the identification of some related topics that would benefit from similar treatment.

As I looked through the Report I identified a number of things about which I wanted to comment, and then I went back again and picked out four that I thought were the most important. First of all, I was struck by the similarity of the retrospective conversion issues to those of the bibliographic control of current materials. In many cases the problems are identical. Certainly the duplication of cataloging on OCLC, WLN, and RLIN, with LC then coming along and producing a record that replaces all three, is a problem for both current and retrospective cataloging. The Report considers RECON standards. Certainly standards are something we have been dealing with

for a long time in current cataloging, although at the moment we seem most concerned with minimal level cataloging standards. The costs and strategies for dealing with maintenance are key issues for current cataloging as well as for retrospective conversion. So, my question is: Can we realistically address the problems of retrospective conversion without placing them in the context of ongoing operations?

A working principle that I have adopted, as I am sure most of us have, is that when something is out of control the first thing is to keep it from getting worse and then go back and mop up the mess from the past. In the case of RECON I think that, to some extent, we may be developing a strategy for mopping up with no assurance that the situation will not continue to get worse. We need to include in the strategy for retrospective conversion systems to maintain what we convert as well as what we have already converted. Clearly, if we wait for a perfect maintenance system we will never have coordinated retrospective conversion, but as part of the planning we must be prepared to maintain what we convert and relate those records to our current cataloging.

The second point I would like us to consider is the value of coordination and the role of the Library of Congress in retrospective conversion. Some of my comments here are very similar to issues that Dick raised.

There are some fundamental questions that we need to ask. Is authority control important? Is it the key to better-quality and lower-cost

records in the future? Or is it an obsolete concept made unnecessary by the power of computer searching in online catalogs? Is the Library of Congress the basis of our bibliographic control system? Or should LC be viewed as just another large producer of cataloging copy?

Clearly there is not agreement on the answers to these questions. In looking back to the ARL program on bibliographic control last fall in which a number of people here were involved, I think we made a mistake in planning that program. We should have presented the "coordination is unimportant" view of bibliographic control. If we had, we probably could have gotten the issue discussed in the way it appears, from the minutes, it was discussed in the January 1984 ARL Board Meeting.)

I have decided that ARL directors fall into three categories. There is the relatively small group that believes that authority control is important; that it is the key, in the long term, to lower-cost records; and that we are better off giving up individual variations for consistent, quality records. Then there is the "authority control is unimportant" group, which is probably about the same size as the first group. This group believes that, while authority control may be desirable, it is not economically feasible and that we are better off just taking what LC gives us, doing our own enhancements, and letting the computer and the user take care of any shortcomings that may result. The third group is far and away the largest. This group, which is not quite sure which way we should go, takes a look at the other two groups, sees the lack of agreement, and does nothing.

On the plane I read an article by Arlene Taylor in Cataloging and Classification Quarterly entitled "Authority Files and Online Catalogs,"¹ in which she makes an interesting distinction between consistency of entry in authority control and the cross-reference structure. She argues that files that are not maintained consistently become out of control very quickly, so consistency of entry is important. But she questions the cross-reference structure that has been developed in a manual environment and provides some good evidence that it may not be very effective.

My primary concern with authority control is the consistency of entry. The RECON Report clearly advocates or, as Dick said, assumes an authority control system. But I have no confidence that this concept will be supported any more for RECON than it has been for current cataloging. The problem may be best exemplified by item 9 in the January 1984 minutes of the ARL Board Meeting in the statement that "There is not a consensus of what directors want from catalogs and national systems." That is clearly true and may be ARL's understatement of the year.

In looking at the implications of this for retrospective conversion, I think we will not have any difficulty in assigning areas of responsibility. There is a long tradition of libraries participating in cooperative projects, taking on efforts that may not be cost effective for individual libraries in order to advance the greater good. The Wright American Fiction Project is an example mentioned by Mary Ellen. Certainly the earlier COMARC Project is another example. But I think without education and without tying retrospective conversion to present cataloging, we will have a difficult time

gaining acceptance of the coordination concept and of the standards that require coordination.

The third thing I would like to talk about is the "open system" and what is meant by an "open system." Recommendation 3 in the Report says, "Open access to converted records should be provided by the bibliographic utilities." Later on in that same section it says that the Library of Congress should provide interim linkage and distribute the tapes through the LC MARC Distribution Service. I think we need to consider some economic questions here. The Report also states that half of OCLC's cataloging activity is retrospective conversion, and it is clear that, at least for OCLC, retrospective conversion is a major part of their planning. OCLC generates revenue from in-house conversion projects. It generates some system activity from member RECON, and both of these activities are enriching the database. This enrichment makes it easier for other institutions to do RECON as well as enhancing the database for resource sharing.

In discussions about OCLC's copyrighting of its database, I have suggested that if OCLC gave its database away it would have little impact for current cataloging since most members use OCLC because of the speed with which they can get cataloging copy. For RECON the situation is clearly different. We need to be aware that an open system that allows significant portions of a utility's database to be available to commercial organizations could present some serious problems and could result in shifts of funds away from the utilities. It could also, and I think this is the more serious problem, result in holdings not appearing in the national database.

We could define an open system as being a sharing of records among the utilities in a closed system. But the question is whether the Library of Congress could participate in a coordinating role and not make the records available to everyone, including the private sector. One could argue that if the only way to have LC participate were to make the records available to anyone, then it would be better to let the records move into the public domain. I suspect, though, that the utilities might have a real problem with this and that the time pressures are such that a little foot-dragging by any of the utilities could have a detrimental effect on retrospective conversion. So, I think one of the things we need to talk about is what is meant by an "open system" and how it can be achieved.

The fourth thing I would like to talk about is how we coordinate what has already been converted with what is still to be done. As I am sure many other institutions have done, last winter the University of Georgia Library took a look at its catalog to try to build a statistical picture of what would be involved in doing retrospective conversion. We found that it broke down this way: 40% is already done; 15% is in OCLC as MARC records; 24.1% is LC cataloging input by members; 10% is acceptable member copy; 3.4% is poor member copy; and 6.8% has no copy. This means that we have 60% to convert, of which two-thirds is Library of Congress cataloging and somewhat less than 10% will have to be keyed or upgraded. Now, I recognize that this is not typical because the University of Georgia Library has grown rapidly in recent times. But I think it does show the importance of coordinating what has been done with what is to be done. A major part of this work is what we might call

RECON #1.5, which is the upgrading of existing records. It seems to me, certainly from looking at the OCLC model, that any type of coordinated program must include an ENHANCE feature that allows these records to be gradually upgraded until they reach full standard.

The other thing I think we ought to consider is the possibility of convincing the utilities to contribute those records that are LC records input by members to the Library of Congress. This is 24% of my collection. These records from the different utilities could be combined and the duplicates stripped out by using the Library of Congress card number. They then could either be run against the LC authority files or, if the funds were available, they could be put into the AACR2 upgrading process in which LC is involved right now. Then the records could be distributed as part of the MARC Distribution Service and maintained as part of the MARC file.

The benefits of returning LC records to LC would be substantial. Certainly it would dramatically increase the amount of data that is LC-based and LC-maintained. I would imagine that it would significantly increase the size and the value of the LC authority files. In the case of the University of Georgia it would mean that over 80% of the collection would be LC cataloging maintained by the Library of Congress.

This approach would be a little less threatening to the utilities than asking for all the records for pre-1970 imprints. There is a sense, particularly on the part of OCLC, that we are asking them "to give away the farm." Giving back to LC what LC cataloged might be a good way to start.

After we have seen that this does not, in fact, have serious detrimental effects, it could be made part of an ongoing project so that anytime LC cataloging is converted to machine-readable form, a copy of the machine record would go back to the Library of Congress. I think this approach might be worth giving some serious attention.

That covers the four points I wanted to talk about. It is clear from the Report that the issues are complex and, the more I think about them, the more complex they get. As the Report makes clear, the clock is ticking, and I think maybe that is a good thing. Maybe we will be forced into doing something and doing it quickly. The key is to determine what approaches and standards are feasible and possible and build on them, even if they are not what we would ideally choose.

¹Arlene Taylor, "Authority Files and Online Catalogs," *Cataloging and Classification Quarterly* 4, no. 3 (Spring 1984): 1-17.

DISCUSSION

Bishop's presentation raised the question of what it is we are trying to accomplish with retrospective conversion. He responded by indicating that we are not planning RECON solely to convert local catalogs, but also to improve access to the nation's bibliographic records. The conversion of the records held by large research libraries will benefit not only those libraries, but also the libraries that need access to those collections.

Consequently, we need to try to convert more rapidly than we are at present records for rarely held items.

Equally important is the need for a structured way to improve and upgrade substandard records that are in our databases right now. No one can afford to do RECON that requires going back to the piece, so it is unlikely that we will be able to convert a record only once and call it finished. We will need to have mechanisms to upgrade already converted records. A second major part of RECON, then, is upgrading existing records. A third part would be the addition of holdings or location symbols to existing good quality records. But if the first two are done, the third part is not a problem. So we are talking about the first two--the conversion of records that are not in machine-readable form and the systematic upgrading of already existing records.

Discussion then turned to the question of where records from a national conversion project would reside. Bishop suggested that the answer may depend on how far out we're talking about. In the shorter term, if we adopt the strategy of returning LC's records to LC and incorporating them into the MARC file and the MARC Distribution Service, then the file would reside in the utilities and at LC as it does now. If records are not returned to LC, they will reside in only one file unless we can arrange for the transfer of records from one utility to another. Even if we could achieve this, there are some real problems, not the least of which is the identification of duplicate records, and these problems must be addressed in the coordination of the project. It was clear from the comments that some members of the group did

not feel that it was feasible to have the utilities return LC records converted by their members to the Library of Congress. It did seem, however, that there was a greater likelihood that the utilities would be willing to return LC's records to LC than to turn over their entire database. As Bishop noted, returning LC cataloging to LC was a way to start. This plan might also put some pressure on Carrollton Press to rethink its restrictions on distribution of records in the REMARC file.

Kaye Gapen offered a distinction between building a large database to support conversion and building it to support resource sharing. In the first case, once the database is built it can exist in a variety of formats (tape, optical disk, etc.) and once it is converted, it's converted. However, a database to support resource sharing needs to be maintained and updated with new information. In this case, the question becomes, how many databases for resource sharing do we need? The economics of the marketplace will probably support multiple databases for conversion. Gapen felt that we could devise a strategy for RECON fairly easily, but the database for resource sharing requires continuous attention and raises more problems, both technical and economic.

Gwen Culp commented that the return of LC's records to LC fit rather nicely with what LC was trying to do with the NACO participants in building a national Name Authority File and with the authorities module of the Linked Systems Project. However, there were clearly some difficulties for LC in taking on the ongoing maintenance of those records once incorporated into the LC MARC file. If the LC subset of records is useful to a wide variety of

libraries, it seems like a manageable and identifiable subset of records that WLN could contribute to LC, using the WLN linked authority system to upgrade the headings to the point where they would be useful in today's files. WLN is planning to reclaim some of the Carrollton Press REMARC records as they are upgraded to AACR2 and the cataloging source code could be changed to reflect the work that WLN had done on the records. It would be possible for WLN to send upgraded and authorized records back to LC through the computer-to-computer link provided by the Linked Systems Project.

Culp's comments raised questions about the economic implications of the Linked Systems Project. Henriette Avram indicated that some discussion about the economics of the link had taken place among LC, WLN, and RLG, but that the LSP participants had decided to postpone further discussion until there was some use and cost data available. Although some analytical work had been done on the transfer of bibliographic records over the link, the three institutions had not proceeded further with working on the bibliographic portion of the system, preferring to concentrate all available resources on getting the authority record part of the project working. There has been thought about using the link for bibliographic records to report holdings to the NUC, and that is another possibility for sharing records through the Library of Congress. However, it will be necessary for LC staff to determine the level of record needed at LC in order to include them in the MARC file before beginning further planning along these lines. It is clear that LC could not handle 1.8 million additional records in the MARC file overnight. Since LC does not have a linked authority system to support its maintenance

operations, the maintenance of additional bibliographic records in the MARC file will add considerably to LC's file maintenance costs.

Preservation activities are generating the equivalent of RECON records, and it seems that preservation activities, particularly preservation microfilming activities, are on the increase. What impact will this have, should this activity have on RECON planning? For preservation microfilming there is a need for not only the conversion of the bibliographic record, but also for the reporting of holdings and location data to show what has been preserved and where the preservation work has been done.

A brief discussion of the compensation issue provided evidence of the complexity of the pricing issues. Henriette Avram sketched some of the complexities in thinking about compensation within the Linked Systems Project. Supposing that LC distributes its authority records through the link and that there is a cost for that distribution just as there is a cost for distributing the MARC authorities tape now. However, in the case of the link records, there has been a contribution through the Linked Systems Project of authority records to LC from participating utilities. Is LC then to charge the utilities for what could be regarded as their own records? Complexities such as these were the reasons the participants in the Linked Systems Project agreed to postpone discussion of the economics of the Project until there was an operational link and some experience in using it.

4.3: What It Would Take to Make Things Happen.
Panel Discussion: Pat Earnest, Ron Leach, Joe Rosenthal

4.3.1: Pat Earnest

After this morning's discussion, it seems to me that we are not sure what things there are to make happen. If we accept the fifth recommendation in the Report, it seems rather straightforward to specify what it would take to make things happen. We must get the academic libraries and the Library of Congress to agree on who will convert what, on the timetable for the conversion, and on the standards to be used. Most importantly, the networks need to agree to do some sharing of the converted records. I was invited to express some concerns beyond those addressed in the Report, and the discussion this morning has led me to believe that the recommendations in the Report are not assumed and accepted at this point. We are questioning them. Perhaps, then, my other concerns are relevant.

One of my concerns is that there does not seem to be a role for other, non-research libraries. The public libraries, the special libraries, even small academic libraries do not hold much that is unique. Conversion hit rates for these libraries are usually around 90% in the already existing databases. Since these libraries do not have many unique holdings, it may be appropriate not to include them in the national RECON effort, but I do hope that at some point there will be a way for them to use what is converted, and that is one of the things that I find missing in the Report and in the discussion.

Perhaps I am too concerned about the details in trying to envision what would happen at the point where a lot of records are converted. How, for example, could a library in Iowa proceed to do its own RECON? What are the mechanics? One of our current problems is that some of the smaller libraries have economic problems in dealing with the networks. Not all of them do, of course, but some of them simply do not have sufficient funding to do cataloging or conversion on one of the bibliographic utilities. They can do a retrospective conversion project with one of the commercial services and buy MARC records for around 25 cents. As long as this is the case, it is very difficult to justify joining a network that will charge between \$1.00 and \$2.00 or more for the same MARC records. So if we are talking about putting this RECON data only into the three networks, then we are limiting the ability of these libraries to use it. It is not a problem to expect them to pay for the records they use, but membership in and commitment to a network is a problem for some of these libraries. So I would like a better picture of what will happen ultimately to the records, and I see a need for a central coordinating agency that will be fair and make sure that the interests of all the libraries are taken care of.

Assuming that we do go with this plan to have the academic libraries convert various subject areas within their catalogs, we still have the problem of converting without knowledge of what has already been converted and of identifying which records are really unique. Unless some sort of linkage occurs that allows us to search not only a single utility, but also across the databases of the others, we cannot be sure that the record has not already been converted.

My other concern is the role of Carrollton Press. I have done a retrospective conversion with Carrollton--a very successful one. My database has about 200,000 records; about 150,000 of those were converted using a circulation system tape run against the MARC file. That was the easy part. The 50,000 records that were left over were more difficult, and those we converted through the Carrollton Press REMARC system. Out of 35,000 titles submitted, 25,000 were hits and, of those, only 200 were false hits--less than 1%. My experience with retrospective conversion prior to the REMARC experience was as an employee of two different commercial vendors. Early conversions were really messy and produced a great many duplicate hits. I was very impressed with the REMARC results and with Carrollton's ability to produce a clean conversion.

My experience with Carrollton makes me concerned that we are not putting as much faith as we could in the REMARC resource. I have heard comments that the records will have to be upgraded and that the upgrade is very expensive to do. Upgrading later is expensive, but I think the upgrading from a REMARC record should not be considered in the same light as upgrading from a circulation record.

For one thing, automated authority control systems can deal with some heading upgrades without further review by library staff. This is not always true, of course, but you can have the machine do what it can do and then generate an exception file so that library staff can work on the rest. At any rate, I think Carrollton is a valuable resource, and I think it can be used at

some level for some of the conversion we're talking about.

I do not see that we will be able to get the utilities to cooperate with one another and, while we would all be comfortable if the Library of Congress would do our linking for us, this may not be practical. It is an issue that needs further thought.

The only other comment I would like to add concerns authority work. The Report makes the point that doing authority work at the front end of the conversion is very important. But I think we are missing the fact that there are automated authority control systems available that can eliminate much of that work. The example that comes to mind is T.S. Eliot in the old and new forms. If you have fifty occurrences of T.S. Eliot in your files and you are upgrading each of them as you convert the bibliographic record, that is, at the front end, then the new form must be verified and changed for each of the fifty bibliographic records being converted. It seems to me that the same argument that says we should convert the record only once should also include doing the authority work only once. It is not necessary to wait until two million records are converted. You can use the automated authority control system to do a run quarterly, twice a year, or whatever. Since there are automated facilities for handling heading changes, they should be used.

4.3.2: Ron Leach

I want to begin by saying that I am very pleased to have an opportunity to read the Report and react to it. Indiana State University is not an ARL library, but we have just about completed our retrospective conversion, which has come to be known in our institution as the "great tape project." We are still very much interested in the topic, even though we may shortly have most of our problems solved. Other libraries in the state of Indiana and elsewhere are also rather happy that we have almost completed the project--if the 10,000 interlibrary loan requests received last June are any indication. Since our retrospective holdings are now in the OCLC database, I suspect that the number of requests will increase.

When I first thought about this topic and looked at the Report, I decided I needed a benchmark to see the scale of things with which we are dealing. I took a quick look at the ARL statistics for 1982 and 1983 and learned that the median of the 104 reporting libraries had approximately 2,000,000 volumes and an annual materials budget of over \$2,000,000. I also looked at the ACRL statistics, which contain statistics for 92 non-ARL libraries, and found that the median was 750,000 volumes and \$900,000 in annual materials expenditures. If you consider the totals, you can see what you already know--that it's a huge problem. On the one hand, we wonder how in the world we can muster resources to convert a significant portion of the records for these volumes and, on the other hand, how in the world can we afford not to? It reminds me of a business or a series of businesses that have invested millions in a product and then have an opportunity to improve

the product, in this case improve the information supplied to the researcher and the scholar. I regard RECON as worth the R & D money that we will invest.

Also, increasingly our users expect to have bibliographic records in machine-readable form and available for searching in sophisticated systems. We will simply have to deal with those expectations.

It has already been pointed out in the Report and in this discussion that we do not have a national, centralized database, but a distributed one that is available through the bibliographic utilities and in local systems. Therefore, whatever we do is going to require coordination. But there are a number of issues in trying to decide how to go about it.

How many libraries would need to convert their records in order to solve the national problem? For example, in the state of Indiana, do we target two or three libraries to contribute to the national effort? And then what about the other libraries in the state? Would the conversion of their catalogs be regarded as a state problem?

How do the restrictions imposed by the utilities and other vendors affect our efforts? We have heard about the restrictions on the REMARC file and the problems of copyrighted databases, and these restrictions must be addressed. We must also address the problem of equitable compensation for the utilities for sharing records. As someone suggested last night, we need to know more about these economic problems so we can decide whether or not we can bite the cost bullet.

It is my own feeling that the subject approach that Fina described and that is recommended in the Report makes sense for a number of reasons. It seems manageable for any one library, particularly if there is no external funding. It has the virtue of being able to focus on collections that are not yet available to us. It also seems that there may be more possibilities that the subject approach will be attractive to potential funding sources.

There are, of course, some problems. Libraries involved in the RECON project who do not have a local system will have difficulties in maintaining their records.

The ideas I've heard about using microcomputers, compact disks, packaging subsets of data, etc., could be very helpful to many types of libraries. Some of these are already in place and should be very useful, as long as we can send information back to the utility when we need to do so. I was delighted to hear Dick talk about OCR, and I would personally like to see a research and development project to determine the feasibility of using optical scanning for RECON. We could then match the converted record against an authority file to upgrade the headings to the current form. But there is another reason I am interested in OCR. I expect that in the near future we may want to make several uncataloged collections available through the library computer--or information facility--at Indiana State University. Using OCR to convert or create manuscript and archival bibliographic records into machine-readable form would be an enormous help. Libraries are not the only

institutions interested in this technology, and we may be getting close to the time when it is feasible.

I have just a few comments about funding. As with a lot of library programs, the local contribution is going to be the lion's share. I have faith that we will find a way to do it. Ten years ago we would not have guessed that the budget would stretch to support networks and computer-based reference work, but they are with us today. At the state level there may be some possibilities that state support will be available, particularly if the large research collections are considered an important state resource. I noted in a recent ACRL newsletter that federal funding for libraries is down 23% since 1979, so there may not be much help there. And, as I mentioned earlier, foundations may be interested in funding a particular portion of the effort.

I think I'll leave suggestions on governance to those who may be better suited to speak to it and turn the microphone over to the next speaker.

4.3.3: Joe Rosenthal

I will begin by acknowledging the worth of the Report. I think Jutta, Dorothy, and Charles have set the scene for the possibility of action. The assignment we got was to talk about what it would take to get things done, and I will try to speak to that topic. But I must also acknowledge that I have mixed feelings on the subject and that I am in agreement with some of Dick De Gennaro's remarks. I would agree with Dick that the prospects are somewhat

dim, that some major mistakes have been made, and that perhaps it is too late. There are some strong vested interests, and the necessity to modify some of those interests if a coordinated North American program is going to happen will be a tough job. My remarks constitute one person's opinions on a few of the decision points that need to be addressed if a program is to be effected.

Dick mentioned RECON #1 and #2. I will expand on that distinction and say that three overlapping targets may be involved in the national and North American retrospective conversion programs. One is to build and maintain the file--to get as many titles as possible into the file. Another is to list holdings for interlibrary loan and cooperative programs, preservation, etc. And a third is to convert local files.

The long-range prospects are that we will have an imperfect file for some time and, as we work toward a perfect file, there are diminishing returns. We must spend more and more effort to make smaller and smaller gains. If I were forced to choose between devoting resources to move closer to absolute consistency and conformity to standards and increasing the inclusiveness of collections and the inclusiveness of records within significant collections, I would choose the latter--that is, inclusiveness. But the real question is the appropriate mix between these two somewhat conflicting targets.

I would like to digress just for a moment and mention something I think needs doing. We would benefit from a study, perhaps financed by the Council and analogous to the study that Jutta and Co. have done, a study of

maintenance and synchronicity of files that would look at the bibliographic utilities, at the Library of Congress, at manual and machine-readable files, and at the consequences of vendor utilization and subsequent access in a regional and national context. We have talked a lot about files that are not maintained and the consequences of regional and local conversions, and it seems that we would benefit from a study that would set forth exactly what the situation is and delineate the consequences of what we are doing and not doing.

In the abstract it is not clear to me which of two possible strategies would be more cost effective. Should the first priority be to bring the retrospective files of the Library of Congress up to standard and then to use those files in and out of the utilities as a base for conversion in other libraries? Or is it more cost effective to follow the strategy used by the Research Libraries Group--that is, to develop RECON projects based on significant holdings in subject fields as defined by LC classification and to provide dollars to cover part of the costs?

I do not know which would be the better choice, and I do not believe that we have sufficient reliable information to tell us, among other things, the extent to which LC holdings are the strongest in North America. To what extent are the strongest research collections in particular fields equal to or greater than those of LC? And to what extent do the several strongest collections in a given field overlap? We have some glimmerings of answers through the RLG Conspectus and the verification studies, but these have been done in only a few fields. They are indicative and not necessarily

conclusive, and the Conspectus does not include some of the strongest research libraries in North America that belong to other consortia.

Given the current tide of retrospective conversion efforts, it is probably too late to try to obtain definitive data with respect to these questions. Someone will need to make some judgment calls if we are to have a coordinated RECON program.

There are existing data that will be helpful in making such judgments. The RLG verification studies and the shelflist counts we have can be used. There is considerable correlation between quantity of holdings, as reflected in the shelflist counts, and quality of holdings as measured by such means as the verification studies.

LC collections, I feel, are not always the strongest, and there is good reason to convert collections selectively from other libraries. If the initial RECON effort were aimed solely at the LC collections, the effect on interlibrary loan would be less than optimal. Therefore, I would argue that, to stimulate the RECON program, there should be subsidized RECON efforts at a limited number of institutions selected on the basis of their strong holdings and with the assurance that subsidized projects will be completed within a specified time limit.

It is not always easy to decide what constitutes a major collection. I mentioned in conversation last night the OCLC booklet that describes collections held by OCLC libraries for which records have been contributed to

the OCLC database. Some of the collections are in ARL libraries; some are not. Some of these collections are extraordinary, but some of them, while notable in a particular library, could be assimilated with little notice into the collections of major research libraries.

If we were going to begin a program such as I have outlined and that is clearly based on some of the work done by RLG, I think it would be best to specify standards and deadlines and the minimum number of records that would be subsidized for any particular library--and any other points to be covered in a contractual relationship. The conversion should be performed by one or a few outside agencies on a cost-plus-profit basis. This would enable the work to be monitored and would limit the contractual relationships to one or a few agencies. It would make for consistency in both the technical and bibliographic aspects of the work. And it would avoid a number of staffing and space problems encountered in individual libraries attempting to do conversion projects. However, I suspect that the task may be too big to be handled that way, and that we would be unlikely to get a consensus on going in such a single-minded direction.

Some libraries or groups of libraries are already geared up and not only geared up, but have completed RECON projects. They have experience, they have trained staff, they are willing to meet standards, and they can cope with the vagaries of their own manual records. In some cases, there is or there can be established an esprit that will result in a better product than if the work were done by an outside agency. Therefore I believe that the funding agency and/or the body that makes the subsidization decisions should specify

the standards and the deadlines and the other parameters, and award an amount of money based on the number of records to be converted. If the library receiving the money wishes to hire an outside agency, let that library negotiate and engage the outside agency.

Who should make the allocation decisions? Well, for starters, I would suggest that it be done in the context of the Association of Research Libraries; whether it should be an ARL group like the Bibliographic Control Committee, I don't know. There may be other possibilities that would be as good or better, but I think that ARL and some group within or established by ARL is a plausible possibility.

Funding support should be on the basis of shared commitment; that is, a library that receives funding should also contribute some of the out-of-pocket costs. The rationale for this is that local interests, the prospects of reduction of hard dollar costs and improved services, should be a strong motivating factor in looking at conversion. Outside dollars should be directed toward providing a margin of excellence--that is, adherence to agreed-upon standards--and toward giving priority to those collections or groups of records that would make a decided contribution to the North American database.

Along the way I think we should try to get LC's minimal level records and the LC in-process records into the North American database as well.

If retrospective conversion is to be taken seriously as a major goal by the research library community, that is, ARL, the Council on Library Resources, the Library of Congress, and other interested parties, I would like to make the following modest proposal. Each of the ARL libraries, in their own self-interest, should pledge to contribute to a fund for retrospective conversion to build a North American database, an amount equivalent to the assessment made for members of the Center for Research Libraries. In 1983 CRL member assessments amounted to just over \$2,000,000. These assessments range from just under \$10,000 to just under \$30,000, based on a formula developed by the Center that has a number of components, but that relates basically to acquisition expenditures. Matching funds should be provided by the Council and other foundations and a more than relative share by the Library of Congress. In turn, the Library of Congress might be supported to upgrade some of its retrospective records in collections that are particularly valuable. In addition, I would argue for an effort by ARL libraries to obtain a million dollars a year for each of three years from Title II-C funds by applying for RECON funds under some such umbrella as I have described.

All of this might amount to something on the order of \$5,000,000 per year. The money should be raised in each of three successive years, beginning in 1985, and should be raised with the stipulation that it be spent no later than 1989.

Once the major collections are converted, then what happens? How do the rest of us that have not been subsidized to convert parts of our collections go about getting our records converted? Once these major

collections are done, most of the rest of us with records to convert should find a very high percentage of hits when we search the North American database--whether it is on OCLC or RLIN or UTLAS or WLN. Of course, one of my assumptions in all of this is that the Linked Systems Project is operational.

At this point, that is, in 1988-89, we should go about trying to raise money to subsidize the recording of additional locations and the conversion of items that have not yet been converted.

I am probably beginning to sound, in conjunction with the religious experience, more like a prayer meeting, but I submit that we have a number of necessary elements in place. We have an excellent report that gives us a common basis for discussion; we have a number of milestones toward agreed-upon standards; we have the development and near-term prospect of operational linked systems; we have a set of criteria that has been developed for making judgments on what collections should be subsidized; we have at least one agency that seems to be appropriate for fund allocation decisions--ARL. The question remains: Is this a priority for research libraries and for the library community in general? If so, I believe that funds are available to make it work.

DISCUSSION

In response to a question about the "North American database," Rosenthal responded that he did not envision the database resulting from a cooperative conversion effort as existing separately from the databases of the

utilities, but rather as an expansion of the common core of records held by all the utilities and made available to the utilities through the offices of the Linked Systems Project. At some point it might develop into a single file managed and maintained by the Library of Congress, but there seemed to be no immediate prospect for this kind of centralization.

The use of a subject approach as a way of assigning conversion responsibilities was explored. Calling for a "subject" approach was not understood by some members of the group as entailing the use of the LC classification scheme to describe and assign conversion responsibilities. Jutta Reed-Scott pointed out that the Report called for using the National Collections Inventory Project as a framework. The suggestion that the music project might be a pilot for the national effort was not favored because that project might not be typical of projects developed under the national program. There was also some concern expressed that there might be some narrow, but important, collections that would not be included if there were a too-strict division along LC class lines. The consensus was that the basic organization should be by LC class, but that some specialized subject collections that did not lend themselves to description by LC classification could also be included in the program.

The Report had indicated that the number of unique records converted under Title II-C funding was not large, and there was a question about why the conversion of unique research collections would not yield a large number of original conversions. Reed-Scott replied that the cost of original conversion was extraordinarily high, ranging, in the projects with which she was

familiar, from \$30.00 to \$100.00 per record. The amounts of Title II-C grants simply would not support the conversion of a large number of records in this price range. Also, even for premiere collections such as the science and technology collection held by the Massachusetts Institute of Technology, the hit rate was fairly high. The conversion program under discussion would produce a relatively small number of original records held by a small subset of research libraries, which would not enhance the retrospective conversion capabilities of the vast majority of libraries in the country. It would, however, provide enhanced access to the research library collections.

Conversion of special collections might not be the best approach because, in many cases, the value of a special collection is the gathering together of the material in one library and not necessarily in the uniqueness of the holdings in the collection. In developing a conversion strategy it might be better to work through, by LC classification, the holdings of several large libraries.

Discussion about the possibility of using the music RECON project as a pilot brought out a number of pros and cons. On the one hand, the music project would involve coordinating efforts among several institutions and across utilities. It would involve developing a number of funding possibilities. Operationally it would involve organizing and distributing responsibilities for converting different segments of the music files held by several institutions, reducing duplicative effort, converting original records, and adding holdings to already existing records. It has the virtue of involving all of the elements that will be encountered in a national

program, but is confined to one subject and to a group of institutions that is already organized and committed to the effort.

On the other hand the experience of a music conversion project may not be applicable to much of the rest of the job because music includes so many different formats and because the number of music records available from the Library of Congress in the MARC files is so small. Although it should not be considered representative because the sample is so small, the music conversion work ongoing at the University of Wisconsin at Milwaukee has a hit rate of only 27 or 28%. Because the music user community is not a large one, the music project may not have the public relations value of a less specialized subject area.

Rosenthal's preference for inconclusiveness of the file over the completeness of individual records was generally supported. Most participants thought that minimal level records for, perhaps, the more esoteric collections should be included in the national database. There could and should be a mix of full and minimal level records resulting from the program. This would mean that libraries other than the Library of Congress could contribute a minimal level record to the national database.

Mary Ellen Jacob provided clarification of OCLC's revenues from retrospective conversion. Despite the fact that RECON represents about half of OCLC's system activity, RECON represents less than 10% of their revenue.

In effect, OCLC subsidizes RECON, and she did not feel that OCLC's current involvement in RECON efforts would be a barrier to developing a national program.

CHAPTER 5

DEVELOPING RECOMMENDATIONS

5.1: The Subgroups

Four subgroups were formed to discuss the issues raised in the background papers, the descriptions of current RECON activity, and the critiques and comments on the RECON Report. The subgroups met Tuesday afternoon. During the Tuesday evening session, designated reporters summarized the discussion and recommendations on the five topics that served as guidelines for the subgroup deliberations. The four subgroups were composed of the individuals listed below:

Subgroup 1

David Bishop, Convener
Susan Kalenbach, Recorder
Gwen Culp
Lee Jones
Richard Jones
Joe Rosenthal
Lou Weatherbee

Subgroup 2

Richard De Gennaro, Convener
Ron Miller, Recorder
Henriette Avram
Patricia Earnest
Mary Ellen Jacob
Keith Russell
Elaine Sloan

Subgroup 3

Harold Billings, Convener
Margaret Child, Recorder
Doris Brown
Jim Corey
Tina Kass
Ron Leach
Jutta Reed-Scott

Subgroup 4

Sue Martin, Convener
Kaye Gapen, Recorder
Jim Haas
Carol Ishimoto
Michael Keller
Dawn Lamade
Charles Payne

The subgroup discussion guidelines were as follows:

1. Do we need a national RECON program? If so, should it be research library based? How many libraries should participate?
2. Comment on the approach to be used. Is the subject approach recommended in the RECON Report the best way to proceed? Would a CONSER-like approach work?
3. Recommend the standards to be used in a national RECON effort.
4. Identify some reasonable implementation strategies. Would Joe Rosenthal's suggestions for funding (or something similar) be workable? Discuss the feasibility of beginning with Dave Bishop's suggestion that we return the already converted LC records now residing in the databases of bibliographic utilities to the Library of Congress for distribution and maintenance.
5. Discuss the relationship of a national RECON project with other record-producing programs, e.g., preservation.

Separate reports from each of the subgroups will not be included here but, instead, the perspective of the small groups will be included as part of the report of the discussion by the whole group.

5.2: Discussion by the Whole Group

The group worked from a synthesis of the Tuesday evening subgroup reports prepared by Jones, Russell, and Gregor. The recommendations are stated as they appeared on the blackboard at the end of the meeting and highlights of the discussion are provided. Because the discussion and recommendations are reported in some detail in this chapter, the casual reader may wish to skip to the final summary of the meeting presented in Chapter 6.

Preamble: An open, logical, national database is the primary objective.

Concerns about the constraints on the access to records in two of the largest resource files for retrospective conversion, namely, the REMARC file of Carrollton Press, Inc., and OCLC, prompted repeated statements of the need to ensure open access to the machine-readable records created as part of the national project. In practice, "open" translates into "distributed by the Library of Congress." "Open" should not be confused with "free." The records should be included in the databases of the bibliographic utilities and serviced through commercial vendors like other records made available by the Library of Congress through its various distribution services.

Describing the national database as "logical" rather than as residing in an integrated physical file acknowledges the decentralized nature of our national bibliographic system. Despite the decentralization, however, the records distributed by the Library of Congress are a common core in the distributed files of the bibliographic utilities and in many database services

available from the commercial sector. The goal of a national conversion project is to include the records resulting from the project in the common core of records distributed by LC. LC distribution can be the linking mechanism until the technology and economics of computer-to-computer linkage among the bibliographic utilities and LC can be worked out.

Recommendation 1. An organized RECON program is a viable alternative at this time. It should not be viewed as a replacement for local RECON efforts. The object of the program is the original conversion of manual records and, secondarily, the upgrading of extant machine records that are less than full.

Recommendation 1A. Research libraries in the U.S. and Canada are the focus of the program, but there should be provisions for including special resources in other institutions.

Although several participants arrived skeptical about the possibilities of mounting a national conversion strategy, most, if not all, left "converted." Over the course of the meeting the multitude of uses to which the records could be put appealed to the multitude of interests represented among the participants. The range of possibilities for using the resultant records--for resource sharing and cooperative collection development activities, to support the recording and dissemination of preservation-related information, to feed online catalogs, and for inclusion in the integrated library systems currently under development in many libraries--seemed to include something for everyone.

Some of the participants felt that the conversion work would be done over the next few years with or without an organized program and expressed concern that the program would not be worth its overhead. "Can we justify the resources required to convert the remaining records? Two points were made in response to these concerns: 1) If the work is being done and will be done anyway, libraries engaged in the conversion work would benefit from an organized, cooperative approach that would help limit the duplication of effort in current conversion projects. In other words, if we are going to do it, why not do it in an organized way? Even though it is the case that an estimated 80% of the largest library collections have already been converted, a library with two or three million titles will still have 200,000 or so records that require original conversion. These numbers are sufficiently daunting to provide motivation to try to do the work cooperatively. 2) If an already existing organization such as the ARL Bibliographic Control Committee assumes the oversight of the program, the overhead will be low because it will not be necessary to create another organization.

The existence of an organized plan for retrospective conversion was seen as an aid in requesting funding from the foundations and other agencies. It is likely that funding agencies will be more positively inclined to fund a project that is part of a developed plan because they can be assured that the project is not just one more local retrospective conversion project that will duplicate other efforts.

The distinction made by Richard De Gennaro in his "reaction" remarks between RECON #1 and RECON #2 became an important one, as the participants developed the basic goal of increasing the number of unique records available in the national database. It was this goal that led to the focus on research libraries as the repositories of the unique materials and, consequently, the primary players in a national project. A secondary concern was the upgrading of extant machine-readable records to make them more useful to the bibliographic community and its users. "Upgrading" included both making access points consistent with current cataloging practices and the provision of fuller information in records now characterized as "minimal." However, the overriding goal was the growth of the national database in the service of scholarship.

Margaret Child was particularly supportive of the inclusion of libraries outside the membership in the Association of Research Libraries. Recognizing that many special collections are housed in non-ARL libraries, she advocated the inclusion of the IRLA (Independent Research Libraries Association) libraries in the project. Participants agreed that the project should not exclude any collections or libraries from contributing to the building of the national database.

Recommendation 2. The approach is through LC classification (i.e., subject) or is special collection based. Two sources, the ARL National Collection Inventory Project and the National Shelflist Count were mentioned as particularly useful tools in identifying libraries with strong subject collections who would be potential contributors to the national RECON effort.

Strong area studies collections pose complications because they cut across many disciplines and might have to be looked at as a separate issue. It was agreed that RECON had been under way too long for the CONSER A to Z approach to be useful. The subject-oriented approach and the guidelines used by RLG in organizing RECON efforts among its members might serve as a model. Explanations of the approach to funding agencies should indicate that the LC classification is a mechanism for defining subject areas.

Recommendation 3. Standards for the records converted in the program:

1. The use of the MARC format for encoding data is assumed.
2. The fullest possible record is to be preferred.
3. The National Level Bibliographic Record--Minimal Level is the least acceptable record.
4. AACR2 is preferred for access points.
5. Subject headings should be LCSH/MESH compatible.

Standards considerations are complex and difficult because of the variety of cataloging rules and local practices reflected in the historical catalogs of research and other libraries. Given the size of the universe to be converted, it is not feasible to retrieve the item to verify or correct the cataloging on the source record (usually a shelflist card). Rather than setting a standard that must be met by every record going into the converted file, it will be necessary to apply standards to the data on the source record.

The record with the most information is preferred because, in most cases, fuller information provides a more useful record. Most libraries involved in conversion work see the machine-readable record as a replacement for a card record and do not want to have to refer to the card record after it is converted. There was at least one suggestion that fullness of source records be considered as one of the criteria for selecting participants.

The use of the MARC format is a "given" if the records are to be shared. Furthermore, participants agreed that any data keyed into a record should be fully and correctly coded.

Although the group was unhappy with the thought of not having subject access on the resulting records, particularly in light of the results of the early studies of the use of online catalogs, it was agreed that it was important to define a level of fullness below which records would not be acceptable to the national program. That level is the minimal level requirements included in the National Level Bibliographic Record.

Most of the records targeted for the national program will not have been cataloged according to the AACR2 rules used for current cataloging. If retrospective records are to be integrated into current online catalogs, it is important that access points in both old and current records be compatible. Thus the preference for access points in AACR2 form. However, it is also realized that the creation of full authority records to govern the access points on all the records converted by a single library would be beyond the

resources available--even assuming that some external funding was available to participating institutions. Consequently, access points that are not in conflict with access points in AACR2 form are also acceptable. It was hoped that projects could be organized so that institutions could commit part of their resources to doing full authority work for some part of their converted records and that, over time, the capability for bringing most of the national database under authority control would be developed. At least one of the subgroups recommended that RECON planning include passing converted bibliographic records against the LC Name Authority File and the LCSH to upgrade access points to current forms in order to avoid extensive checking of headings prior to input and to get as much help as possible from already existing authority data.

The inclusion of subject headings in the converted records was considered to be of obvious value, but there was considerable discussion about which subject headings would be useful and acceptable in a national database. Clearly LCSH, but the structured MESH vocabulary employed by many of the nation's biomedical libraries was also regarded as a standard for subject heading assignment. Since the MARC format also allows for coding locally generated subject headings and most participants thought that any subject access was better than none, participants also leaned toward the inclusion of local subject headings as long as they were properly coded.

In addition to the bibliographic and format standards listed above, the suggestion was made that production/performance standards should also be included in the standards for the projects. The RLG RECON program was

mentioned as a possible model for setting benchmarks and production standards to make sure that the funding provided a library was producing the number of records expected from the investment. Mary Ellen Jacob cautioned that production standards must be tempered by the realities, indicating such problems as multiple formats, records in languages that may not be familiar to conversion staff, and the experience of conversion projects like the U.S. Newspaper Project and CONSER. Her suggestion was that the group or agency responsible for developing the program should be concerned with setting and applying production standards in order to make sure the standards were applied with judgment and not across the board.

There was a suggestion that serial searching across the utilities should also be a requirement for program participation in order to avoid the duplicate conversion of already converted titles. If "transutility" searching were required, program participants would need access to all the major utilities.

Recommendation 4. The focus of management for the program is ARL; the ARL Microform Clearinghouse is a possible model. The ARL Bibliographic Control Committee should have program definition and oversight roles. A representative from IRLA should also be included. Attention needs to be paid to problem scope--the size of the problem.

Three funding options:

1. Packaging projects for fund raising.
2. Generalized assessment of research libraries. Cash assessments would be ideal, but probably not realistic for all libraries. Non-cash budget commitments (staff and other resources) would be acceptable alternatives. Such assessment would form the basis for matching funds from other sources.
3. Title II-C program staff and the National Endowment for the Humanities (NEH), as potential funding sources, should be informed of the plan.

All of the subgroups mentioned ARL as the agency that should be the focus of the program. Three of the four groups specified the ARL Microform Clearinghouse as a model, and the incorporation of the skills in OMS (Office of Management Studies) was also mentioned as being useful to the project. Four members of the ARL Bibliographic Control Committee were also meeting participants: Joe Rosenthal, Chair of the Committee, Kaye Gapen, David Bishop, and Henriette Avram. Lee Jones is a regularly invited guest. Joe Rosenthal stated that the acceptance of such a role for the Committee and for ARL would have to come from the ARL Board, but the five-year program of ARL speaks to the need for retrospective conversion and charges the Bibliographic Control Committee with addressing alternatives for RECON. Realistically, it was noted, the Committee will need a full-time coordinator to get the work done.

IRLA should also participate in the planning process. Including an IRLA representative on the ARL Bibliographic Control Committee would lend credence to the program developed by the Committee as being representative of the needs of the nation's research libraries.

The proceedings and recommendations of this meeting will be transmitted to ARL as soon as they are available, and Joe Rosenthal agreed to discuss the program with the ARL Executive Director and to try to place it on the agenda of the next ARL Board meeting.

Because LC class (or subject) is the basis for making conversion "assignments" to various institutions, a major funding option is to package various subject projects for funding by agencies with an interest in supporting particular areas of scholarship. The Getty Foundation's interest in art and architecture was a specific example of the potential use of the packaging approach.

The most controversial suggestion for funding came from Joe Rosenthal's part of the panel discussion, in which he suggested a general assessment of research libraries, perhaps patterned after the assessment made for ARL dues or membership in the Center for Research Libraries. Rosenthal argued that the assessments would promote matching funds from non-library agencies. Several participants were skeptical that research library directors would be willing to contribute out-of-pocket funds for RECON, and a suggestion was made that the assessment might also include non-cash resources of staff

and equipment. However, the need for "hard, cold cash" was reiterated. The libraries with the distinctive collections, which will be doing the RECON work, would already be contributing staff, equipment, and overhead costs to the conversion effort and would need, in addition, external financial support to do the work. It might not be necessary to develop an assessment program if the foundations are willing to provide sufficient funding for RECON.

The existence of an organized program was also seen as providing leverage for libraries to appeal for funds from both their institutions and their state government. National programs of the kind being discussed have the virtue of legitimizing and underlining the significance of the RECON activity outside the library community.

The program would provide a framework for getting on with RECON work in the worse case scenario in which no external funding is obtainable. Since many institutions have undertaken RECON work using their own resources, the program could serve to maximize those resources by reducing the amount of duplicative effort in which these libraries are engaged.

ARL was encouraged to alert Title II-C program staff and the National Endowment for the Humanities to the planning for a national retrospective conversion program, so that those agencies would have an understanding of how their program dollars could be stretched through support of the RECON plan. Since the next Title II-C application deadline is November 1, 1984, notification needs to be done right away. Although NEH resources are not so extensive as Title II-C, the number of proposals received by NEH has fallen

off markedly and there is concern at NEH that they are not receiving enough good proposals. NEH tends to fund proposals in more specialized or exotic areas, so some of the packaged proposals might be very appropriate for consideration by that agency.

Recommendation 5. The program must capitalize fully on other RECON record producing activities, e.g., the National Newspaper Project, preservation projects, the OCLC Major Microform Project, etc.

This recommendation was made by all the subgroups. There are two reasons for the recommendation. One is the desirability of not duplicating other RECON activity. The second is that RECON efforts that are by-products of other activities, particularly preservation activity, are of particular interest to funding agencies concerned with encouraging a sense of national cohesion in putting recorded information to effective public use. Any time it is possible to demonstrate a long-term commitment to combined principles of preservation and access, there is a stronger argument for support.

Recommendation 6. Open access to resulting records should be through an LC distribution mechanism.

Henriette Avram took pains to explain the two types of distribution that could be considered by the Library of Congress. One possible mode of distribution would be one without a connection to the MARC file. The Library of Congress is now distributing records for the Government Printing Office (the GPO tapes) and the art exhibition catalog records of the Boston Public

Library. Neither of these record sets are part of the MARC file, which is also the catalog of the Library of Congress.

The other possible mode of distribution would be to include the LC records converted under the project in the MARC file and make them available through the MARC distribution service. Examples of LC's distributing records through the MARC service include the records added to MARC online by the University of Chicago and Harvard University, the CONSER serial records, and the name authority records contributed through NACO and distributed as part of the LC Name Authority File. Including the LC portion of the converted records in the MARC file would have the additional advantage of LC's maintenance of the records as part of its ongoing catalog maintenance program. However, in order to include the LC records from this project in MARC, LC must be in a position to exert some quality control over the file as is presently done with the Chicago, Harvard, CONSER, and NACO projects mentioned above. This means that the standards for record conversion and ongoing quality control that are compatible with LC's cataloging standards would have to be developed. Once the WLN bibliographic file is linked to the LC Name Authority File, WLN could supply LC with machine-readable non-MARC records with headings that have been upgraded to AACR2.

Recommendation 7. LSP (Linked Systems Project) protocols should be an enabling mechanism for sharing resources.

This recommendation received little discussion and was included to indicate the need for the computer-to-computer link between systems and the high priority assigned to the LSP development.

There were, however, some cautions about thinking of LSP as the "final solution" that would allow us to leap over the kinds of economic concerns which are very much a part of the constraints on record sharing and open distribution referred to repeatedly throughout the meeting. Henriette Avram pointed out that an operational LSP will raise its own set of economic problems. It was also suggested that there was a tendency among librarians to treat access issues as philosophical problems, to the exclusion of the related economic issues. It might be useful to evolve some very specific scenarios about the number of records that would be eligible for inclusion in a national RECON effort and to track the economic impact on the utilities and the various vendors if these records were openly available through LC's distribution service. Although the distribution of retrospective records is only a small part of the record sharing question, investigating the economic impact of sharing these records might give us some insights into dealing with the larger problems of sharing current bibliographic information.

Miscellaneous Recommendations

--OCR techniques for RECON need reassessment.

Discussion of the need to reassess OCR (optical character recognition) techniques for RECON applications stemmed from remarks in Richard De Gennaro's

critique/reaction paper in which he described technology developed by a company called Optiran based in London, England. The Council on Library Resources agreed to investigate the technology, and the Library of Congress offered to print from its laser disks as many records as were needed to provide a test database. Because LC's Card Distribution Service is now based on an optical disk system and because the system contains cards records of all types, including cards with special characters, diacritics, non-roman vernacular languages, etc., it would be possible to test fully the capability of any OCR technology.

Questions were asked about the possibility of using the Library of Congress format recognition program in conjunction with the OCR technology. Henriette Avram explained that the format recognition program had not been maintained since the changes introduced with AACR2, so the current utility of those programs is very much in question.

--Return to LC all LC records that have been converted and are now residing in the databases of one or more of the bibliographic utilities.

The possibility of returning to the Library of Congress those records that have been converted on one (or more) of the bibliographic utilities received a great deal of discussion, reflecting a general concern that LC records be made widely available in the open distribution service represented by LC's distribution service. Again and again the possibility was raised and its ramifications commented upon. While it would probably not be too difficult for the utilities to identify LC records in their files and return

them on magnetic tape to the Library of Congress, the resulting problems at LC would be many and difficult. As in the above discussion of an LC distribution mechanism, there is the question of how LC would redistribute the records. Through a separate distribution service or through the MARC distribution service? These records would duplicate records in the REMARC file (renamed "PREMARC" at LC), and LC's contract with Carrollton Press prohibits distribution of REMARC records (with the exception of 15,000 upgraded records per year), so there is a question about the legality of redistribution that LC will need to explore.

Because the records have been converted by various libraries at various times, a LC card number on a record does not guarantee that the converted record corresponds to the LC original card record. Many libraries used LC cataloging as the basis for cataloging another edition, added local information, changed subject headings, etc., all of which could introduce conflicts into LC's MARC file. OCLC estimated that there were 1.8 million LC records in its database. Even if these records were returned to LC, the workload of reviewing the records for incorporation into the MARC file would exceed what the Library could support in the short term. David Bishop suggested the possibility of extramural funding for LC to upgrade the headings in the way the headings in the MARC file are being upgraded in the "bibliographic flip" project. Henriette Avram agreed that LC would explore the possibility in further discussions at the Library.

--Micro-enhancer or similar techniques should be explored for multi-utility searching (pending linking agreements among the utilities).

This recommendation reflects the need for a technique using a microcomputer for searching serially the major databases in which staff engaged in retrospective conversion might expect to find needed records. The need to overcome the decentralized nature of the national database in order to avoid duplication of conversion effort and obviate the need to search separately each of the bibliographic utilities was an overriding operational concern of the librarian participants.

CHAPTER 6

SUMMARY OF RECOMMENDATIONS

C. Lee Jones

From July 16 through 18, at the Spring Hill Conference Center in Wayzata, Minnesota, 29 individuals focused their attention on a report, Issues in Retrospective Conversion, prepared by Jutta Reed-Scott, Dorothy Gregor, and Charles Payne. The underlying question during the conference was whether or not the cause of scholarship could be advanced by a carefully articulated program aimed at a coordinated approach to retrospective conversion of manual bibliographic records to machine-readable form by the research libraries of the country.

Support of scholarship and research is the fundamental objective of any retrospective conversion program. A requirement for providing that support is an openly accessible, consistent, logical national database of bibliographic records reflecting the nation's library resources. Throughout the conference it was clear that there are no national boundaries to scholarship and that in the shorter term, the recommendations of the conference and subsequent actions taken should include all North American interests, with a longer-term goal of links to any bibliographic database in the world.

The conference discussions ranged broadly and the debate assured that a wide set of approaches and concerns were aired and became in some way a part of the recommendations that follow. While there may be alternative approaches to the problem, the following represents the sense of the group gathered at Spring Hill. Given the quality and extent of information available (in some cases more than adequate and in others frustratingly sketchy) these recommendations are the strongest statements that can be issued at this time. They suggest action on the part of the Association of Research Libraries as an organization and, less directly, on the part of every research library in the country.

RECOMMENDATION #1

A coordinated retrospective conversion (RECON) program is a viable alternative at this time.

Whatever program results from these recommendations should not be viewed as a replacement for existing local RECON efforts. The fundamental objective of such a program must be the conversion of manual records to machine-readable form and, secondarily, the upgrading of extant machine records that are less than full records.

This first recommendation flowed from the discussion of whether or not it made sense to mount such an organized effort at this time. Some argued that there was so much RECON going on that it would all be done in the next few years, despite the fact that there is no plan in place now and apparently

much duplication of effort. The specific degree of duplication was not known, but suspected to be high. Since there are few if any RECON programs searching all shared cataloging service databases and none sharing records with all of them (OCLC, RLIN, WLN, and LC), the argument was made that duplication was bound to be high.

A major question was what was meant by RECON. In the context of this conference, RECON was limited to the original generation of machine records from "older" manual records. Thus, the nearly clerical tasks of identifying records in a database and attaching a holding symbol were deliberately excluded from any plan that might result. However, the process of identifying and upgrading to "full" record status any minimal record was considered to be an important contribution to the quality of resulting databases and so an important part of a national RECON plan.

RECOMMENDATION #2

North American research libraries are the focus of these recommendations and any program that may flow from them. However, this focus must also include the special resources of other institutions.

A principal reason for this focus is the present state of RECON in North America. Many smaller academic and public libraries have finished, embarked upon, or have near-term plans for the complete RECON of their collections. It was indicated that most collections of less than 250,000 volumes can be converted at reasonable institutional costs using the very

large databases of one of the utilities or the services of a commercial vendor. A very high percentage of the RECON work will consist of matching records from the database and so require very little "original" RECON work. However, as collection size grows the costs of RECON become so large that it is difficult to devote sufficient institutional resources to accomplish a total RECON.

While there are few large research libraries that do not have some RECON activity either in process or scheduled, it is rare to find one intending to do all extant records because of the number of items requiring "original" RECON work and the very much higher costs associated with this process. In order to assist research libraries with their RECON loads, a coordinated program has a very good chance of distributing the amount of "original" RECON work that any one institution would have to do.

There is no doubt that many smaller non-research libraries must do original RECON for some part of their collections. It is also probably true that there is not much local pressure on them to convert their special collections unless there is an institutional commitment to convert "all" records. For the most part, these libraries will have comparatively few "unique" records to add to a national database. Consequently, in order to expand the national database of RECON records for the benefit of scholars everywhere, it makes sense to focus the national coordinated RECON program on the research library community.

RECOMMENDATION #3

The Association of Research Libraries, probably through its Bibliographic Control Committee, should assume program definition and management oversight responsibilities.

There are several models for operation of such a program within ARL, including the microform clearinghouse and certain OMS operations. ARL should also invite the participation of a representative of IRLA (Independent Research Library Association) during the program definition stages of the process. Early attention needs to be paid to the exact scope of the RECON problem.

Since most of the RECON problem that remains to be solved, at least in terms of "original" RECON, is located within research libraries, it is reasonable to suggest that ARL should take the organizational lead in defining what should be done and the strategy to be used. These recommendations will be forwarded to ARL as soon as possible for their action.

Not all research libraries are members of ARL; several are members of IRLA. To make certain that non-ARL member research libraries are part of the program and are urged to contribute to the end result, they should be invited to participate in the program-definition deliberations of the Bibliographic Control Committee. There will be other collections that should be a part of the program that are not represented by these two organizations, and their interests should also be accounted for in the definition of the program.

The precise scope of the "original" RECON problem is unknown. A modest and rapidly mounted effort should be made to determine the size of the problem and some indication of how it should be approached. ~~Are~~ there concentrations of records that need to be converted? Is the problem tractable?

RECOMMENDATION #4

A coordinated program for RECON must capitalize fully upon other RECON record-producing activities.

There are several projects that are already under way that are creating what amount to RECON records as by-products of their activities. These include the NEH-funded newspaper project, the Major Microform Project, the RLG RECON project, and certain preservation projects. Each of these projects produces bibliographic records that either replace existing manual records or upgrade incomplete machine-form records. It is possible to identify the groups of materials that are being dealt with in these projects and any RECON program must do so in order to avoid or minimize duplicate record production. By recognizing the contributions expected from these ongoing activities, the ARL plan for coordinated RECON work will include these projects and so expand the productivity that can be expected from it.

RECOMMENDATION #5

The approach recommended is to segregate the work by subject based upon the LC classification scheme or, under certain conditions, based upon certain very strong special collections.

Two programs were identified as being useful in identifying institutional strengths based upon subjects as defined by the LC classification scheme: the National Collection Inventory Project (NCIP) and the National Shelflist Count (NSC). Since the former is still in its early stages of operation, it is more likely that the NSC will prove to be more useful in the short run despite certain limitations. While LC information is part of the NSC data, only 25 other libraries are included in this 1977 compilation. NSC can yield initial information on size of research collection, while NCIP will eventually yield collection quality data.

RECOMMENDATION #6

It is important that any institution choosing to participate in the coordinated RECON program agree to produce and share records according to agreed-upon standards.

Those standards are based upon the premise that the fullest possible record properly encoded is to be preferred. Specific standards that should be followed include:

1. MARC format for data encoding and exchange
2. The National Level Bibliographic Record--Minimal Level Record standard is the least acceptable record
3. AACR2 is preferred for access points
4. Subject headings should be LCSH/MESH compatible

There is no point in putting together a program for coordinated RECON unless the resulting records can be shared. Sharing records requires an agreed-upon set of standards and distribution among the databases of the large shared cataloging services and other suppliers of bibliographic records. In the end, these databases are the component parts of our objective, a logical, consistent national bibliographic database openly available to all citizens.

The use of MARC for the exchange of data is assumed.

The specification of the Minimal Level Record as the least acceptable standard is intended to specify the absolute minimum and not to specify the target against which to measure quality. It was recognized that the NLBR--Minimal Level Record was developed for cataloging a book in hand and not for transcribing cataloging data in RECON projects. The intent of including the NLBR among the recommended standards is simply to indicate the minimum acceptable record fullness. In fact, if support is provided in the context of the program for the production of RECON "original" records, little or no

support should be provided for the production of minimal records. Any minimal record that is selected by another institution may force that institution to do additional work if it chooses to use only full records in its database. The object of the program is to do as many "original" RECON records as possible and do them fully once so that others may share them without undue additional work.

There is also a need to keep the costs of RECON under control. Specifying AACR2 as preferred for access points is a case in point. Should all access points and descriptions be required to be consistent with AACR2, few if any institutions could afford the time required to bring old records up to the new standard. This would amount to recataloging and not just converting from a manual to a machine record. The possibilities of doing post-cataloging authority work should be explored. It may be possible to convert headings to AACR2 form by running bibliographic records against an AACR2 authority file and upgrading those headings that are in conflict with other headings in the database.

Where subject headings are used in a RECON record they should be consistent with the two largest controlled subject heading lists, the Library of Congress Subject Headings and the National Library of Medicine's Medical Subject Headings. It was agreed that subjects will be important even for the older records, and that an effort to assure consistency with the two prime subject heading standards was required for the benefit of users.

RECOMMENDATION #7

The telecommunication protocols resulting from the Linked Systems Project should provide the enabling mechanism for the sharing of records produced on the several shared cataloging services' systems.

The linking protocols that are now in the testing phase and approaching the implementation stages are viewed as the appropriate mechanisms for making resulting and other records available to the library user community. It is realized that this is an option that will take some time to implement, but it should remain the objective of the library community.

RECOMMENDATION #8

When the Linked Systems Project is fully operational, access to records will be dramatically enhanced. However, access to all original or upgraded records resulting from a coordinated RECON program should be provided through an LC distribution mechanism. There are at least two possibilities for LC distribution. LC might simply take records contributed to the RECON projects on the various utilities and distribute the records without incorporating them into an LC database. Or, and participants saw this as the more desirable possibility, LC records input by another organization according to guidelines specified by LC might be accepted into the LC MARC file, maintained by LC as part of the MARC file, and distributed as part of the MARC Distribution Service. The Library of Congress agreed to investigate the possibilities for an LC distribution mechanism.

Participants recognized that the widest possible distribution would come from using an LC distribution mechanism. All subscribers would receive the records and there are no limits, other than financial, to those who may subscribe. The commercial sector will thus be served as readily as the not-for-profit sector.

RECOMMENDATION #9

The ARL Bibliographic Control Committee should explore a variety of funding options for the support of a coordinated RECON program.

Individual projects should be packaged for fund raising purposes. In addition, a strategy of assessments of research libraries should be explored. Finally, appropriate staff from Title II-C and NEH should be advised that a coordinated RECON program is being prepared.

RECON activities have received sporadic support for several years. Much of what has been done has been done with local funding in efforts to implement online circulation systems that required more or less full bibliographic records as raw material, and there is bound to be more local support of RECON in the years to come. A national coordinated strategy for retrospective conversion, whether fully/partially funded or not, would provide the context in which institutions could approach their own RECON projects, knowing that they would be making a contribution to the national RECON effort.

Thus, a worst case of no extramural support for RECON still calls for a logical, coordinated RECON plan.

There are, however, many foundations that may be interested in specific pieces of the RECON problem. It would be useful, for example, to put together a package that might be interesting to the Getty Foundation in the area of art and architecture. Other foundations may be interested in other pieces of the knowledge spectrum. It would not be terribly difficult, once data was examined from the NSIP, to put together some subject assignment suggestions for a limited number of institutions, to secure their commitment to the concept, and to seek support for a cooperative project in a specific subject area. The nature of the support should be such that each participating institution is investing in the project rather substantially. Foundations are more likely to be interested in providing matching funds than they are in supporting all the institution's costs relative to RECON. Support should be sought within these limitations.

In a more broadly based program for generating support for RECON, ARL should consider a program of assessments of research libraries in order to accumulate resources that could be used as matching funds for the RECON effort. Some institutions will be able to make cash payments to a project-specific fund. Others will not be able to do much more than to allocate a specific sum within their operating budgets as matching support for RECON. These non-cash commitments are likely to be in the form of staff and other resources and should be viewed as an acceptable alternative to cash

commitments. Again, such a resource pool may attract matching attention from the foundation and federal funding communities.

Both Title II-C and NEH have funded RECON projects in a less than coordinated way over the past several years. Both agencies should be alerted to the fact that there is now an effort to produce a logical, coordinated plan for RECON activities. The Title II-C deadline of November 1 is very close, but some may be able to take advantage of it if a draft plan were to be available by October 1 or so. In any case, alerting these two programs to what is coming should allow them to capitalize upon the plan in their support of RECON proposals.

The foregoing constitute the central recommendations of the three-day conference. As one might expect, there were many other recommendations that did not receive such wide support or that had poor specific fits in the program recommended above. The most useful of these recommendations are summarized as miscellaneous recommendations.

MISCELLANEOUS RECOMMENDATIONS

Optical Character Recognition (OCR) techniques should be explored in light of some new developments in the field. Given that most of RECON is the capture of data that already exists in a variety of print formats and that there have been some interesting recent developments in OCR and the controlling software, a renewed examination of OCR technology for purposes of

supporting RECON should be undertaken. The Council on Library Resources (CLR) committed itself to such an appraisal.

One of the products of the RECON program will be the conversion of records that were originally the product of LC cataloging. It was suggested that all of these records should be flagged and sent to LC by the shared cataloging services as a service to LC. LC representatives agreed to consider the usefulness to LC of this suggestion.

While the Linked Systems Project will result in operating links between the Library of Congress, the Research Libraries Group, and the Washington Library Network, it will be some time before OCLC can become a part of the technical link. Microenhancer or similar techniques using microcomputers should be developed for searching several databases in the RECON process. Since one of the objectives is to reduce duplicative effort, it makes no sense to search only one database when there is some likelihood that similar work may already have been done on one or more others. This suggestion may require more software work on the part of the target databases than they are willing to do, but there was encouragement to explore this avenue as a short-term solution to the lack of operational links among the utilities.

These recommendations form the essence of a nationally coordinated program for retrospective conversion of print form bibliographic records. It is a program that has the chance of reducing the aggregate costs of the RECON process and securing funding for making a very large dent in the inventory of

records that need to be converted to machine-readable form in order to better support the work of the scholarly community.

CHAPTER 7

EPILOGUE--RETROSPECTIVE CONVERSION FOR MUSIC MATERIALS: MEETING SUMMARY,

by C. Lee Jones

Immediately following a three-day conference on retrospective conversion (RECON) focused on the needs of research libraries, a group of twenty-one individuals met at the same conference site, the Spring Hill Conference Center, Wayzata, Minnesota, to plan the integration and coordination of RECON activities within the context of the music library community. All of the major music library societies and professional groups were represented, as were the music faculty communities of composition and musicology. The recommendations of the preceding meeting formed the immediate background against which all subsequent discussions took place.

It was hoped that the recommendations of the general meeting would provide a framework for developing a coordinated music RECON effort out of at least two different efforts. The two groups, REMUS, a Committee of the OCLC Music Users Group, and the Associated Music Libraries Group (AMLG), demonstrated a willingness to find a way to work together toward a joint RECON program for music materials.

This spirit of mutual cooperation pervaded the discussions and did much to create the set of recommendations that follow. The recommendations

themselves were the result of five discussion papers, animated group discussion, and lengthy debates in smaller discussion groups. Each of the discussion groups dealt with identical agendas and the resulting recommendations were similar.

RECOMMENDATION #1

The recommendations of the research library RECON meeting, in very rough form, were the background for the entire set of discussions by the music group. Six of the music meeting participants were also participants in the general session, so it was not difficult to carry over the sense of the preceding meeting. After a modest amount of discussion, it was agreed unanimously that the recommendations of the general RECON conference were acceptable and useful in the deliberations of the music library community.

Some would have liked the music effort to be viewed as a pilot of the general RECON recommendations, but it was realized that the music community was faced with slightly different conditions than the general research library community. The difference is the fact that relatively little RECON has gone on in music, so there is not a large accumulation of RECON records upon which RECON projects in music can build. Hence, music libraries, using their own resources, will have to deal with the remaining heavily used, core collection records with which other disciplines have already dealt.

RECOMMENDATION #2

A program for retrospective conversion of bibliographic records of music libraries would be a rational investment on behalf of the music community of artists, students, and scholars.

The question of the usefulness of a RECON project focused on music materials was considered within the broader context of the needs of music libraries. Given the pressing demands of existing and developing online services, ranging from circulation systems to online catalogs and integrated systems, any delay in converting large numbers of music records would significantly impair music library participation in automated systems.

RECOMMENDATION #3

In order to plan and carry out a coordinated RECON effort for music, an umbrella organization including REMUS, AMLG, the International Association of Music Libraries (U.S. Branch), the Music Library Association, the Association of Recorded Sound Collections' Associated Audio Archives Project, the Library of Congress, and the three shared cataloging services should be formed.

It was clear that the two organizations presently interested in music RECON did not represent all parties involved in the issue. An impassioned debate resulted in the above recommendation. As soon as these detailed summaries are completed, a meeting of representatives will be called by CLR.

CLR's only role is as convener and moderator of the discussion. The participants will be responsible for creating some mechanism for planning and implementing a music RECON project. The intent is to have sufficient program detail specified so that support can be sought from the next round of HEA Title II-C proposals, which are due by November 1, 1984.

RECOMMENDATION #4

The program emphasis should be on the conversion of manual records of research materials in music collections. Its character should be similar to the CONSER project.

All agreed that there are two kinds of materials in most music collections: research materials and core materials for the support of undergraduate instruction. As far as RECON is concerned, individual institutions should accept the responsibility of converting records of core materials to machine-readable form. Any program support that might be forthcoming should be focused on converting records for those materials essential to music research.

RECOMMENDATION #5

In order to be effective, the music RECON projects must adhere to a common set of standards. Only in this way can the resulting records be shared among many institutions and only through sharing will duplication of effort be reduced.

A guiding principle of the music RECON projects should be that the fullest possible record should be converted, and that it must meet at least the minimum standards set forth below. Work already done should be retained if it has value for subsequent users of the record. Descriptive information should be transcribed as is without any effort to upgrade to the latest AACR2 rules. The standards recommended for the music RECON projects include the following:

1. The use of MARC for encoding and exchange of data is assumed.
2. AACR2 is preferred for name headings and for uniform titles. (Note: Some participants felt that AACR2 form for uniform titles should be mandatory.) Choice of entry can remain the same as that of the source record.
3. Subject headings should be included if present (no verification required); local subject headings should be included, if present, and appropriately tagged.
4. Authority work, including the creation of a series authority record, is required if a series entry is to be used as a controlled access point. (See also Recommendation #6.)

These standards are slightly more stringent than those adopted by the general RECON meeting. While these standards describe the minimally acceptable record, more complete, authenticated records are encouraged.

RECOMMENDATION #6

Two reference tools contain widely recognized lists of major music series titles. These tools are:

Charles, Sydney Robinson, "Editions, historical," vol. 5, pp. 848-869, in: The New Grove dictionary of music and musicians. Edited by Stanley Sadie. London, Macmillan, and Washington, D.C., Grove's Dictionaries of Music, 1980.

Heyer, Anna Harriet, comp. Historical sets, collected editions, and monuments of music: a guide to their contents. 3d ed., Chicago, American Library Association, 1980.

The Library of Congress should be responsible for converting these series titles to machine-readable form as a special project for inclusion in the LC Name Authority File.

Because of the nature of music bibliographic records, there are many series entries required. A special effort to establish in machine-readable form the authoritative forms of these important series would be a great service to the music community. If the project were started soon, it would

have a major beneficial impact on the proposed RECON projects focused on music materials.

RECOMMENDATION #7

The access points in the MARC music format of great importance to the music community were identified with proposed levels of coding.

These specific coding recommendations are covered in the body of the meeting report.

After two days of intensive discussions, impassioned pleas, and friendly camaraderie, the above recommendations came forth with surprising unanimity. The conferees departed the Spring Hill Conference Center with a sense of purpose. Once the "umbrella" group has an opportunity to meet and to organize itself for action, progress will be evident to outside observers. It is certain that the music community wants to begin its RECON program before the larger research library community has a chance to put its program in place.

APPENDICES

APPENDIX A

AGENDA

RETROSPECTIVE CONVERSION MEETING

**July 16-18, 1984
Spring Hill Center
Wayzata, Minnesota**

Monday, July 16

- 4-5:30 p.m.** **Opening Session/Session I**
Welcome and background -- Lee Jones
Description and summary of the RECON Report -- Jutta Reed-
Scott
Basic assumptions in retrospective conversion -- Tina Kass
- 5:30-7:30** **Cocktails and dinner**
- 7:30-9:00** **Session II**
Description of WLN RECON plans -- Gwen Culp
Description of RLG RECON plans -- Tina Kass
Description of OCLC RECON plans -- Mary Ellen Jacob
Report on RLAC RECON-related activities -- Elaine Sloan

Tuesday, July 17

- 7:30-9:00 a.m.** **Breakfast**
- 9:00-noon** **Session III**
Critique of the Report/reactions to the Report #1 -- Dick De
Gennaro
Critique of the Report/reactions to the Report #2 -- David
Bishop

Panel Discussion: What it would take to make things happen --
Patricia Earnest, Ron Leach, Joe Rosenthal

Preparation for small group work -- Lee Jones

Noon-1:00 p.m. Lunch

1:00-4:00 Session IV
Small Group Discussions

4:00-6:00 Recreation

6:00-7:30 Cocktails and dinner

7:30-9:00 Session V
Reports from small group discussions

Wednesday, July 18

7:30-8:30 a.m. Breakfast

8:30-9:00 a.m. Session VI
Discussion by the whole group
Recommendations and plan of action
Final comments
Adjournment by noon

Noon First bus leaves for the airport

Noon-1:00 p.m. Lunch for those with later flights

1:15 Final bus leaves for the airport

APPENDIX B
LIST OF PARTICIPANTS
RETROSPECTIVE CONVERSION MEETING

July 16-18, 1984
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