MANAGEMENT REVIEW OF
THE LIBRARY OF CONGRESS

FINAL REPORT

VOLUME 2

PREPARED FOR
THE GENERAL ACCOUNTING OFFICE
BY

BOOZ·ALLEN & HAMILTON

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MANAGEMENT REVIEW OF THE LIBRARY OF CONGRESS

FINAL REPORT

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MANAGEMENT REVIEW OF THE LIBRARY OF CONGRESS

ARREARAGES REDUCTION CASE STUDY

Prepared for

General Accounting Office

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1.0 BACKGROUND

The issue of "arrears in work" arose as early as 1900 and continues to plague the Library of Congress. From a historical perspective, it is unlikely that all arrearage will ever be eliminated. From a pragmatic perspective, there may be nothing wrong with storing limited amounts of certain materials for future demand-based processing. But boxes, carts, sealed crates and loose bundles of unprocessed materials were piling up in environments unacceptable from security or preservation standpoints. Collections mangers did not know exactly what they had, and it was deteriorating in out-of-the-way places with little prospect of being examined or controlled. An internal planning task force raised arrearage in the special collections as a concern in 1977. The backlog in unprocessed materials was again raised as a problem in the 1987 Annual Report. A 1989 arrearage census estimated the unprocessed backlog at nearly 40 million items, nearly 1/3 of the size of the total Library collection, and the backlog was growing by 1.8 million items per year. This prompted budget and staffing increases and other actions to address the growing problem.

Four key definitions[1] are in order:

- *Library materials* are physical objects intended for the Library's collections.
- An *unprocessed item* is an item:
  - For which processing required to make it routinely available for use has not been completed
  - That has not been put in the location from which it will be served.
- *Processing* includes:
  - Physical preparation
  - Bibliographic access (e.g., cataloging or indexing)
  - Preservation.
- *Arrearages* are library materials that have been in an in-process state for longer than a reasonable time or are not expected to be processed within the foreseeable future. The in-process state begins when the Library receives the item and ends when processing is complete and the object has been placed in the location from which it will be served. The "reasonable"

[1] Report to the House and Senate Committees on Appropriation, "Unprocessed Arrearages of the Library of Congress," December 1, 1989, page 5.

time depends on the type of material, the extent of processing, and other factors.

In practice, monographic materials are assigned cataloging priorities I through IV (during selection). They become arrearages if not processed and placed into service within specified times. Priority I items must be processed within ten days while Priority IV may take up to one year. These priorities apply only to monographic materials; the special collections are addressed more subjectively by considering such factors as research value, preservation needs, potential use, etc.

2.0 HISTORY

2.1 Origin of Current Arrearage-Reduction Program

The current arrearage-reduction program started with the major 1988 internal review commissioned by the current Librarian, Dr. James Billington. In its report the Management and Planning (MAP) Committee stated, among other things, "We need a commitment both to eliminate current arrearage and to establish policies and practices which will prevent the formation of new arrearage."[2]

2.2 Major Events in the Program

The MAP Committee report prompted the Library's Transition Team to establish a Special Project Team for Unprocessed Arrearages during April 1989. This Special Project Team of 19 experienced staff members from throughout the Library was charged to:

- Conduct a composite census of arrearages
- Determine the resources necessary to process them
- Prepare a plan for reducing them significantly.

Soon after formation of the Special Project Team, the House Appropriations Committee directed the Library to transmit an arrearage reduction plan to the House and Senate Appropriations Committees by December 1, 1989. The direction included a requirement to address acquisition policies, resources required, and processing requirements.

Subsequently, the Conference report on the FY 1990 Legislative Branch Appropriations Bill indicated that the Library was to make reduction of arrearage its "highest priority."

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[2] Data from December 1, 1989, Report to Congress, "Unprocessed Arrearages of the Library of Congress."

The Library submitted its report, "Unprocessed Arrearages of the Library of Congress," in December 1989. This report, among other things:

- Presented a census of unprocessed arrearages
- Described the arrearage
- Presented a detailed arrearage-reduction plan with goals[3] for FY 1990, 1991, and 1992
- Stated the following goals for FY 1993 through 1999, provided adequate resources are available:
  - Prevent arrearage growth
  - Reduce arrearage to 80 percent of the arrearage at the time of the report.

Appendix 1 contains a timeline of major arrearage events.

2.3 Results of the Program

At the time of the report to the Congress (December 1989), the estimated number of unprocessed pieces was 38,069,000. A reduction goal of 80 percent would reduce the backlog of unprocessed items to under 8 million items.

The Library has made substantial progress in reducing the arrearage estimated in September 1989. At the end of FY 1995, the total arrearage had been reduced by 43.6 percent to the levels shown in Exhibit 1.

[3] The 1990-1992 pilot prescribed numerical and percentage goals totaling 3.4 million items for 16 specific format and collections and 25 general goals regarding innovations for processing efficiency and effectiveness.

EXHIBIT 1
Estimated Items in Unprocessed Arrearage in 1989 and at the End of FY 1995

Type of Item	Number in Arrearage (September 30, 1989)	Number in Arrearage (end of 1995)
Books and pamphlets	893,030	268,102
Serials (pieces)	2,562,023	350,666
Microforms	587,473	48
Total "print" materials	4,042,526	618,816
Maps	64,000	17,066
Moving-image materials	630,259	541,760
Sound recordings	1,917,104	1,576,663
Manuscripts	13,641,784	5,049,989
Music	5,994,000	6,200,918
Rare books	332,000	205,186
Pictorial materials	12,943,000	8,015,455
Total "special" materials	35,639,627	21,781,091
Total items in arrearage	39,682,153	22,399,907

3.0 FINDINGS

3.1 Analysis of the Arrearage Situation

The Library obtained information to understand the arrearage situation through the investigations of processing backlogs by a subgroup of the MAP Committee. This subcommittee noted a very large and old processing backlog in cataloging collection items and reported the existence of these backlogs in a MAP position paper.[4]

3.2 Decision-Making Process to Address Situation

The Library process that led to establishing arrearage as a major problem was a byproduct of the MAP Committee deliberations. For several collections, including

[4] Included in the MAP Committee report, Part II, page 82.

books, the MAP subgroup concluded that the backlog was unacceptable. The subgroup also concluded that:

- Failure to process the collection backlog to a condition where the items were accessible was unreasonably denying access to the collections
- To a large extent, the arrearage existed because catalogers were attempting to achieve cataloging perfection. Policies and procedures emphasized exacting thoroughness over speed or throughput.

The MAP Committee accepted the conclusions of its subgroup and included the backlog issue in the Committee's November 1988 report. At the time of the report, Congress was not expressing any special interest in the Library's collection backlogs.

3.3 Development of Arrearage-Reduction Policy

The Library developed a course of action for resolving the arrearage situation by the actions of a special project team. After the MAP Committee issued its report, the Library formed a Special Projects Office (SPO) to resolve the general issues. The former leader of the MAP Committee subgroup that studied the arrearage became a member of this office. In his role as a member of the SPO, he proposed that the Library Management Team charter a Special Project Team to conduct a census of unprocessed arrearage throughout the Library.

At the end of 1988, the arrearage subgroup leader convened a Special Project Team to complete the census by December 1989. He subsequently became the Coordinator of Arrearage. Early in 1989, the team leader identified 16 people to form the team and negotiated their availability with their supervisors. The team comprised representatives from across the Library and employed a statistician to develop valid sampling techniques.

Before the team could complete its census, Congress intervened by requesting a report of unprocessed arrearages before December 1, 1989. In response to this demand, the census team accelerated its work and completed the census from June to September 1989.

After the census, the team leader submitted a draft of the mandated Report to the Congress. The draft recommended setting a Library-wide goal of reducing the unprocessed arrearage to 50 percent of the census level by 2000. The Librarian accepted the draft and made an executive decision to increase the long-range target by directing the goal be set at an 80 percent reduction instead of the 50 percent reduction proposed by the staff.

MANAGEMENT REVIEW OF THE LIBRARY OF CONGRESS

COLLECTIONS SECURITY CASE STUDY

Prepared for

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1.0 BACKGROUND

Collections security is defined as the protection of Library materials from misuse, abuse, or loss through human or natural acts. Misuse, abuse, or loss can arise from natural events like water leaks, fires, flooding, and through human errors or intentional acts committed by Library employees or users. LCR 1810 defines Library materials as *"items in all formats...either in the collections, acquired for, or in-process for the Library's collections."*

Collections security addresses the implementation of a controlled environment where Library materials are: issued under controlled circumstances to readers in reading rooms and research facilities; housed in book stacks and other storage facilities when not in use; or held temporarily for processing in work areas. The creation of a security-controlled environment should include: establishment of policies, Library regulations, and plans defining protective goals; separation of Library materials into physical control zones (i.e., rare book storage vs. general storage) through the use of locks and electronic security systems; use of personnel (e.g., Library police) to govern proper use of Library materials; and creation of automated systems to track and identify Library materials. Collections security excludes security measures which exclusively protect Library personnel or Library facilities not used for the issuing, housing, or holding of Library materials.

Collections security has been a topic of intense discussion over the past several decades among the Librarian's office, at the senior management level, in the press, and in congressional hearings. In the Library, workgroups and security experts have studied the issue, detailed plans have been drawn up to improve collections security, and protective measures have been put into place. This case study reviews collections security from a historical perspective, tracking decisions and related actions to evaluate the process by which the Library has addressed collections security as part of their management processes. The study addresses: the origin of, or need for, collections security at the Library; the recent history of management activities relating to collections security over a period from the late 1980s to today, as represented in the timing of decisions and actions over the past two decades; the status of past activities; and decision making on the status of collections security at the Library today.

This case study illustrates the management activities surrounding collections security at the Library and provides conclusions as to the effectiveness of Library decisions and actions related to collections security.

2.0 HISTORY

2.1 Origin of Collections Security at the Library

Collections security was addressed in a management report dating from 1974. In the 1988 timeframe, the Librarian initiated management studies conducted by Arthur Young and by an internal Management and Planning (MAP) committee, whose scope included the assessment of the protection provided to the collections. The Arthur Young effort focused on the functions and operations of the Library Support Services and the Protective Services organization, which shares responsibility for protection for the Library's collections. The MAP committee conducted a broad-ranging assessment of Library management effectiveness and addressed Library security in their committee report.

2.2 Major Events in Collections Security

The MAP Report, delivered in late 1988, and the Arthur Young study, delivered in early 1989, provide a starting point for the Library's collections security efforts. The Arthur Young and MAP studies formed the basis for security-related planning and activities from 1989 to 1992. In the early 1990s, Library police were successful in detaining and arresting several persons attempting to remove Library materials. In an effort to respond to this series of discoveries and actions, the Librarian closed the book stacks to the public. Discoveries of book mutilations and the concern over the reported number of lost or stolen books also contributed to requests for hearings into suspected and reported protection problems at the Library.

In early 1992, the work of the Ad-hoc Collections Security Committee was subsumed by the Collections Security Oversight Committee (CSOC) which was chartered to work with the Library Service Units to develop a collections security plan for the Library. The CSOC surveyed the Library's current collections security capability and developed a set of 46 specific initiatives to improve collections security.

In mid-1992, the CSOC contracted with an outside security consultant for a limited (two-day) assessment of both general security and collections security to provide an objective opinion from an outside source. At the end of 1992 and in early 1993, the CSOC continued its planning efforts which were folded into phase one of the Library-wide Multi-Year Strategic Plan. The security initiatives previously defined were translated into detailed objectives and actions in the "Strategic Plan Implementation, Operational Plan for 1993." This document fleshed out the 46 security initiatives into specific actions to be accomplished. It organized the collective wisdom of the Library's growing security community, and provided the basis for the development of security upgrade/enhancement budgets. In 1993, the plan was submitted to the Librarian.

CSOC efforts continued throughout 1993 and 1994 to initiate and implement collections security measures as appropriate to the funding received and priorities that they had established. The implementation document was updated in mid-1994 to reflect the accomplishment of actions to date and changes in the committee's approach to specific objectives.

In mid-1995, in concert with the Maceda incident,[1] the Librarian was called before Congress to answer questions about Library collections security. The CSOC Chairman was detailed by the Librarian to assume temporary responsibility for the operation of Protective Services. At the end of 1995, the Library published regulatory changes to further enhance collections security efforts.

2.3 Results of the Collections Security Efforts

Although not identified as a formal program, the efforts of the CSOC, the Protective Services staff, the Library Police, other functional areas in the Library, and the Architect of the Capitol, have implemented protective measures which improved the situation identified in the MAP committee report. Examples include:

- Creation of additional Library regulations to address the security of buildings and collections
- Development of a Library materials marking reference document for use by the Library Police
- Installation of anti-theft tags into Library books and installation of anti-theft gates at reading room and building entry/exit points
- Installation of access control devices in Library buildings.

From 1991 through 1995, $8.3 million was expended to purchase additional security equipment and components, and to bring about changes in the policies and regulations governing collections security in the Library. In addition, the Library used existing Police officers to patrol the book stacks.

[1] In 1994, a Library Police Detective began reporting alleged losses and damage of Library materials to her supervisors in Protective Services and to senior managers in the Library. She also alleged that she was instructed to desist in these actions by her supervisors and that her persistence led to a disciplinary action to remove her from the Library. In findings reported by the Asistant Inspector General for Investigation, who investigated these allegations and reported to the Library on March 1, 1996 and April 17, 1996, the Assistant Inspector General concluded that "our investigation determined that Ms. Maceda's complaints about significant ongoing theft and mutilation of Library collection material were exaggerated and generally unsubstantiated." In addition, the Assistant Inspector General reported that "there is insufficient evidence to support Deborah Maceda's allegation that Library management retaliated against her for reporting her complaints about police management to Library management and to outside sources."

3.0 FINDINGS

3.1 Analysis of Collections Security

Collections security at the Library has been an evolving effort over the past two decades, and different groups within the Library have addressed the need to protect the collections in Library planning documents. The actual implementation of these plans has taken place in a slow and piecemeal fashion. The protections implemented have been individually effective, but tend to be more a reaction to address near-term needs than part of a long-term solution. The current implementation also lacks the synergy of a comprehensive solution. The Library has never developed a complete definition of the problem or threat they are working to counter, so the solutions have been applied in a layered fashion with the hope that all potential threats will be neutralized.

Analysis and planning for the improvement of Library security began with the Arthur Young study, and the formation of an Ad-hoc Collections Security Committee, as part of the MAP effort. In the MAP Report, under the subject Security, a memorandum (referenced as DOC 88) from the Ad-hoc Collections Security Committee, identified several near-term recommendations for improving collections security. These included:

- Conducting a security audit to identify security vulnerabilities
- Funding two police positions to staff a loading dock post
- Issuing revised and new Library regulations for identifying Library staff and the public with photo identification cards
- Creating secure storage areas for unprocessed Library materials
- Installing lockers at public entrances and reading rooms
- Installing electronic security equipment to implement access controls over the book stacks.

The Arthur Young study cited inconsistent performance of duties, poor morale, and lack of confidence in management as symptoms of problems in the Library police force, which relate directly to the security of the Library's collections.

Several of the recommendations of the MAP and Arthur Young efforts were implemented in the 1988-1992 timeframe. It is unclear why some of the recommendations were not acted upon more quickly. We suspect that the time required to complete the recommendations may have been extended by complex coordination requirements.

In response to increasing reports of lost or mutilated books and increasing scrutiny by Congress, the CSOC was formed. The CSOC reported directly to the Librarian to provide greater participation in security across the entire Library. This committee was led by a Special Assistant to the Librarian and included representatives from all service units with major security responsibilities. The CSOC developed a set of 46 specific initiatives to improve collections security. The CSOC plan laid out a four-year timeline for enhancing collections security with specific actions to implement the initiatives. For example, the first initiative, "Develop and publish revisions of LC regulations as necessary to support enhanced collections security," called for the systematic review and revision of Library regulations to include: an improved definition of the Library materials subject to specialized "collections security" protections, a definition of the authorized and unauthorized uses of Library materials, and a definition of access requirements for the book stacks. This initiative was originally planned for implementation in the 1992-1995 timeframe and involves the lengthy process of developing and approving new policy (in the form of regulations) or changes to existing policy. This effort was substantially completed by 1995. Appendix 2 summarizes these 46 security initiatives and identifies the progress to date and specific funding expenditures for each initiative.

Budgetary information on funds spent suggests that, of the 46 initiatives, no additional funding was requested for 12 initiatives. The remaining 34 initiatives did require some level of funding, and from this list, 19 activities were put forth in budget requests and funded.

On March 30, 1992, the Librarian announced the closing of the book stacks to the public and the implementation of procedures for controlling access to and protecting Library materials. Stack access was severely restricted to Library staff in May. In April and September, the CSOC contracted with an outside consultant for a "quick look" assessment of collections security. Consultants conducted site surveys of Library reading rooms and provided several recommendations.

From 1992 until mid-1995, planning and implementation of security initiatives continued, although implementation was constrained by funding. Again, in response to congressional pressures and scrutiny by the press, responsibility for Protective Services was turned over to the Chairman of the CSOC. Security implementation has continued, but priorities are usually established more as a reaction to the immediate needs of the Librarian, the Executive Committee, and collections managers, than in a proactive or systematic manner. The Librarian initiated policy and regulatory changes, enhanced physical security of collection storage areas, developed a book tagging and detection system, and implemented additional protective measures and procedures in reading rooms.

In August of 1995, the Library contracted with Computer Sciences Corporation (CSC) for a two-day security survey. The CSC survey amplified the need to control access to the book stacks through the use of locks and access control devices on stack

entry/exit points and limitation of the number of personnel authorized to be in the book stacks. The Library subsequently contracted with CSC to conduct four tasks:

1. A physical security site survey of Library facilities
2. A review of LC Police operations
3. The development of security awareness program materials
4. An inventory and condition check of parts of the general collection considered to be most at-risk from theft or mutilation.

CSC has delivered a draft physical security survey of the Landover facility, and in early 1996 briefed Protective Services on their concept for a Library security awareness program. The draft assessment of the Landover facility is detailed and provides a number of specific recommendations geared to improve site security. The training concept includes employee orientation and new employee training, and orientation for researchers and visitors, daily and periodic awareness training ideas, and concepts for recurring training of employees. The results of the CSC efforts will address several key needs related to both general and collections security in the Library, but it will not result in a full or useful definition of the threats to the collections and will not lay out a long-term strategy for the protection of the collections.

The Library's collections security approach is based primarily on their specific history of losses, and may not adequately represent the full spectrum of potential threats to the collections. As a result, they may not have adequately evaluated potential fire- or water-related vulnerabilities. From 1988 through 1995, both the Library staff and management have gained an understanding of the impacts due to the theft, loss, or destruction of Library materials. The Library has identified vulnerabilities in their protective strategy through limited internal assessments and through the conclusions of outside experts. With the exception of the water leak in the Jefferson Building, the Library has not suffered a major fire or water incident in recent times.

3.2 Decision-Making Process to Address Collections Security

Since 1988, ad-hoc decisions regarding security of the collections have been made, based on the following factors:

- The strategic planning derived from the recommendations developed by the Ad-hoc Collections Security Committee as part of the MAP, and further expanded by the CSOC
- Priorities established by the Librarian and senior Library Management, associated with near-term operational objectives and issues associated with Library operations

- Priorities established by individual collections managers for the control of their reading rooms and book stacks
- The concerns and priorities expressed by both Congress and the Joint Committee
- The concerns expressed by the Library research and academic communities
- Representations made by the press.

The Library has not developed a formal collections security program to guide day-to-day decision making. In lieu of this, Protective Services reacts to problems and issues as they are raised. Decision making related to security is currently based on limited regulatory guidance and the history of recent security problems, as opposed to a systematic risk assessment for either the Library, as a whole, or for the collections. The protective measures implemented (e.g., closing the book stacks) have had a positive individual benefit, but the implementation of these measures on an individual basis has not yielded a complete or interlocking solution (e.g., keeping all unauthorized persons out of the stacks). In the example of the book stack closing, the installation of electric locks on book stack doors is an effective measure when considered individually, but the lack of security awareness and cooperation on the part of the employees, who attempt to block the doors open, negates this protective measure. This decision process, which led to the installation of the electric locks, did not account for the reaction of Library staff, who viewed access to the stacks as one of the benefits of their job.

The Library makes great efforts to gain consensus for major decisions related to the collections. For example, the decision to close the book stacks received discussion internally among the Librarian, senior management, and the employee population (as represented by their unions); and externally within the professional Library community, including researchers. Before the book stacks were closed, the Librarian gathered evidence of directly-related threats to the stacks, a history of book losses, the opinion of key stakeholders, and the professional opinion of security experts. This need to develop consensus in the Library tends to lengthen the time required to implement security protections.

3.3 Development of a Collections Security Policy

The Strategic Plan implementation document drafted by CSOC has been the informal foundation for security enhancements since 1992. This plan provided 46 specific recommendations for security improvements organized in the five major security initiative areas, as follows:

- Security Policy Oversight
- The Collections Themselves

- Collections Storage and Processing Areas
- Reading Rooms/Areas
- Building Entrances/Exits/Loading Docks.

From 1991 to 1994, tangible advancements have been made in most of the major initiative areas. The development of security-related Library regulations has improved the precision of the Library's definition of collections security. The Library has not developed a single overarching policy or long-term strategy for the protection of the collections focused on both environmental controls and security protection standards.

3.4 Allocation of Resources for Collections Security

With the closing of the book stacks in 1992 and ongoing congressional pressure, expenditures for security were increased from approximately $200,000 in FY 1991 to over $1 million in FY 1992, as reflected in Library of Congress Executive Committee Meeting notes (see Exhibit 1). Expenditures for 1991 through 1996 were allocated among the five major security initiative areas as shown in Exhibit 2.

EXHIBIT 1

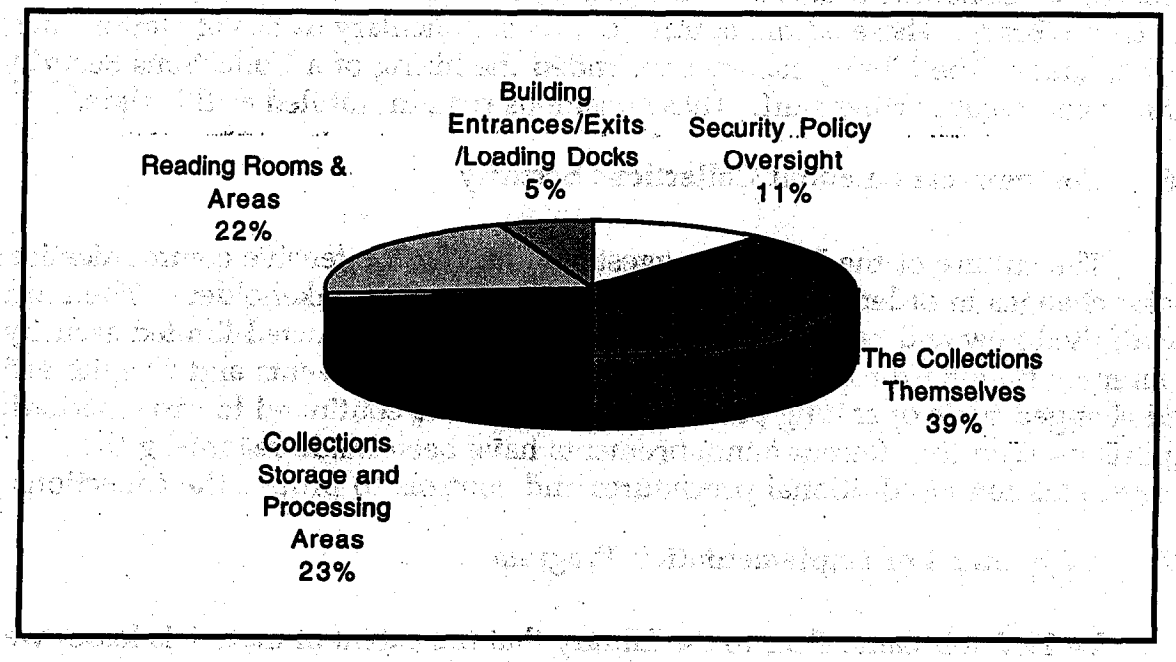
Expenditures for LC Collections Security Initiatives

Estimated Expenditures					Projected	FY 91-96	Requested
FY91	FY92	FY93	FY94	FY95	FY96	Total	FY97
$246K	$1,012K	$1,558K	$2,511K	$2,992K	$3,707K	$11,956K	$2,860

The "Security Policy Oversight" area received approximately 11 percent of the total funding, with the majority spent on the evaluation of the security program in 1992 and 1995 and the administration of the security initiatives to include staff time for administration and training. "The Collections Themselves" area received approximately 39 percent of the total funding, with the majority spent on development and enhancement of the Collections Control Facility, implementation of anti-theft tags and (KNOGO) gates, and securing of the delivery/charge stations serving points throughout the Library. The Collections Storage and Processing area received approximately 23 percent of the total funding with the majority spent on improving access controls over the book stacks and special collections areas, increased Police patrols of the book stacks, and implementation of physical security at the Landover facility. The "Reading Rooms & Areas" received approximately 22 percent of the total funding with the majority spent on improving reader registration systems, surveillance cameras, and security for Library exhibits. Finally, the "Building Entrances/Exits/Loading Docks" area received approximately 5 percent of the total funding with the majority spent on improving reader registration systems, surveillance cameras, and security for Library exhibits.

EXHIBIT 2

Allocation of LC Expenditures to Major Security Initiative Areas



The Library's allocation of resources for collections security also includes the use of Library managers and staff in direct and indirect ways. Initiative 2 called for the hiring of one or more full-time Collections security officers and was the most direct allocation of personnel to the collections security. The Library is awaiting the outcome of the CSC and this study before hiring additional personnel. The CSOC has worked extensively with Collections managers, the Law Library, and PSD to formulate Library policies related to the protection of the collections and to develop collections security procedures. PSD and Police personnel have devoted substantial staff time to the implementation of physical security measures in the buildings, book stacks, and reading rooms, and to the day-to-day implementation of security inspections and patrols designed to improve collections security.

3.5 Accountability and Responsibility for Collections Security

There is no direct accountability for the status of collections security in the Library. Responsibilities for collections security currently rest with the division chiefs and Library officers who have custody of Library materials, the Library personnel who make use of Library materials as part of their jobs, and the researchers who are granted access to Library materials under specific readership rules. The Protective Services organization currently has the responsibility to assist and support the development and maintenance of a security-controlled environment.

Library of Congress Regulation 214.20 formally assigns responsibility for security to the individual collections managers. This results in a somewhat uneven application of protective support between the different collection categories. Administrative initiatives related to collections security are spread across Collections, Constituent Services, Congressional Research Service, Copyright, and the Law Library. These administrative efforts are ancillary duties of staff in those service units. The Library has recommended the hiring of a Collections Security Officer and a supporting staff. These positions remain unfilled at this time.

3.6 Communication about Collections Security

The culture of the Library suggests the need for extensive communications of major changes in order to achieve consensus among the stakeholders. The Library has drafted new and revised policies and regulations, conducted limited security awareness training through "Security Awareness Week" events and Gazette articles, and changed basic operating procedures. *The Gazette* continued to carry periodic reports on security. Recent announcements have been made regarding the implementation of additional procedures and controls to protect the collections.

3.7 Adjustment of Implementation Program

By 1992 it became clear to the Library that the extent of materials losses was not fully understood, and would be difficult to track and identify. Even though the actual cause of these losses could not be specifically identified (e.g., mutilations versus deterioration), the Librarian responded by closing the stacks. During the past five years, other planned initiatives have been re-prioritized by the availability or lack of funding, and by the pressure placed on the Librarian by the Congress. Adjustments are vaguely evident in the funding profile for the past five years but are not documented in any organized form.

3.8 Tracking of Implementation

The chairman of the CSOC formally tracked progress against the 46 initiatives from 1992 through a revision to the Strategic Plan Implementation document in mid-1994. There is no evidence of formal or systematic tracking after 1994. The current progress of the Library against its implementation plan can be identified through a survey of the Library facilities and operations, but does not seem to be documented except through the correspondence of the Librarian to the Joint Committee. One outcome of the CSC effort should be the documentation of the current state of collections security implementation as of early 1996.

3.9 Performance Measurement

The Library does not have a performance measurement system or procedure in place for the assessment of implementation progress, so it is impossible to accurately determine the effectiveness of implemented security measures. A

recently released report from the Inspector General (IG) suggests that the evidence of unauthorized activity in the stacks has decreased dramatically. Looking to more subjective measures of performance, the Library Police indicate a reduction in the number of personnel in the stacks is linked to a reduction in the number of security events related to the Collections. The IG of the Library indicated that the number of arrests has declined since 1992, but this cannot be directly linked to the protection of the collections. One element of CSC's work is an assessment of the condition of 5,000 items. While this is a limited sample, it is designed as a narrow baseline against which the effectiveness of Collections Security can be measured in the future.

4.0 CONCLUSIONS

The Library's collections security initiatives have evolved from a series of recommendations dating from 1988. While comprehensive in their level of detail, many of the recommendations, as further expanded upon in the 1991 Collections Security Plan and the 1992 Strategic Plan, have not been fully funded or implemented. Although progress is being made, continuing re-prioritization in reaction to events, limitations in resources, and constraints on facilities have delayed the implementation of security initiatives.

4.1 Effectiveness of Decision Making Leading to Collections Security

The Library has initiated several planning processes to deal with security issues. Unfortunately, specific decisions regarding the implementation of security measures have been made, not based on an understanding of the long-term risk to the collections, but in reaction to near-term problems and pressures. The identification of collection security requirements is currently placed in the hands of the individual collections managers, who are undeniably expert in the curation of their collections, but not equipped with the threat or vulnerability data needed to prioritize their security needs. The Protective Services Division reacts and responds to the needs of collections managers with point solutions, as opposed to integrating the individual needs into a larger Library-wide collection security standard. The lack of an integrated approach to the collections security problem suggests a less-than-effective decision-making process related to this aspect of Library operations.

4.2 Effectiveness of the Process to Implement Collections Security

The Library approaches the management and allocation of resources to collections security in a reactive manner, with no one individual focused on collections security. Budgeted resources are allocated in reaction to identified problems or concerns (e.g., exhibits) against plans. The expenditure of $11 million over the past five years has brought about the improvement of collections security. Without an objective method of evaluating the performance of these implementation measures (i.e., a reduction in the rate of book losses), the overall effectiveness of the implementation process cannot be graded. Our experience in

evaluating other organizations for security suggests that a reactive, piecemeal implementation of security measures without the benefit of understanding the full threat spectrum has led to stovepipe solutions. Such solutions might meet a specific (narrow) objective but do not contribute to the overall or long-term protection of the Library.

Although the Library has developed plans for the implementation of collections security, these plans have not been followed through to completion. Several initiatives still remain open. Although the Collections Security Plan provides the overall strategy for security of the collections and continues to be used as the budget/expenditure template, additional priorities have been drawn into the process, and progress can no longer be tracked to the plan. Adjustments to this plan are not documented.

Collections security plans developed to date do not incorporate performance measures or effectiveness criteria. The Library is attempting to create a baseline on the condition of the collections through a contract with CSC to document the condition of 5,000 items. However, CSC is not under contract to develop performance criteria.

4.3 Significance of the Results

The problems and issues associated with collections security and the effectiveness of security measures have been highly visible to Congress and the press over the last three years. Despite its ad-hoc nature, the Collections Security Initiative has reduced access to the book stacks which, in turn, has reduced the size of the potential threat to the collections from the public. The approach to collections security suggests that the Library does not fully understand the full extent of potential threats to the collections and must provide blanket-protections as opposed to specific protections to the collections. A more detailed analysis of both the threats to and the vulnerabilities of the collections must be accomplished to allow the Library to move toward more specific and leveraged solutions for collections security.

The state of collections security can currently be measured in terms of subjective effects (the report of problems), but this does not directly allow for grading the effectiveness of security programs or the use of funds for security implementation. The sheer size of the Library collections may preclude any absolute measurement of security effectiveness with respect to the number of Library materials lost or damaged, or the rate at which Library materials are lost or damaged. The Library should develop standards by which the security implementation can be judged and actively track progress against these standards.

APPENDIX 1
EVENTS RELATED TO COLLECTIONS SECURITY

1974—Consultant study identifies concerns for security of the Collections
1983—Internal Library report raises concerns for security of the Collections
1987—September, Billington appointed Librarian
1988—Arthur Young commissioned to study alternative operational processes to include Police Operations
1988—October 24, "Report and Recommendations on Security Issues" from Ad-Hoc Collections Security Committee
1988—November 18, "The Report of the Management and Planning Committee to the Librarian of Congress"
1991—Librarian appoints Collections Security Oversight Committee
1992—Arrests made of three individuals stealing Library Materials
1992—March 30, Librarian orders the closing of the stacks
1992—Outside consultant Steve Kellor hired—recommendations made as to security of the Reading Rooms
1992—The Collections Security Oversight Committee issues a Collections Security plan with 46 initiatives as a response to the Library Strategic Plan
1993—June 15, Librarian testifies before Joint Committee on the Library on security proposals and policies
1995—August 3, new allegations of theft and mutilations reported to Congress by an LOC employee
1995—August 16, CSC hired to do a two-day security assessment
1995—October, CSC contracted to conduct four tasks regarding security at the LC
1995—November 29, Librarian testifies before Joint Committee on the Library on the state of collections security at the Library
1996—January 30, Associate Librarian Tabb announces a reader registration system to open February 12
1996—June, CSC effort expected to be completed

APPENDIX 2
SECURITY INITIATIVES FROM THE "PLAN FOR ENHANCING COLLECTIONS SECURITY"

No.	Title and Description	Progress made as of 1995	Specified Funding 1991-1996
SECURITY POLICY OVERSIGHT			
1	**LC policies and regulations:** Develop and publish revisions to LC regulations as necessary to support enhanced collections security.	The Library has researched and published several LCRs to support the definition of the Collections and protection of Library materials.	$ 0.0
2	**Collections security officers:** Study the potential benefits of one or more full-time collections security officers in the Library and, if justified, establish and fill these positions.	The Library has not hired a collections security officer to date.	$ 0.0
3	**Evaluation of security program:** Conduct an evaluation of the effectiveness of each of the security initiatives implemented within the security enhancement programs. Monitor the results of implementing each initiative and make appropriate adjustments.	The Library has hired Computer Sciences Corporation to provide an initial assessment of physical security, security training, etc. PSD has informally implemented and monitored initiatives, and made adjustments due to funding realities.	$ 339,060 for external Contracting $1,031,805 for Internal Operations
THE COLLECTIONS THEMSELVES			
4	**Piece level control: marking library materials (policy):** Establish policies and procedures for the marking of materials in Library of Congress Collections.	The Library has developed policy support for the marking of Library materials.	$ 0.0
5	**Piece level control: marking library materials (implementation):** Implement policies and procedures for the marking of materials in Library of Congress Collections.	The Library has initiated the marking of Library materials and tagging of the high risk materials as part of the rebinding process.	$ 24,800
6	**Piece level inventory control tracking through CCF:** Develop and implement an ongoing program to ensure that each piece in the Library's Collections appropriate for PIN (bar code) tracking through the Collections Control Facility is effectively tracked through this system.	The Library has improved tracking through CCF and increased the percentage of Library material for which the status and location are known.	$2,390,751

7	**Piece level inventory control: anti-theft devices:** Develop and implement an ongoing program to ensure that each piece in the Library's Collections identified as needing an anti-theft detection device (target) receives one.	The Library's installation of the theft detection gates and improved reading room procedures has created a deterrent posture at the Library.	$1,453,912
8	**Secured delivery/charge stations:** Ensure that collection items ordered by staff are delivered to secure delivery points where the staff member may use or copy pages from them or, if they are to be removed from the delivery station, will properly charge them.	The Library has tightened delivery and charging procedures and secured delivery stations.	$ 639,577
9	**Use of surrogates when available:** Develop and implement policies to serve patrons surrogates in lieu of original materials and increase creation of surrogate materials of Library collection items.	The Library has instituted policies and procedures to develop and deliver surrogates where available.	$ 405,680
10	**Staffed photocopy centers: special collections:** Develop and implement programs to assist patrons in photocopying of Library materials.	The Library has tightened procedures for photocopying of Library materials.	$ 0.0
11	**Staffed photocopy centers: books/serials:** Plan for, and provide, staff intervention to ensure that collection items inappropriate for photocopying because of format or physical condition will not be subject to abuse, damage, or loss.	The Library has tightened procedures for photocopying of Library materials.	$ 0.0
12	**Replacement program:** Develop and implement a program to replace those items lost, stolen, or mutilated, where such replacement is deemed necessary.	Replacement of lost books has not been funded.	$ 0.0
13	**Revision and enforcement of loan policies:** In support of enhanced security, develop necessary revisions of lending policies, publish them in revised lending regulations (LCR's 900-921), and ensure that they are enforced.	Lending policies have been revised and tightened.	$ 0.0
14	**Staff training, collections:** Develop and implement a staff security training program which incorporates preservation handling of Library materials.	The Library has initiated limited staff training for collections.	$ 0.0 Covered under initiatives administration

COLLECTIONS STORAGE AND PROCESSING AREAS

15	**Electronic access to and within general stacks: installation and operation:** Design, install, and operate an electronic access system for the general collections stacks in the Jefferson and Adams buildings.	Electronic locks and access devices have been installed to control authorized access to the book stacks.	$ 53,497
16	**Access to and within stacks and collections storage areas (policy):** Develop and implement comprehensive policies and procedures regarding access to stacks and collections storage areas by staff members, congressional staff, and the public.	The Library has developed policies and procedures for the control of access to the book stacks.	$1,481,739

17	**Surveillance cameras, collections storage areas:** Identify specific areas within collections storage areas which require an additional level of security provided by surveillance cameras, and install the necessary cameras.	The Library has installed surveillance cameras at key locations.	$59,140
18	**Police patrols:** Provide an adequate number of uniformed police to patrol collections storage areas and reading rooms regularly.	The Library has initiated regular patrols of the book stacks and other areas.	$ 287,000
19	**Electronic access to and within special collections stacks and storage areas (installation):** Design and install an electronic access system for special collections stacks and storage areas.	The Library has implemented additional sensors and cameras within the special collections areas.	$ 356,228
20	**Security within secured areas:** Identify specific areas within collections storage areas which require an additional level of security provided by caging or other means of preventing unauthorized access, and install the necessary cages.	The Library has installed physical barriers in key book stack areas.	$ 49,655
21	**Staff training, collections storage:** Create and implement a staff training program to sensitize collections management staff to security and preservation handling needs of Collections.	The Library has initiated limited staff training for Collections.	$ 0.0 Covered under initiatives administration
22	**Landover Center Security:** Upgrade security at Landover Center Annex.	The Library installed locks and electronic security systems into the Landover facility to improve facility security.	$ 568,342
23	**Security of in-process materials (policy):** Develop policies and procedures for safeguarding in-process materials.	The Library has initiated informal policies and procedures for protecting materials when in-process.	$1,200
24	**Security of in-process materials (implementation):** Implement policies and procedures for safeguarding in-process materials.	None.	$ 0.0

READING ROOMS/AREAS

25	**Reader registration:** Implement a Library-wide reader registration program.	The Library has initiated implementation of reader identification recording systems in the reading rooms.	$ 902,615
26	**Surveillance cameras: reading rooms/areas:** Install and employ security surveillance cameras in reading rooms/areas where identified as critical.	The Library has implemented surveillance cameras and monitor capability in reading rooms.	$1,114,887
27	**Police presence:** Provide an adequate number of uniformed police to patrol reading rooms regularly.	Library Police provide limited (as available) patrol of the reading rooms.	$ 0.0 Part of stack patrols

28	**Use of library materials in designated areas of reading rooms:** Evaluate and establish designated areas in reading rooms and reference areas where LC collection materials will be served.	The Library has established specific locations as needed to serve and maintain view over readers.	$ 0.0
29	**Assigned seating:** Evaluate and implement designated seating areas in reading rooms and reference areas.	The Library has established assigned seating in several reading rooms based on rarity of material served.	$ 0.0
30	**Limitation of personal materials brought into reading rooms:** Establish, publish, and enforce limitations on personal materials that may be brought into reading rooms.	The Library has initiated procedures and processes to limit the materials carried into reading rooms by readers.	$ 0.0
31	**Cloakrooms/lockers for personal materials:** Provide lockers and/or cloakrooms for readers' personal property.	The Library has implemented limited cloakroom and reader storage space.	$132,320
32	**Reconfiguration of furniture and reader areas to provide clear sight lines:** Reconfigure space and furniture to maximize the ability of reading room staff to observe readers' activities.	The Library has reorganized reading room areas to provide better visibility.	$29,779
33	**Limitation of hours/services when too few staff are available:** Assess and develop a plan to reduce hours or services when staffing levels are not adequate to address the needs of security.	The Library has considered the reduction of reading room hours.	$ 0.0
34	**Reading room duties in subject/format specialists' position descriptions:** Wherever applicable, update subject/format specialists' position descriptions to include reader service duties performed in reading rooms.	The Library has evaluated the revision of position descriptions.	$ 0.0
35	**Theft detection gates in reading rooms/areas:** Continue phased installation of existing theft detection gates and pursue identification/future installation of state-of-the-art theft detectors at each exit where Library materials are used, and any area where materials are in transit.	The Library has implemented theft detection gates in reading rooms.	$ 0.0 Covered in Building funding
36	**Inspection of materials before/after use:** Evaluate the effectiveness of piece-level review, and implement programs to conduct piece-level review in Library reading rooms.	The Library has initiated the review of materials before and after use.	$ 0.0
37	**Staff training, reading rooms/areas:** Develop and implement a training program for processing, reference, and research staff to heighten their awareness of the role they play in preserving and protecting Library collections.	The Library has initiated limited staff training for collections.	$ 0.0 Covered under initiatives administration

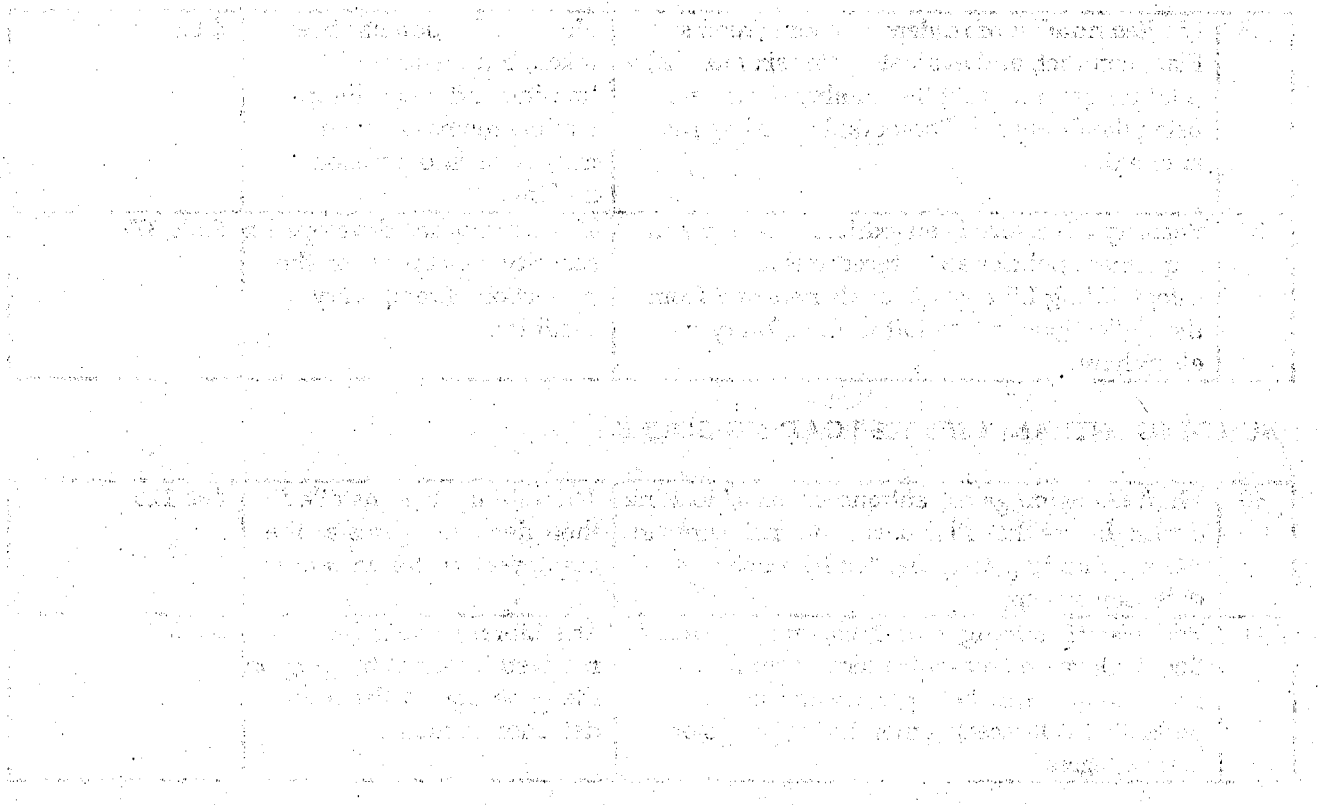
38	**Limited number of readers in reading rooms:** Plan, conduct, and evaluate (after six months) a pilot program to limit the number of readers using the Prints and Photographs reading room at one time.	No formal action has been taken, but the idea of limiting and controlling reading rooms has been integrated into decision making.	$ 0.0
39	**Security of materials on exhibit:** Develop and implement policies and procedures for safeguarding Library materials removed from the Collections for exhibit in the Library or elsewhere.	The Library has developed a security capability for the protection of temporary exhibits.	$566,377

BUILDING ENTRANCES/EXITS/LOADING DOCKS

40	**Theft detection gates, entrances/ exits/ loading docks:** Insure that all means of normal egress in Library Building are protected by a book detection system.	The Library has installed theft detection gates at the employee/visitor entrances.	$68,125
41	**Police/staff training, entrances/ exits/ loading docks:** Develop and implement a training program to ensure both police and staff understand all facets of monitoring points of ingress/egress.	The Library Police have received informal training on the operation of the theft detection systems.	$ 0.0

COMMUNICATIONS AND PUBLICITY

42	**The Congress:** Develop and implement effective methods for communicating with the Congress, particularly with members of the Library Oversight Committees, about collections security measures.	The Library has developed processes to communicate collections security activities to Congress.	$ 0.0
43	**Labor organizations:** Develop and implement effective methods for communicating with the labor organizations about collections security measures.	The Library has worked with labor unions to stress the importance of collections security.	$ 0.0
44	**Library staff:** Develop and implement effective methods for communicating with the Library staff about collections security measures.	The Library has developed processes to communicate and publicize collections security activities.	$ 0.0
45	**Library constituents:** Develop and implement effective methods for communicating with the library constituents about collections security measures.	The Library has published reader and researcher notices related to collections security activities.	$ 0.0
46	**The press:** Develop and implement effective methods for communicating with the press and others about collections security measures.	The Library has issued press releases related to collections security activities.	$ 0.0



MANAGEMENT REVIEW OF THE LIBRARY OF CONGRESS

COMPETITIVE SELECTION PROCESS CASE STUDY

Prepared for

General Accounting Office

by

Booz·Allen & Hamilton

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1.0 BACKGROUND

In November 1975, an administrative complaint was filed against the Library of Congress which asserted that the Library practiced discriminatory employment practices that denied African-American employees opportunities for promotion and advancement into administrative or professional positions. In 1981, the Library concluded that discrimination did not exist. In appealing this decision, African-American employees filed a class action suit in February 1982 and asserted that they were discriminated against in various ways resulting in their inability to advance within the Library's organization. The class, open to those individuals employed by the Library of Congress on or after November 25, 1975, was certified by the District Court for the District of Columbia on December 13, 1988.

Finally, on August 14, 1992, Judge Norma Holloway Johnson of the U. S. District Court for the District of Columbia concluded in a Memorandum Opinion in the class action case *Howard R.L. Cook et al. v. James H. Billington* that the Library's competitive selection system for hiring and promotions was so subjective as to lend itself to discriminatory effects and that its process for measuring qualifications was infused throughout with subjectivity. On the basis of this opinion, the Library pursued a settlement with the class, and entered into a settlement agreement with the class. Judge Johnson gave preliminary approval of the settlement on August 2, 1994. Final approval of the agreement was granted by Judge Johnson on September 22, 1995.[1]

Requirements of the settlement include:

- Changes in employment policies at the Library, including a revision to the competitive selection process
- Promotions (40) and reassignments (up to 10) for a number of the class members
- Monetary relief to the class totaling $8.5 million, exclusive of attorney fees

[1] Under the terms of the Settlement Agreement, however, the settlement is not fully implemented until "any and all appeals from any objections to the Agreement have been dismissed, a final appellate decision upholding approval has been rendered, or the time for taking an appeal has expired without an appeal having been taken." Settlement Agreement, Section I.1.D. The time for appeals expired at midnight on November 21, 1995, and five appeals were filed by the deadline.

- EEO, workforce diversity, and unlawful stereotyping training for Library supervisors

- The elimination of any discriminatory nonjob-related criteria for noncompetitive personnel actions.

As part of the settlement, the court reserves jurisdiction for 4 years to ensure compliance with the settlement. In addition, the Library is required to review the results of its employment decisions quarterly and provide plaintiffs' counsel with statistics demonstrating whether its selection procedures have resulted in disparate impact on African-Americans.

In light of the Court's findings and settlement agreement, the Office of the Librarian and the Human Resources Service Unit have placed much emphasis on establishing a new competitive selection process that is consistent with the Court's requirements of compliance with the *EEOC's Uniform Guidelines on Employee Selection Procedures*. This case study addresses the management decisions, resource allocations, and timelines established and used to implement the new competitive selection process.

2.0. HISTORY

2.1 Origin of Current Competitive Selection Process

The competitive selection process was revised and implemented in January 1993 as a direct result of the August 14, 1992, U.S. District Court opinion which found that the Library's competitive selection and promotion practices were discriminatory to African-Americans. In response to the Court's opinion, the Librarian directed the Human Resources Director to correct those aspects of the Library's competitive selection process that were found to be legally deficient by the Court. The Human Resources Directorate solicited input from the service units and developed a plan for ensuring equity in the competitive selection process which included specific actions that should be taken to address the concerns of the Court. The actions to be taken were reviewed by Library legal counsel who determined that they would provide a legal foundation for the competitive selection process. The proposal of the new process was also reviewed by Edmund Cooke, Jr., an attorney at Epstein Becker & Green, P.C., to determine its legal sufficiency "to withstand a reasonable challenge. The implementation of job analysis[2] efforts on January 21, 1993, by the Human Resources Management Team was the kick-off of the new competitive selection process.

[2] Job analyses provide the primary basis for defining the content of a job.

2.2 Major Events in the Competitive Selection Process

The kick-off of the new competitive selection process in January 1993 coincided with several other efforts undertaken by the Library in relation to the competitive selection process:

- On August 25, 1992, and again on September 8, 1992, the Management Team of the Library provided input to the Director of Human Resources and Affirmative Action Officer regarding a draft of "Actions to Ensure Equity in the Competitive Selection Process."

- In the fall of 1992, a Human Resources Working Group was established to include 32 employees from throughout the Library, in part to address tasks related to making the competitive selection process legal and report to the Management Team by January 31, 1993. They provided their report on January 29, 1993.

- In October 1992, the Librarian created the Human Resources Service Unit, centralizing human resources into one service unit, and assigning an Acting Associate Librarian for Human Resources who would sit on the management team.

- On November 23, 1992, the Associate Librarian for Human Resources contracted with Morrison Associates to improve the Library's Human Resources policies and procedures.

- In December 1992, the Library solicited advice from Edmund Cooke, Jr., attorney, regarding the legal sufficiency of the proposed competitive selection process. He reported his findings on January 8, 1993.

The implementation of the revised competitive selection process took place over the next year, during which time the Library began job analysis training, training on interview techniques, and publishing HR Directives about selection and vacancy announcements. On August 2, 1994, the Library and the plaintiffs reached agreement on a settlement that was given preliminary approval by the U.S. District Court. On January 3, 1995, the Human Resources Service Unit published merit selection plans for bargaining and nonbargaining unit positions, which provided the steps to be taken in the competitive selection of employees for positions.

A Management Retreat on November 5-7, 1994 identified five primary areas of concern related to human resources services, one of which was ensuring fairness and equity in employment practices. This retreat was the impetus for an inservice day for all Human Resources employees, held on March 23, 1995, in part to further address issues related to the competitive selection process. There were 103 participants from

Human Resources who attended the inservice day and brainstormed ideas of how to address the concerns enumerated at the Management Retreat.

The inservice day resulted in the formation of four task groups to improve specific aspects of human resources services, one of which was the improvement of the timeliness and efficiency of the competitive selection process. The timeliness and inefficiency of the CSP was a recurring subject at the Management Retreat and HR Inservice Day. The task group for the improvement of the competitive selection process provided a report in June 1995 which included:

- Recommendations
- A projected timeline for implementing the recommendations
- Projections of the length of time each stage of the competitive selection process takes and would take if the Library implemented their recommendations
- Background materials describing the issues explored, the methodologies employed, and current information and results about the competitive selection process.

The recommendations from the June 1995 report were incorporated into an implementation plan. On September 22, 1995, Judge Johnson of the U.S. District Court gave her final approval of the settlement agreement.

2.3 Results of the Revised Competitive Selection Process

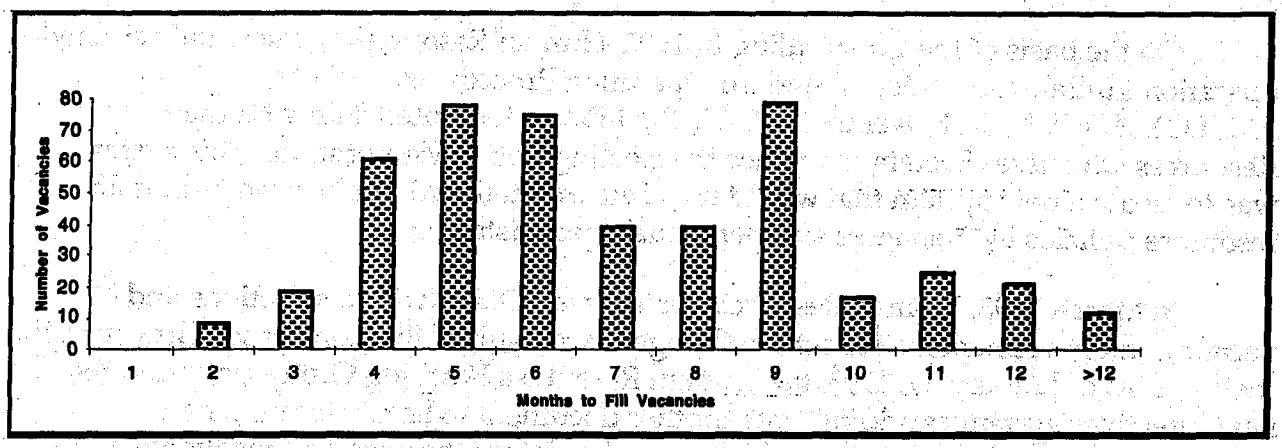
As of May 1995, the Library indicated that its diversity numbers have significantly improved. Exhibit 1 shows a comparison of the profiles of new hires between the old and new systems.

EXHIBIT 1
New Hire Profile Comparison

Old System (May 1991 - November 1992)					New System (November 1993 - May 1995)				
White	Asian	Hispanic	American Indian	African-American	White	Asian	Hispanic	American Indian	African-American
72%	6%	2%	0%	20%	60%	6%	1.5%	1.5%	31%
Total Hires: 169					Total Hires: 77				

A June 1995 report from the Task Group to "Improve the Competitive Selection Process Now!" states that the competitive selection process has "resulted in dramatic improvements in the racial/ethnic hiring profile for professional/administrative positions". However, the competitive selection process is viewed by many, including service unit managers and human resources staff, as lengthy and cumbersome. In our review of all vacancies posted during FY1993-1995, the median number of calendar days to fill vacancies was 177 days. Few vacancies (6 percent) were filled between 1 and 3 months. Most of the vacancies (78 percent) were filled within 4 to 9 months. Some vacancies (16 percent) took 10 months or more. Exhibit 2 shows the distribution of days per vacancy.

EXHIBIT 2
Time Required to Fill Vacancies Posted Between FY 1993-1995



The competitive selection process contains more than 30 steps and decision points, with five affirmative action reviews, which make the process cumbersome. Considerable time and resources have been spent within the Library analyzing the revised process and making recommendations for improvements and changes to reduce the length of time it takes to hire employees under the new process.

3.0 FINDINGS

3.1 Decision Making Process to Address Situation

The competitive selection process was revised in draft form by the Director of Human Resources and the Affirmative Action Officer in August 1992. The management team provided comment on the August draft, and it was revised further by the Director of Human Resources and Affirmative Action Officer. Decisions were made by the Director of Human Resources at the time in conjunction with the Affirmative Action Officer and the management team. Further decisions about the competitive selection process were based on input from the Human Resources Management Team, the Human Resources Working Group, and the 2 independent contractors hired to evaluate

the process. The Human Resources Working Group consisted of 32 representatives from throughout the Library, thus involving the service units, managers, unions, and employees in the revision of the competitive selection process.

After the implementation of the competitive selection process, many others have been involved in addressing issues related to the process. The competitive selection process was a major issue discussed at a Management Retreat in November 1994, which led to a Human Resources Inservice Day to address the results of the Management Retreat. This latter series of meetings resulted in the formation of four task groups, one of which studied and reported back on improvements to the competitive selection process. An implementation plan for their recommendations was developed for beginning implementation in 1995. The recommendations are currently being implemented and no results are available as yet.

3.2 Development of Policy

On the basis of the Court ruling in 1992, Human Resources revised and reissued operation guidelines entitled "Standard Operating Procedures: MERIT EMPLOYMENT." On November 5, 1992, the Library instituted a new Human Resources Directives System to replace the existing Policy Memoranda. This system was to create a new system that would mandate the standard application of human resources policies by managers and personnel specialists.

In March 1993, Human Resources issued new Directives on selections and vacancy announcements to reflect the changes as a result of the Cook case. However, in their Report of January 29, 1993, the Human Resources Working Group criticized the new directives system as adding "yet another document to be consulted when contemplating or taking a personnel action and point up the need to consolidate all such information into one document." The Working Group went on to make several recommendations to improve the new directives.

Several procedural manuals and guidance were produced and provided to the workforce by Human Resources on the competitive selection process as well.

- On May 17, 1993, "Job Analysis for Selection Procedures" was produced and provided to the service unit managers and human resources personnel as a resource for use in the selection process.

- On January 3, 1995, Human Resources issued a Merit Selection Plan for Bargaining Unit Positions as guidance for selections to Library employees and managers to implement the policies and procedures requirements contained in the Merit Employment Article of AFSCME Local 2910, AFSCME Local 2477, and the Congressional Research Employees Association (CREA).

- Also on January 3, 1995, Human Resources issued the Merit Selection Plan for Nonbargaining Unit Positions to implement the policies and procedures contained in Library of Congress Regulation 2010-14, "Merit Selection and Employment."

3.3 Allocation of Resources for the Competitive Selection Process

The Library has dedicated many resources to develop, analyze, implement and improve the competitive selection process. Throughout FY 1993-1995. Human Resources Services funded 24 contracts to obtain services related to the revised competitive selection process. These contracts and the dollar amounts are listed in Exhibit 3. These do not include resources expended by other service units for related purposes.

In September 1995, the Associate Librarian for Human Resources developed cost estimates for addressing the Cook Case. The estimate included costs for fiscal years 1995, 1996 and 1997. The estimates for FY 1996 and 1997 are shown in Exhibit 4. These estimates describe anticipated types of expenses but do not, for the most part, provide expected costs.

In addition to the previous costs, the Library has dedicated many of its staff resources to the competitive selection process. Thirty-two employees spent some of their time on the Human Resources Working Group. Human resources employees attended the Inservice Day and employees from throughout the Library participated in the resulting 4 task groups. The time spent by these employees in these activities is in addition to the typical time spent by HR employees carrying out the selection function. Thus, the Library has invested substantial time and money in the competitive selection process.

EXHIBIT 3
Competitive Selection Process Contracts

Contracts	Contract Amount
FY 1995	
Job Analysis of 10 Series (OPM)	$371,200
Processing of Applications using MARS[3] (OPM)	19,100
Review of Applications for Minimum Qualifications (OPM)	99,350
Review Library's Competitive Selection Process (OPM)*	146,600
Technical Support to Implement the Posting and Applicant Tracking System	76,320
Job Analysis Training Program for Staffing Specialists	13,950
Job Analysis and Crediting Plan Packages	4,275
Interviewing Techniques Training for Library Managers	6,500
Service on Rating Panels	5,800
Development of Recruitment Strategy Model	10,000
Review and Analysis of Proposed Competitive Selections	99,600
Diversity Training for Managers and Supervisors*	114,720
Contracts Total for FY 1995:	**$967,415**
FY 1994	
Job Analysis of 1 Series (OPM)	67,000
Job Analysis of Individual Positions	134,984
Service on Rating Panels	9,600
Develop Positions Descriptions/Performance Requirements and Standards	29,500
Interviewing Techniques Training for Library Managers	1,250
Validate Basic Skills Test/Develop Structured Interview Protocol for Clerical, Secretarial, and Administrative Selections	43,945
Review and Analysis of Proposed Competitive Selections	124,200
Contracts Total for FY 1994:	**$410,479**
FY 1993	
Job Analysis of Individual Positions	213,398
Assist Improvement of HR Policies/Procedures	48,000
Interviewing Techniques Training for Library Managers	500
Update Statistical Data for Multi-year Affirmative Action Plan/Analyze Various Library Personnel Actions	188,845
Review and Analysis of Proposed Competitive Selections	74,650
Contracts Total for FY 1993:	**$525,393**

*Requirement of the Cook Settlement

[3] Microcomputer Assisted Rating System.

EXHIBIT 4
Estimated Costs for Addressing the Cook Case Settlement

ACTION	FISCAL 96	FISCAL 97
Contract with OPM to conduct review of LC's competitive selections to professional and administrative positions	Additional funds to cover analysis and recommendations for corrective action	May consist of variable costs described under fiscal 96
Compile data on professional and administrative competitive selections and provide to Plaintiffs' Counsel	HRS staff time	HRS staff time
Compile data on professional and non-competitive actions and provide to Plaintiffs' Counsel	Temporary personnel services (approx. $15,000) needed to recode data appearing in National Finance Center (NFC) database; HRS staff time	HRS staff time
Conduct statistical analyses of professional and administrative competitive selections and provide to Plaintiffs' Counsel	Affirmative Action and Special Programs Office (AASPO) Statistician time	AASPO Statistician time
Issue directive on non-competitive personnel action		
Train supervisors in Equal Employment Opportunity; managing diverse workforce; changes in competitive selection process and non-competitive personnel actions	Additional training costs	Additional costs
Promote 40 class members (no more than 10 of whom are retirees)	Service units responsible for funding promotions from existing budgets. Promotions effective 60 days from final settlement agreement; partial year impact in fiscal 96. Estimated average increase from GS-11/5 to GS-12/3 ($6,200 for salaries and benefits)	Full year impact of promotions on service units' budgets
Train competitive selection participants (e.g., panel members, selection officials) in appropriate procedures	Training underway and ongoing; estimated $2,000 for interview training	Training underway and ongoing; estimated $2,000 for interview training.

3.4 Accountability and Responsibility for the Competitive Selection Process

In August 1992, the Librarian of Congress directed the Human Resources Director to correct those aspects of the Library's competitive selection process that were found to be legally deficient by the Court. The Human Resources Directorate solicited input from the service units and developed a plan for ensuring equity in the competitive selection process which included specific actions that should be taken to address the concerns of the court. The actions to be taken were reviewed by Library legal counsel who determined that they would provide a legal foundation for the competitive selection process. The proposal of the new process was also reviewed by Edmund Cooke, Jr., an attorney at Epstein Becker & Green, P.C., to determine if its legal sufficiency was able "to withstand a reasonable challenge."

The Librarian, in his testimony on the Library of Congress Personnel Policies and Procedures, March 18, 1993, expressed his commitment to implementing the procedures to eliminate bias in the process. In addition, the Librarian instituted a new performance appraisal system for senior-level managers, designed to hold them accountable for adherence to EEO/AA policies and plans. Although the Librarian, as the head of the Library, holds overall responsibility for the competitive selection process and its results, the service unit senior managers are also held accountable for their part in the hiring process. Senior managers must provide subject matter experts, job descriptions, interview questions, and conduct interviews in order to be able to hire against their vacancies.

3.5 Communication about the Competitive Selection Process

The Librarian provided information regarding organizational changes related to the Human Resources area in a Special Announcement from the Office of the Librarian, No. 92-19, dated October 14, 1992. Employees of the Library were provided information about the competitive selection process via *Gazette* articles that discussed the court finding and the new merit selection process, the testimony before Congress, and initiatives underway to reach a settlement. Managers and employees who are involved in the hiring and selection of employees (for example, subject matter experts and selecting officials) were provided training on job analysis and interviewing techniques beginning in January 1993.

3.6 Adjustment of the Competitive Selection Process

As a result of the Management Retreat in November 1994 and a Human Resources Services Inservice Day in March 1995, an HRS Task Group was formed to study "Improving the Competitive Selection Process Now!" The task force made several recommendations for improving the process, which addressed 6 key areas:

- Planning—formulating hiring plans, workable operational strategies, assessing progress toward achievement of agency goals
- Decentralization—decentralizing aspects of the process that do not sacrifice legal defensibility to the service units
- Resources—making the staffing function a higher priority with HRS and reallocating staff to this function
- Technology—automation to reduce operational inefficiencies and improve communications

- Process—streamlining the process by eliminating unnecessary steps
- Development/Training—training the HR staff to lessen reliance on external contractors.

The task group provided these recommendations as a method for significantly reducing the average amount of time required for filling positions at the Library which was estimated at 196 calendar days or 152 working days based on a sample of 20 percent of jobs filled from November 1994 to June 1995. The task group estimated a 30 percent decrease in the time required to hire under the competitive selection process. Implementation of these recommendations began in late 1995 and is not yet complete. Any recommendations for changes to the process must be evaluated and approved by the Office of General Counsel to ensure that the requirements of Appendix B of the Cook Settlement are being met.[4]

Finally, the Human Resources Services Unit has piloted the use of the Microcomputer Assisted Rating System (MARS) for Library Technician (1411) series positions not included under the Cook Settlement Agreement to facilitate the job posting, job analysis, and ratings panels steps of the competitive selection process. The Library would like to further pilot the MARS process but will need to obtain plaintiff's counsel's agreement to do so on any positions included in the Settlement.

3.7 Tracking of the Process Implementation

The monitoring of the competitive selection process is a part of the Cook Settlement Agreement. The Library must conduct five affirmative action reviews at different points of the process. In addition, the Library must provide quarterly reports to Plaintiff's Counsel that assess the Library's compliance with the terms of the Settlement Agreement. The Settlement Agreement also requires that the Library maintain data regarding every selection made under the new competitive selection process in addition to the recordkeeping requirements of the *Uniform Guidelines*. These reporting and data requirements must begin no later than the effective date of the agreement, which had not become effective as of March 11, 1996. The Library keeps this data in their Posting and Applicant Tracking System (PATS) and in their Personnel and Payroll Database through the U.S. Department of Agriculture's National Finance Center (NFC).

[4] The Cook Settlement Agreement requires that the Library adhere to the CSP as is described in Appendix B of the Settlement Agreement. Any of the task force recommendations or other changes that are implemented must be evaluated and approved by the Office of General Counsel to ensure they do not violate the requirements of the Cook Settlement Appendix B.

3.8 Performance Measurement

The performance of the Library in its competitive selection process must be reviewed by the Office of Personnel Management (OPM). This review must consist of a determination of whether disparate impact exists for African-Americans under the Library's selection system. The reason for any disparate impact shall be analyzed and the Library shall take appropriate corrective action in accordance with the EEOC Uniform Guidelines.

4.0 CONCLUSIONS

4.1 Effectiveness of Decision Making Leading to the Competitive Selection Process

The problem was defined by the U.S. District Court before the Library took action despite years of accusations and complaints. Once the Library took action, participants from throughout the Library were involved, including the service units, legal counsel, and human resources staff, to make changes to the competitive selection process to meet the legal issues. In addition, 2 outside contractors with relevant expertise were hired to provide guidance on selection procedures and compliance with the Court ruling. The involvement of these experts and Library employees shows a concerted effort on the part of the Library to obtain decision making guidance from selection experts and customers and users of the selection process. The Librarian of Congress delegated the authority of improving the competitive selection process to the Associate Librarian for Human Resources and the Human Resources Working Group. However, the concentration of the involvement was to improve the existing process rather than have a new one completely developed by the experts. The decision making authority was widely dispersed, making no one person completely responsible for the changes.

Despite the involvement of many in the improvement of the selection process, there were and continue to be ongoing problems with the selection process, particularly the length of time (typically 5 to 6 months) it takes to hire employees. Several recent studies were conducted internally to provide recommendations for improving the competitive selection process. Implementation of a major process often takes time and includes some process improvements over the course of the changes. Over the past 3 years, the process has been studied frequently with the same recommendations made consistently and yet the changes are just beginning to be made. The Library has an action plan for making the improvements beginning in 1995, and it remains to be seen if it will fully implement those changes.

In addition, the critical factor of resource requirements was omitted from the decision making process related to the revision of the competitive selection process. In 1995, there were some estimates of resource requirements for implementing the new process. However, there were no indications of resource considerations during the

development and initial implementation of the competitive selection process. This may be because the settlement has not yet become fully effective and the Library was gearing up for the completion of Appeals (sometime after September 22, 1995).

Overall, the decision making related to the improvement of the competitive selection process involved the correct persons at onset and throughout the implementation. The key consideration of resource requirements was neglected but the process was implemented according to a plan. However, there appears to be some dilution of responsibility for the process and its results across the Library.

4.2 Effectiveness of the Program to Implement the New Competitive Selection Process

The internal resource requirements for the task force, human resources working group, and human resources staff required for the selection process, as mentioned above, were not clearly delineated as part of the revision and implementation of the competitive selection process. Most resources were drawn from existing resources and employee volunteers. The Librarian and the co-chairs of the Human Resources Working Group provided clear roles and responsibilities to the Working Group and contractors involved in the revision efforts. However, despite clear recommendations resulting from the Working Group and contractors, there are no obvious tracking methods in place to ensure implementation of the recommendations. The effect of having no tracking is that the implementation may not be accomplished without specific goals to meet. In addition, there have been considerable expenditures of time to improve the process but the improvement options are greatly constrained by the Settlement Agreement. Over the past 3 years, the Library has been trying to improve the length of time it takes to hire under the competitive selection process. To date, only one initiative (MARS) has been piloted to improve the timing of the process for the technical positions. Overall, the implementation of the competitive selection process seems to be haphazard, with some planning for implementation but little if any tracking of accomplishment of the implementation.

4.3 Significance of the Results

This case study shows the Library's efforts to address a well-defined, highly publicized problem. The U.S. District Court spelled out the requirements and the Library developed a process to implement those requirements. This was a problem that affected everyone at the Library and was acted on by people throughout the Library in various capacities. The Settlement Agreement is currently under appeal, which will delay OPM's review and the start of the 4-year period under which the Library must adhere to the agreement. However, the Library has made some progress toward a more diverse workforce since the Court ruling.

Perhaps the most significant finding, however, is that this process has been studied so much since the Court ruling, and it is still criticized for being cumbersome and lengthy by the HR staff and service unit managers. As improvements are being

implemented (assuming they can be while maintaining compliance with the Settlement Agreement), the Library will need to monitor their effects on the hiring process and workload of HRS.

4.2 Effectiveness of the Program

The Fort Meade Storage Facility will be effective in providing *some* relief to the overcrowding that the Library has been experiencing. The parties involved have put significant effort into the project since 1989, and they have achieved many milestones:

- Congress appropriated the funds required to build the new facility
- The site has been chosen and successfully transferred to the AOC
- The Library developed move plans based on available resources for when the new facility is complete
- The design contract for the new facility has been awarded. However, the new facility is not sufficient to meet even short-term storage capacity requirements. When the new storage facility is completed, the Library will remain in a severely overcrowded situation. In addition, plans for the 10 to 13 modules of supplementary storage capacity are in the preliminary stages only. Given the time that has been required to plan the Fort Meade facility, the Library's storage problem will not be solved within the near future.

4.3 Significance of the Results

The results of this case study are significant because the initial Fort Meade module is the only storage facility funded, yet it does not come close to meeting the Library's future storage needs. The Fort Meade case is an example of the coordination that is necessary among the Library, Congress, and AOC to resolve facility planning issues. The Library's storage requirements continue to grow, thus demanding increased attention and the need for innovative solutions. The lack of clear facilities planning guidelines is preventing the Library from solving its fundamental storage problems. Since no one at the Library has been charged with responsibility for developing these guidelines, ISS needs to address this issue before the Library can move forward.

MANAGEMENT REVIEW OF THE LIBRARY OF CONGRESS

FORT MEADE STORAGE FACILITY
CASE STUDY

Prepared for

General Accounting Office

by

Booz·Allen & Hamilton

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1.0 BACKGROUND

The issue of a remote storage facility arose in February 1988 during the Library of Congress' FY 1989 budget request. The Library planned to use a secondary site for housing older bound serials to alleviate the crowded conditions at the Adams and Jefferson Buildings on Capitol Hill. The object was to move all serials kept in the collections from a certain date (for example, 1959 and earlier) to the secondary site. Requests for such material would be sent to the site, and books would be delivered to reading rooms. The site could also house embrittled books no longer serviceable to readers. LC raised the need for additional storage space during each budget request through FY 1993 when Congress approved funds for an off-site storage location. Since then, the Library, the Architect of the Capitol (AOC), and Congress have been considering alternative sites and planning for the remote storage facility.

The following defines the storage facility types being considered:

- The *conventional storage* facility alternative involves a warehouse type building with standard shelving (not high-density shelving). Because the shelving is not high-density, this alternative requires a building with a much larger area than the next two alternatives described below.

- The *Harvard Style* facility alternative includes high-density shelving with a single Raymond lift (high-lift lift truck with operator) for access to the shelves above the reach of personnel. Material in shelves within reach is manually stored and retrieved; portable barcode readers verify locations of trays on specific shelves.

- The *automated storage and retrieval system (AS/RS)* facility alternative involves high-density shelving with an unoccupied, remote-controlled crane system for each aisle in the facility. At the end of each aisle, a computer workstation transmits requests to store or retrieve a particular item. The actual work of storage and retrieval in the stacks is done by the aisle crane, without further intervention by personnel.

2.0 HISTORY

2.1 Origin of the Fort Meade Project

The Library described the need for a remote storage facility during the FY 1989 budget request, and Congress bundled the request with other Legislative Branch storage requirements for an off-site location. After Congress, the Library and AOC considered several sites, Congress selected the Fort Meade site in 1993 for a multipurpose campus of 100 contiguous acres. This multipurpose campus will be the site for new collections storage facilities and additional facilities to satisfy the storage requirements of other legislative agencies, the House, and the Senate. Congress recommended the Harvard Style facility alternative for the design of the Library's first remote storage building at Fort Meade.

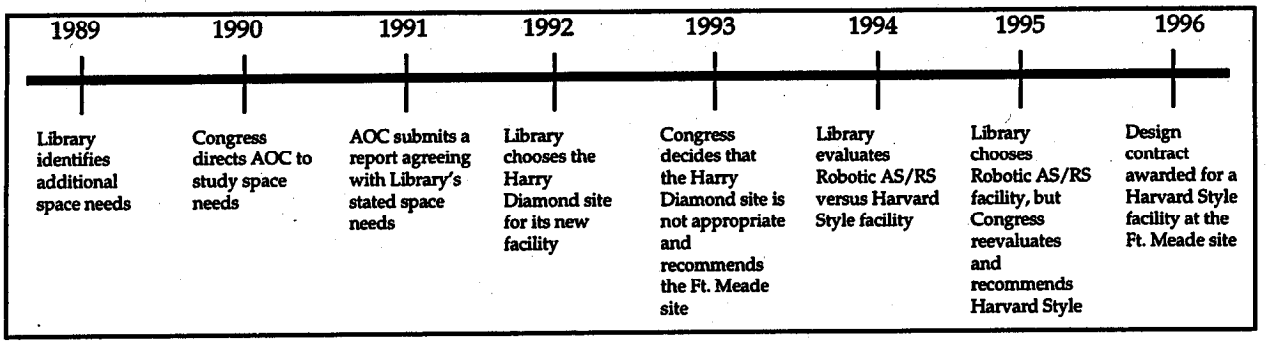
2.2 Major Events in the Program

The Library began identifying the need for additional storage space in FY 1989. Two major decisions were involved:

- Site Selection
- Facility Type Selection.

From 1989 through 1993, the Library, AOC, and Congress considered several sites for the remote storage facility including Landover, Harry Diamond in Woodbridge, Patuxent Science Center, White Oak, Vint Hill, Indian Head, and Fort Meade. From 1994 through 1995, the Library and Congress evaluated the Harvard Style and AS/RS facility alternatives, and eventually chose the Harvard Style facility. The timeline in Exhibit 1 summarizes the major events in the decision making process.

EXHIBIT 1
Major Events Timeline



2.3 Results of the Fort Meade Facility Efforts

The book collections in the Adams and Jefferson Buildings are growing at a rate of more than 300,000 volumes annually. This number does not address special collections which consist of a wide variety of items which grow at an equal if not greater rate. Exhibit 2 shows the growth forecast for general collections, special collections, and copyright material from the Library's 1992 Space Collections Plan.

EXHIBIT 2
Space Growth Forecast
(Space in Thousands of Square Feet)

Year	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02
Total Space Available *	1,326	1,326	1,326	1,342	1,342	1,342	1,342	1,342	1,342	1,342
General Collections Space Needed	849	868	888	908	927	947	966	986	1,006	1,025
Special Collections Space Needed	464	486	508	547	585	611	637	663	692	721
Copyright Space Needed	56	58	60	62	64	66	68	70	72	75
Total Space Needed	1369	1412	1456	1517	1576	1624	1671	1719	1770	1821
Additional Space Required	43	86	130	175	234	282	329	377	428	479

* Does not include space in the Fort Meade facility, which is planned for completion in FY 1998

This exhibit describes square footage requirements for storage facilities with conventional shelving. Storage facilities with high-density shelving would have much lower square footage requirements. The Fort Meade off-site storage location is scheduled for completion in 1998. Exhibit 2 shows that by fiscal year 1998, the storage capacity deficit will be the equivalent of a 282,000 square foot facility with conventional shelving. Even when the new building is complete at Fort Meade, the Library will have a storage space deficit. According to the AOC, the Library and AOC are not building a larger initial facility because they must design the size of the facility to stay within the $3,186,000 budget appropriated by Congress.

The Library has developed a move plan specifying how many volumes will be relocated to the initial Fort Meade facility. Depending on available resources, the

Library plans to move 1,559,000 volumes to the off-site storage location according to the following schedule:

- First year—1,000,000 volumes
- Second year—409,000 volumes
- Third year—50,000 volumes
- Fourth year—50,000 volumes
- Fifth year—50,000 volumes.

This move plan is based strictly on number of volumes. The Library has not defined how much space (square footage) these 1,559,000 volumes require. Since the Library has not equated the number of volumes to facility square footage required, it is unclear whether the size of the new facility will accommodate these moves. Moves are planned, in conjunction with other shifts and redistributions between the Adams and Jefferson Buildings to relieve overcrowding. According to the LC plan, even with the new storage facility at Fort Meade, major relief in the Adams Building will not be possible until the third year (2000), when they will begin to redistribute the 8,000,000 volumes planned to remain in that building. The move plan describes major efforts extending into 2002.

Congress transferred 100 acres at the Fort Meade site to the AOC in 1993 to satisfy facility requirements for the Library, other legislative agencies, and the House and Senate. The window of opportunity for planning and defining the Library's specific project requirements for the Fort Meade storage facility is 3 to 4 months from the date of the design contract award. This contract was awarded in March 1996; therefore, it is critical that the Library finalizes its project requirements no later than June 1996 in order for the construction drawings and specifications to be completed as scheduled in November 1996. The Library does not yet have a consolidated facilities requirements plan for the new building including specific environmental, security, and operational requirements. Between April and June 1996, the Library needs to define these requirements and provide them to the AOC and the design contractor immediately for the project to meet scheduled milestones.

3.0 FINDINGS

3.1 Analysis of the Fort Meade Project

In the FY 1989 budget request, the Library stated that shelf capacity had reached saturation in the Library's Capitol Hill buildings in some cases and was nearing saturation in all others. To alleviate the critical situation, the Library requested a facility of 75,000 to 80,000 square feet with conventional shelving to accommodate at least 3,000,000 books. It planned to lease an unspecified, warehouse-type building and install the required shelving. This request was not approved by Congress due to funding limitations. The Library failed to convince Congress the new facility was a high priority within an overall long-term facilities strategy.

In the FY 1990 budget request, the Library stated that shelf capacity for the Library's general collections was completely filled in some locations and would be functionally full by the end of FY 1992. The Library requested money to lease about 100,000 square feet of a specific warehouse building, Landover Center II, and install conventional shelving to accommodate 3,000,000 books. Again, Congress did not approve the Library's request. The Library failed once more to convince Congress that the new facility was a high funding priority in the overall long-term facilities strategy.

In the FY 1991 budget request, the Library stated that its stack space would reach its practical capacity by the end of FY 1992. It again stated an objective to lease and equip an additional collections storage facility to alleviate crowded and dwindling collections storage space in the Adams and Jefferson Buildings on Capitol Hill. The request was not approved; Senate Report Number 101-533 stated, "Library plans for this facility are premature at this time." Congress did not believe that the request was part of a comprehensive facilities strategy. Congress directed the AOC to conduct a total legislative branch warehouse survey. This study was to evaluate the needs of the Library, other legislative agencies, and the House and Senate for needed storage facilities. As directed, the AOC explored location and facility alternatives, including remote sites that would afford cost savings and expansion possibilities.

The Appropriations Committee of Congress changed the Library's facility acquisition focus from a lease and equip strategy to a build strategy. During the FY 1992 budget request, the Library stated that the AOC would take 2 to 3 years to build a new remote storage facility. Therefore, the Library requested money for FY 1992 to lease 25,000 square feet of temporary storage space and install shelving to accommodate 750,000 volumes until a more permanent facility could be constructed.

In the FY 1993 budget request, the Library stated that the general collections expanded by more than 300,000 books per year, and about 1,000,000 books would be

added to the collections between fiscal years 1992 and 1994. On the basis of this annual growth, the Library projected that the Jefferson Building would experience gridlock by the end of 1994. The Library also stated that although the AOC was surveying warehouse needs for the legislative branch, it had not developed a plan to accommodate the Library's immediate collections storage requirements. Therefore, the Library proposed to modify 70,000 square feet of its Landover, Maryland, warehouse. Congress did not approve this plan because the Library failed to convince it that the request was a high funding priority within the overall long-term facilities strategy. However, Congress directed the Library to provide a plan for a reasonable long-range solution to its secondary storage needs, including a comprehensive space plan based on an overall collection plan. The Library responded with its 1992 Collections Storage Plan and incorporated requirements into its Library Strategic Plan. Congress also identified $3,186,000 (no-year funds) for the rental or purchase and outfitting of a remote storage facility.

Once Congress approved the money for the remote storage facility, the Library obtained information about the feasibility of site options mainly through the investigations of the Integrated Support Services (ISS) group. ISS provides facilities, equipment, supplies, and services to other service units to ensure an efficient, adaptable, safe, and secure environment. ISS comprises the Directorate, Contracts and Logistics, Facility Services, Health Services, Office Systems Services, Protective Services, and Safety Services. The site visits and facility type analyses were conducted by the ISS Directorate office.

3.2 Decision Making Process to Address Situation

Once Congress identified $3,186,000 for a remote storage facility, two major decisions were required—site selection and facility type selection. The events that preceded the selection of site and facility type are shown in Exhibits 3 and 4, respectively.

The site selection process started in 1989 and ended with the Fort Meade land transfer in 1994. The Library was directed to search the Base Realignment and Closure list for an initial set of candidate sites, and from that group chose the Harry Diamond Site in Woodbridge, Virginia. Subsequently, Congress decided that the Harry Diamond site was not appropriate for the Library's needs due to environmental concerns. Congress decided to turn the land over to the U.S. Department of Fish and Wildlife for conversion into a wildlife refuge. Congress, the Library, and AOC analyzed a new set of candidate sites, and Congress chose the Fort Meade site as the best alternative.

The facility type selection process began in 1994 with multiple site visits and economic analyses by the Library. Using site visits, an unsolicited AS/RS proposal from Eaton-Kenway, a life-cycle cost analysis from The Compton Company,

Exhibit 3
Site Selection Event Chart for Fort Meade Storage Facility Project

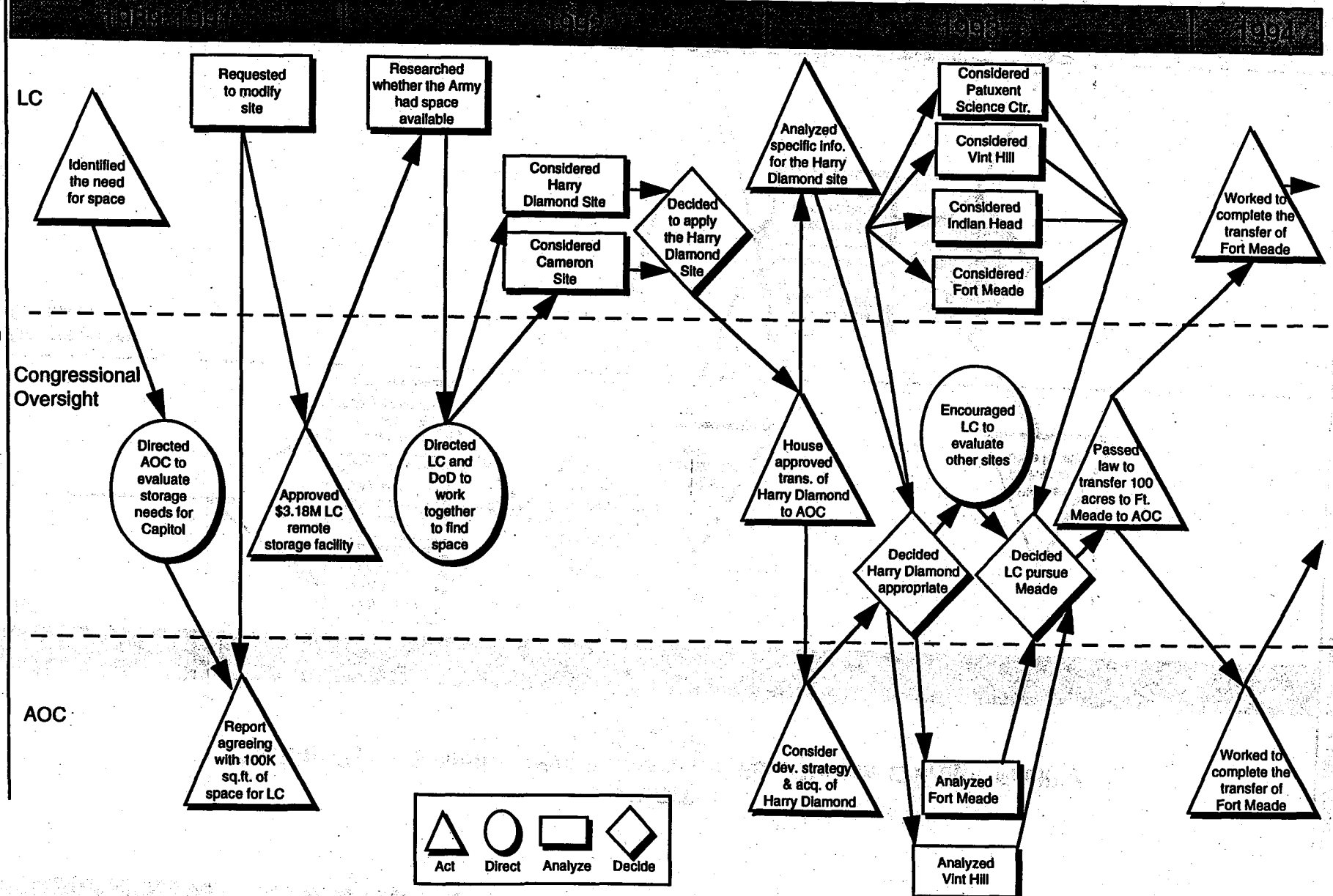
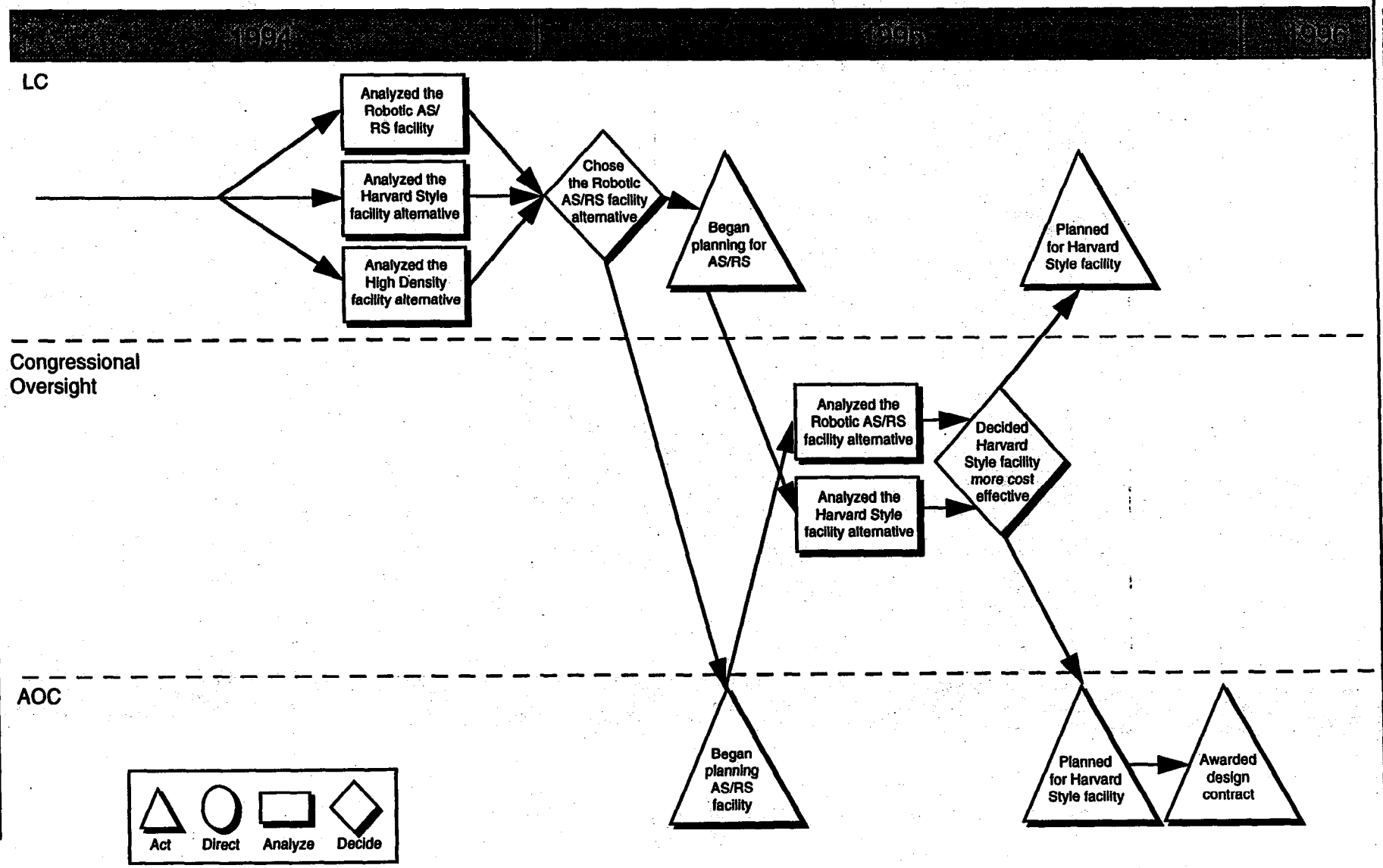


EXHIBIT 4
Facility Type Selection Event Chart for Fort Meade Storage Facility Project



and a comparison of labor requirements from Gross & Associates, the Library chose the AS/RS type design alternative for the new remote storage facility. Congress later conducted its own analyses through site visits and reviews of the Compton and Gross reports. The Appropriations Committee of Congress thought the figures in these reports were unreliable and determined that the Harvard Style facility design alternative would be more cost effective. When we asked for a copy of their analysis, the Appropriations Committee declined. Both the Harvard Style and AS/RS alternatives utilize high-density shelving which significantly reduces the square footage requirement associated with conventional shelving.

The decision processes in the Fort Meade project show the tendency for multiple decision-makers to get involved, resulting in restarts of the evaluation and selection procedure after significant effort was expended on the initial recommendation. For example, the Library invested significant time in evaluating the Harry Diamond site in Woodbridge, Virginia. It conducted site visits, determined the assessed value of the property, and requested and received existing condition information related to the buildings, security system, existence of hazardous material, and soil. Also, the AOC held meetings to discuss a development strategy and possible acquisition of Harry Diamond. In June 1993, the House of Representatives passed HR 2446, which approved the transfer of 100 acres (Harry Diamond site) to the AOC. Subsequently, Congress discarded the Harry Diamond site because of environmental concerns about wetlands. Then Congress, the Library, and AOC restarted the site evaluation process.

Another example of redundant effort occurred during the facility type evaluation for the Fort Meade site. The Library conducted site visits and economic comparisons as well as assessing security and preservation requirements, before recommending the AS/RS facility alternative. The Appropriations Committee did not agree with the Library's economic analyses because they were not convinced that the numbers in these reports were reliable, and did not consider the security and preservation requirements. Then, the Appropriations Committee conducted its own evaluation and recommended the Harvard Style facility as the most cost-effective design for meeting the Library's needs. This redundant effort delayed the planning for the Library remote storage facility by at least 6 months.

Storage of Library materials will require that some level of protection be provided for the collections. The planning and design process has not yet reached the point in which a detailed security system would be integrated into the building design process.

3.3 Development of a Remote Storage Facility Policy

The Library developed several separate planning studies and reports to define its short and long-term collection storage needs. These documents described the Library's storage problems in both the general and special collections, forecasted the growth of collections, and identified both long and short-term solutions for locating

additional space. These studies and reports served as the basis for planning and securing a remote storage facility.

Although these planning studies and reports are important, the Library has not combined them into a clear and comprehensive facilities strategy that provides a foundation for making decisions and obtaining project approvals and funding. For example, because the Library lacked a strong remote storage strategy and convincing rationale, Congress conducted its own analysis and recommended The Harvard System. However, the Library clearly prefers the AS/RS type facility for remote storage, especially for special collections which can be difficult for a person on a lift truck to handle. However, the Library has not convinced the Appropriations Committee that an AS/RS should be part of the Library's remote storage strategy.

3.4 Allocation of Resources for the Fort Meade Facility Project

Congress allocated $3,186,000 for the design and construction of the new Fort Meade Storage Facility. Initial plans for the facility specified a size of 100,000 square feet with conventional shelving. This translated into an initial AOC design estimate of $31.86 per square foot, for a total building cost of $3,186,000. The $31.86 per square foot cost represented a traditional warehouse-style building with conventional shelving. Because of the environmental complexity and special requirements needed to satisfy the Library's needs, AOC stated that a more realistic estimate was $35 to $40 per square foot. In addition, the $3,186,000 must cover other costs associated with the building such as design, contract award/ administration, and any other building infrastructure requirements. Given these more realistic estimates, a new facility with conventional shelving would have to be between 60,000 and 70,000 square feet in order to stay within the $3,186,000 budget identified by Congress. A new facility with high-density shelving would have to be between 10,000 and 12,000 square feet in order to stay within the budget.

Throughout our case study, we found multiple square footage estimates for the new off-site facility. During the 1989 budget request, the Library specified the need for a 75,000 to 80,000 square foot building. Then, during the FY 1990 and 1992 budget requests, the Library described the need for a 100,000 square foot building. In the FY 1993 budget request, the Library proposed converting 70,000 square feet of a warehouse building to meet its space requirements. The Library's 1992 Collections Storage Plan (updated 1994), states that the $3,186,000 identified by Congress for the new storage facility should be used to lease and outfit about 45,000 square feet of storage space. Once the Harvard Style facility with high-density shelving was chosen, square footage estimates were between 10,000 and 12,000 square feet. Since the $3,186,000 was identified by Congress in 1992, the Library's plan for using the available funds to build a remote storage facility have been unclear.

3.5 Accountability and Responsibility for Fort Meade Facility Planning

Exhibit 5 shows which participants carried out the primary responsibilities involved in the Fort Meade project. Facility Services in ISS is responsible for planning the Library's long-term facilities requirements; however, a long-term facilities requirements plan has not been developed. The Director of ISS and the Library's Management group were responsible for the events surrounding the Fort Meade facility planning, but Congress took ultimate responsibility for decisions regarding funding level, site selection, and facility type recommendation. The primary project responsibilities included:

- Analyzing problems
- Formulating alternatives
- Evaluating alternatives
- Adopting plans, policies, and action instruments
- Providing feedback and monitoring.

EXHIBIT 5
Fort Meade Participation Matrix

	Analyzing Problems	Formulating Alternative Solutions	Evaluating Alternatives	Adopting Plans, Policies, and Action Instruments	Providing Feedback and Monitoring
Library Management	✓	✓	✓	✓	✓
Library ISS Directorate	✓	✓	✓	✓	✓
Library ISS Facility Services					
Library ISS Protective Services					
Library ISS Safety Services					
Architect of the Capitol	✓		✓	✓	
Congress	✓	✓	✓	✓	✓

For the Fort Meade project, Library management, ISS Directorate office, and Congress were involved in each one of these responsibilities at various times during the project. The AOC took responsibility for portions of the problem analysis, evaluation of alternatives, and adoption of plans, policies, and action instruments.

For the Fort Meade project, the ISS Facility Services group and the Safety Services group have not participated in the site planning process so far

because they were not asked by the ISS Directorate to get involved. Their lack of participation is significant because critical planning elements that these groups are responsible for (for example, fire safety, environmental safeguards, and space relocation requirements) have not been fully addressed. The Protective Services Division (PSD) at the Library has also not participated in the facility or site planning process because the ISS Directorate has not yet focused attention on security planning for collections and personnel at the new building. ISS will include these groups in the planning process now that the design contract has been awarded, but the groups will have to meet a 3 to 4 month accelerated planning schedule. If these groups had been included at the beginning of the project, they would already have developed preliminary planning requirements. The Library could have improved the Fort Meade facilities requirements planning by involving facilities, safety, and security earlier in the process.

3.6 Communication About the Fort Meade Facility Project

Coordination between the Library and Congress occurred mainly through the annual budget requests. Beginning in 1989, the Library made several requests for a new off-site facility to accommodate its collection storage requirements. Congressional staff did not feel that the Library communicated these requests as part of an overall strategic vision that would ultimately satisfy the Library's long-term storage requirements. Therefore, Congress did not approve the Library's methods of space acquisition because it did not present a cohesive, defensible program strategy.

In addition, ISS organizational groups did not fully communicate during the remote storage facility requirements planning. Facility Services, Protective Services Division, and Safety Services acknowledged little involvement with the planning and development of the Fort Meade facility to date. The ISS Directorate did not stress the need for communication and cooperation among these organizational groups during the site selection and facility type selection for Fort Meade.

3.7 Adjustment of Implementation Program

Congress has recognized the Library's critical storage need and has authorized the Library's program to build 10 to 13 future storage facility modules at the Fort Meade site. The first module at Fort Meade will be completed in 1998. The next opportunity for program funding is January 1997 for the FY 1998 budget request from Congress. The Library has not yet produced the comprehensive planning documents necessary to support future appropriation funding requests from Congress because it is concentrating so heavily on planning for the initial facility module at Fort Meade. ISS does not have an organizational unit responsible for long-term facilities planning.

The design contract for the initial facility at Fort Meade has been awarded and includes the development of a master plan. The architect/engineering contractor will provide this plan as part of the schematic phase of the design effort. The master plan will describe where the 10 to 13 future facility modules will be located within

the 5-acre site and delineate a comprehensive long-range development approach. The Library can use this document for assistance in planning its long-range storage requirements.

3.8 Tracking of Implementation

The Library has not conducted any formal implementation tracking during the Fort Meade project. We have identified progress through the Library's budget requests to Congress; however, without a strategic facilities plan or a corresponding comprehensive facilities implementation schedule, it is impossible to assess implementation milestones.

3.9 Performance Measurement

This section does not apply to the Fort Meade Facility Case Study.

4.0 CONCLUSIONS

4.1 Effectiveness of Decision Making Leading to the Fort Meade Facility

Congress did not believe the Library presented an acceptable long-term facilities plan that included adequate planning, analysis, and justification of requirements. Therefore, Congress filled the voids and made strategic decisions involving the Fort Meade storage facility project. Throughout the project, the parties involved did not clearly define and agree upon requirements for the site and facility type before taking action. The decision making was unorganized, with different results recommended by the Library and Congress. In addition, Congress believed the Library was unprepared to defend its planning process when it changed its recommended approach for solving the storage problem several times throughout the project.

The Fort Meade storage facility is now in the advanced planning stages, and several program components are fixed including the following:

- For the first module, $3,186,000 is available
- Square footage is dictated by the $3,186,000 available—AOC will design to cost
- The first module will support book collection only
- The Library plans to build 10 to 13 total modules to meet long-term storage capacity requirements.

With these major decisions already made, the Library has still not identified what part of the storage requirements the initial Fort Meade facility will meet. For example, the Library has not defined the exact size of the new facility or which volumes the building will accommodate. It has also not developed a complete plan for how the 10 to 13 facility modules will affect the additional storage requirements for general collections and the critical shortage of storage space for special collections.

As a result of reactive decision making involving Fort Meade, the Library has emphasized short-term rather than long-term planning. It does not have an organizational group that is specifically responsible for long-term facilities planning. As a result, the Library does not have a strategic facilities plan for building a defensible foundation from which to make effective facilities requests and guide all facilities-related decisions.

MANAGEMENT REVIEW OF THE LIBRARY OF CONGRESS

NATIONAL DIGITAL LIBRARY CASE STUDY

Prepared for

General Accounting Office

by

Booz·Allen & Hamilton

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1.0 BACKGROUND

In a Library of Congress release dated March 22, 1995, it was noted that "The Library of Congress proposes to establish, in collaboration with other major research institutions and the academic and philanthropic communities, a systematic program for creating a National Digital Library." It will not be a single entity, but actually many libraries throughout the nation and the world linked electronically. The Library of Congress intends to play a leadership role in establishing the National Digital Library (NDL) and has created a separate organization within the Library for this purpose.

This case study addresses our assessment of the strategy, planning, and execution activities of the NDL project in terms of the Library's business decision making methodology. We examined the following issues:

- Why has the Library decided to pursue the NDL? What is its mission and goals?
- What is the strategy for the NDL?
- How and why did the Library decide to create a separate organizational entity for the NDL? How is it staffed and funded?
- Has the cost of digitizing the collections been established, communicated to Congress, and cost justified? How well has the Library communicated with the consumers of this service?
- How does the Library track NDL progress against plans and assess the value of the products and services it provides?
- What are the future plans for the NDL?

Booz·Allen examined these issues through discussions with senior Library staff including the Associate Librarians, the NDL Program Director, and the ITS Director, and by reviewing presentations, news releases, and other supporting material presented by the Library. We also visited libraries at the University of California, Berkeley, Harvard University, UCLA, Indiana University, New York Public Library, and the National Archives and Records Administration with whom the Library is collaborating, or have similar initiatives to, the NDL Program.

The Library currently has an estimated 110 million pieces in its total holdings. A "piece" may be a book, a movie, a journal, etc. These holdings are divided into groups called "collections." There are hundreds of collections within the Library. When the Library began its NDL project, it needed a more granular subset for addressing material to be maintained in its digital collection. The new subset, called

an "item," can be a single picture, a video clip, a sound clip, a part of a book, etc. Items are linked together to form the basis for a new concept called a "digital collection."

2.0 HISTORY

In 1990 the Library began to study how to achieve one of the Librarian's key mission goals, namely to make a wide range of the current Library holdings available to the public in digital format. The project was initially called the American Memory project. Its goal was to test the feasibility of digitizing approximately 210,000 items from more than two dozen collections on American culture and history. These collections are all in the public domain. The initial plan included making the material available to 44 test sites. The Library completed this project in 1994.

The success of this project resulted in the expansion of the program's goals in terms of numbers of items and the number of people and organizations who would be given access to the digital collections. The project changed its name in 1994 to the National Digital Library (NDL) Program to reflect its new mission. The current plans are to digitize five million items over the next five years. The Library is also currently in the process of making these digital collections more widely available through the use of the Internet.

2.1 Major Events in the Establishment of the NDL Program

Major events in the establishment of the NDL Program were as follows:

- The American Memory Pilot (1990-1994) tested the best way of making various types of historical digital collections available to other institutions across the United States.

- Congress funded the digitization initiative at $1 million per year for 5 years (1991-1995), assuming that there would be matching funds from outside sources.

- In October 1994 the NDL was established within the Library as a separate organization with a charter to create an infrastructure and approach for the NDL. The organization has a supporting staff of 65 people.

- Based on the results of the American Memory Pilot, the Library initiated a National Digital Library Program in October 1994 in collaboration with other institutions. The purpose of the NDL Program was to provide leadership in digitizing and cataloging the digital collections. The goal is

to digitize and make available 5 million items from the Library collections by the year 2000.

- Also in 1994, the Library joined forces with ARPA to provide engineering support in developing a repository management system and a framework for indexing, storage, and access for the NDL, and to develop a common architecture to include the Copyright Office Recordation and Deposit System (CORDS) environment.

- The Library has sought philanthropic and private funding to underwrite the digitization effort. It raised $20 million in private funding during the past two years.

- On May 1, 1995, the Library, the Commission on Preservation and Access, and officials from 14 other research libraries, universities, and archives, signed the National Digital Library Federation Agreement.

- Congress appropriated $3 million in FY 1996 to fund the next phase of this effort. This phase will cover the next five years and will involve the digitization of 5 million items. The estimated funding to complete the entire digitization process for the 5 million items is $60 million: $15 million to be supplied by Congress, and $45 million provided through outside funding sources.

2.2 Results of the Program

The NDL Program has been established within the Library and approximately 80 percent of the required staff is on board. During the production and delivery phase, the NDL Program plans to make available new digital collection items each year, in addition to contributions from other institutions, thus reaching its goal of 5 million by the year 2000. The accomplishments of the program to date include the following:

- Tested the feasibility of digitizing the collections and making them available to other sites

- Designed and tested the technology infrastructure for the NDL

- Used the Internet as the dissemination facility

- Established the NDL Federation (NDLF) and created a broadened awareness and level of interest in the NDL. The NDLF consists of 14 major research and public libraries from around the country currently

sponsoring and funding their own digital library projects. The Library's leadership helped to form this federation. The purpose of NDLF is to share intellectual capital, to better leverage digital capture processes, and to develop a standard for the creation of digital collections. These standards include storage format, indexing, catalog information and search aids.

- Identified and established alternate sources of funding.

3.0 FINDINGS

3.1 Analysis of the Decision to Establish the National Digital Library

The decision to establish the NDL was based on that part of the Library's mission to serve as the "nation's library," and the Librarian's desire to have the Library serve the greater public by making the historical collections available to a broader audience. In response to this need, the Librarian initiated the American Memory Program as a content program rather than as a technology program. His stated objective was to make more of the Library's collections accessible to the public. As a result, technology and digital imaging were by-products rather than objectives of this initial pilot project.

Following the success of American Memory Pilot, the Library started to focus more on the digitization process and technology in an attempt to develop a common architecture and framework for the NDL. Thus, the Library senior staff established a separate organization in the Library with the charter to develop the capability to effectively digitize and to make more of the collections available to the public. The stated mission of the NDL organization, as described in the Library of Congress Program Director's presentation on the NDL Program, is "to provide the widest possible access to knowledge and information for educating and enriching a free society."

Through our site visits to the major research libraries around the country and our discussions with the Library of Congress staff, we discovered that there was an apparent shift in the target audience during the American Memory Pilot project. The initial audience targeted for the American Memory Program was the research community, but they did not see the value of the initially digitized material. Once the material was made available, however, the educational community seized upon the tremendous value of the material selected. They recognized the academic benefits of having this material electronically available in the classroom. Following the pilot, the research community has become more interested in the program, not

necessarily for the value of the digital collection, but rather for the technology that has been developed to support the project, namely the indexing, cataloging, and search aides.

3.2 Decision Making Process Used to Establish the NDL Program

Library management conceived of the NDL effort as a means of supporting its mission to provide greater public access to the collections. Since the Librarian viewed the NDL concept as a high priority, he established a separate organization to manage the program. This organization has a 5-year charter to provide leadership and to establish a collaborative relationship with other organizations to develop an NDL capability.

The Librarian and senior staff directly involved decided to establish a separate organization to manage the second phase of the project's life-cycle. This decision was based on the following factors:

- The perceived importance of the NDL initiative to the Library mission
- The uniqueness of the skills required to execute the NDL vision
- The management attention needed to properly build this capability
- The need to coordinate NDL plans and objectives with other senior managers in the Library
- The need to collaborate with other Libraries and institutions in developing the NDL.

Although the Information Technology Services (ITS) Director participated in the Management Team, ITS did not play a significant role in the establishment of the NDL because the original thrust of the American Memory pilot project was content and not technology. The NDL project organization subsequently requested and funded ITS to provide up to seven full-time employee (FTE) positions. The level of ITS support has been sporadic, however. Part-time staffing and inconsistent technology leadership have been provided from the ITS organization.

The NDL organization was chartered to perform the following three basic roles in the creation of the NDL capability:

- **Information Provider**—select and digitize 5 million items of the Library's collections and make them available across the country. This is only a very small portion of the Library's total holdings (well less than 1000th of a percent).

- **Collaborator**—sponsor initiatives with other Libraries and institutions to define methodologies in areas such as digital cataloging, indexing, and searching aids

- **Leader**—maintain and promulgate standard methods and best practices for the NDL.

The Library has not yet attempted to address the issues associated with the processing and dissemination of copyrighted material. The pilot study only addressed public domain information. During our discussions with the NDL organization, this was viewed as an extremely complex issue. Today there is no Library-wide plan to address this key issue. The NDL Program will not be able to achieve its full potential unless this problem is solved since most of the material of value to the user community has copyright restrictions.

The Library has not finalized the schedule for digitizing the next group of items. As a result, it cannot determine or project a return on investment for the new material to be included in the digital collection. Without this assessment, the only measure that can be used to determine success is the number of items completed (digitized, stored, and made available to the user community). This is an ineffective business decision metric because all items are not equal in value from an information perspective.

3.3 Allocation of Resources for the National Digital Library

The Librarian and NDL Program staff established the funding requirement of $60 million over the 5-year period (1996 to 2000). Of the $60 million, $50 million is slated to support the 65 planned staff and contractors in the Library. The remaining $10 million will be distributed to other libraries and institutions in defining methods and tools to support the NDL program.

This funding estimate was predicated primarily on the size of the staffing level needed to carry out the charter, and not directly on the cost of digitizing the 5 million items over the next five years. Based on the American Memory Pilot, the Library has developed a good cost estimating process for determining the effort required to digitize material to be incorporated into the existing NDL digital collection. This information was used to create the staffing and funding projections.

It is not evident that the Library has completed a cost estimate for fielding an operational system containing these 5 million items, nor is it evident that it has estimated the value or benefits to be realized by its customers, once the material is made available. Both of these are key findings. Operational planning material, in terms of staffing plans, hardware, and telecommunication resources were not available during our review.

It is also not apparent, based on information supplied, that the Library has spent time canvassing their customers to determine the optimum priorities for digitizing Library collections in order to yield the greatest return on investment. It is not clear how this prioritization process will be conducted.

The NDL Program Director believes that the Library has support from Congress for the NDL Program. The Library has communicated to Congress the initial capture cost for digitizing various items from within the current Library collections. They have less information about the costs required to sustain this service and to grow the digital collections in the future. There does not seem to be a coherent plan or focus for the future beyond the next five years. Issues such as how much of the existing holdings of the Library should be digitized and at what cost, whether to use the NDL as a preservation environment, or how to capture new material in electronic format, are all important actions that must be addressed. In addition, the impact of millions of users accessing this material on a worldwide basis must also be addressed.

3.4 Accountability and Responsibility for Implementing Actions

The Director of the NDL Program is responsible for planning, executing, and measuring performance for this effort. The Library established an Executive Committee in 1994 to assess progress and performance, identify needed resources, and provide guidance for the overall program. This committee is chaired by the Associate Librarian, and includes the Directors of the NDL Program, ITS and Public Service Collections within the Library.

3.5 Communication About Resolving the NDL Charter

Various levels of management within the Library review the status and progress of the NDL Program. The Executive Management Committee provides a forum at the senior Director level whereby consensus about scope and objectives of the Program can be discussed. The Information Technology Working Group, comprising representatives from the participating organizations in the Library, provides a forum for discussing specific operational and technical issues, and addressing the other digital initiatives in the Library. External to the Library, the NDL Federation provides the primary communications vehicle to the other Libraries and institutions.

3.6 Performance Measurement, Status Reporting and Evaluation

Current evaluation methods employed include the following:

- Adjustment of Implementation Program—The NDL Program Director is currently preparing a Work Plan/Program Plan. Its intent is to document the goals, objectives, schedule, resources, planned accomplishments, and performance measures for the program. The Executive Management Committee conducts status reviews of the program to review planned versus actual progress and to make adjustments in overall implementation.

- Tracking of Implementation Program –Once completed, the Work Plan will contain the specific schedule of accomplishments. The NDL Program currently follows a published schedule for the digitization of the collections in order to track and manage the production phase of this effort.

- Performance Measurement Program —The NDL Program Director is in the process of establishing a formal performance measurement program. She is defining objectives and performance measures for the organization, its components, and key individuals. Once completed, this program will support formal program reviews and the staff performance appraisal process.

4.0 CONCLUSIONS

The positioning, charter, and staffing decisions for the NDL Program reflect the perceptions of the Library of Congress leadership that it supports their mission as the "Nation's Library." The stated mission of the NDL is "To provide the widest possible access to knowledge and information for educating and enriching a free society." The organization's role has been characterized as an information provider, a collaborator, and a leader for the NDL Program.

While the NDL Program organization has been established in response to the perceived mission of the Library, a plan and vision have not been developed linking all aspects of the goal to "improve public access" into an integrated strategy for the Library. As a result, the NDL Program, like other major programs in the Library, has been initiated as an isolated project. It did not evolve from an integrated set of strategic objectives linked by a common information architecture.

The 5 million items currently planned as a part of the NDL project are insignificant in terms of the total Library holdings and the volume of information received on a daily basis at the Library. The current NDL project must be woven into a larger strategy of digital information acquisition and dissemination. Without

this strategy, the Library may be spending $60 million for 5 million items which may or may not have significant value, either in terms of content or as a prototype for the library community. The value could be realized if the knowledge resulting from the NDL effort aids the entire library community in solving their digital collection and preservation problems. This will require a plan and a strategy to ensure that lessons learned are properly shared in a cooperative manner.

4.1 Effectiveness of Decision Making Leading to the NDL Program

The decision making process used for the NDL effort has several different dimensions. Exhibit 1 presents our assessment of each of these dimensions. The assessment factors used in this exhibit are based on known industry best practices. The term "meets expectation" is used to denote a process which is believed to be standard within a well run operating environment. The term "marginal" denotes that some effort was expended in this area but not sufficient to meet industry standards. The term "missing" denotes that no evidence was noted based on the information provided.

EXHIBIT 1
Decision-Making Dimensions

Dimension	Assessment	Factors	Impact to the Library
Mission	Meets Expectation	• The NDL project supports the Library's mission of making information available to a broad audience.	This project demonstrates that the Library can prepare mission objectives which can be tracked through all aspects of the planning process.
Strategy	Missing	• The Library's current plan for digitization is limited to a small segment of the Library's holdings. There is no strategy specifying what part of the existing holdings should be digitized or how new material already in digital format should be handled. • No plans define how copyright material will be processed, distributed and tracked.	The Library did an excellent job of developing the strategy for creating the NDL pilot. Once the pilot was successful, it failed to develop a life-cycle strategy to support all aspects of the Program. The fact that the Library did not address how to handle incoming digital material or the processing of copyright material could result in $60M pilot system which still does not achieve its full potential.
Organization	Marginal	• The Library created a separate organization to plan and manage the project. This organization prepared detailed plans for digitizing 5M items from the current collection. • Although a dedicated project team was created, the information technology resources were shared across projects and often reallocated without warning.	The Library recognized the importance of this key mission objective and established an independent organization to manage the program. The organization has a clear focus but has not received the support from the technology organization that it needs.

Dimension	Assessment	Factors	Impact to the Library
Performance Measurement	Missing	• It is impossible to determine return on investment for the items selected for digitization because no effective measurement strategy was developed. • The only metrics available within this project are the number of items digitized and the number of times an item is accessed by the end user community. • No method exists for determining the value proposition for selecting one item to digitize over another.	It is almost impossible to assess the value of the digital collection. The material has inherent value, but making it available to a wider audience has not been quantified. The result is that it will be difficult to determine return on investment for each increment of funding beyond the physical counting of items.
Financial	Marginal	• The Library did an excellent job developing metrics to accurately estimate the size and cost for digitizing the collection. • It did not prepare a detailed life-cycle funding profile that includes operational support costs and resource requirements. • The Library does not have an accurate picture of the total cost of fielding and sustaining an operational service. It has an excellent idea of how much it will cost to capture each item, but that is only one component of the total cost model.	The Library does not have an accurate picture of all costs associated with the implementation of their total mission objectives. The costs associated with operations, copyright handling or sustained worldwide access could significantly change the value proposition for this Program.

4.2 Effectiveness of the Program Methodology

The Library was effective at gathering information in the pilot study. They determined the cost and difficulty of capturing various types of data and the methods and techniques required to store, index, and catalog the material once digitized. It was not prepared to switch from a "content" driven project to a "technology" driven project. The initial plans presented to us during our interview process focused on capturing the content rather than on providing it as a service to the public. This issue is currently being remedied.

The Library has also been ineffective at deciding how much of the collection should or can be captured realistically in digital format. The volumes specified as goals were funding and time driven. Minimal attention was given to how many images could be captured for the available funding. Apparently no methodology was used to arrive at the optimum number of images required or the strategy to be used to determine which images should be digitized and in what priority order.

4.3 Significance of the Results

The significance of our findings is that the Library is in an excellent position to extend the pilot project until 2000 at a cost of $60 million, but it is not ready to field a service-oriented product that satisfies mission objectives. It is difficult to determine if Congress and the external fund providers are aware of this fact.

The Library has done an exceptional job at taking one of its mission objectives and developing an organization to implement that mission. The change in focus from a "content" provider to a delivery service provider, however, requires the Library to solve the following issues in order to ensure the successful delivery of this digital collection capability:

- The Library needs to examine the scope of the project within the context of whatever decisions are made by the Congress regarding the appropriate mission of the Library of Congress.

- The Library must determine the amount of dollars needed to operate the NDL beyond the 5-year period of the current plan and develop a strategy for securing the funds.

- The Library must develop a strategy for selecting items to be included in the digital collection. This strategy should address the rationale for selection in terms of customer benefit.

- The Library must develop a strategy for handling copyright data and its dissemination and tracking.

- The Library must develop a strategy to handle the information which will be received in digital format.

- The Library must develop a plan for creating the service center to support the NDL product once it is ready. The plan should consider the life-cycle cost in terms of resources to maintain and sustain the growth of the collection.

- The Library needs to conduct periodic evaluations of the NDL effort to ensure that it is providing value and benefits to its customers in a cost effective manner.

COMMENTS FROM THE LIBRARY OF CONGRESS

Letter dated April 26, 1996, to the General Accounting Office from the Acting Deputy Librarian of Congress

THE DEPUTY LIBRARIAN OF CONGRESS

WASHINGTON, D.C. 20540

April 26, 1996

Dear Mr. Gadsby:

The Library appreciates the opportunity to review and comment on the draft Management Review of the Library of Congress prepared for GAO by Booz-Allen & Hamilton Inc. In addition to the Library's comments herein, we have separately forwarded to the Assistant Comptroller General our comments on the Financial Statement Audit for the Library of Congress for Fiscal Year 1995.

Overall, the report's findings and conclusions mirror the assessment that led to the Library's 1996 Management Improvement Plan (MIP-96), developed prior to receiving Booz-Allen's management review. The Library agrees with the report's recommendation that it must capitalize on its strengths -- chiefly its incomparable collections and unique workforce which acquires, catalogs, secures, preserves, provides research access and generates analysis for the Congress from those collections. The Library must, therefore, extend and improve the program planning and execution processes begun with its 1992 Strategic Plan.

The Library recognizes that it has not developed fully integrated work processes and supporting systems and that its planning and delivery of support functions needs improvement. We are already tackling these issues and will utilize the report's data and findings to good effect.

The update of the 1992-2000 Strategic Plan is an essential component of the Library's internal management improvement process. The Library began the management improvement process in 1995 and the Plan has since been formally adopted by the Library's Executive Committee. It is being revised to reflect many of the recommendations and findings included in the Booz-Allen report. The Library will now begin formulating the Library's 1997-2004 Strategic Plan. The key objectives of MIP-96 are the improvement of management/employee relations and management techniques; strengthened accountability throughout the Library; improved efficiency and responsiveness of support functions; and enhanced security for people, facilities, collections and data systems.

The Library questions the methodology used in arriving at some of the report's findings. Throughout the report, data gathered from small focus groups are offered as "benchmarks" for study or emulation by the Library in critical areas. There is no indication that these benchmarks have been subjected to the same in-depth analysis as the Library's systems and processes to which they are compared.

The Booz-Allen management review addressed the Library's mission as articulated in Dr. Billington's October 1995 Statement of Mission and Strategic Priorities. While it is clear

that the review recognized the Library's unique stature and rich history, the report questions the Library's mission to serve the Congress and the American people with a sustained universal collection of knowledge and creativity. The Library disagrees with the Booz-Allen assessment of its mission in the strongest possible terms. We will comment in detail on the Library's mission to the Joint Committee on the Library on May 7, 1996.

The remainder of the report addresses management processes, organizational structure, infrastructure, and human resource management. The report consistently challenges the Library's functional structure and processes. We will be evaluating the broader application of process management as a key objective of MIP-96. A particular focus will be on improving customer satisfaction and improving key areas such as collections and facilities management. Although not noted in the report, the Library had successfully piloted a number of process management improvements prior to the Booz-Allen review. The Library's advances in whole book cataloging have met with praise throughout the library community and its efforts in Exchange and Gift have drastically reduced and refined the Library's incoming workload. These are, in fact, but two examples illustrative of our movement from functional to process management.

With regard to the Library's organizational structure, the position of Deputy Librarian has already been announced as the Library's Chief Operating Officer and a search is underway. We will take the report's other organizational recommendations under advisement. We strongly agree with the report's conclusions that the Copyright Office and CRS should remain part of the Library.

The report recommends that the Library strategically link its human, information, and facilities resources to fulfilling its mission objectives. We cannot agree more. Critical decisions lie ahead about the future of the Library's computer legacy systems, but the Library is no different from virtually any other major entity -- federal or private -- in needing to manage its transition from a main frame to a client server environment. We will need to refocus our technology infrastructure to accomplish this, a process which is underway.

The report does not recognize strongly enough the Library's cutting edge efforts in harnessing technology to create the digital Library of the 21st century. The National Digital Library Program, THOMAS, and the Copyright Office Electronic Registration, Recordation and Deposit System (CORDS; for which we are partnered with the Defense Advanced Research Projects Agency) all demonstrate national leadership by the Library -- leadership not acknowledged in other parts of the report.

The report recognizes the impact of the Cook class action suit on our human resources operations. The Court approved the Cook class action settlement on September 22, 1995. Final approval awaits a court decision regarding appeals from five individuals brought forward after the settlement was approved. The report notes the Library's compliance with the Cook settlement as it relates to the competitive selection process. We agree that the Library's lengthy competitive selection process hampers efficient and effective recruitment but affirm and underscore the report's finding that some needed changes are constrained by the Cook Settlement Agreement.

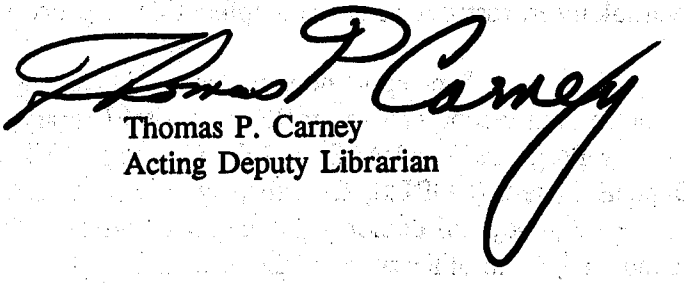
Management will pursue the report's recommendation of a labor relations pilot. The establishment of an internal university, barely mentioned in the report, will significantly buttress the Library's training initiatives, but critical resources are needed to achieve the levels recommended by the report on a per employee basis.

The report suggests that the Library has ignored the implications of its aging workforce and the prospect of an ever larger group of retiring experts. We have been well aware of and vocal about this problem before the Congress for some time but it is impossible to solve such a problem without resources for new hires. All areas of human resource management will be addressed as we continue MIP-96.

With regard to collections security, we concur with the report's finding that the Library's security challenge is unique. The Library's collections acquire value only through their use. Dr. Billington took the single most effective step to secure the Library's collections when he closed the stacks in 1992. At that time, he also directed each area of the Library to assess and act on its particular collections security needs. The five-year effort that has followed addressed many aspects of securing the Library's collections in a comprehensive manner. As we indicated in November 1995 testimony, critical data from the Computer Science Corporation studies, due to be reported on June 7, 1996, will enable the Library to proceed with risk assessment and overall formulation of a complete policy. The Library will also be recruiting a Library Security Officer with appropriate credentials. Library officials regularly confer with major libraries and research institutions regarding collections security. The report confirms that the development of protective standards has not been a high priority for the library community. The Library has appropriate responsibility in place for its computer security and will codify its existing procedures for disaster recovery into a written plan.

We appreciate all the work that has been done by Booz-Allen & Hamilton for GAO and we look forward to hearing your comments at the hearing on May 7th.

Sincerely,



Thomas P. Carney
Acting Deputy Librarian

Mr. J. William Gadsby
Director, Government Business
Operations Issues
U. S. General Accounting Office
Washington, DC 20548

cc: Dr. James H. Billington

APPENDIX A

"The Mission and Strategic Priorities of the Library of Congress,"
Library of Congress, *The Gazette*, October 27, 1995

MISSION

THE MISSION AND STRATEGIC PRIORITIES OF THE LIBRARY OF CONGRESS

■

BY JAMES H. BILLINGTON
THE LIBRARIAN OF CONGRESS

MISSION

The Library's mission is to make its resources available and useful to the Congress and the American people and to sustain and preserve a universal collection of knowledge and creativity for future generations.

PRIORITIES

I. THE FIRST PRIORITY of the Library of Congress is to make knowledge and creativity available to the United States Congress.

The Congress is the lawmaking body of the United States. As the repository of a universal collection of human knowledge and the creative work of the American people, the Library has the primary mission to make this material available and useful to the lawmakers who are the elected representatives of the American people.

II. THE SECOND PRIORITY of the Library of Congress is to ***preserve, secure, and sustain*** for the present and future use of the Congress and the nation

(A) a comprehensive record of American history and creativity;

The record of American history and creativity has to be maintained in order to fulfill the mandates both to protect intellectual property rights (the statutory role of the Copyright Office) and to preserve the record of the past for the sake of present and future creativity (the constitutional mandate "to promote the Progress of Science and useful Arts").

(B) a universal collection of human knowledge.*

A universal collection is essential to meet the present and potential future needs of the Congress (the statutory work of the Congressional Research Service) and of the government more broadly (Law Library, Federal Research Division, general reference services).

All other services and activities of the Library of Congress depend on its core mission of maintaining and continuing to stock the world's greatest storehouse of human knowledge and of American memory.

The collections must continue to be no less broad and inclusive than at present because:

- far more knowledge is being generated in more ways, more places, and more formats than in the past;
- the knowledge needs of Congress and the government are becoming more complex and extensive than ever before as we enter the information age in a competitive international environment where Americans will increasingly have to rely on better use of knowledge to succeed; and
- the access needs of Congress, the U.S. government, and the thinking and creative public cannot be made hostage to the collection and deaccession policies and priorities of other less comprehensive and less nationally accountable institutions.

*except for technical agriculture and clinical medicine, which are covered by the National Agricultural Library and the National Library of Medicine, respectively.

MISSION

III. THE THIRD PRIORITY of the Library of Congress is to make its collections maximally ***accessible*** to (in order of priority)

(A) the Congress,
(B) the U. S. government more broadly,
(C) the thinking and creative public.

The Congress' creation of the Jefferson Building a century ago has enabled the Library in the 20th century to become as fully open in fact as it had always been in theory to the broader federal government and to the general public. It is unprecedented in human history — and a unique American accomplishment — to offer open public access to an institution that is at the same time in many respects the working library of a government and a *de facto* national library. The unifying purpose of providing all the variegated library services of cataloging, reading rooms, and reference staff is to afford as much access to useful knowledge as possible to each of these three constituencies. The National Digital Library effort will provide remote electronic access to the most interesting and important documents of American history and culture for local schools, libraries, and homes across America.

The unique and ambitious mandate that the Congress has given its library during the past two centuries is a stunningly original expression of a broader American democratic ideal. For a democracy to be dynamic and self-correcting, its *governing institutions must be* not only continuously accountable to the people but also *solidly based on a body of knowledge that is both constantly expanding and equally available to those who legislate and those who elect the legislators.*

Equal access to knowledge for both governors and governed, rich and poor, represents an essential minimal form of empowerment in a pluralistic democracy — and has found expression in our system of public libraries and public schools. The Library has been given by the Congress a series of centralized national functions to perform that are essential to the health of these local institutions: setting bibliographic standards, providing subsidized cataloging, storing the records and artifacts of the copyrighted creativity of America, and creating and delivering nationwide reading materials for the blind and physically handicapped.

Congress has now recognized that, in an age where knowledge is increasingly communicated and stored in electronic form, the Library should provide remote access electronically to key materials. For the general public, the Congress has endorsed the creation of a National Digital Library through a private-public partnership that will create high-quality content in electronic form and thereby provide remote access to the most interesting and educationally valuable core of the Library's Americana collections. Schools, libraries, and homes will have access to new and important material in their own localities along with the same freedom readers have always had within public reading rooms to interpret, rearrange, and use the material for their own individual needs.

IV. THE FOURTH PRIORITY is to add interpretive and educational value to the basic resources of the Library in order to enhance the quality of the creative work and intellectual activity derived from these resources, and to highlight the importance of the Library to the nation's well-being and future progress.

Implicit in the broad and international inclusiveness of the Library's clientele (both here and electronically elsewhere) is another ideal unique to American democracy: the desire to promote the free exchange of ideas no less than of material goods with the outside world.

There are three essential aspects to this mission of quality enhancement that are needed by America and uniquely possible within the Library of Congress:

(A) *greater use by the Congress, government officials, scholars, scientists, and the private sector* of the vast special and foreign collections that are unique to the Library and that are underused resources for specialized needs.

(B) *greater use of the Library's Capitol Hill facilities by scholars and creative people at all levels* for the kind of interdisciplinary, cross-cultural, multimedia, multilingual, and synthetic writing that is important to Congressional deliberation and national policy-making, but inadequately encouraged both in specialized academia and in advocacy-oriented think tanks.

(C) *greater use by the general public* through programs that stimulate interest, increase knowledge, and encourage more citizens to use the collections on-site and electronically.

The Library staff must move more of its efforts from inward-looking and process-driven activities to outward-looking service activities focused on knowledge navigation: *helping more people find appropriate materials in a swelling sea of unsorted information* and doing things with library resources that the Library of Congress can uniquely do. This requires not merely more development and retraining of staff than the Library has previously been able to do, but also facilitating in new ways more extensive and *systematic use by researchers of the distinctive materials that only the Library of Congress has.* Programs for the general public, such as exhibits or publications, must demonstrate the value of the collections and promote pride and participation in the Library.

MISSION

THE ENABLING INFRASTRUCTURE

To accomplish its mission the Library must have an efficient and effective infrastructure with four key components:

(A) The ***motivation and mobilization of human resources*** in all parts and at all levels of the Library.

There are four important elements within this category:

1. recruiting, assessing, holding accountable, and, where merited, recognizing the achievements of the workforce on the basis of objective evaluations of skills and performance.

2. training, developing and, where needed, retooling the workforce to perform new functions in new ways.

3. promoting fairness, equal opportunity, and respect for diversity at all levels and in all parts of the Library.

4. fostering communication and consultation to promote innovation and increase participation in decision-making and the implementation of change.

(B) The provision and ***delivery of electronic services*** in order to serve the departments of the Library in the execution of the Library's overall priority missions with speed, quality, and economy.

(C) The allocation and ***use of space and equipment*** in order to:

1. preserve and make accessible the artifactual collections, and

2. maximize the efficiency, productivity, and well-being of the staff.

(D) The operation of ***modern financial and information systems*** to facilitate decision-making and ensure accountability.

IMPLICATIONS

All of these priorities and the enabling infrastructure are essential and must receive some level of support if the Library is to be able to raise the money to survive, but they are outlined in order of absolute importance so that, if further cuts have to be made, they can be administered in accordance with these priorities.

A constant effort must be made to reduce or eliminate activities that perpetuate procedure rather than extend service; process must give way to substance. We must rely on less paper and more "walk-around," and devote less attention to past practices and turf protection as we continually reexamine what we should be doing both inside and outside the organization. The objective for the next year or more should be to eliminate functions and activities that may have been desirable in the past but do not support core priorities or do not support them well enough to justify their costs.

October 16, 1995

THE LIBRARY OF CONGRESS

MISSION

Focus Group Protocol

March 18, 1996

BOOZ·ALLEN & HAMILTON, Inc.

MISSION
Focus Group Protocol

Purpose: Focus groups will be conducted to facilitate discussion on several topics relating to the mission of the Library of Congress. These topics include examining:

- present and future Library missions
- Library customers and their service needs
- future Library governance structures and their value.

Attendees:

- A maximum of four focus groups will be conducted each lasting two to four hours.
- Each focus group will have eight to ten participants.
- Attendees will consist of:
  - appropriate staff members of relevant Congressional committees (Oversight, Appropriations, Libraries and Memorials, etc.)
  - Senior Library Executives
  - Library Customers (library associations, publishers, scholars, public educators).

Interview Guide/Outline:

Purpose: The purpose of these focus groups is to assist Booz·Allen & Hamilton Inc. to gather information needed for the general management review requested by the General Accounting Office. Our specific task in these focus groups is to discuss how Congressional Staffers, Senior Library Executives, and Library customers perceive the organization's mission, service needs, and future Library governance structures and their value.

Anonymity: The information gathered in the focus group meetings will be recorded by Booz·Allen employees taking notes. The information gathered in the three meetings will be consolidated and presented as overall general group findings in an effort to draw general conclusions about the Library's mission and related issues.

Focus Groups Key Issues:

- present and future Library missions
- Library customers and their service needs
- future Library governance structures and their value.

FOCUS GROUP AGENDA

I. INTRODUCTION

A. Welcome and introduction of Booz·Allen facilitators and recorders.

B. Explanation of the purpose of the focus group. (purpose)

The Congress and GAO requested that Booz·Allen help assess the mission and management at the Library of Congress.

This focus group is being brought together to discuss the issues surrounding the mission, customers, products and services, and governance of the Library of Congress. The mission of the Library of Congress may connote different meanings to different people:

- The Library is to serve as the Library of Congress/Library of the Nation/Library of the World.
- The Library serves as a repository of written words/artifacts.

This reconsideration of the mission is marked by a crossroads of the Library:

- Exploding information economies and exponential growth in the number of books and publications created worldwide and therefore available to the Library.
- New and emerging information technologies with new capabilities for information storage, retrieval, and transmission.
- Limitations on government budgets and view toward more limited government roles and funding.

C. Explanation of the written notes to be taken by Booz·Allen employees during the focus group and individual anonymity.

D. Explanation of how the data will be used.

E. Address any issues or concerns of the participants.

II. DISCUSSION - Note taking begins at this point

A. Focus group participant introductions.

B. General questions and discussion.

1. What should the mission of the Library of Congress be?

(A) Current Library of Congress Mission Statement

* Display Overhead for Handout A: Library of Congress, Mission

** *Pass out Handout A: Library of Congress, Mission*

- We have found no concise statutory statement of the Library's overall mission. Instead, we will use the current mission statement which Dr. Billington authored 3 months ago. Please focus first on the statement within the upper part of this handout. On the lower part, the meaning or possible ramifications of the key terms are described for discussion. What are your thoughts about this mission for the Library?

  According to James Billington, Librarian of the Library of Congress, the mission of the Library "...is to make its resources available and useful to the Congress and the American people and to sustain and preserve a universal collection of knowledge and creativity for future generations." (The Gazette, October 27, 1995)

  The "strategic priorities" of the Library are to:

  - "...make knowledge and creativity available to the United States Congress."
  - "...preserve, secure, and sustain for the present and future use of the Congress and the nation
    - a comprehensive record of American history and creativity
    - a universal collection of human knowledge

- "...make its collections maximally accessible to (in order of priority)
  - the Congress
  - the U.S. government more broadly,
  - the thinking and creative public
- "...add interpretive and educational value to the basic resources of the Library in order to enhance the quality of the creative work and intellectual activity derived from these resources, and to highlight the importance of the Library to the nation's well-being and future progress." (The Gazette, October 27, 1996)

Probe: From exegesis comments on Handout A

Discussion: 20 minutes

(B) Mission Dimensions

* Display Overhead for Handout B: Library of Congress, Mission Dimensions

** *Pass out Handout B: Library of Congress, Mission Dimensions*

- Now let's discuss some of the competing dimensions associated with the mission of Library. Focus on each of the dimension groupings. We will discuss each of the four groupings. How do you view these competing dimensions? How might they affect the way in which the mission of the Library is defined and carried out?

Discussion: 15 minutes

Wrap Up: "Here's what we heard you say."

* Display Overhead for Handout C: Library of Congress, Mission Dimensions Ranking

** *Pass out Handout C: Library of Congress, Mission Dimensions Ranking*

Collect surveys.

2. What customers and services, products, activities are "aligned with" the Library's mission? Which appear NOT to be?

(A) Library of Congress Customer, Products, and Services

* Display Overhead of Handout D: Library of Congress, Customers

** *Pass out Handout D: Library of Congress, Customers*

Here is a list of Library customers as identified by Library management. Please look at this list. We will be looking at the products and services provided to these groups.

* Display Overhead for Handout E: Library of Congress, Customers and Products/Services

** *Pass out Handout E: Library of Congress, Customers and Products/Services*

These are the products and services provided to Library of Congress customers. Are there additional significant customer needs that the Library should address? Are there products provided which are outside the mission of the Library?

Discussion: 15 minutes

(B) Mission - Product/Service Linkage

* Display Overhead for Handout F: Library of Congress, Products and Services

** *Pass out Handout F: Library of Congress, Products and Services*

Now we'd like to move on to how you assess the current products and services offered by the Library. Please rank from 1 to 5. One being critical to the mission of the Library as we discussed earlier and 5 being outside the mission.

Discussion: 15 minutes

Please take five minutes and check the appropriate boxes on this Handout (Handout F) and turn in your results. It's not necessary to sign these sheets.

Collect surveys.

(C) Product/Service Fees

- Now let's discuss some of the products and services offered by the Library. What is your reaction to being charged a fee for these services? Why? Are these services worth doing? Should the Library be doing them?

* Display Overhead for Handout G: Products, Services, and Fees Ranking.

** *Pass out Handout G: Products, Services, and Fees Ranking.*

1. Charging publishers a fee <u>for cataloging books and other materials</u> (or, requiring publishers themselves to do this work).
2. Recovering all costs of <u>processing copyrights</u>.
3. <u>Charging commercial researchers</u> a fee for using Library materials, facilities, and staff time.
4. <u>Charging for Library materials on loan</u> to users, other institutions/inter-library lending.

Discussion: 15 minutes

3. **What should the future mission of the Library of Congress be?**

Background - Funding Levels

- Appropriations for 1996 are approximately $352 million
- In 1980 the appropriations in 1996 dollars were $365 million. So between 1980 and 1996 appropriated funds declined 4%.
- Between 1987 and 1995 private funds raised increased from $1 million to $27.5 million.

(A) Mission Alternatives

Background

- To provide a framework for a discussion of mission alternatives we have articulated four such alternatives, one of which is the current mission. We'll hand out a sheet that describes these alternatives. Please feel free to articulate additional or revised alternatives.
- Here's the handout.

* Display Overhead for Handout H: Library of Congress, Mission Alternatives

** *Pass out Handout H: Library of Congress, Mission Alternatives*

Probe: For likely funding impacts, operational consequences of alternative missions; impacts on constituents

What is the most appropriate future mission for the Library of Congress?

Discussion: 15 minutes

Wrap Up: "Here's what we heard you say."

(B) Other issues not addressed by general and specific questions.

III. FOCUS GROUP CONCLUSION

A. Participant questionnaire.

B. Thank you.

Focus Group Evaluation

Customers
Date and Time: _____

1.) Did you understand the purpose of the focus group? (Yes No)

2.) Do you think the focus group discussion contributed to understanding of the needs/concerns of the Library? (Yes No)

3.) Were you able to voice your ideas and opinions in the session? (Yes No)

4.) What could have been done to make the focus group better?

5.) How would you assess the usefulness of this focus group?

Sample Handout for Mission Focus Group Discussion

Topic 1
Handout A
March 5, 1996

Library of Congress

MISSION

The Library's mission is to make *its resources* *available* and *useful* to the *Congress* and the *American people* and to *sustain and preserve* a *universal collection* of *knowledge* and *creativity* for *future generations*.

James H. Billington
The Librarian of Congress
October 27, 1995 The Gazette

Exegesis

Mission Element	Comment
"Its Resources"	This includes both its collections which it possesses/owns as well as intellectual capital of the LOC personnel
"Available"	The access issue - who, under what rules, facilitated by what technology, at what prices, etc.
"Useful"	The librarian's role in making knowledge usable by users. Huge potential of "interpretation"
"The Congress"	Precise, defined customer
"American People"	Broad, almost unlimited customer base
"Sustain and Preserve"	Emphasizes the operating and custodial roles
"Universal Collection"	Utterly unlimited scope; e.g., all languages, from all countries?
"Knowledge"	Mostly expressed in words on paper, electronic media, and intellectual capital of LOC personnel
"Creativity"	Amorphous in content and medium
"Future Generations"	Emphasizes continuity of institutional custodial role

Sample Handout for Mission Focus Group Discussion

Topic 1
Handout B
March 5, 1996

Library of Congress

MISSION DIMENSIONS

Library

Scope

- Congress // Nation // World

Roles

- Collection Building // Reference/ Document Delivery // Service to Libraries (cataloging, standards) // Knowledge Creation // Public Outreach

- Leadership/Coordination // Production

Collection

- Universal // Customer-driven

- Ownership/Possession // Accessibility/Locational Knowledge

- Centralized // Decentralized

Sample Handout for Mission Focus Group Discussion

Topic 1
Handout C
February 6, 1996

Library of Congress
MISSION DIMENSIONS RANKING
Focus Group Survey

Please check the appropriate box under Mission Dimensions. One is a critical mission of the Library and 7 is outside the mission of the Library.

Mission Dimensions	Degree of Mission Criticality						
	1	2	3	4	5	6	7
LIBRARY Scope							
1. Library of **Congress**							
2. Library of the **Nation**							
3. Library of the **World**							
Roles							
4. Library as **Collection Building**							
5. Library as a source for **Reference/Document Delivery**							
6. Library as a **Service to Libraries** (cataloging, standards)							
7. Library providing **Knowledge Creation**							
8. Library providing **Public Outreach**							
9. Library providing **Leadership/Coordination**							
10. Library providing **Production** services							
COLLECTION							
11. Library builds a **Universal** collection							
12. Library collection is **Customer-driven**							
13. Library **Owns/Possesses** collection							
14. Library provides **Accessibility/ Locational Knowledge**							
15. Library is **Centralized**							
16. Library is **Decentralized**							

Sample Handout for Mission Focus Group Discussion

Topic 2
Handout D
February 5, 1996

Library of Congress

CUSTOMERS, PRODUCTS, AND SERVICES

Customer Groups

Products/Services

Library of Congress:
- **Congress (both current and former Members)**
- **Congressional Staffers**

Government:

- **Federal Government:**
  - **Federal Libraries**
  - **Immigration and Naturalization Service (INS)**
  - **State Department**
  - **Supreme Court**
- **Foreign Governments**
- **State Governments**
- **Local Governments**

Nation/World:
- **Libraries (public, academic, research, special)**
- **Educators**
- **Thinking and Creative Community (e.g., publishers, scholars)**
- **General Public**
- **Legal Community**
- **Special Constituencies:**
  - **Blind & Physically Handicapped**

Sample Handout for Mission Focus Group Discussion

Topic 2
Handout E
February 5, 1996

Library of Congress

CUSTOMERS, PRODUCTS, AND SERVICES

Customer Groups	Products/Services
Library of Congress:	
Congress (both current and former Members)	CRS, Reference, Legislative Information Systems (THOMAS), Translation Services, Law Library, Global Legal Information Network (GLIN)
Congressional Staffers	CRS, Reference
Government:	
Federal Government:	
Federal Libraries	FEDLINK
Immigration and Naturalization Service (INS)	Law Library, Research, Reference
State Department	Research, Reference
Supreme Court	Law Library, Research, Reference
Foreign Governments	Research, Reference
State Governments	Archiving, Reference, Research
Local Governments	Archiving, Reference, Research
Nation/World:	
Libraries (public, academic, research, special)	Cataloging, Interlibrary Loan, Classification, Catalog Distribution Service
Educators	Collection Development, National Digital Library (NDL), Center for the Book
Thinking and Creative Community (e.g., publishers, scholars)	Copyright, Cataloging, Research, Reference
General Public	Research, Reference, Cultural Performances, Exhibits and Displays, Visitor Services, Retail Marketing, American Folklife Center, Publishing, Center for the Book, Legislative Information Systems (THOMAS), Scholarly Programs
Legal Community	Law Library, Global Legal Information Network (GLIN)
Special Constituencies:	
Blind & Physically Handicapped	National Leadership of network providing access to machines, audiotapes, and Braille publications

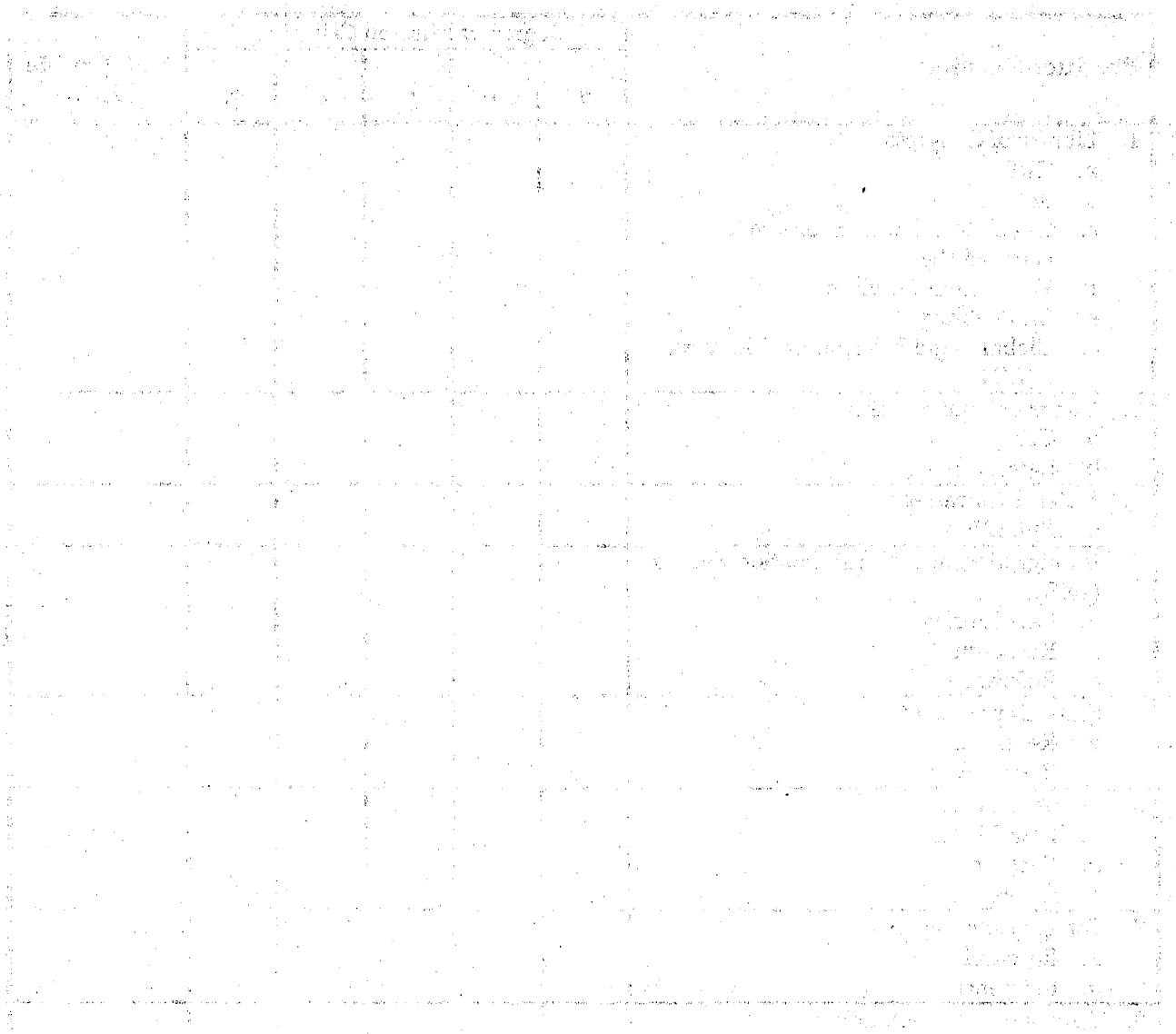
Sample Handout for Mission Focus Group Discussion

Topic 2
Handout F
February 6, 1996

Library of Congress
PRODUCTS AND SERVICES
Focus Group Survey

Please check the appropriate box under Degree of Mission Criticality. One is critical to the mission of the Library and 5 is outside the mission of the Library. In the last column please provide your assessment of whether the Library should provide these products/services by marking the item "yes" or "no."

Product/Service	Degree of Mission Criticality					LOC Provide Yes/No
	1	2	3	4	5	
1. Library of Congress a. CRS b. Reference c. Legislative Information Systems (THOMAS) d. Translation Services e. Law Library f. Global Legal Information Network (GLIN)						
2. Congressional Staffers a. CRS b. Reference						
3. Federal Libraries a. FEDLINK						
4. Immigration and Naturalization Service (INS) a. Law Library b. Research c. Reference						
5. State Department a. Research b. Reference						
6. Supreme Court a. Law Library b. Research c. Reference						
7. Foreign Governments a. Research b. Reference						
8. State and Local Governments a. Archiving b. Research c. Reference						
9. Libraries (public, academic, research, reference) a. Cataloging b. Interlibrary Loan						



Sample Handout for Mission Focus Group Discussion

c. Classification d. Catalog Distribution Service						
10. Educators a. Collection Development b. National Digital Library (NDL) c. Center for the Book						
11. Thinking and Creative Community a. Copyright b. Cataloging c. Research d. Reference						
12. General Public a. Research b. Reference c. Cultural Performances d. Exhibits and Displays e. Visitor Services f. Retail Marketing g. American Folklife Center h. Publishing i. Center for the Book j. Legislative Information Systems (THOMAS)						
13. Legal Community a. Law Library b. Global Legal Information Network (GLIN)						
14. Special Constituencies: Blind & Physically Handicapped a. National Leadership of network providing access to machines, audiotapes, and Braille machines						
15. Classification a. Dewey b. LOC						
16. Cataloging a. Preparation b. Distribution						
17. Collections Management a. Acquire b. Maintain						

Sample Handout for Mission Focus Group Discussion

Topic 2
Handout G
February 5, 1996

Library of Congress
PRODUCTS, SERVICES, AND FEES RANKING
Focus Group Survey

Please check the appropriate box.

Product/Service	Ranking				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. **Charging publishers a fee for cataloging books and other materials** (or, requiring publishers themselves to do this work).					
2. Recovering all costs of **processing copyrights.**					
3. Charging **commercial researchers** a fee for using Library materials, facilities, and staff time.					
4. Charging for **Library materials on loan** to non-congressional users, other institutions/inter-library lending.					

Sample Handout for Mission Focus Group Discussion

Topic 3
Handout H
March 12, 1996

Library of Congress

MISSION ALTERNATIVES

Please rank the mission alternatives from 1 (most critical) to 5 (least critical) to the Library of Congress.

Mission Alternative	Description	Rank Mission Alternatives
A. Library of Congress	Focuses the Library's functions toward the original role of serving as the Library of Congress, essentially a collection focused primarily on Congressional needs plus CRS-like research. Other functions go elsewhere or disappear.	
B. Library of Congress/Nation	Today's basic functions with some limits on interpretation and cultural programs.	
C. Library of Congress/Nation/ World	Fulfills the words of Dr. Billington's mission statement of October 1995. The terms "make...useful" and "universal collection" are particularly powerful in legitimizing expanded functions.	
D. Information/ Knowledge Broker	Changes the Library's principal role from being a custodian of collections to a comprehensive broker/referral agency that would, using computer/ communications technology, tell an inquirer where particular "knowledge and creativity" is stored (i.e., which libraries in the world have the specified information). This mission would be facilitated by elegant index/pointer systems and data/document transmission techniques to enable access and information retrieval.	
E. Comprehensive Digital Library	Digitize Library collections for digital storage, distribution, and access.	

APPENDIX C

Improvement Initiatives

Improvement Initiatives

From the interviews of Library of Congress personnel and analysis of documentation, Booz·Allen identified several initiatives intended to improve performance of Library operations. These undertakings, generally at the directorate level, included efforts to increase productivity, streamline operations, and improve organizational results. As discussed in Volume 1 of the Booz·Allen report, these initiatives can provide useful expertise and lessons learned that could be applied in other parts of the Library. We found, however, that these performance improvement efforts are initiated and implemented at the staff level, with little opportunity for integration into the institution wide operating processes of the Library. In addition, we found that many of these efforts, though valuable attempts in their own right to improve performance, remained in the pilot, test or study phase.

Among the process/performance/productivity initiatives proposed, underway, or recently put in place are the following:

- Acquisition and Support Services Directorate:
  - Whole-acquisition teams for Hispanic Acquisition Section of the Exchange and Gift Division and African/Middle Eastern Acquisition Section of the Order Division
  - Activity Based Costing analysis of labor costs of the acquisition process (1995)
  - Reduction of unwanted materials deposited in the Library by government organizations, by the Exchange and Gift Division
  - Project R, to replace damaged and mutilated books, by the Exchange and Gift Division
  - Project EX, to encourage microform exchanges by other libraries to replace lost Library of congress books
  - Publishers' creation of bibliographic records in USMARC[1] format in the resource base of the Seminar of Latin American Library Materials (SALALM), using a manual prepared and distributed by the Hispanic Acquisition Section.
- Cataloging Directorate:[2]
  - Program for Cooperative Cataloging (PCC), which handles cooperative cataloging of monographs and was initiated in February 1995
  - Focus on BIBCO, the bibliographic record component of the PCC

[1] US Machine Readable Catalog
[2] Cataloging directorate Annual Report, fiscal year 1995

- Expansion of international cooperative efforts, with the British Library, National Library of Canada, and University of Newcastle (Australia)
- Expansion of National Union Catalog of Manuscript Collections (NUCMC) and creation of a World Wide Web page for NUCMC
- Text Capture and Electronic Conversion software for Bibliographic Work Station (BWS)
- Automated capabilities to measure throughput time for book and Cataloging in Publishing (CIP) cataloging.

- Preservation Directorate:
  - Six months planning effort leading to significant changes in the focus of the Directorate's efforts, involving about two-thirds of the staff, internal Library customers, and outside people concerned about preservation of library materials
  - Improved method for preserving audio recordings (e.g., cassettes, LP records), in cooperation with collection custodial personnel
  - Pilot project to apply combined bar-code/security tapes to books to permit tracking of work in progress (tapes would be applied with pressure not heat).
- Copyright Office:
  - Program to relieve publishers of requirement to deposit items that neither the Library nor the Office wants (e.g., successive issues of a tool catalog)
  - Optical imaging of registration applications.
- Prints and Photographs Division:
  - Since about 1989, upon arrival of current Division Chief, use of Paradox data base for accession records
  - Currently, shifting to use of a Paradox data base for new collection references.

APPENDIX D

Organizational Realignments and Personnel Shifts

Selected Major Organizational Realignments and Personnel Shifts, 1988-1996

DATE OF CHANGE	TYPE OF CHANGE	DESCRIPTION OF CHANGE (partial list)
Sept. 1987	LIB	Dr. Billington becomes Librarian of Congress
1988	MGMT	• The Library establishes a 20 member management team, replacing the Executive Session
	MGMT	• Temporary Management Services director named • Acting Chief of Financial Management Office appointed • Associate Librarian for Management appointed
	HR	• Acting Associate Librarian for Human Resources appointed • Acting Associate Librarian for HR assumes new role as Director for Technical Processes Research • Director of Personnel and Labor Relations assumes new role as the Director for Research Management, Research Services • Assistant Director for Operations, Congressional Research Service serves as Acting Director of Personnel • Associate Librarian in Technical Processes Research role assumes responsibility for overseeing the Affirmative Action Program, the EEO Complaints Program, and the Women's Program • Director of Personnel and Labor Relations appointed
1989	LIB	• Acting Deputy Librarian of Congress appointed
	MGMT	• The Library begins to form matrix teams through its newly established Office of Special Projects • Associate Librarian for Management assumes additional responsibilities for management of the Special Programs Office • Associate Librarian for Management named head of Library Management Services, overseeing Human Resources, Financial Services, Information Technology and Integrated Support Services
	ORG	• MAP transition effort completed with establishment of Collections Services and Constituent Services as two separate entities. Policy Planning Office is dissolved
1990	HR	• The EEO/Dispute Resolution Pilot project is expanded to all service units
1991	LIB	• Acting Deputy Librarian of Congress appointed
	MGMT	• Associate Librarian for Constituent Services appointed • Associate Librarian for Special Projects appointed • Associate Librarian for Science and Technology Information appointed
1992	MGMT	• Associate Librarian for Management reassigned to Special Projects to head a Library wide working group on the "Electronic Library"
	ORG	• Financial Services and Personnel Security reorganized under the Office of the Librarian, Information Technology Services reporting to the Associate Librarian for Science and Technology Information • Integrated Support Services reorganized under the Associate Librarian for Constituent Services • Establishment of Affirmative Action and Special Programs Office
	HR	• Associate Librarian for Human Resources named, directing: AASPO, Dispute Resolution Center, EEO Complaints Office, and the Human Resources Directorate. Assigned to Co-chair a working group with to design programs to address past divisiveness. A nationwide search for permanent Assistant Librarian for HR is initiated

1993	LIB MGMT ORG HR	• Deputy Librarian of Congress position created • Consultative Management initiative initiated through the Associate Librarian for Constituent Services • The Center for Creative Innovation and the Office of the Associate Librarian for Management are dissolved • Special Projects service unit and the Science and Technology Information Service Unit abolished • Centralized training unit re-instituted. It had been de-centralized to service units subsequent to MAP • Associate Librarian for Human Resources appointed
1994	LIB MGMT	• Deputy Librarian of Congress appointed • Director of the Congressional Research Service (CRS) appointed • Senior Advisor for Diversity appointed
1995	LIB, ORG, MGMT, HR	• Library of Congress reorganization begins and five member executive committee established • Chief of staff assigned the additional responsibility for Information Technology Services, Financial Services, and Integrated Support Services • Associate Librarian for Library Services created, merging Collections Services, Constituent Services and Cultural Affairs • The Office of the Librarian absorbs the Office of Communications, Office of Special Events and Public Programs • Plans to consolidate all support services in 1996 are unveiled. • CRS reorganization • Labor Relations Chief appointed (vacant since 1993) • American Memory Office's name changed to the National Digital Library Program
1996	LIB MGMT	• Deputy Librarian assigned to Internal University as the Senior Advisor for Staff Development and Staff Transition in the Librarian's Office • Temporary Deputy Librarian of Congress appointed • Chief of Staff reassigned to Associate Librarian responsible for managing and directing: Financial Services, Human Resources Services, Information Technology Services, Integrated Support Services, and the National Digital Library program. • Director of Diversity program assumes additional role as Chief of Staff

* LIB - Office of Librarian, General Management
MGMT- Management Shift
ORG - Reorganization
HR - Human Resources

Source: Selected from The Gazette and Librarian Special Announcements, 1988-1996.

APPENDIX E

Process Profiles

APPENDIX E

Process Profiles

This Appendix provides the detail of our profiling activities within the Library of Congress and the basic summary points about the processes profiled. The intent of profiling these processes was to create an operational and organizational foundation for understanding the findings and opportunities for improvement in the operations and management of Collections, Copyright, and CRS. A detailed investigation or analysis for Continuous Improvement, Business Process Reengineering, Total Quality Management or other improvement efforts is left for future Library efforts focused on specific, targeted areas or processes.

The following is an explanation of the method we used to perform the process profiling and the resultant understanding we obtained.

Booz·Allen profiled the following major operational processes:

- Acquisition and receipt of materials
- Cataloging
- Preservation
- Servicing
- Disposal
- Copyright
- CRS inquiry and response.

The profiles are made up of flow charts, throughput data, and staffing data for the processes and are located through this and the other Appendices.

Booz·Allen's approach to developing process profiles was straightforward. Using existing Library documentation (e.g., work flow documents, various studies, Annual Reports), the team first developed tentative process flows for the core processes. Using these flowcharts as a starting point, the team conducted interviews with Library staff to adjust, confirm, and expand each profile. Process information obtained from these interviews included:

- Steps and sequence
- Input and output
- Approximate time intervals
- Responsibility centers
- Number and type of staff involved
- Throughput data
- Information systems and databases used
- Decisions and decision-makers involved.

Booz·Allen compiled this information and created the flows using EXTEND+, a commercially-available software product. We then reviewed and validated the profiles with Library staff.

The following is a summary of the major points and understanding obtained from the profiling. This summary is intended to provide a general understanding of the operations and how they are carried out on a daily basis (high level).

1. The Collections Management Process Is Relatively Simple And Straightforward

It is clear from our study that the general processes of collections management are relatively simple and straightforward. As shown in figure E-1, the overall process includes the functions of acquiring, cataloging, preserving, servicing, and disposing of items in the collections.

LOC MAJOR OPERATIONS (for Monographic Books and Serials)

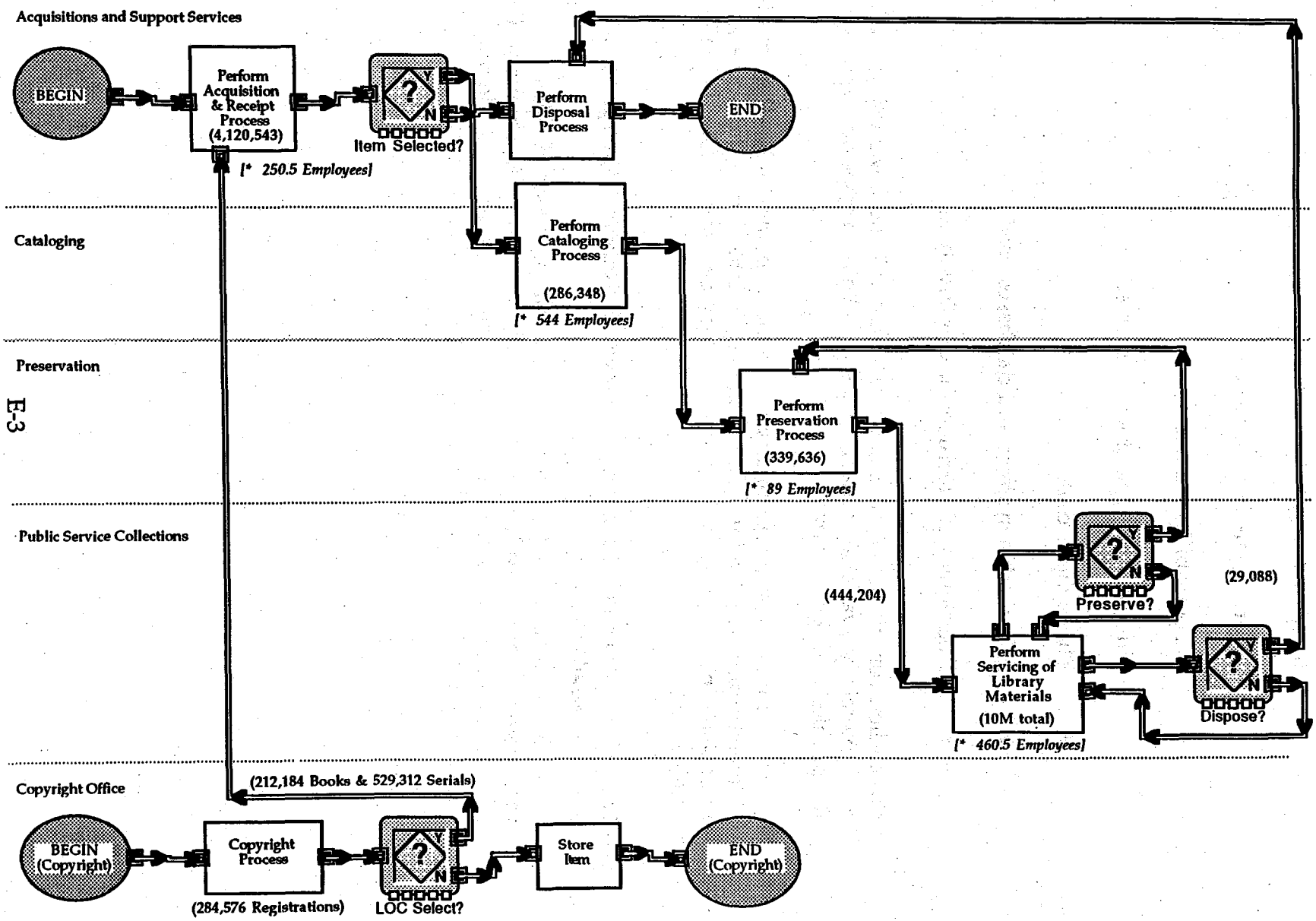


EXHIBIT E-1
Overall Collections Management Process Flow

As we profiled the processes and spoke to Library staff, we found that the processes used:

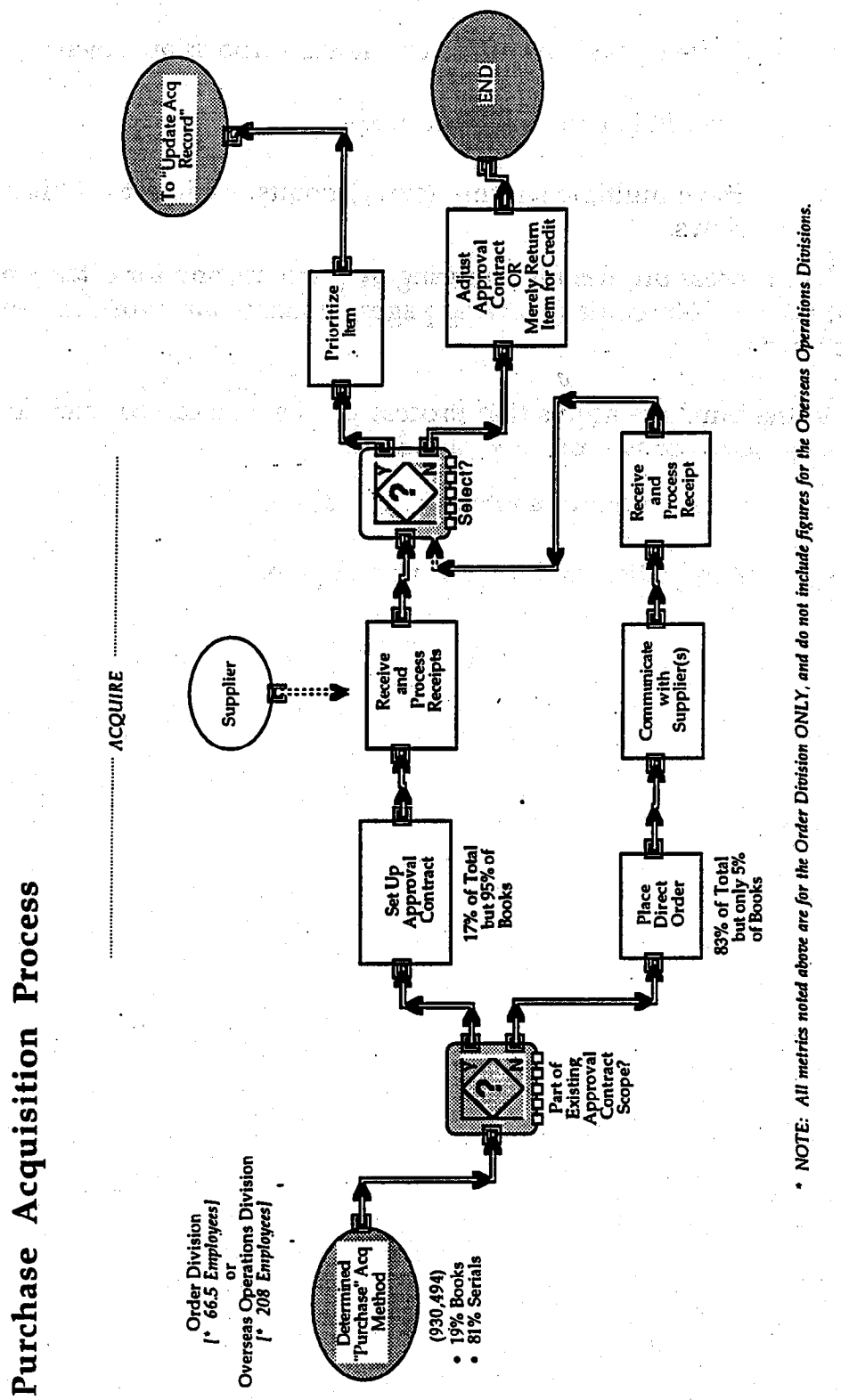
- Are organized in serial flows
- Have few rework loops and few in-process approvals
- Are similar for different media
- Have multiple starting (entry) points, leading to similar serial flows.

The process profiles for acquiring by purchase and for cataloging, Exhibit E-2 and E-3 on the following pages, illustrate many of these process characteristics.

In the purchase acquisition process profile, one can see similar, serial processing paths for two process variations:

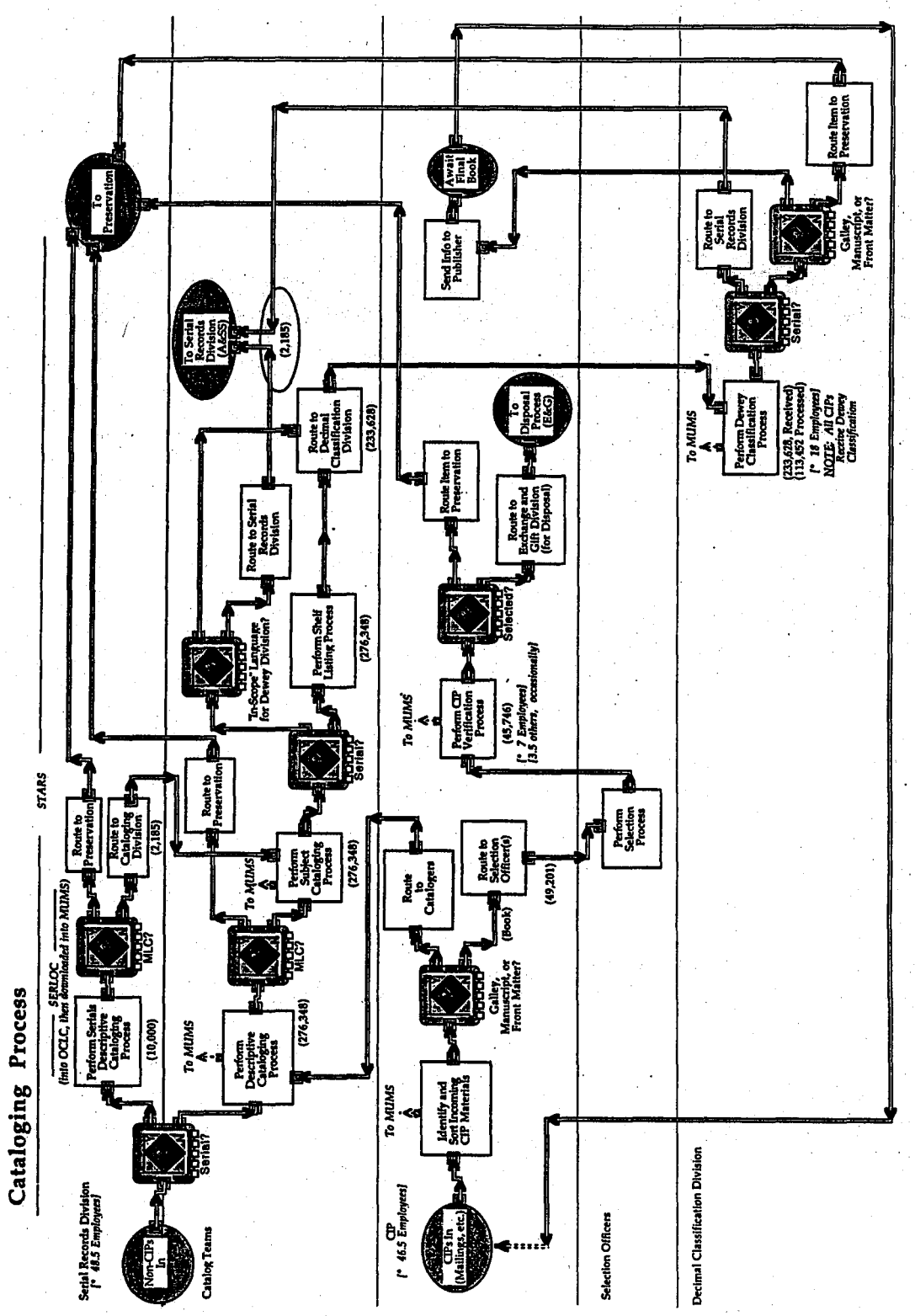
- Direct order of an item from a dealer
- Acquisition under an approval plan.

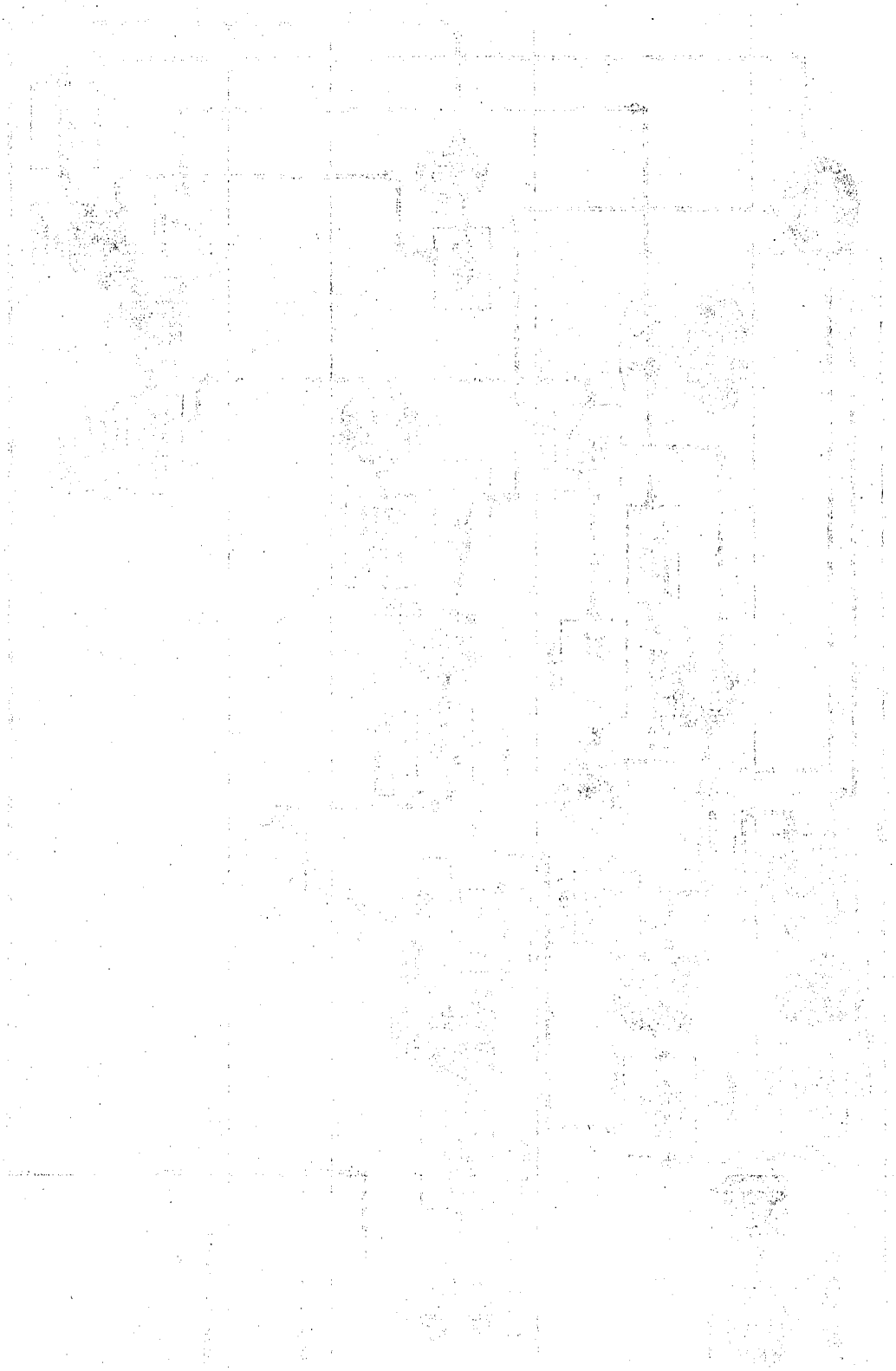
EXHIBIT E-2
Purchase Acquisition Process Profile



* *NOTE: All metrics noted above are for the Order Division ONLY, and do not include figures for the Overseas Operations Divisions.*

EXHIBIT E-3
Cataloging Profile





In the cataloging process profile shown in Exhibit E-4 one can see:

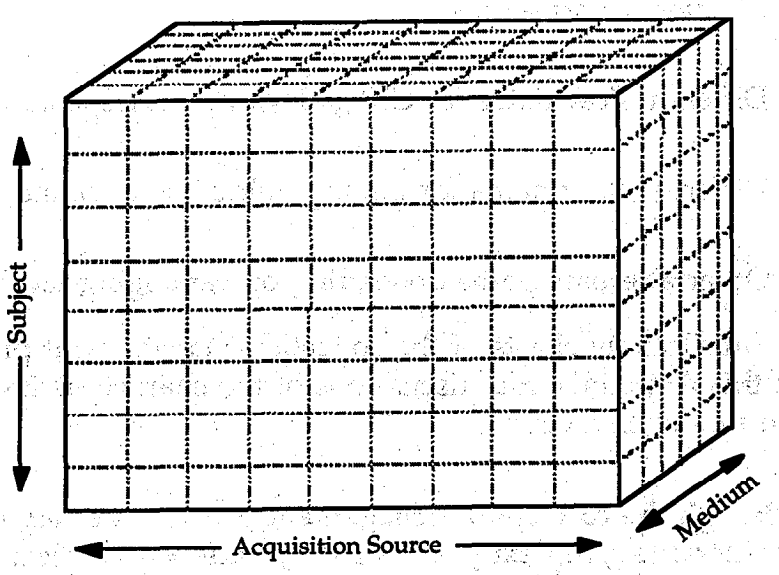
- Three different process variations, for the following types of materials: Cataloging in Publication (CIP) galleys and deposits, non-CIP items, and serials.
- Different flow paths for CIP galleys versus deposits
- Different flow paths for monographic books versus serials
- Other alternate paths depending on cataloging level and selection.

All profile flow charts of the collection management processes are located in this Appendix and discussions of the characteristics of the processes are located in Appendix F.

2. Although the collection management process is straightforward, considerable complexity is created by variety of subject matter, acquisition sources, and media that must be dealt with in the Library.

The complexity of collections management arises from the variety of media, acquisition sources, and subjects in the collections.

EXHIBIT E-4
Acquisitions



The media and acquisition sources are defined in Exhibit E-5 and E-6, respectively. The Library's collections include about 33 major subject areas (defined by the Collection Policy Statements).

EXHIBIT E-5
Media in the Library Collections

MEDIA	TYPES OF ITEMS
Printed Materials	Monographic books Serials Rare books Newspapers Pamphlets Technical reports Manuscripts Maps Microforms Other
Visual Materials	Moving images Photographs (negatives, prints, and slides) Posters Prints and drawings Other (broadsides, photocopies, non-pictorial material, etc.)
Audio Materials	Music Sound recordings Talking books

EXHIBIT E-6
Acquisition Sources for the Library Collections

Acquisition Sources (i.e., the means by which the Library obtains an item)	Purchases by order Purchases through approval plans Exchanges Gifts Transfers CIP deposits CIP demands Copyright deposits Copyright demands

As we tracked sample materials through the process, we found that the Library makes exceptions to the routine processes to deal with:

- Complexities arising from different media
- Complexities arising from different acquisition sources
- Language requirements of various materials
- Other differences such as acquisition of replacements versus new items.

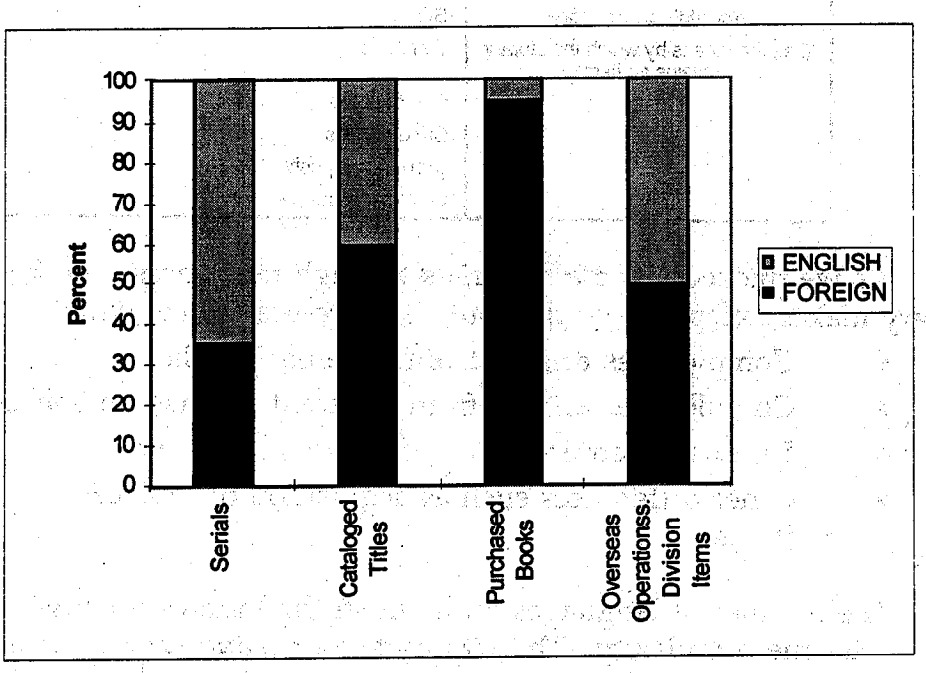
The number of languages with which the Library must work exacerbates the complexity. The Library acquires and services materials in over 400 languages. As of July 1994, the Library's book collections consisted of 49.9% English language and 50.1 % foreign language materials.

EXHIBIT E-7
Breakdown of Book Collections as of July 1994

LANGUAGE	PERCENTAGE OF TOTAL
English	49.9
German	9.5
French	6.4
Russian	5.9
Spanish	5.3
Italian	3.2
Japanese	3.0
Chinese	2.2
Polish	1.5
Portuguese	1.3
Other	11.7

As shown in Exhibit E-8. many incoming materials require a foreign language skill. Exhibit E-8 of Appendix E provides a view of the impacts of non-English language materials on the Library's Cataloging Directorate.

EXHIBIT E-8
Incoming Foreign Language Materials[1]



To acquire, catalog, classify, or service material in a foreign language, a staff member must have knowledge of the language appropriate to the work being done. The Library currently deals with this need in two ways:

- **Specialized Teams.** For some languages, the people with language skills are made available as special teams in the functional organizations. Examples are the Hebrew team in cataloging and the Slavic team in the Order Division. This approach causes some exceptions to routine processing to take advantage of the language skills and stresses the limited resources.

- **Functional Dispersal.** For other languages (e.g., Urdu and Hindi), people with the language skills are dispersed throughout the Library, where they perform functions that are not necessarily based on their language expertise. This approach causes such process

[1] Serials data in this figure are based on a telephone call to Kim Dobbs on February 8, 1996. Cataloging data are based on a telephone call to Susan Morris on February 8, 1996. Purchases data are based on a memorandum from Linda Pletzke dated February 8, 1996. Data on Overseas Operations purchases are based on a telephone call to Judy McDermott on February 12, 1996.

exceptions as routing an item to a custodial division for the selection step.

In addition to the specialized language knowledge required for handling many items, we found that most of the effort involved in cataloging and collections development is knowledge-based work. Specifically:

- Cataloging personnel need knowledge of cataloging standards and rules, subject areas, media, creators, and/or language. The library industry and many other institutions view and use the Library of Congress cataloging decisions as the industry standards. For example, the Library maintains the Dewey Decimal Classification System.

- Curators need knowledge of their subject areas, creators, and history of their areas. In many cases, the curators determine the direction of collection development and, hence, its completeness.

- Some acquisition personnel need specialized knowledge of sources and modes of acquisition.

3. Historically, The Library Has Dealt With Process Complexities By Organizing Collections Management Along Specialties.

The Library has organized its collections along specialties, as shown in Exhibit E-9.

EXHIBIT E-9
Organizational Alignments

AREA	ALIGNMENT	EXAMPLES
Acquisition	Acquisition source or channel	Order Division Exchange and Gift Division
	Geography	Overseas Operations Division African/Middle Eastern Acquisition Division
Cataloging	Subject	Business and Economics Section Education, Sports, and Recreation Section General History and Literature Section
	Language	Korean/Chinese Hebraica Germanic
	Special collections and medium	Music Division Manuscripts Division
Servicing	Subject	General Collections Law Library Poetry and Literature
	Language/Geography	Asian Studies
	Medium	Prints and Photographs Division Motion Picture, Broadcast, and Recorded Sound Division

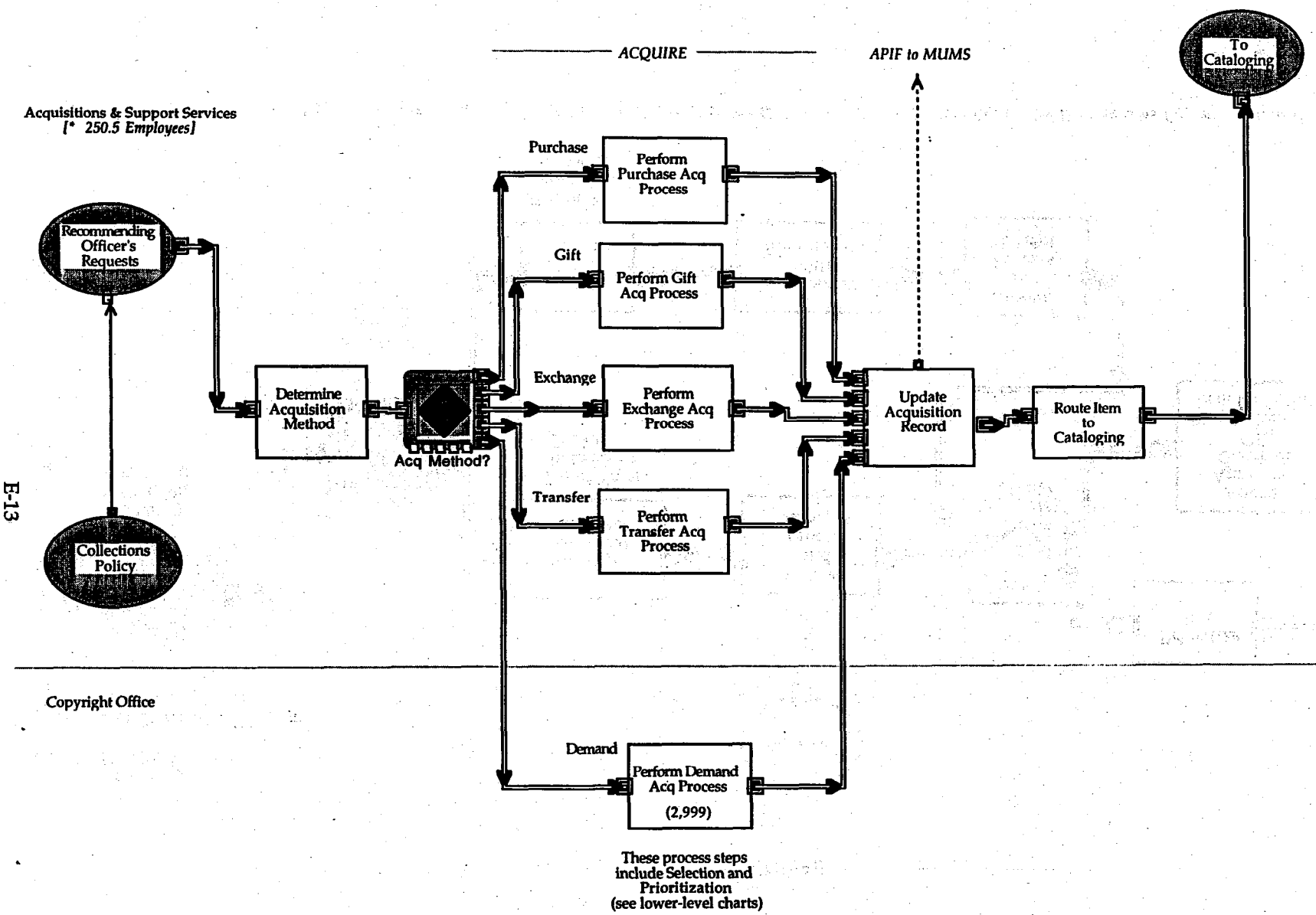
To deal with complexities, the Library has also tested non -routine approaches as pilots. These include the whole-acquisition (Hispanic Acquisition and African/Middle Eastern Sections) and whole cataloging pilots. The whole acquisition pilots align staff and skills by geography. For example, the Hispanic Acquisition Sections handles all types of acquisition, for all languages, in the Iberian Peninsula, Latin America, and the Caribbean. Whole cataloging pilots are teams for cataloging items in, or dealing with, a language.

Additionally, individual Library Services units have designed and installed information systems to support their individual portions of the overall collections management process. The Library Services directorates have instituted separate work control and information systems that are not linked nor integrated. Exhibit E-10 identifies some of the principal systems that are used.

EXHIBIT E-10
Automated Systems Used During the Collections Management Process

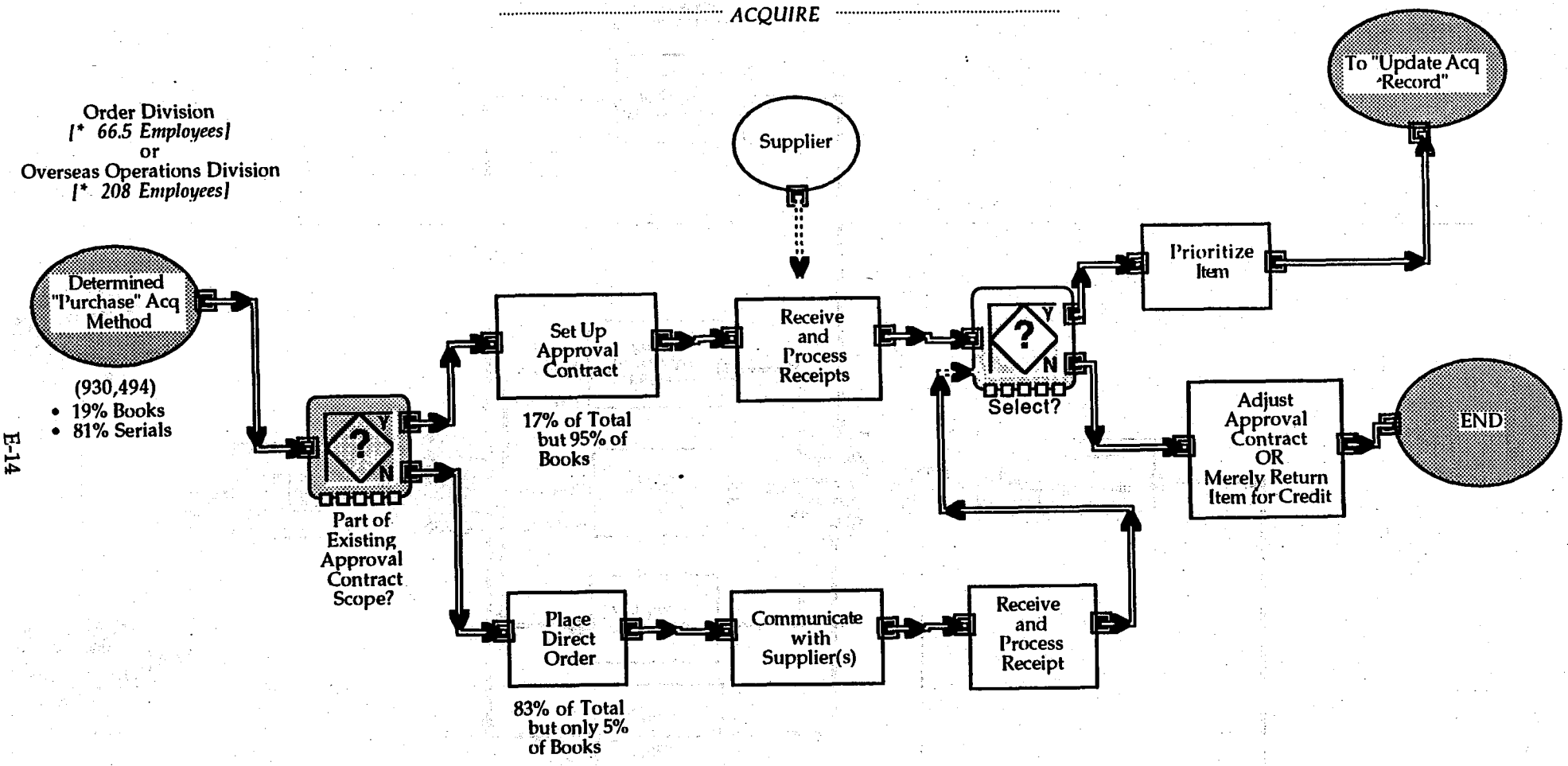
PROCESS	SYSTEM	USE
Acquisition	ACQUIRE	Bibliographic control of serials and non-print materials Order, request, and demand control Material receipts and invoice control Follow-up and claiming Supplier directory Voucher preparation Payments scheduling and tracking Funds management Audit Statistics
Cataloging	STARS Bibliographic Work Stations (BWS)	Bibliographic-item receipt and completion control Throughput control Team productivity control and monitoring Arrearages monitoring Labor and time monitoring Enter and check data in MARC records
Serials Cataloging	SERLOC file of MUMS	Cataloging data entry into OCLC for batch download into MUMS
Preservation	LARS	Control of books and serials in binding and labeling process

Acquisition and Receipt Process



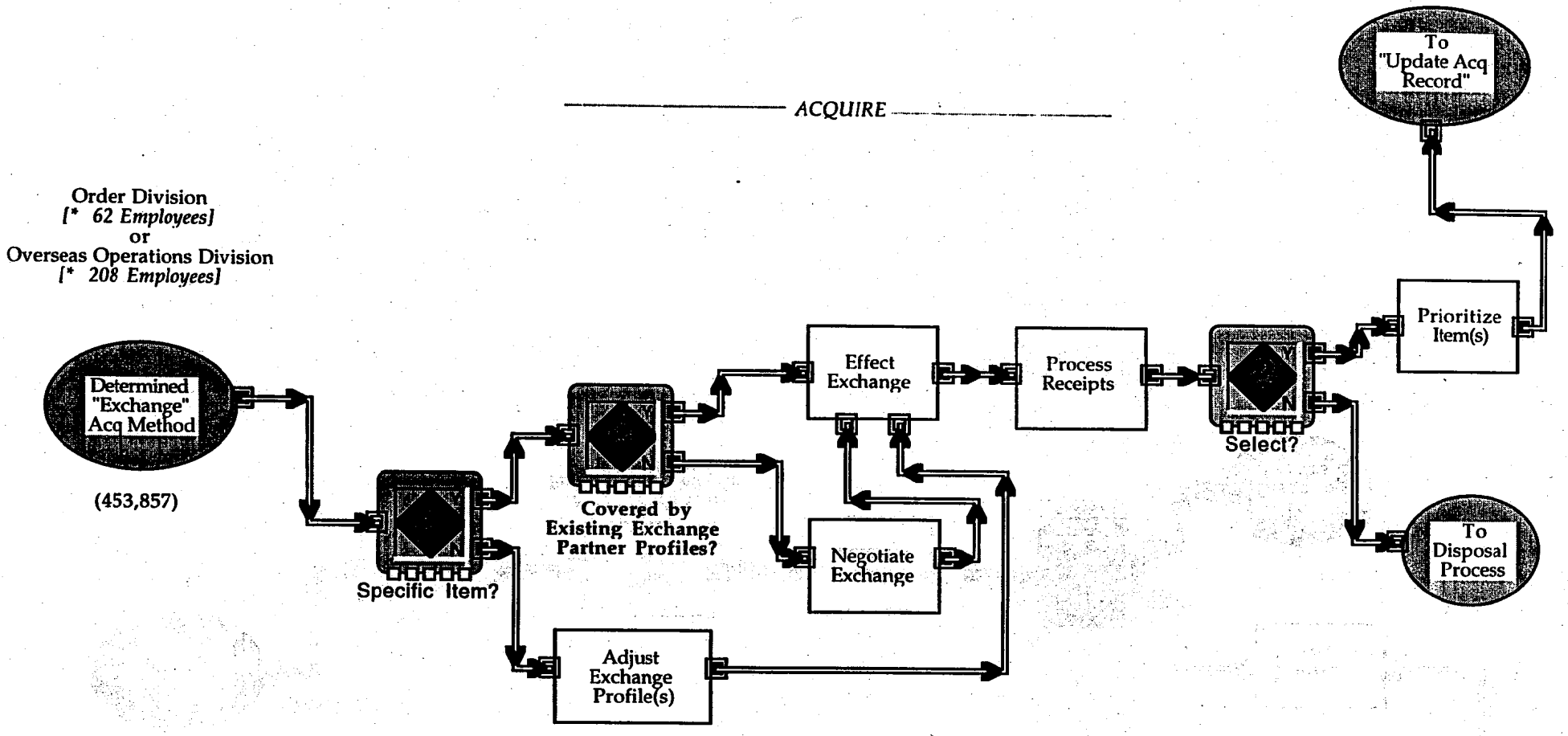
PLEASE NOTE: The acquisition of CIP Deposits and Copyright Deposits occurs within the Cataloging and Copyright process flows, respectively. Please see these lower-level charts for more detail...

Purchase Acquisition Process

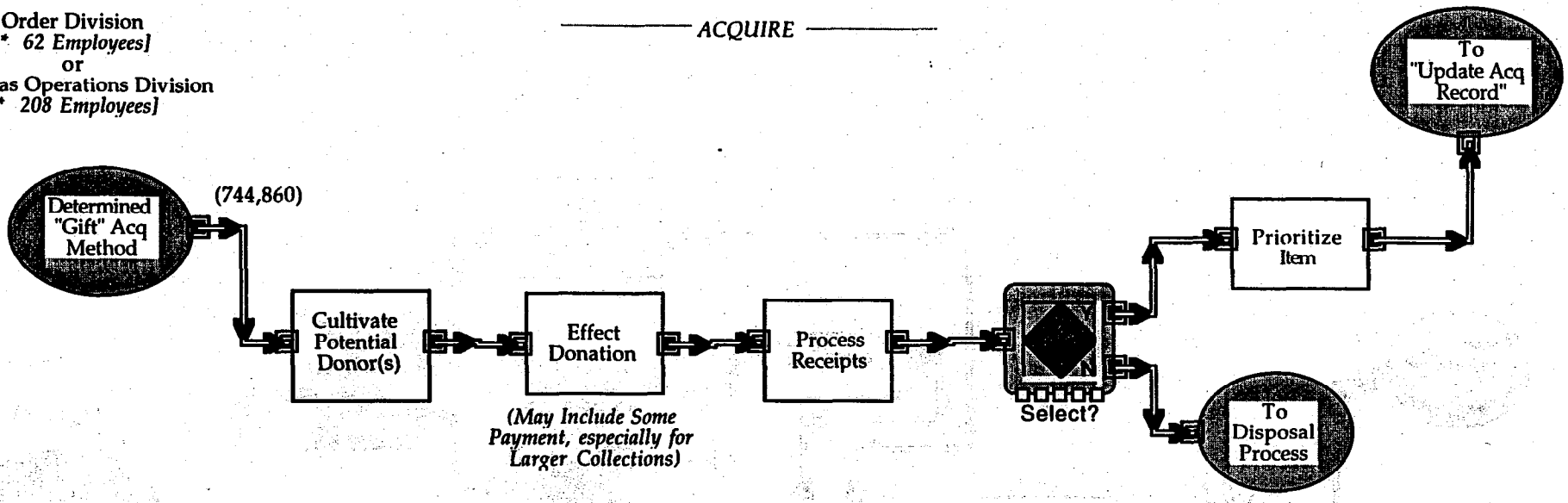


* *NOTE: All metrics noted above are for the Order Division ONLY, and do not include figures for the Overseas Operations Divisions.*

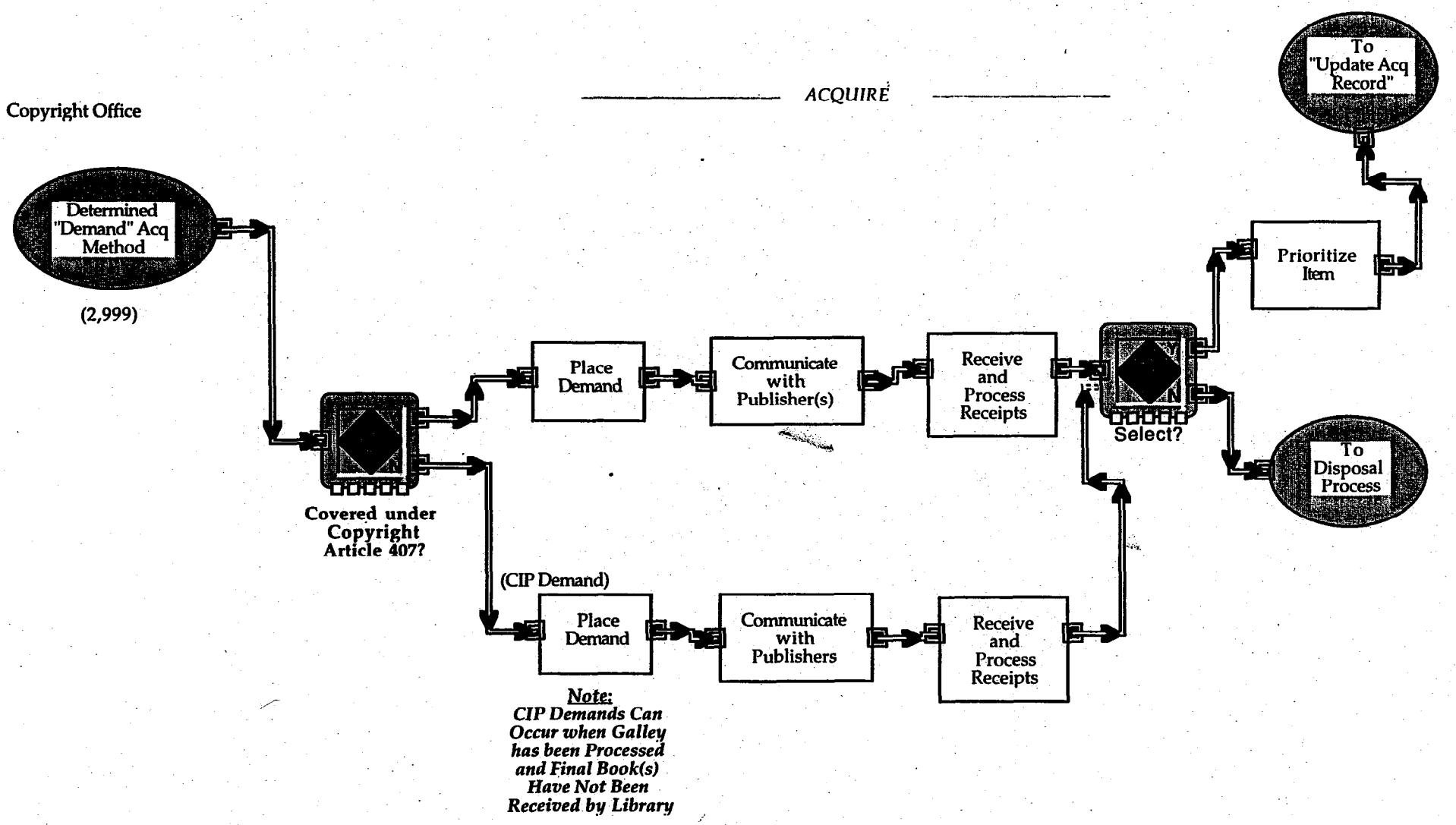
Exchange Acquisition Process

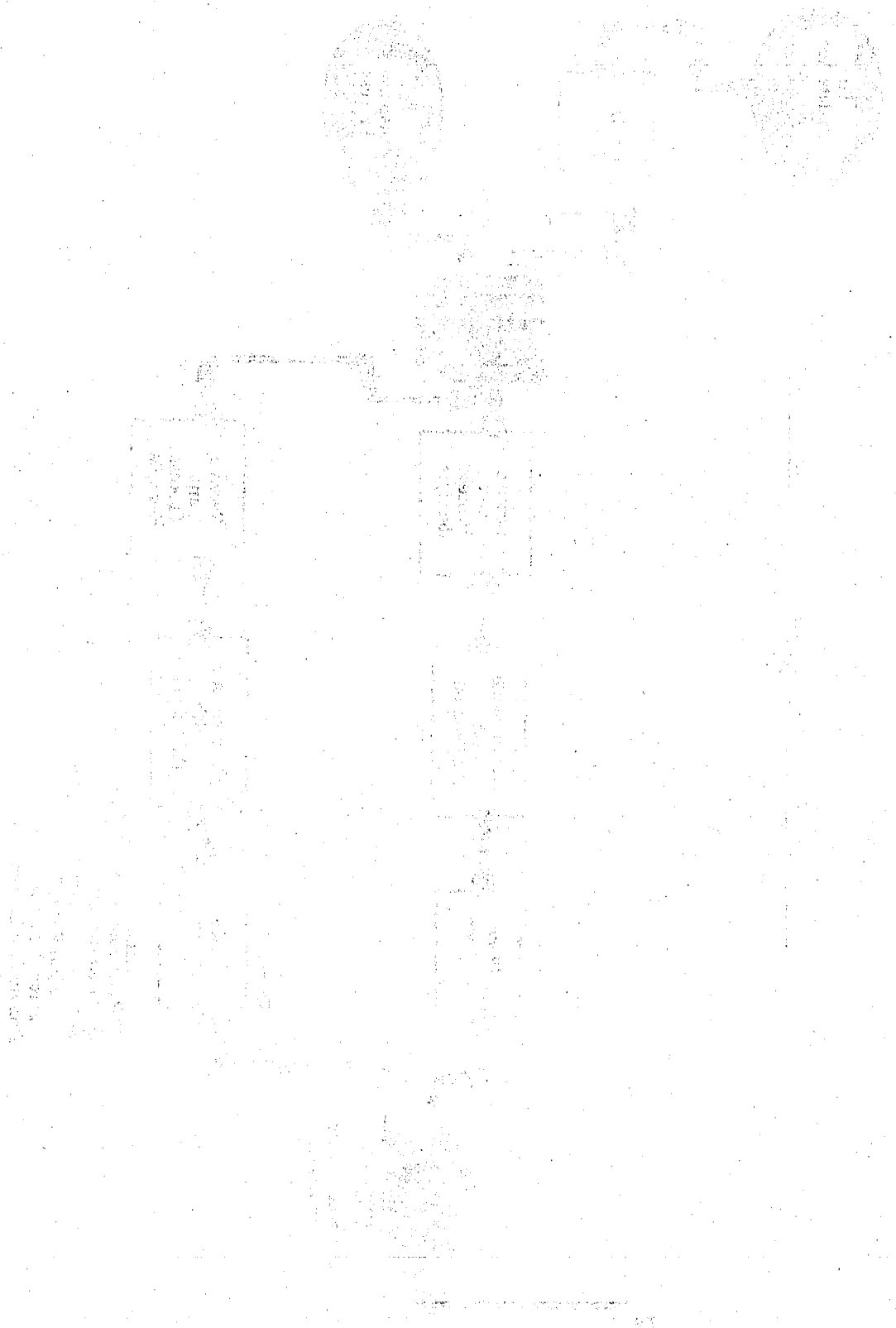


Gift Acquisition Process

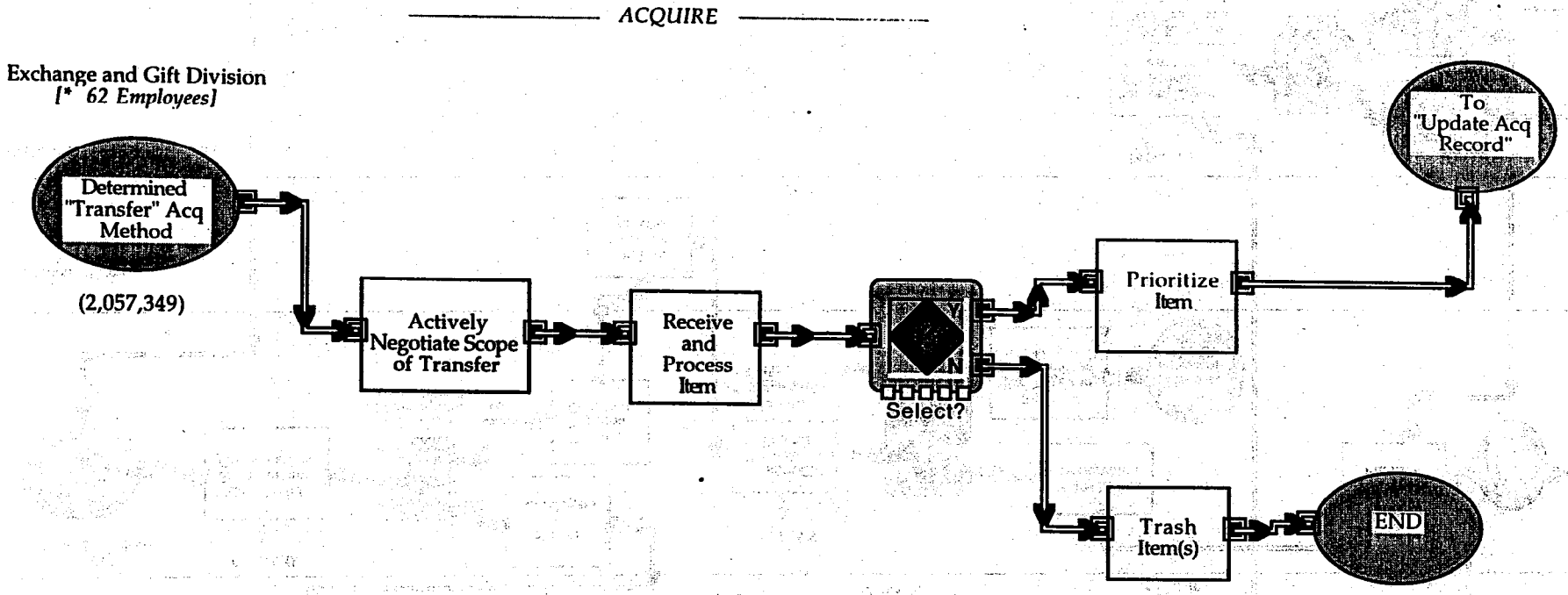


Demand Acquisition Process

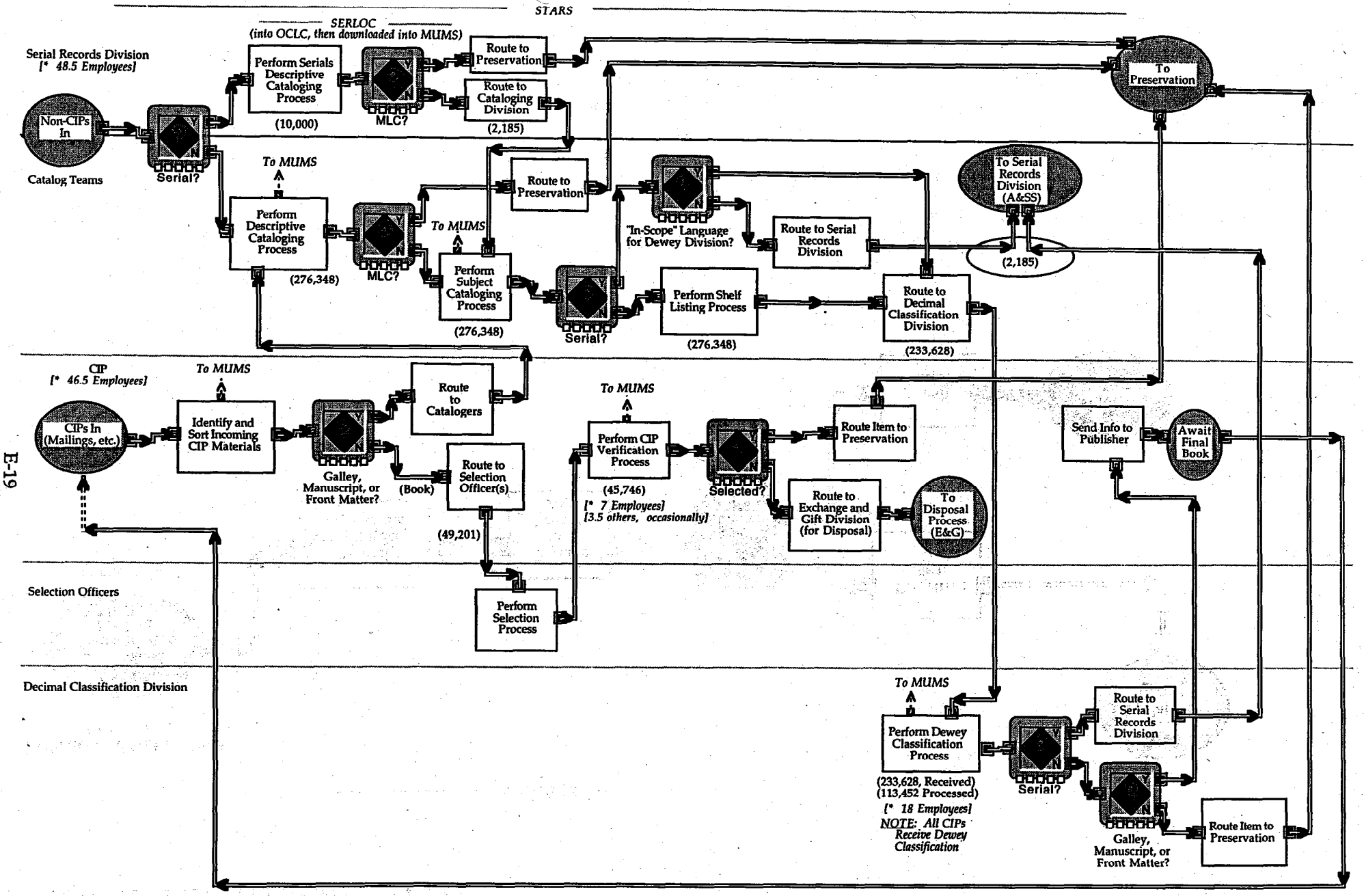




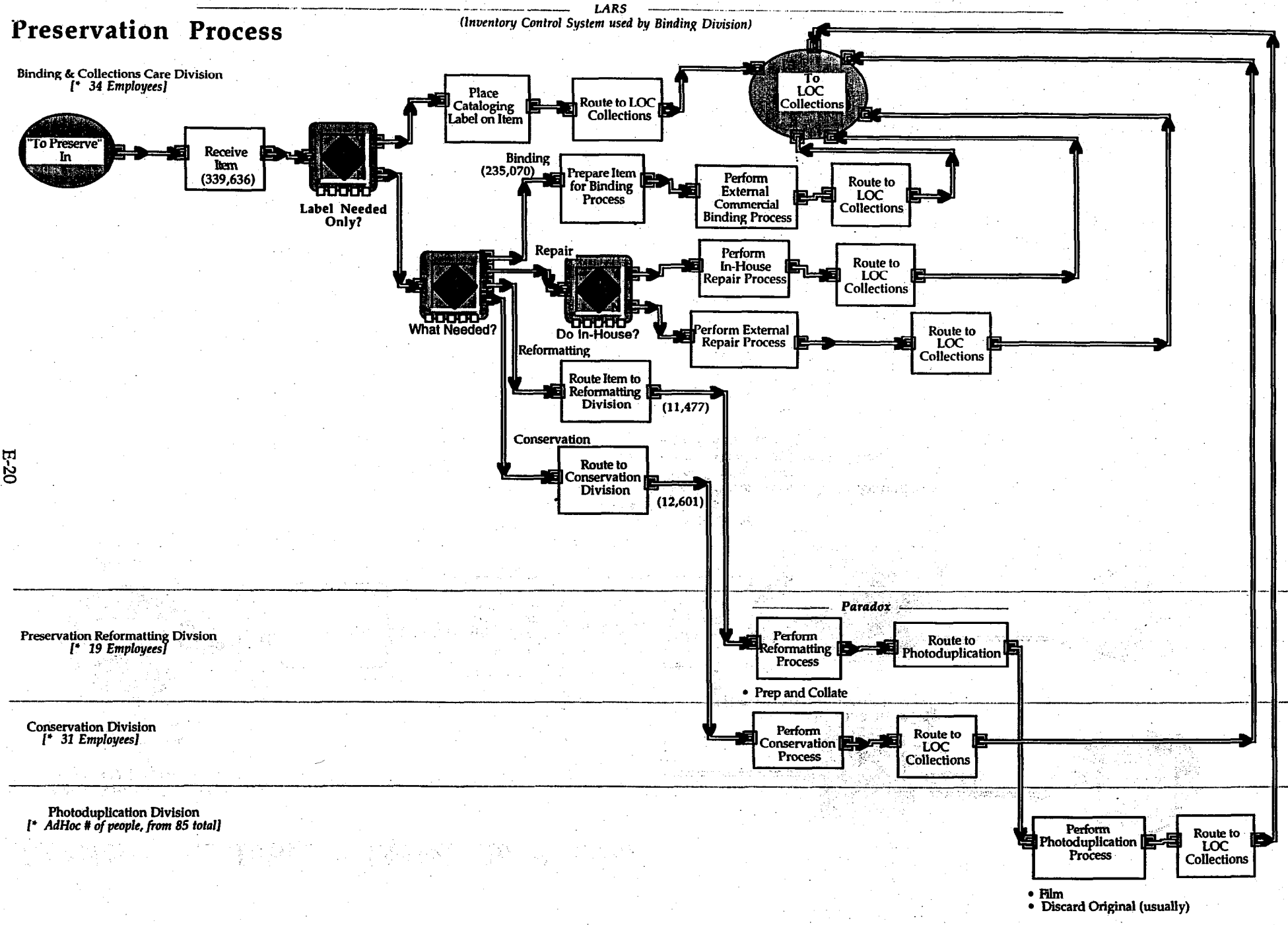
Transfer Acquisition Process



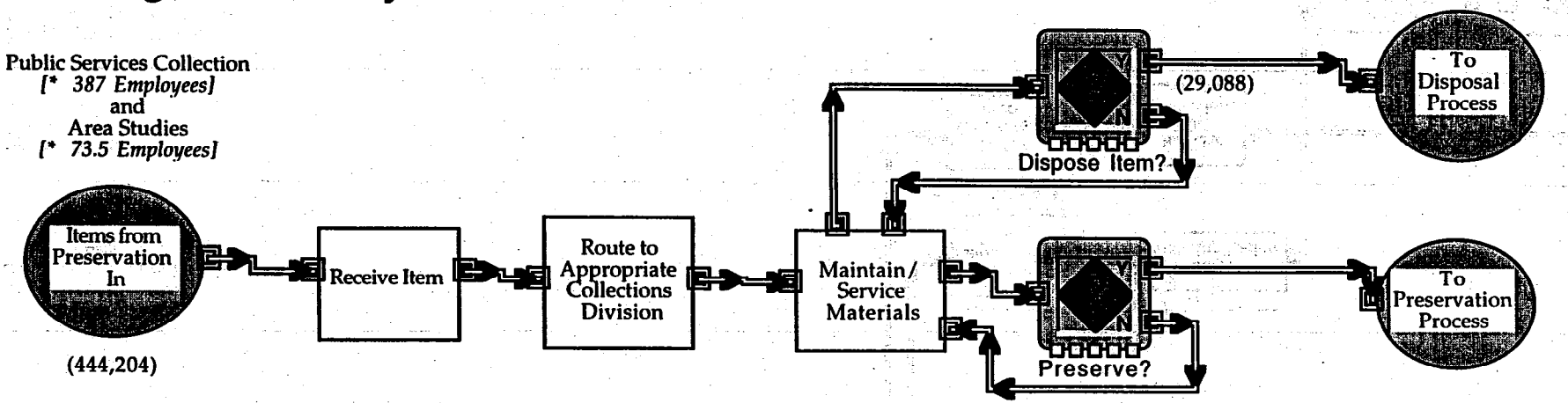
Cataloging Process



Preservation Process



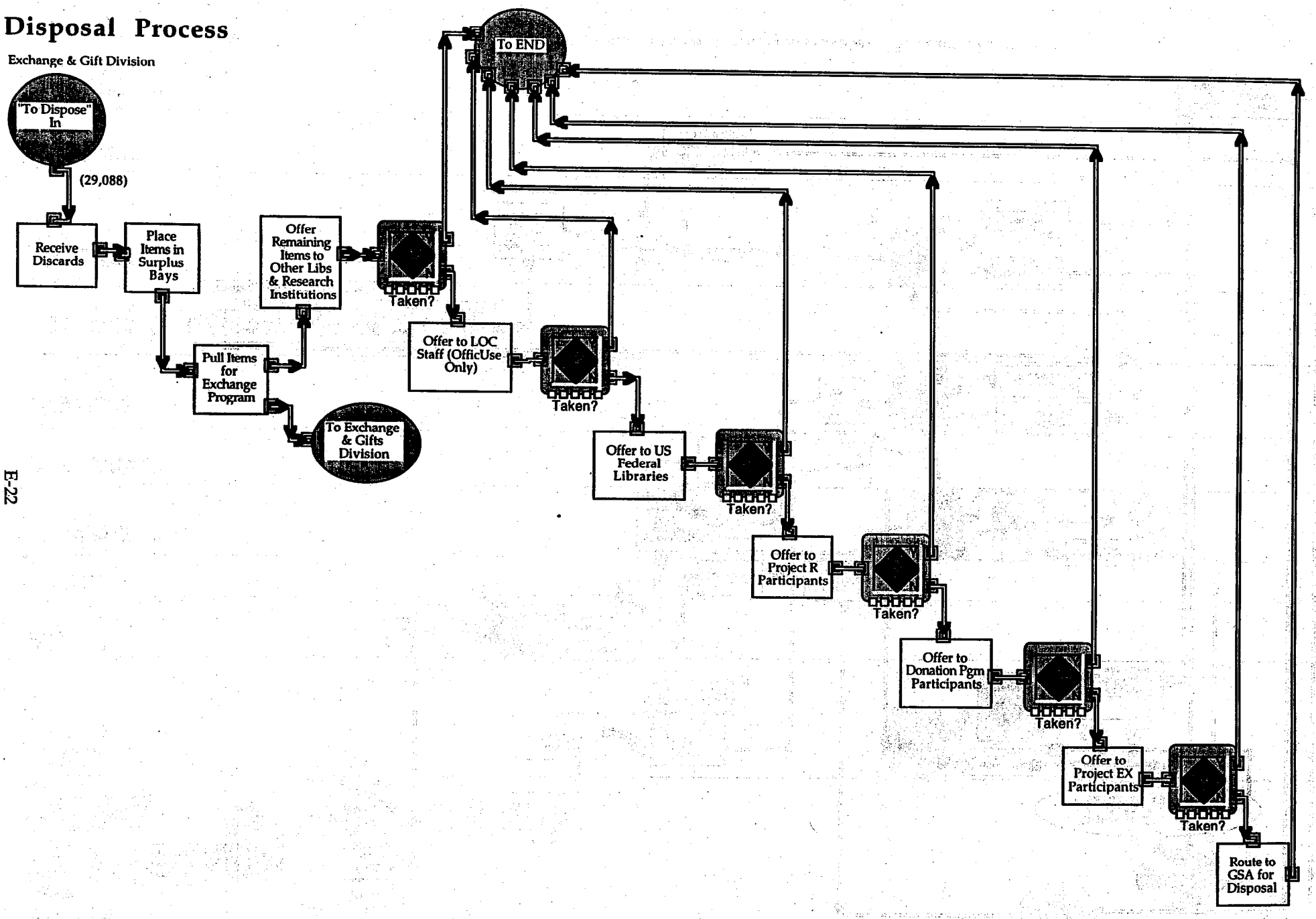
Servicing of Library Materials Process



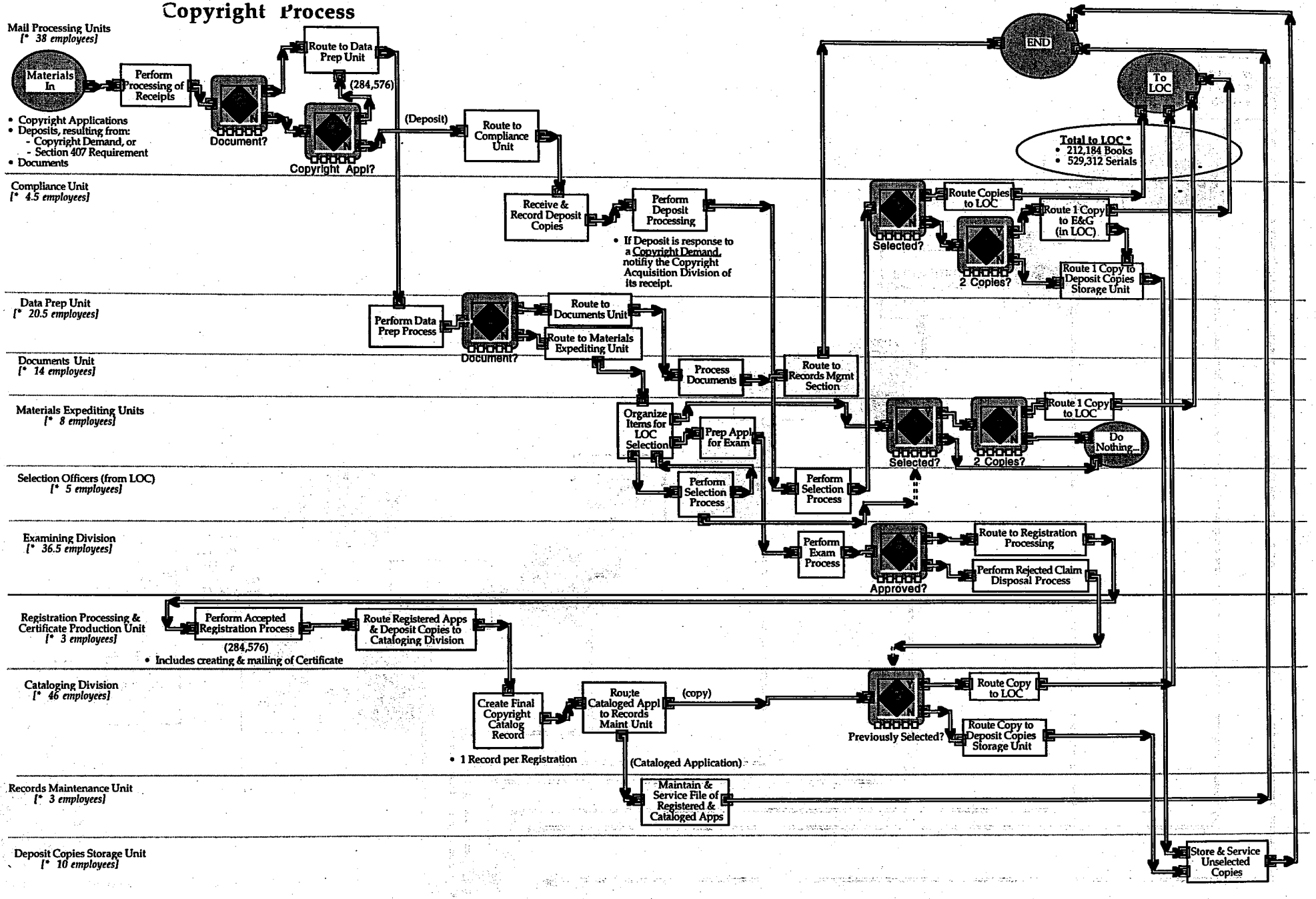
- Store & Receive Items
- Loan Items
- Condust Preservation-related Activities
- Manage Reading Rooms
- Provide Info & Assistance to Public
- Create & Manage Exhibits

Disposal Process

Exchange & Gift Division

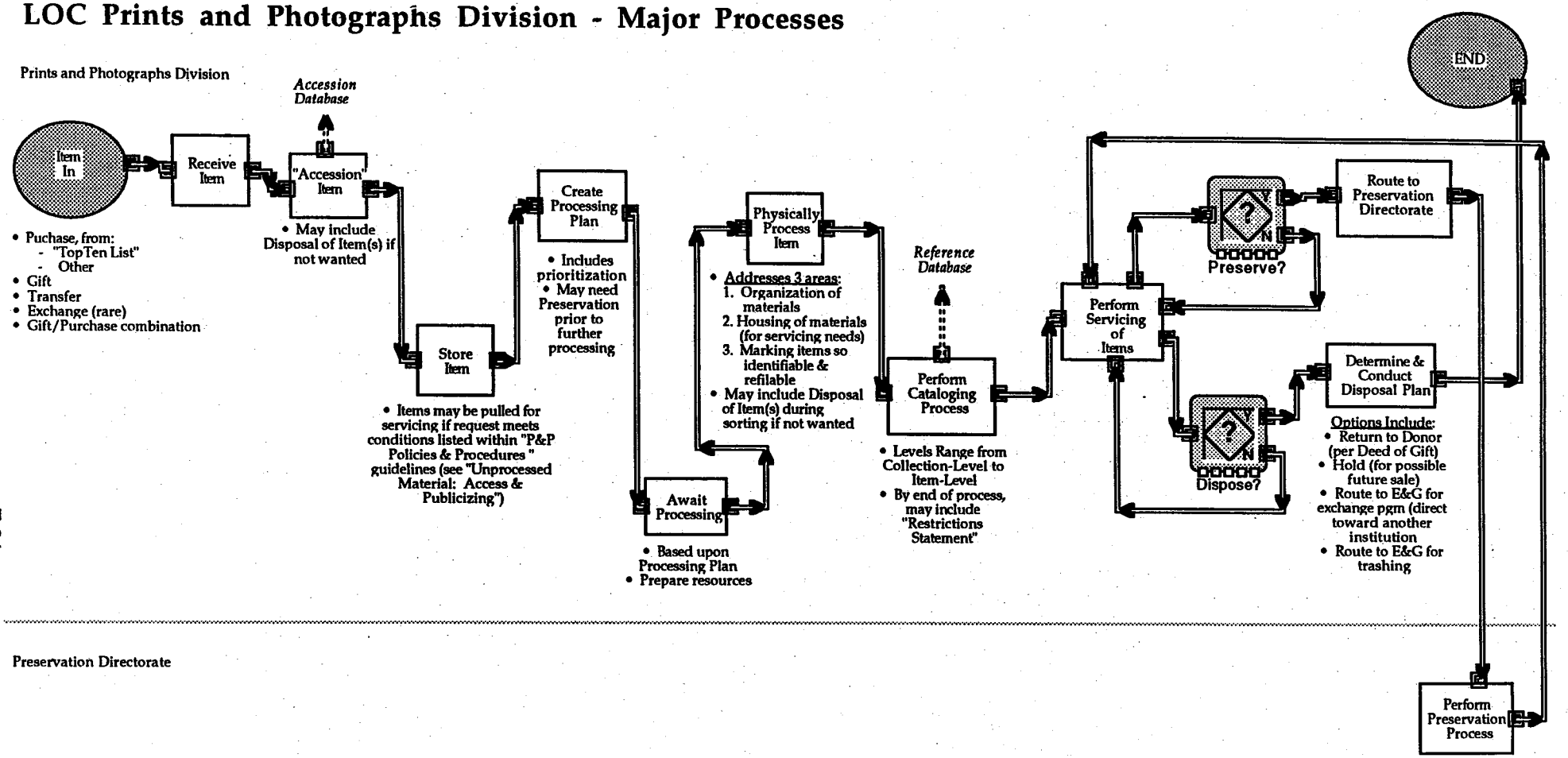


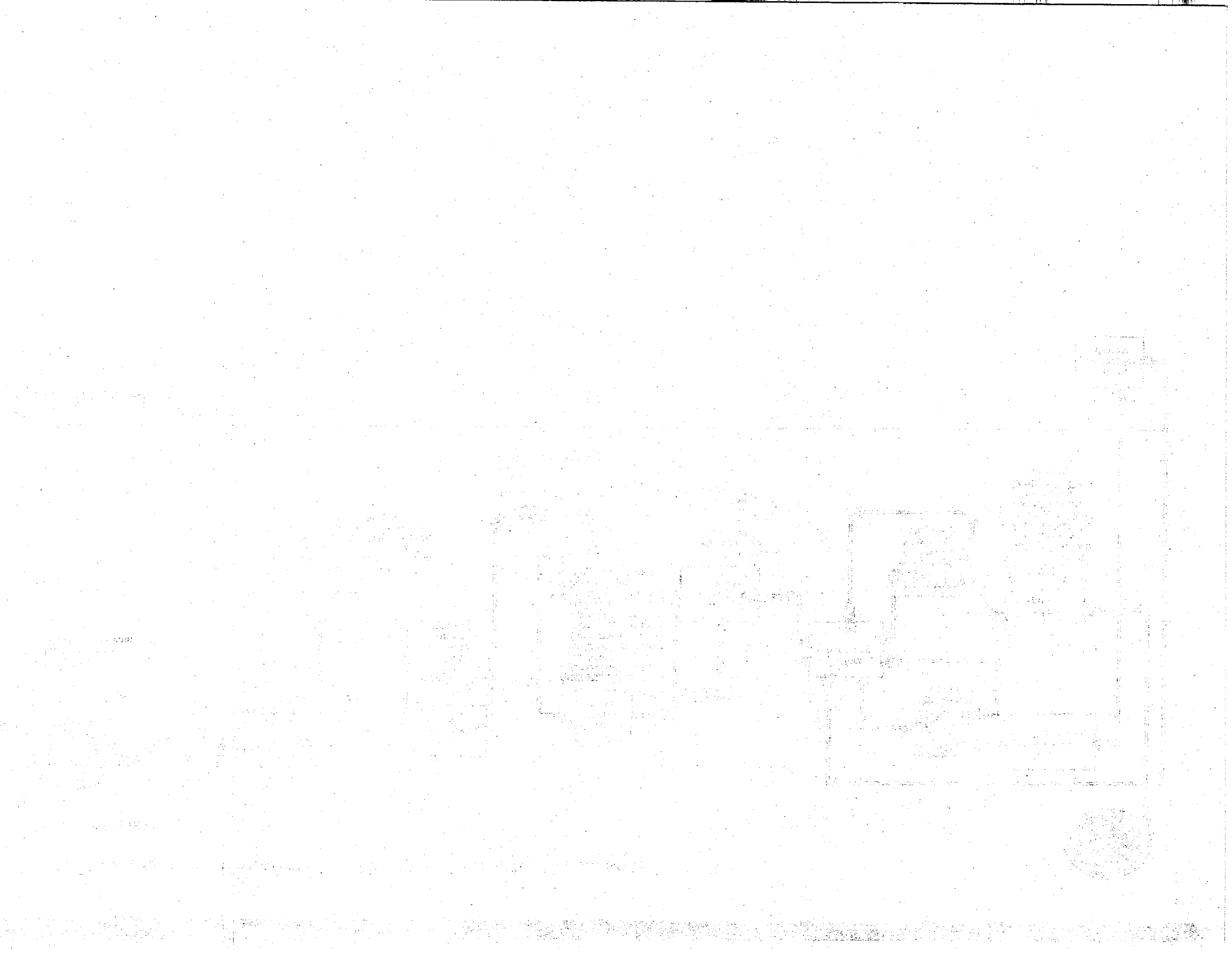
Copyright Process



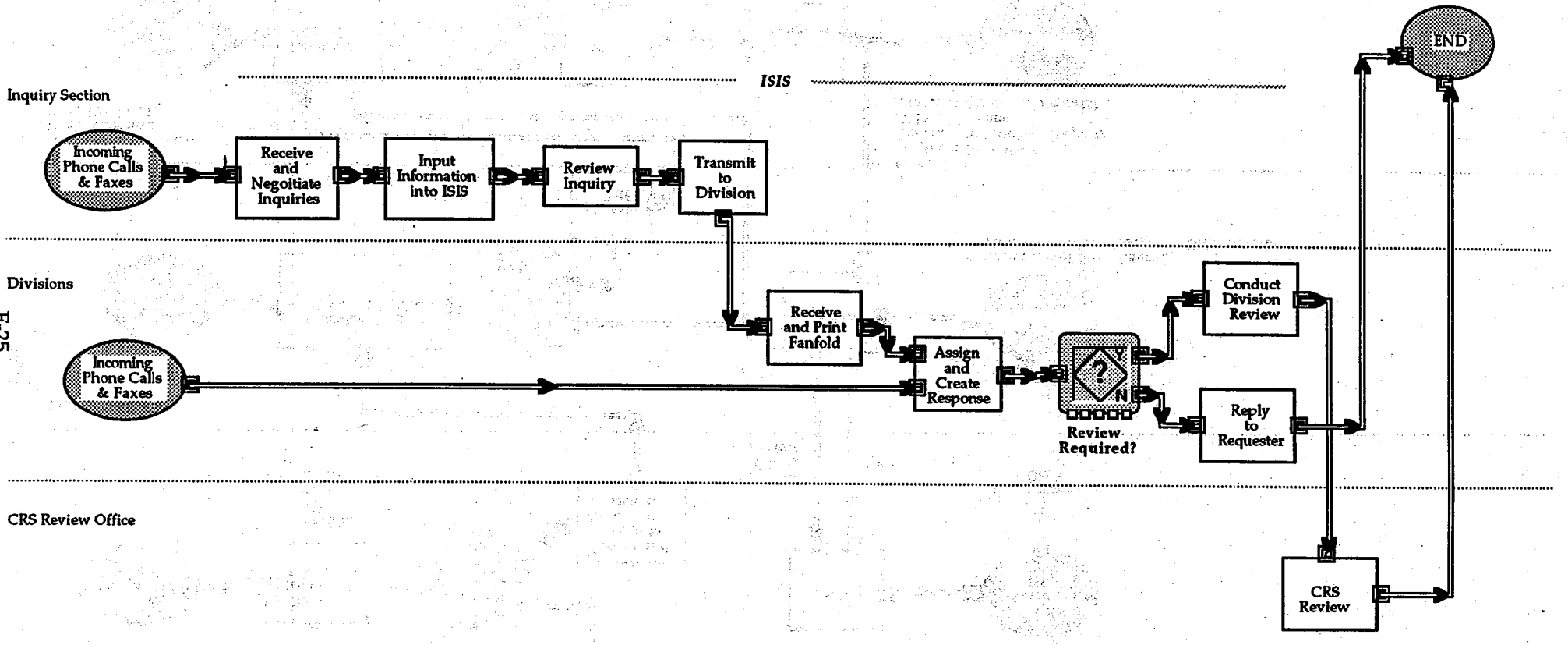
* Books and Serials account for 741,496 of 855.022 total items transferred from Copyright Office to LOC in FY95.

LOC Prints and Photographs Division - Major Processes

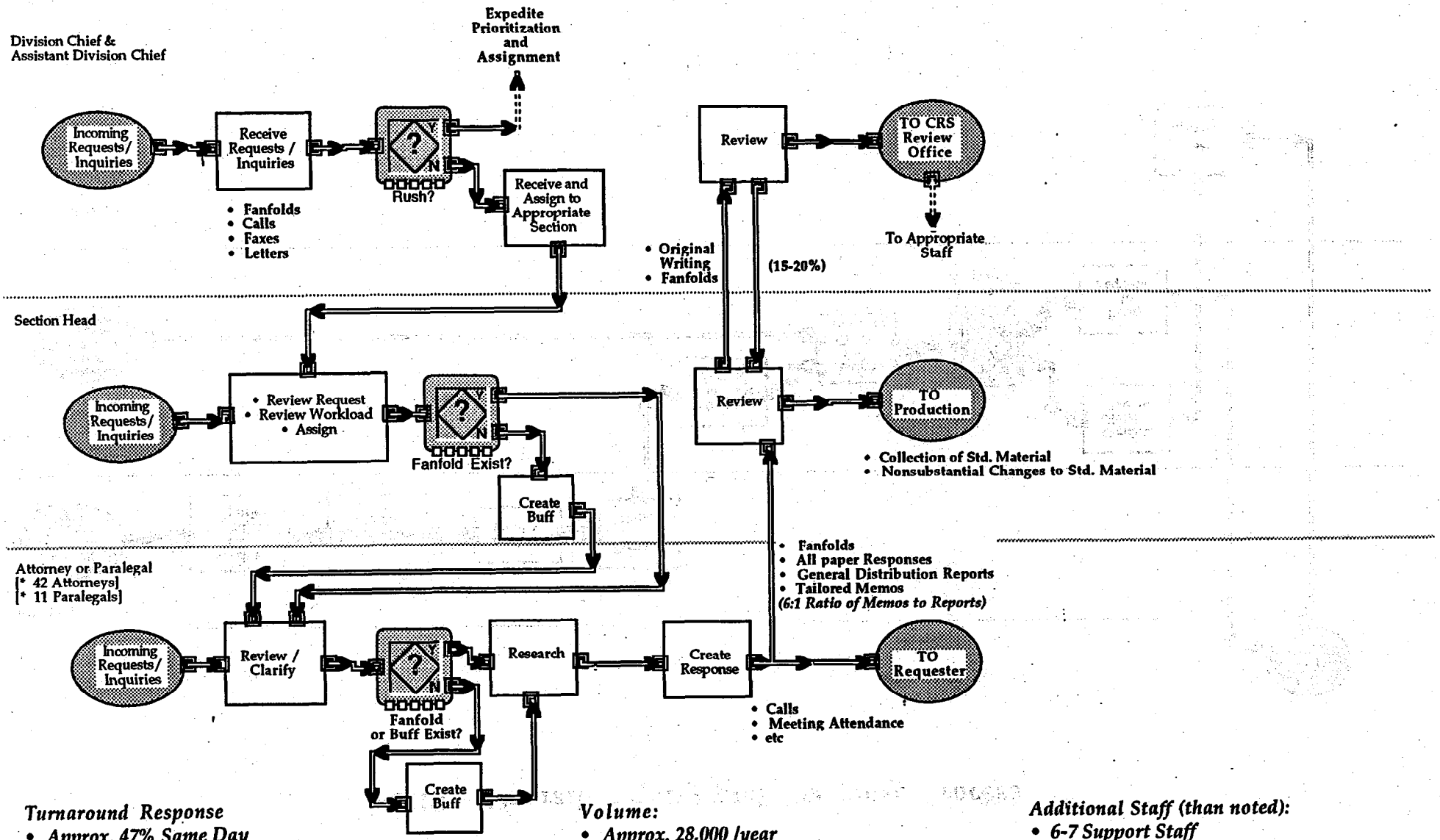




CRS - Overall Inquiry and Response Process



CRS American Law Division - Receipt and Processing of Inquiries



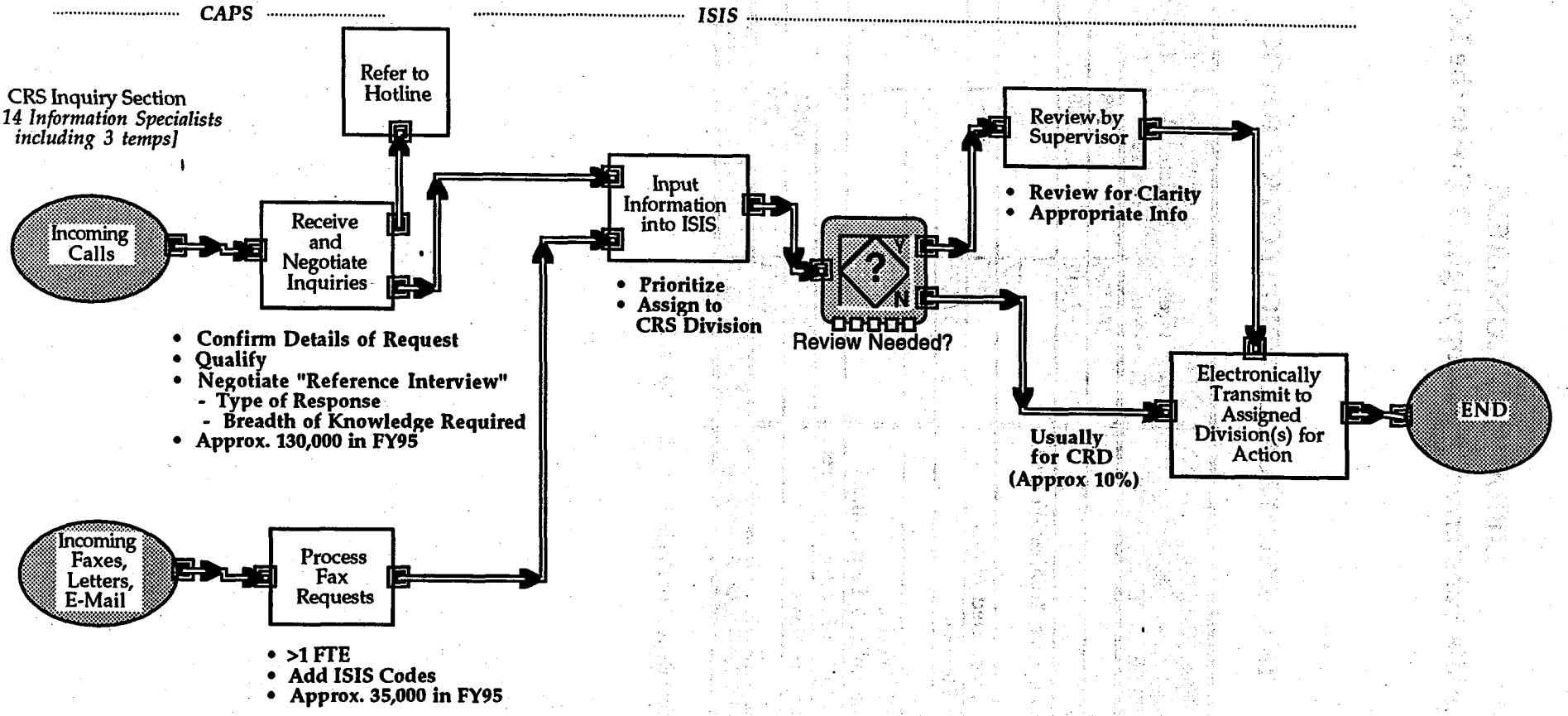
Turnaround Response
- *Approx. 47% Same Day*
- *Approx. 86% within One Week*

Volume:
- *Approx. 28,000 /year*

(2/3 from Inquiry and 1/3 from ALD Staff)

Additional Staff (than noted):
- *6-7 Support Staff*
- *3 Librarians*

CRS Inquiry Section - Receipt and Processing of Inquiries



LIBRARY OF CONGRESS
Materials transferred from Copyright Office to the LOC

TRANSFERS FROM COPYRIGHT OFFICE TO LOC*

TRANSFER TYPE	Registered Transfers	Non-Registered Transfers	Total Items Transferred
Books	181,006	31,178	212,184
Serials	267,812	261,500	529,312
Prints, Pictures, & Other Works of Art	1,627	232	1,859
Computer-related Works	7,487	3,362	10,849
Motion Pictures	11,073	539	11,612
Music	54,336	1,621	55,957
Dramatic Works, Choreography, & Pantomimes	1,906	0	1,906
Other Works of Performing Arts	1,170	0	1,170
Sound Recordings	22,465	4,201	26,666
Maps	3,231	276	3,507
TOTAL TRANSFERS	552,113	302,909	855,022

* Source: Report of Register of Copyrights, 1995

APPENDIX F

Collection Control

APPENDIX F

Profiles Of Monographic Books, Serials, And

Photograph Collections Management Processes

Booz·Allen developed profiles of the processes used by the Library for processing books and photographs. These specific profiles are as follows:

A. MONOGRAPHIC BOOKS AND SERIALS. This series of process profiles details the processing of monographic books and serials for the General Collections. Categories, such as Rare Books, are considered a Special Collection within the Library, and are not included.

Overall Process. This is the highest level profile and represents the overall processing that monograph books and serials receive as they are added to the collections. This profile illustrates some fundamental findings regarding the Library's core collection management process. The process is:

- Relatively simple and straightforward
- Serial flow
- Few rework loops
- Few in-process approvals.

Acquisition and Receipt Process. This profile is a high-level overview of the acquisition of monographic books and serials. The acquisition processes differ depending on the acquisition sources, and the influence of collections policy the acquisition requests. Because processing varies depending on acquisition sources, separate profiles were developed to illustrate the types of acquisition:

- Purchase Acquisition Process
- Gift Acquisition Process
- Exchange Acquisition Process
- Transfer Acquisition Process
- Copyright Demand Acquisition Process.

Cataloging Process. This profile includes both CIP and non-CIP materials. The notable points of this profile are:

- CIP and non-CIP materials are processed differently

- Four different computer systems and computer access channels are involved

- Dewey Decimal classification is an additional step after the Library catalog/classification process.

International library cataloging and classification standards and cooperative programs govern cataloging of monographic books, serials, and other media. The Library of Congress is a major participant in the establishment and maintenance of these standards. The hierarchy of general cataloging standards and procedures is:

- Anglo-American Cataloging Rules (1988 with updates), issued by the American Library Association
- Library of Congress Cataloging Rule Interpretations (1989 with updates), issued by the Library Cataloging Policy Support Office (CPSO)
- Descriptive Cataloging Manual, issued by CPSO
- Library of Congress Subject Headings, issued by CPSO
- Machine Readable Cataloging (MARC) procedures, issued by the MARC Standards Network Development Office.
- Standards and procedures particular to serials cataloging, including:
  - Cooperative On-line Serials Editing Manual, issued by Serial Records Division
  - Newspaper Cataloging and Union Listing, issued by Serial Records Division.

Preservation Process. This profile details the various preservation functions performed during the entire life cycle of items in the collection. The notable points are:

- The variety of preservation processes possible: binding, repairs, reformatting, and conservation
- Library out-sources some functions: binding and some repairs
- Photo-duplication is also offered as a service to Library users.

Servicing of Library Materials Process. The Servicing of Materials Process details the activities in the Library's collections. As the focus is on books, this profile only shows the processing employed by the Collections Management Division (CMD) for the Library's General Collection.

Disposal Process. This profile illustrates the highly structured process that the Library employs for eliminating unwanted materials. These materials may originate from the Library collections, or come directly from unwanted acquisition channels.

Copyright Process. The Copyright Process profile details the Copyright Office's primary processes relating to books. This profile illustrates the flow of Copyright materials to the Library collections, via both Copyright registrations and deposits. The notable point is that most of the books and serials received in Copyright are put into the Library collections.

Definitions of cataloging priorities and levels for monographic books and serials

- **Cataloging Priorities.** The Library uses a system of Cataloging Priorities to specify the desired period for cataloging each individual item. The determination of cataloging priority is driven by the content of or need for a particular work -- that is, its need and/or research value. The Library defines a publication of research value as one that "presents primary documentation otherwise unavailable, interprets a field in the context of current concepts, presents the point of view of prominent or influential practitioners of a discipline, or organizes existing literature in a field of coherent bibliographies."[1] Four cataloging levels currently exist. These levels, and a brief description of each, are as follows:

  - **Level One.** A Level One Cataloging Priority denotes that the item is of the highest priority, and should receive prompt catalog processing. As CIP publishers are assumed to be waiting for CIP information for inclusion within its published material, all CIP items are automatically tagged as Priority One. As priority one, Library catalogers should complete all cataloging activities of these materials within 10 days. These items include titles requested by Members of Congress or their staffs, by agency heads or higher officers of the Executive Branch, by Supreme Court Justices, or by division chiefs or higher officers of the Library. Pre-publication CIP titles are also automatically tagged as Priority One.

  - **Level Two.** A Level Two Cataloging Priority is the second most urgent cataloging priority level. This level indicates that Library Catalogers should complete cataloging activities within 60 days. Items that receive this priority include:

    -- Titles for reference assignment
    -- The first volume received of a numbered monographic series, and serials issued annually or less frequently, as well as the first and subsequent volumes of a multipart monograph that are published over a period of time
    -- All titles destined for the Rare Books and Special Collections Division or rare titles destined for other custodial units
    -- High-need and/or research value titles (e.g., U.S. Congressional publications, major publications in humanities or social sciences,

[1] Cataloging Service Bulletin, No. 51 (Winter 1991).

and substantial publications of topical interest [official and nonofficial]).

- **Level Three.** A Level Three Cataloging Priority indicates that an item should complete cataloging activities within 120 days. This priority includes items that are of medium-need and/or research value. Priority three materials include:

  - Substantial publications in the humanities or social sciences not given a higher priority
  - Encyclopedias, almanacs, and other works of general reference not selected for reference assignment or given higher priority
  - Dictionaries (foreign language only)
  - Substantial (i.e., likely to be used for research) travel guides
  - All U.S. local histories and substantial (i.e., likely to be used for research) foreign local histories
  - U.S. Federal documents not given higher priority
  - U.S. state documents, except primary sources, generally dealing with subjects of national interest.

- **Level Four.** A Level Four Cataloging Priority represents the least urgent cataloging priority. A level four priority indicates that catalogers have up to a full year to finish cataloging processing of the item. This priority includes items that are of low-need and/or research value. This priority level can include:

  - Materials selected for addition to the collections but not given higher priority (e.g., children's books, college level textbooks, official publications of foreign countries, privately printed works, and state and local government publications)
  - Material types that are rarely given a higher priority such as anthologies, applied arts and crafts, secondary level textbooks, popular instructional and devotional publications, popularizations in all subject fields, sports and recreation, and unrevised reprints.

  Priority 4 materials receive only minimal-level cataloging (MLC). The Selection Librarians are responsible for determining the appropriate Cataloging Priority at the time the item is selected. Some exceptions do exist, such as for CIPs, which automatically receive Priority One cataloging. The Selection Librarian identifies the chosen priority level for an item by inserting in the item a paper slip colored to correspond to the assigned priority level.

- **Cataloging Levels.** The level of cataloging of an item also affects the overall processing. The Library's current range of possible cataloging levels, referred

to as "modes of cataloging," performed by the Cataloging Directorate includes the following:[2]

- **Full-Level Cataloging.** -The most complete form of cataloging done. Within this mode, the Library develops a full and complete cataloging record. Includes descriptive cataloging, subject cataloging, classification/inventory control records (e.g., shelflisting, Dewey Decimal Classification), and machine-readable cataloging (USMARC format).

- **Copy Cataloging.** -Cataloging mode for which the Library uses the catalog records prepared by another agency while making only limited that relate to accuracy, substance, or retrievability but not style.

- **Minimal-Level Cataloging (MLC).** Cataloging mode that limits the descriptive, subject, classification, and authority work aspects of the cataloging process. MLC was designed as a means of providing access to items worth retaining in the collections but not worth the expense of full cataloging and also a very large number of items in arrearages that were previously unavailable to users. With MLC, the Library develops a usable, yet incomplete catalog record.

- **Collection-Level Cataloging.** Cataloging mode used to control materials that are unrelated bibliographically but can be gathered together because of some other unifying factor, such as personal author, issuing body, subject, language, or genre. This level is applied to materials that generally do not warrant the expense or a full or minimal level record.

Data about foreign language cataloging complement the profiles presented above. These data are presented in the following exhibit.

EXHIBIT F-1
Foreign Language Materials in Cataloging

CATALOGING DIVISION	TOTAL COMPLETIONS (FY95)	ENGLISH COMPLETIONS (FY95)	ENGLISH PORTION OF ALL COMPLETIONS
Arts & Sciences	69,809	47,972	69 percent
History & Literature	83,658	45,775	55 percent
Regional & Cooperative	63,990	10,403	16 percent
Social Sciences	97,698	54,597	56 percent
Special Materials	17,936	4,458	25 percent
TOTALS	333,091	163,205	49 percent

[2] "Modes of Cataloging Employed in the Cataloging Directorate," December 10, 1994.

B. PRINTS AND PHOTOGRAPHS

Overall Process. This profile presents a high-level perspective of processing for prints and photographs within the Library. Notable points include:

- The process differs significantly from the process for monographic books and serials

- The prints and photographs collections are cataloged and serviced within the Prints and Photographs Division, as opposed to other Library directorates. Nevertheless, the Special Materials Cataloging Division inserts collection-level bibliographic records into MUMS.

Data about process throughput, staffing, and foreign language cataloging complement the profiles presented above. These data are presented in the following exhibits.

EXHIBIT F-2
Process Throughput Data

Process Step(s)	Annual Data (FY 1995)	Source
Perform purchase acquisition process	930,494 pieces 1,123,925 pieces	Report: Acquisitions by Source Collections Services Key Indicators Report
Perform exchange acquisition process	453,857 pieces	Report: Acquisitions by Source
Perform gift acquisition process	744,860 pieces ~40,000	Report: Acquisitions by Source Interview of Panzera
Receive CIP deposits	49,201 pieces	Report: Acquisitions by Source
Perform CIP verification process	45,746 titles	Cataloging Directorate annual report data
Perform transfer acquisition purchase	2,057,349 pieces	Report: Acquisitions by Source
Route copyright deposits to collections	212,184 books 529,312 serial pieces 1,859 prints and photographs	Report of Register of Copyrights 1995
Perform serials descriptive cataloging	~10,000 titles	Interview of Dobbs
Perform demand acquisition process	2,999 pieces	Mike Pew (telephone call, 2/21)
Route serials to cataloging for subject cataloging	2,185 titles	Cataloging Directorate annual report data
Perform descriptive and subject cataloging processes	276,348 titles	Cataloging Directorate annual report
Minimal level cataloging	42,720 titles	Cataloging Directorate annual report data

Process Step(s)	Annual Data (FY 1995)	Source
Route to and perform Dewey classification	113,452 titles	Cataloging Directorate annual report data
Preservation processes	339,636 pieces	LOC Comparison of Appropriations, Staff, and Workload Statistics
Preparing, binding, and routing printed materials to collections	235,070 pieces	LOC Comparison of Appropriations, Staff, and Workload Statistics
Preservation treatment	12,601 items	LOC Comparison of Appropriations, Staff, and Workload Statistics
Reformat paper-based materials to microfilm	11,477 items	LOC Comparison of Appropriations, Staff, and Workload Statistics
Collection materials circulated	2,289,981 items	LOC Comparison of Appropriations, Staff, and Workload Statistics
Additions to the printed materials collections	221,790 titles 345,424 pieces	LOC Comparison of Appropriations, Staff, and Workload Statistics
Additions to the prints and photographs collections	24,851 items	LOC Comparison of Appropriations, Staff, and Workload Statistics
Copyright claim registrations routed into process	284,576 registrations	LOC Comparison of Appropriations, Staff, and Workload Statistics
Mail receipts for Library and Copyright Office	~22,000,000 pieces (estimated from number of tubs received)	Interview of Zaic and others
Additions to print collections	444,204 items	LOC Comparison of Appropriations, Staff, and Workload Statistics
Removals from print collections	29,088 items	LOC Comparison of Appropriations, Staff, and Workload Statistics

APPENDIX G

Analysis of Inputs and Management of the General Collection of Monographic Books During 1995

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Analysis of Inputs and Management of the General Collection of Monographic Books during 1995

This appendix answers specific questions posed by the General Accounting Office about the management of the Library of Congress general collection of monographic books.

How was the acquisition policy determined?

Collection Policy Statements (CPSs) express the acquisition policy for acquiring materials for Library collections, including its book collections. CPSs have governed development of Library collections since the 1960s. In preparing CPSs, the Library is guided by the relevant Research Library Group (RLG) conspectus.[1] The library industry developed the conspectus during the 1980s.

The CPSs are organized into the following four series:

- Series A: Subjects. (currently 11 CPSs and another 22 planned)
- Series B: Formats. (currently 17 CPSs)
- Series C: Type of Publication. (currently 19 CPSs and another 2 planned)
- Series D: Joint Policy Statements. (pertaining to Acquired Immunodeficiency Syndrome and Biotechnology)

For monographic books, the policy expressed in the CPSs is multidimensional. Series A of the CPSs is arranged by subject. Series C is arranged by type (e.g., children's literature, commercial firms, ethnic publications, ephemera, government publications).

Until recently, the Collection Policy Office (CPO) developed and maintained the CPSs. Four years ago, the Library established the Collections Policy Committee to oversee collection policy. Currently, the CPO is being abolished.[2] Currently, the Library is relying on Recommending Officers and heads of custodial divisions to revise CPSs. Proposed revisions are subject to widespread review in the Library.

In addition, two years ago, the Library launched a three-year review of all CPSs. This effort is coordinated by the current Director of the Public Services

[1] The conspectus is a set of rules for evaluating library collections.

[2] Nevertheless, some Collections Policy Office staff continue to carry out collection policy and selection functions.

Collection Directorate. It is intended to increase the specificity of the CPSs and confirm the assignment of collection levels. After this internal review, revised CPSs are submitted to the Associate Librarian for Library Services. During 1995, the Library completed four new CPSs and revised one.

To what extent did acquisitions adhere to the policy?

The CPO has assigned about 250 Recommending Officers. They determine what is deliberately acquired for the collections. The Selection Librarians, still functioning in the CPO, examine items recommended by the Recommending Officers when the items arrive at the Library. The Selection Librarians select about 98 percent of ordered books and 85 percent of exchange books.[3] The check by the Selection Librarians is *de facto* confirmation that the Recommending Officers are adhering to the collection policies.

The Selection Librarians also select collection items from the items that are deposited in the Copyright Office and in the Library through the Cataloging in Publication (CIP) Program. During 1995, about 90 percent of copyright deposits and 93 percent of CIP deposits.[4] were selected By this selection action, the Selection Librarians also determine how the collections are developed. Based on interviews and telephone conversations with appropriate Library personnel,[5] we found no evidence that the Library systematically checks whether selection of items from the deposits adheres to the collection policies.

How long did it take for acquisitions to enter into service?

The time required to get acquired books into service is highly variable, depending on such factors as the acquisition channel and cataloging priority.

The mean time to put non-CIP books acquired during fiscal year 1995 into service was about 200 calendar days, with a standard deviation of about 90 days. The books in the non-CIP sample had cataloging priorities of 2 and 3. (Cataloging of Level 2 and 3 items should be completed within 60 and 120 days, respectively.)

The mean time to put CIP books into service was 37 calendar days, with a standard deviation of 10 days. CIP books are priority 1. (Cataloging of Level 1 items should be completed within 10 days.)

These processing data are not statistically reliable because data to support complete statistical analysis are not available in the Library. The processing time

[3] Together, purchased and exchanged books represent about 40 percent of the books acquired during a year.

[4] Deposited books represent about 60 percent of the books acquired during a year.

[5] Selection Librarian, Acting Chief of Collection Development Office and others.

cited is a combination of available, randomly selected processing-time data and estimated data where empirical data are not available. Selection and analysis of book samples is described later in this appendix.

What is the adequacy of the final storage?

The books of the general collection are stored in "closed" stacks in the Jefferson and Adams Buildings. Some rarely used items are stored in Landover. The books in the stacks are arranged according to the Library of Congress classification system.

The adequacy of the final storage of monographic books from the environmental, space, access, and use points of view is:

- Environmental. The temperature and humidity of the storage spaces vary over time and from area to area. The temperature and humidity rarely are ideal for preservation of the books. In addition to the unstable temperature and humidity, the storage areas are exposed to potential leakage from:

  - Bathroom and other plumbing over the stacks in the Adams Building
  - Roof leakage when snow and ice present.

  To protect books in the general collection, the Preservation Directorate provides book-handling training for deck attendants in the collections areas. The directorate also carries out a deacidification program and repairs other types of deterioration.

- Space. The Library has been running out of space for its general collections for the past several years. Booz·Allen's random inspection of books in the general collection revealed that books were stowed inadequately at about 16 percent of the inspected sites. At these sites, books either were stowed on the floor or on top of shelved books, indicating insufficient space for stowage. Since 1989, the Collections Management Division has been trying to get off-site storage, without success. When off-site storage is available and used, the accessibility of the collections will suffer to some extent, and some new environmental concerns may arise (e.g., exposure of collections to plumbing or roof leakage).

- Access and Use. The Library makes books of the general collection available to users in two reading rooms in the Jefferson Building and one in the Adams Building. A user can fill out a call slip for to request a book.

He/she can expect to receive the requested book within about 1 hour.[6] Call slips currently are sent to collection points by pneumatic tube. Deck attendants pick up the requests and then retrieve the requested books from the stacks. The books then are delivered to the reading rooms by conveyor belts.

What impact did budget and space limitations have on acquisitions?

Both budget and space constraints affect development of the collections.

Budget limitations have the following effects:

- Less funds available for acquiring books
- Recommending Officers are induced to request acquisition of fewer books
- Reduction in number of Selection Officers, which might induce the selectors to be less scrupulous in rejecting unwanted items
- Change of guidance for approval purchase-plans to reduce the number of approval items submitted to the Library for purchase.

What restrictions were placed on the collection and how did these restrictions affect the mission?

We found no restrictions that were placed on the collection except for the restrictions inherent in the collection policy, budget constraints, and space constraints.

What is the disposal policy and how was the policy followed during 1995?

We did not find a formal policy for disposal of books in the general collections. Recommending Officers and Selection Officers review books in the general collections when portions of the collections are being prepared for relocation or are to be inventoried under the ongoing inventory program. They may then direct that items be sent to the Gift and Exchange Division for disposal. The Gift and Exchange Division disposes of an unwanted book by the following methods, in the following order:

- Offer to one of 15,000 libraries and research institutions with which the Library has an exchange agreement

[6] The posted time is 90 minutes.

- Offer to Federal libraries
- Offer to Project R participants[7]
- Offer to donation program participants (These are nonprofit institutions who have designated an individual to select offered items)
- Offer to Project EX participants[8]

The Library reported that it disposed of 1,851 items from its general collections during 1995. The Library policy for selecting items to be withdrawn from the General collections is expressed in the Collection Development Office "Guidelines, Policies and Procedures for Weeding from General Collections". The policy for weeding books allows the custodial divisions to withdraw duplicate books under certain circumstances (e.g., the second copy of a first edition of a book when the division shelves copies of the second edition). Withdrawing a unique book from the collection requires approval of the cognizant Selection Librarian.

How is the condition of the collection monitored?

Deck attendants, book service personnel, and reference librarians check the condition of books as they are delivered to the reading rooms and returned to the stacks. If a requested book is found to be in bad condition:

- The book service personnel notify the requester that the book cannot be served
- The deck attendant may perform rudimentary repair (e.g., taping loose covers and pages together)
- The deck attendant inserts a brittle-book slip in the book and returns it to the shelf.

The environmental conditions in the stacks are monitored in the following ways:

- Deck attendants observe the stacks as they are servicing books to and from the reading rooms

[7] Project R is a program to arrange exchanges with libraries to replace deteriorated or mutilated books.

[8] Project EX is a program to arrange exchanges to obtain microform "books" with dealers to replace missing books.

- The Preservation Directorate regularly monitors temperature and humidity recorded by sensors within the storage areas

- The Library Police observe the conditions of the stacks during their routine patrols (e.g., roof leakage)

- Sprinkler system alarms are installed to indicate low water pressure due to sprinkler system leakage

- Floor level water detectors are installed near bathrooms to indicate leakage

Were the acquisitions entered into an inventory record?

The Library creates a bibliographic record for each book title in the general collections and lists each book in the shelf records. Books are not entered in any other inventory record when they are received.

The Cataloging Directorate assigns a call number to each book during the shelf listing step of the cataloging process. The Library considers a book to be in the collection until it is found to be missing. If a book is not found in the stacks when requested from a reading room or during inventory, the deck attendant or inventory person leaves a shelf marker where the book should be. If the book is not found during subsequent searches, the shelf marker is so annotated. The Library considers a book to be missing after five unsuccessful attempts to provide the book in response to a request or during an inventory.

How were/are the physical inventories reconciled to the inventory records?

The Library does not reconcile physical inventories to an inventory record. Physical inventories are reconciled to the shelf listed call numbers (see the question above).

Physical inventorying of the general collections has been underway continually since February 1979. The inventories are item-level (i.e., they deal with each copy of each title, not just the title). Current shelf-list cards are compared with the items on the shelves. If an item is not on the shelf, the inventory team checks the following:

- Call slips retained in the reading rooms, to see whether the book is in use in a reading room or has been delivered to a reader within the past several months

- On-line charges file to see whether the book currently is charged to an authorized user (e.g., a Library employee or on loan to a library).

If the inventory team cannot find a book, the team puts a missing-inventory marker on the shelf. The marker permits a record to be made of five subsequent requests. Under current policy, the Library will attempt to replace the missing item after five unsuccessful requests.

The Library's purposes for the inventory program are to:

- Service users better (i.e., tell requesters why a book is not available so that the requester can look for the book elsewhere)
- Identify need for replenishment and candidates for the National Digital Library Program
- Maintain the order of the stacks.

Since the inventory program began in 1978 through September 25, 1996, the Library accounted for[9] 7,654,175 items of about 9 million items in the classified book collections and found 283,551 items missing (3.6 percent). This number of items inventoried corresponds to an inventory rate of about 1,790 items per day. At the current inventory rate, the Library expects to complete the inventory by about the end of 1997.

How are the responsibilities for doing and monitoring the above assigned?

Responsibilities for monitoring the condition of and inventorying the general collections are among the functions specified in the Library of Congress Regulation LCR 214-9. The regulation includes the following responsibilities:

> *The Collections Improvement Section is responsible for...conducting shelf inspections to identify, remove, and forward items in need of microfilming, rebinding, or other means of preservation...prepares shelf indicators for items that are elsewhere; and records unlocated items.*
>
> *The Collections Maintenance Section maintains...proper environmental conditions in all areas housing library materials...*

The authority for disposing of items from the book collections is defined in the aforementioned "Policies and Procedures for Weeding from General Collections, in the Collection Development Office Guidelines".

How does the Library report on the above?

The Public Service Officer of the Collections Management Division (CMD) reports usage of items in the general collections and the inventory results

[9] i.e., found on the shelf or identified where the items were at the time of the inventory.

regularly. The CMD sends monthly and annual reports to the Associate Librarian for Library Services. These data are included in the Library's Annual Reports.

How was the collection used?

During 1995, the Library serviced 94,170 in-person, telephone, correspondence, and other direct reference requests and circulated 687,321 items from the general collections, which contain about 9 million items. For example, during the six working days starting April 22, 1995, the reading rooms serviced 15,295 requests. During 1995, about 18 percent of the requested materials could not be found. (The percentage of items not on the shelf when requested exceeds the percentage the Library declares to be missing during inventory, because the former figure includes items currently in circulation in a reading room, elsewhere in the Library, or on loan.)

In addition, according to data in the Loan Division annual report, 145,801 items were lent or copied during 1995. Of these, 36,368 items (25 percent) were circulated to the Congress.

Does the Library know how the general collections are managed?

The Library knows certain aspects of the management of the general collections. For example, the Library knows:

- What goes into service. The Collections Management Division's (CMD's) annual statistical report includes the items shelved and disposed of during the year. The shelving includes not only new items but also items reshelved during projects to shift portions of the collections.

- Where items are stowed. Items are recorded in the shelf list catalog and are stored according to their call numbers. The Library maintains a current map of the locations of call numbers within the stacks (e.g., call numbers J, X, and YA are in Deck 7N in the Adams Building, and call numbers B7 and V are in Deck 41 of the Jefferson Building).

- How often collection materials are used. The Library knows precisely how often classes of call numbers are requested and how often these requests are filled. The Library does not know how often a particular item is used.

The Library does not know other aspects of management of the general collections. Specifically, the Library's knowledge of the following conditions is limited:

- Where items removed from the collections for a particular use are. The Library does not know where an item circulated to a reading room is while it is in circulation. The Library's on-line charge system is supposed to show what Library employees hold items removed from the collections. These charges are not audited, but employees are requested about once a year to confirm the charges.

- Who is using removed items, how to contact them, and when items will be returned. In general, the Library does not know who is using a removed item, how to contact the user, and when the user will return it. The book service personnel file the call slips when items they circulate items to the reading rooms, but the large number of slips would make identification of a user of a particular item impracticable. Also, to the extent that the on-line charge system is correct, the Library knows who is using a removed item.

Finally, the Library does not know specifically where an item is while it is proceeding through the acquisition, cataloging, or preservation processes.

ANALYSIS OF RANDOM SAMPLES OF MONOGRAPHIC BOOKS

Booz·Allen selected two random samples of monographic books acquired during fiscal year 1995 in an attempt to answer the question, "How long did it take for acquisitions to enter into service?". Although analysis of the samples provided useful insights into the processing of books, the available data were not adequate to produce a good statistical measure of the processing time. The data available in the Library do not allow tracking of work in process.

We selected the samples from the bibliographic records in the Multi-User MARC System (MUMS), as follows:

Books Acquired Through the Cataloging in Publication (CIP) Program.

We used computer-generated random numbers to select from MUMS a sample of 50 records for books acquired through the CIP program. Each selected record shows the progress of the book galley[10] through cataloging and the date of cataloging verification when the Library received the book as a CIP deposit. The record does not show when a book was received as a CIP deposit nor show whether the book was bound or unbound.

The available data allow calculation and statistical analysis of galley cataloging time but do not allow calculation of the time required to verify the cataloging when the CIP deposit is received. The CIP verification time data can only be estimated.

The data in the selected MUMS records do not include preservation (binding and labeling) time. These times can only be estimated. Moreover, no distinction can be made between the preservation times for bound and unbound books. The processing times for books that require binding before being shelved are substantially higher than the times for bound books.

The processing times for 6 of the 50 selected books were many orders of magnitude greater than the obvious mean of the sample. We did not include these "out-liers" in the analysis of the sample. These "out-liers" involved some special handling, such as the need to request a change in the Subject Headings rules or clarify interpretation of the submitted galley materials with the publisher.

Books Acquired under Purchase Orders or Approval Plans, by Exchange, or by Copyright Demand.

From the ACQUIRE database created by the Acquisition and Support Services (A&SS) Directorate, the Library printed out several thousand order

[10] Galleys, manuscripts, or front matter submitted by publishers for cataloging.

numbers for books acquired by non-CIP means. From these order numbers, by use of computer-generated random numbers, we selected a sample of 50 records. For each sample record, we printed the corresponding MUMS record and ACQUIRE Order/Request Status List. Together, these records contain the dates for acquisition and cataloging steps. For 27 of the 50 MUMS and ACQUIRE records, the process times were indeterminate because the books were still being processed. Of the 27 items that were still "in process," all but 1 were received more than five months before we took the sample.

Numerous anomalies exist in the data for the processing of non-CIP books. Mainly, these are records of cataloging actions occurring before the recorded dates of book receipts.

Data for the CIP and non-CIP samples are shown in the exhibit that follows. The processing time means, standard deviations, and medians are shown in Exhibit G-1 below. These data show that the cataloging time for CIP books is much less than for non-CIP books. Cataloging priority 1 is assigned to CIP galleys. Of the 23 non-CIP books analyzed, 10 were priority 3, 12 were priority 2, and 1 was priority 1. The cataloging-priority processing requirements are:

- Priority 1. High research value, to be completed within 10 days
- Priority 2. Medium research value, to be completed within 60 days
- Priority 3. Low research value, to be completed within 120 days
- Priority 4. Essentially no research value, to be completed within one year.

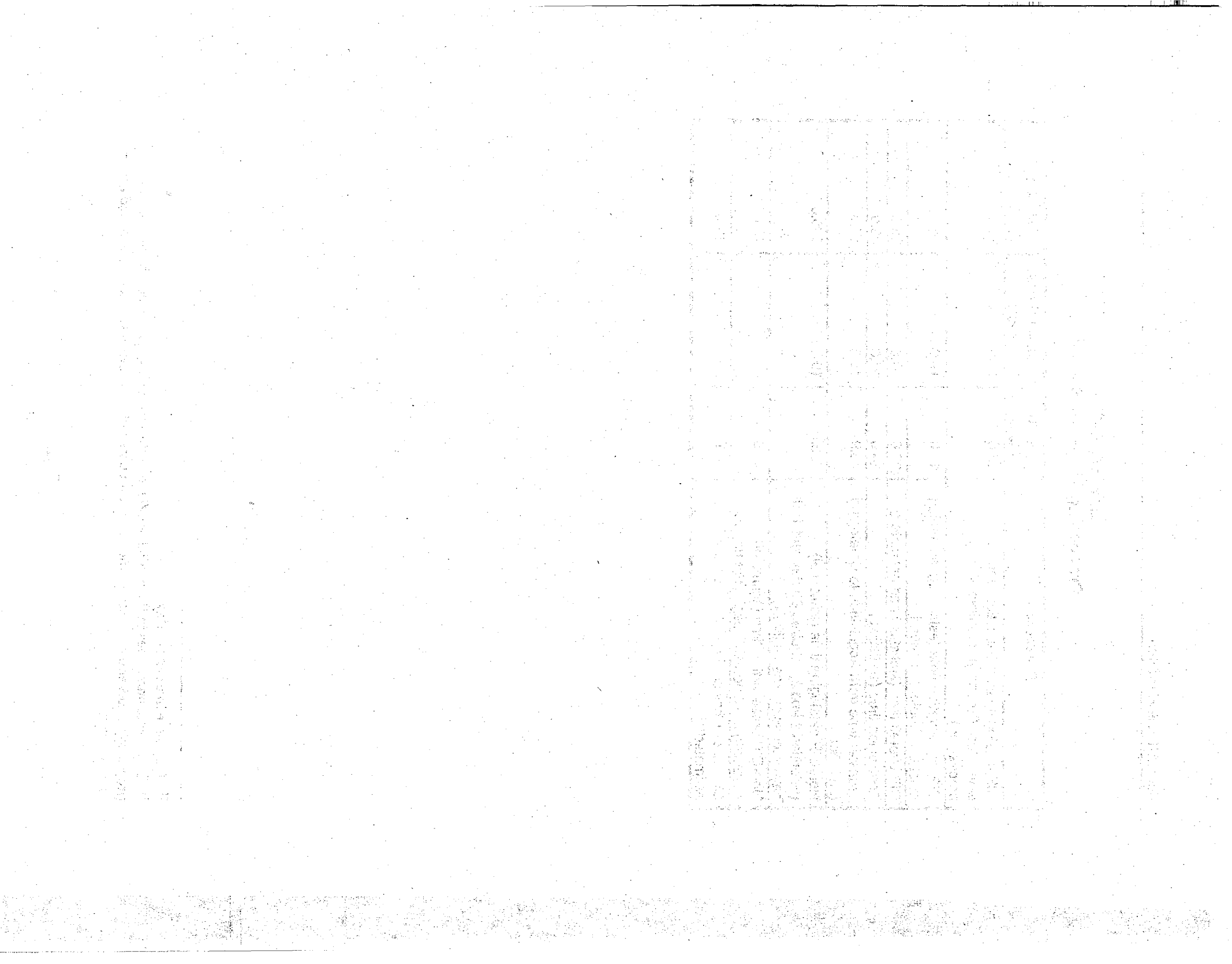
In addition to determining the processing time for the book samples, we looked for the books on the shelves and found many missing. With the help of the Library, we located several books charged out within the Library (e.g., to reading rooms) or mis-shelved. After this analysis, 25 of 54 books (46 percent) could not be located.

EXHIBIT G-1
Processing Times for Books[11]

Operation	Mean (days)	Standard Dev. (days)	Median (days)
CIP cataloging time (statistical and estimated) (Priority 1, required 10-day processing)	22.6	10.0	21.0
CIP preservation time (estimated, assuming most CIP books are bound)	14.0	14.0	14.0
CIP overall time (statistical and estimated)	36.6	10.0	35.0
Acquisition time (statistical)	24.0	16.8	28.0
Transfer time from Acquisition to Cataloging (statistical)	45.9	45.3	17.0
Non-CIP cataloging time (statistical) (Priorities 2 and 3, required 60-day and 120-day processing, respectively)	133.0	104.3	135.0
Non-CIP preservation time (estimated, assuming most non-CIP books are unbound))	42.0	0.0	42.0
Overall processing time (statistical and estimated)[12]	200.8	89.6	204.0

[11] Times are in calendar days.

[12] Because of anomalies in the available data, overall processing time is not the sum of the processing times above. Instead, the maximum time between the first and last recorded action dates is used.



APPENDIX H

Analysis of Inputs and Management of Photographs During 1995

APPENDIX H

Analysis of Inputs and Management

of Photographs During 1995

This appendix answers specific questions posed by the General Accounting Office about the management of the Library of Congress collection of photographs.

How was the acquisition policy determined?

The acquisition policy for acquiring materials for its collections, including its book collections, is expressed in Collection Policy Statements (CPSs), particularly the following:

- CPS B:PHO, Photography
- CPS B:FIN, Fine and Applied Arts: Non-Book Materials.

For the prints and photographs (P&P) collections, the execution of the general policies in the CPSs is entrusted to curators for the major types of items in the collections, that is:

- Photographs
- Fine prints
- Popular and applied graphics art items
- Posters
- Architectural, design, and engineering items.

In a document, Acquisitions Objectives -- Photography (September 1994), the P&P Division has refined the policy for acquisition of photographs in CPS B:PHO.

A major mechanism for establishing the proximate collection policy is the "Top Ten" list. This list specifies the items the P&P Division most wants to acquire and identifies how the items might be acquired. The P&P Division keeps this list current throughout the year. The Librarian personally approves acquisitions from this list. During 1995, the P&P Division acquired the William Gladstone collection of photographs of African Americans in the military from its Top Ten list.

To what extent did acquisitions adhere to the policy?

During 1995, the P&P Division acquired the following photographs:

- Transfers from the Manuscript Division – 17,416 photographs. These photographs support a "larger area of Library interest"

- Historic American Building Survey/Historic American Engineering Record -- 24,348 photographs. The National Park Service transferred these photographs to The Library under an arrangement that dates back to the mid 1930s

- Transfers from the Copyright Office – 2,416 photographs

- Acquisitions recommended by the curatorial staff of the P&P Division. The acquisitions of these photographs were formally recommended and justified by individual curators, on a case-by-case basis.

The P&P Division applied the criteria in the Acquisition Objectives – Photography, which are grounded in the CPS for photography (B:PHO). Moreover, the P&P Division adhered to the policy when it acquired the photographs we sampled. These acquisitions are:

- Collection of photographs from the Booker T. Washington collection. The Manuscripts Division forwarded the photographs to the P&P Division. Acquisition of the photographs by the P&P Division was consistent with the acquisition policy, because they support a larger area of defined Library of Congress interest.

- Gladstone collection. The P&P Division acquired this collection. The acquisition was consistent with the acquisition policy, because the collection supports an established area of collections strength (i.e., American social history).

In addition, the Gordon Parks Archive of photographs, the first item on the current Top Ten list, would adhere to the policy, in that Parks is a distinguished American creator.

How long did it take for acquired photographs to enter into service?

The time required for acquired photographs in a collection to enter into service depends on the size of the collection, other collections awaiting physical processing and cataloging, and any special priority assigned. The Library received the extensive *Look* magazine photograph collection during December 1971. The collection did not start to enter into service until 1995.

When the P&P Division receives photographs, it weighs the priority of their physical processing and cataloging relative to other photographs being received or already in the arrearages. For example, during 1995, such processing projects as the following were competing for attention:

- Creating minimal level cataloging records of photographs for which copy negatives have been made

- Preserving deteriorating nitrate and acetate negatives by creating interpositives and electronic records

- Processing and cataloging the extensive Eames, *Look* magazine, NAACP, and New York World Telegraph and Sun photograph collections

- Processing photographs and other items in the Historic American Buildings Survey/Historic American Engineering Record.

Against such competition, the Gladstone collection received in June 1995, probably will not be moving into service until 1997 or later.

What is the adequacy of the final storage of photographs?

The P&P Division stores photographic materials in the following locations:

- North and south decks of the third floor of the Madison Building (photographs, posters, prints, and architectural, design, and engineering drawings)

- Reading room in the Madison Building (selected photographs, books, graphic arts items)

- Adams Building (glass negatives and other items, including the American Engineering Society library)

- Suitland (acetate negatives)

- Landover (cold storage for negatives).

The accessibility of photographs stored in the decks of the Madison Building, which are adjacent to the photographs reading room, is excellent. The accessibility of items stored in the other locations is notably worse.

The storage of items in the Madison Building decks is orderly and well lighted. The stored items are readily accessible. The temperature and humidity of the decks vary more than desirable for storage of photographs. The collection is insecure in that staff and stored items use the same spaces, and doors to the storage decks lead directly to the public areas of the building and are not locked from the inside.

Storage areas in the Adams Building and at Landover and Suitland are generally insecure, often not clean and crowded. Temperature and humidity controls are inadequate to protect the collection. For example, storage of the American Engineering Society library is so crowded that division staff are unable to inspect contents of the containers. Also, negatives at Suitland and Landover often are subjected to high humidity.

What impact did budget and space limitations have on acquisitions?

The P&P Division must limit acquisition of photographs to the specific amounts of funds appropriated annually and available through trusts. The personnel resources for processing acquired photographs limit the rate at which items enter service. In addition to general, budgetary constraints, the budget for travel limits the extent to which the P&P Division can "court" potential donors. Lack of additional storage space requires the division to curtail the acquisition of photographs. For example, the P&P Division issued the Acquisition Objectives – Photography, which narrowed the acquisition criteria, to respond to space shortages.

Despite the foregoing, the current policy is not to forego small acquisitions because of space limitations. For example, the division acquired the Gladstone collection because it met the acquisition criteria and required a small amount of shelf space.

What restrictions were placed on the collection and how did these restrictions affect the mission?

Other than the Collection Policy Statements and budget and space limitations, no restrictions have been placed on the collection. Even though the photograph collection contains items that to some would be offensive, the Congress has not proscribed service of such items.

What is the disposal policy and how was the policy followed during 1995?

The P&P Division curators have authority[1] to select individual items for the P&P Division to send to the Exchange and Gift Division for disposal.[2] A curator may designate an item for disposal if:

- Its research value does not warrant the processing cost
- It does not fit the collection policy
- It is a duplicate of another collection item
- It is extraneous.

During 1995, the P&P Division disposed of 807 photograph as "extraneous" and "duplicate" photographs.

The Gift and Exchange Division disposes of unwanted items by the following methods, in the following order:

[1] This authority does not extend to an entire collection. At the collection level, the Associate Librarian's approval is required.

[2] A legislative proposal drafted by the Library would provide for the Library to sell property that is excess to its collection and to allow the Library to retain the proceeds to use in the acquisition of books and other material for its collection.

- Offer to Library staff
- Offer to Federal libraries
- Offer to donation program participants.

How is the condition of the collection monitored?

Shortly after the P&P Division receives a lot (item), a team made up of the cognizant curator, cataloger, and chief processing technician examines the lot (item) to determine, among other things:

- Condition of the lot (item)
- Durability of the proposed housings (i.e., ability to remain in a usable condition for a long time under the anticipated storage and usage conditions)
- Physical processing and cataloging required.

Thereafter, curators and reference librarians observe the condition of items when they are withdrawn from storage to meet a service request. In the event an item appears unserviceable, the cognizant curator decides whether to remove it from the collection or to preserve it. Also, from time to time, the curators launch special a special examination of the condition of a category of collection items (e.g., the survey of photograph albums carried out over several recent years and the refiling of the collection of Presidential photographs.

Were the acquisitions entered into an inventory record?

When the P&P Division receives one or a lot of photographs, it routinely enters the receipt in an accession record in a PARADOX data base. Among other things, the accession record identifies the lot (item) its location, its condition, and the number of pieces. The division had created accession records for the sampled items. that were acquired during 1995. We noted accession records for 1995 acquisitions by gift, transfer, and purchase.

How were/are the physical inventories reconciled to the inventory records?

Except for fragile or very valuable photographs, the P&P reconciles physical inventories to individual accession records only when (if) the division catalogs the recorded lot at the individual item level. After cataloging, the P&P Division enters the lot (item) and its location in the "shelf list" record and verifies that the markings on the items correspond to the records. The division also creates a MARC[3] record at the collection level.

[3] Machine Readable Catalog

Subsequently, if an item is found to be missing from its storage area, the shelf list is annotated accordingly.

How are the responsibilities for doing and monitoring the above assigned?

The responsibilities for protecting and controlling the photograph collections are assigned by the Library of Congress Regulation LCR 214-19, which among other things specifies that the division:

> *...processes the materials in its custody, including the physical preparation, cataloging*
>
> *...organizes, boxes, shelves, and files materials..*
>
> *...responsible for...determining appropriate preservation measures...creation of other controls...*
>
> *...develops new techniques and procedures for improving controls over the pictorial collections*

How does the Library report on the above?

The P&P Division reports on some of the areas addressed above. It reports its activities monthly to the Directorate of the Public Services Collections Directorate. The division also provides quarterly arrearages reports, key indicators, and an annual report to the Library Services Department. The Division reports items that go into service (i.e., items for which there is some access, appropriate physical housing, and appropriate marking) and total collection size

How was the collection used?

The photograph collection is served from the P&P Reading Room in the Madison Building. The most-used items are the photographs in the Historic American Building Survey/Historic American Engineering Record, Civil War, and Farm Security Administration/Office of War Information collections.

The Reading Room serves about 800 people a month. Such items as the Civil War and Farm Security Administration collections are used daily. The use of the photograph collections on March 25, 1996, is typical. On March 25, at least the following collections were used by researchers in the Reading Room:

- Civil War
- Farm Security Agency
- Presidential
- News and World Report
- Stereopticon.

Does the Library know how the photograph collections are managed?

The Library knows certain aspects of the management of the photograph collections. For example, the Library knows:

- What goes into service. The P&P Division's annual statistical report lists the types and numbers of items added to and withdrawn from the collections during the year. During 1995, 21,693 photographs entered the serviced collections.

- Where items are stored. The P&P Division records lots and items in shelf list records. These records indicate where each lot or item is stored. The division maintains a current map of the Reading Room. The map shows the locations of the shelf list records, catalogs, indexes, and other finding aids and the locations of some of the often-used photographic collections (e.g., Presidential, foreign geographical, Civil War, and Farm Security Administration files).

- Where items removed from the collections for a particular use are located. A lot or item is serviced in response to a call slip. When the lot or item is removed from the storage area, a copy of the call slip is put in the place of the lot or item until the lot or item is returned. The division maintains a running record of each item sent off-site,(e.g., photograph sent out for photo duplicating or on loan).

- Who is using removed items, how to contact them, and when items will be returned. The call slip or other record of a lot and item removed from the collection indicates where the lot or item is but does not necessarily specify when the lot or item will be returned.

- How often collection materials are used. The Library maintains a record of each service of a lot or item. If the record is at the lot level, the use of the individual items in the lot is not known.

APPENDIX I

Collection Policy Statements

APPENDIX I

COLLECTION POLICY

This appendix presents the Booz·Allen findings and conclusions regarding the Library of Congress policy for developing its collections. Because our study of Library operational processes focused on the management of the collections of monographic books and photographs, these findings and conclusions focus on monographic books and photographs.

FINDINGS

Collection Policy Statements (CPSs) express the acquisition policy for acquiring materials for Library collections. CPSs have governed development of Library collections since the 1960s. In preparing CPSs, the Library is guided by the relevant Research Library Group (RLG) conspectus.[1] The library industry developed the conspectus during the 1980s.

The CPSs are organized into the following four series:

- Series A: Subjects (currently about 11 CPSs and another 22 planned)
- Series B: Formats (currently about 17 CPSs)
- Series C: Type of Publication (currently about 19 CPSs and another two planned)
- Series D: Joint Policy Statements (currently two CPSs pertaining to Acquired Immunodeficiency Syndrome and Biotechnology).

The CPSs are in various stages of revision aimed at achieving consistency and currency.

Until recently, the Collection Policy Office (CPO) developed and maintained the CPSs. Four years ago, the Library established the Collections Policy Committee to oversee collection policy. The CPO is being abolished.[2]

Two years ago, the Library launched a three-year review of all CPSs, to increase the specificity of the CPSs and confirm the assignment of collection levels. The current Director of the Public Services Collection Directorate coordinates this effort. Because the CPO is being abolished, the Library is relying on Recommending Officers and heads of custodial divisions to revise CPSs. Proposed revisions are subject to widespread review in the Library. After this internal review, revised CPSs are submitted to the Associate

[1] The conspectus is a set of rules for evaluating library collections.
[2] Nevertheless, some Collections Policy Office staff continue to carry out collection policy and selection functions.

Librarian for Library Services. During 1995, the Library completed four new CPSs and revised one.

A complete CPS contains the following elements:

- Scope -- specifying subject, format, or type of publication covered and including working definitions of any special terms or concepts
- Prescriptive statement -- specifying the relationship of these materials to the Library's missions and priorities
- Descriptive statement -- giving a summary of current and past collection strengths and weaknesses in this area
- Detailed statement of collections policy (determined by the nature of the subject, format or type of publication)
- Summary of relevant Research Library Group (RLG) or other conspectus documents. The assigned conspectus levels are:
  - Level 0, Out-of-Scope. (i.e., the Library does not collect in this area)
  - Level 1, Minimal Level. (i.e., an area in which few collections are made)
  - Level 2, Basic Information Level. (i.e., a collection of up-to-date general materials that serve to introduce and define a subject and indicate the varieties of information available elsewhere)
  - Level 3, Instructional Support Level. (i.e., a collection that is adequate to support undergraduate and most graduate instruction, or sustained independent study)
  - Level 4, Research Level. (i.e., a collection that includes the major published source materials required for dissertations and independent research)
  - Level 5, Comprehensive Level. (i.e., a collection that, so far as is reasonably possible, includes all significant works of recorded knowledge in all applicable languages, for a necessarily defined and limited field).

For monographic books, the policy expressed in the CPSs is multidimensional. Both Series A and Series C apply to books. Series A of the CPSs

is arranged by subject. Series C is arranged by type (e.g., children's literature, commercial firms, ethnic publications, ephemera, government publications).

For photographs, the acquisition policy is expressed particularly in the following CPSs:

- CPS B:PHO, Photography
- CPS B:FIN, Fine and Applied Arts: Non-Book Materials.

For the prints and photographs (P&P) collections, the execution of the general policies in the CPSs is entrusted to curators for the major types of items in the collections, that is:

- Photographs
- Fine prints
- Popular and applied graphics art items
- Posters
- Architectural, design, and engineering items.

In a document, Acquisitions Objectives -- Photography (September 1994), the P&P Division has refined the policy for acquisition of photographs in CPS B:PHO.

CONCLUSION

During our profiling of collections management, we noted that inputs to the collections, particularly acquisitions of large collections, exceed the processing capabilities of the library's current or foreseeable resources. Specifically, we noted that:

- Adequate stowage space is not available for much of the Library's collections
- Much of the staff in Library Services is nearly overwhelmed by and preoccupied with digesting large collections acquired in the past.

Because virtually no increase in resources can be expected, past practices for acquiring collections should be reexamined.

We address the issue of inadequate stowage for collections in the section of the report dealing with facilities management. We address the adverse impact of large collections below.

1. <u>With Few Exceptions, The Library's Policy For Its Collections Does Not Consider Collections In Other Libraries Of The Nation</u>.

Although the CPSs establish policies for what and to what extent the Library should acquire items, they do not consider the availability of items in other libraries in the nation or world

2. Acquisition of Large Collections can Overburden the Collections Management Process.

In profiling the collections management process, we frequently encountered references to large collections that were demanding attention and resources. Several examples are:

- Altschuler jazz record collection. The Library acquired this collection of an estimated 500,000 78-rpm jazz recordings during 1992. Currently, "inventory"-level cataloging of this collection is still underway, consuming the services of about 10 people from the Special Materials Cataloging Division of the Cataloging Directorate and the staff of the Motion Picture, Broadcasting, and Recorded Sound Division.

- *Look* magazine photograph collection. The Library acquired this collection in December 1971. During the 1989 arrearages census, the collection was estimated to contain about 5,000,000 photographs. Cataloging of the collection has been underway for about two years and will probably continue beyond the millennium. Cataloging of this collection is consuming the services of about five catalogers in the Prints and Photographs Division along with scarce storage space.

- Eames papers. The Library acquired this collection of an estimated 280,000 pieces during 1994. As we learned during our walk-through of the photograph management process, this collection is one of the top processing projects in the Prints and Photographs Division. As discussed in Appendix H, Analysis of Inputs and Management of Photographs during 1995, the Eames collection is one of the processing projects with which our selected photograph samples (the Gladstone and Booker T. Washington collections) are competing for attention.

3. The Programmatic Impacts Of Acquiring A Large Collection Are Not Dealt With Systematically.

We found that coordination and planning for acquisitions of large collections are not based on systematic analysis of the overall effects of the acquisition across the various areas of the Library. Such factors as the current collection/arrearage status and the requirements for preservation, cataloging, storage, and servicing are not considered in a coherent or consistent manner. The overall budget implications are not analyzed. Overall, the acquisition is not treated programmatically.

These conditions imply that the Library does not always recognize and accept the responsibility for proper stewardship of the items it collects.

APPENDIX J

Products, Services and Fees Analysis

Copyright Registrations

The following pages provide a detailed analysis of how we derived the value of full cost recovery for copyright registrations. It is important to understand that we assessed full cost recovery of the claim registration process only, excluding the Acquisitions, Licensing, and the Copyright Arbitration Royalty Panel (CARP) divisions.

A summary of each page follows:

Page(s)	Description
J-2	Calculates fee receipts for FY 1995 based on FY 1995 completions
J-3	Breaks down the Copyright Office 's FY 1995 budget by line item and major Copyright function. Also summarizes costs of each division in the claim registration process (BASIC)
J-4 through J-6	Document source material and data on which the analysis is based
J-7	Compares current fee recovery to full cost recovery using three different sensitivities and assuming the Copyright Office remains on Capitol Hill
J-8	Compares current fee recovery to full cost recovery using three different sensitivities and assuming the Copyright Office moves off site
J-9 through J-14	Provides a detailed account of the cost per claim figures summarized on pages J-7 and J-8
J-15 through J-17	Provide additional backup analysis to support how we allocated division costs in our analysis of a different fee per claim type.

COPYRIGHT WORKLOAD &FEES RECEIVED

CLAIMS			Completions	Computed Receipts	Actual Receipts	
Code	*Description*	*Fee*	*FY 1995*	*FY 1995*		
SE	Serials	$20	81,206	$1,624,120	$1,535,230	
G/SE	Group Serials	$10	5,980	$266,560	$266,560	(1)
G/DN	Group Daily Newspapers	$40	1,669	$66,760	$75,840	
TX	Textual Material	$20	198,631	$3,972,620	$9,956,818	(2)
MP	Motion Pictures	$20	18,602	$372,040		
PA	Performing Arts	$20	148,612	$2,972,240		
SR	Sound Recordings	$20	33,938	$678,760		
RE	Renewals	$20	32,220	$644,400	$641,546	
VA	Visual Arts	$20	98,200	$1,964,000		
CA	Supplementary Information	$20	2,495	$49,900		
MW	Mask Works	$20	837	$16,740	$18,520	
			622,390	$12,628,140	$12,494,514	
SPECIAL HANDLING						
	Documents, Certifications, Searches, Expedited Services and other				$2,116,818	
				TOTAL	$14,611,332	

(1) (Fee) x (# of completions) does not equal receipts for group serials.
Fees are assessed per item in a group, whereas "completions" figure reflects number of groups.

(2) includes TX, MP, PA, SR, VA and CA

COPYRIGHT COSTS BY DIVISION -- FY1995

		BASIC					ACQUISITIONS	LICENSING	CARP	
	Allocation Basis	Receiving & Processing	Examining	Cataloging	Information & Reference	Register of Copyrights & Other	Acquisitions	Licensing	CARP	FY 1995 Budget
Compensation/Benefits	FY 1995 Budget	4,094,128	6,517,219	5,439,977	3,151,588	2,959,784	658,974	1,538,456	295,699	$24,655,825
Travel	Usage	0	0	0	0	87,100	3,700	12,900	4,500	$108,200
Postage/Telephone	# of employees	201,125	212,760	179,516	131,313	69,812	26,700	75,200	6,000	$902,425
Printing/Photoduplication	# of employees	44,250	46,810	39,496	28,890	15,359	3,800	36,000	15,000	$229,605
Other Services	# of employees	74,347	78,648	66,359	48,540	25,806	1,300	685,600	114,300	$1,094,900
Office Supplies	# of employees	52,703	55,752	47,041	34,410	18,294	4,100	10,000	2,000	$224,300
Books/Mat'l./ADP Equipmt.	# of employees	30,984	32,777	27,655	20,229	10,755	3,000	64,345	51,000	$240,745
	Subtotal	4,497,536	6,943,965	5,800,044	3,414,970	3,186,910	701,574	2,422,501	488,499	
					Total BASIC	23,843,426			Grand Total	$27,456,000

Source: -- 1996 salary sheets for Copyright
-- 1995 "Green Sheets"

	Salaries fm. FY 95 Green Sheets	Other Personnel Compensation	Personnel Benefits	Unemployment. Compensation	Total	Benefits as % of Salaries/Comp.
BASIC	18,403,397	115,300	3,625,999	18,000	22,162,696	20.43%
Acquisitions	555,682	0	103,292	0	658,974	18.59%
Licensing	1,202,995	75,400	258,061	2,000	1,538,456	27.89%
CARP	217,240	17,500	59,959	1,000	295,699	36.12%
		208,200	4,047,311	21,000		
	20,379,314		4,276,511		24,655,825	

20.98% of salary = benefits

Division	Section	# of employees	% of Total Employees	Total 1996 Salaries	1996 $ as % of Total $	Total Personnel $; BASIC; FY95 Green Sheets	Imputed 1995 Salary $	Travel	Postage & Telephone	Printing & Photodupl.	Other Services	Office Supplies	Books & Materials	FY 1995 BUDGET
Receiving & Processing	Gen. Mgmt.	4		205,851										
	Fiscal Control	28		784,711										
	Materials Control	48		1,454,104										
	Mail & Correspondenc	41		997,412										
		121	25%	3,442,078	18%	22,162,696	4,094,128	0						
Examining	Gen. Mgmt.	5		302,087										
	Literary I	11		485,539										
	Performing Arts	41		1,816,026										
	Renewals	12		522,146										
	Visual Arts	32		1,128,276										
	Literary II	27		1,225,182										
		128	27%	5,479,256	29%	22,162,696	6,517,219	0						
Cataloging	Gen. Mgmt.	5		279,342										
	Technical Support	19		727,480										
	Audio Visual	10		420,121										
	Literary	29		1,324,823										
	Performing Arts	15		674,078										
	Serials	18		645,854										
	Visual Arts	12		501,883										
		108	23%	4,573,581	25%	22,162,696	5,439,977	0						
Information & Reference	Gen. Mgmt.	4		237,650										
	Ref. & Bibliography	15		563,943										
	Certific & Document	9		239,657										
	Copyright Info	13		599,623										
	Copyright Publications	14		458,063										
	Records Management	24		550,715										
		79	17%	2,649,651	14%	22,162,696	3,151,588	0						
Register of Copyrights & Other	Register's Office	6		465,667										
	General Counsel	16		891,040										
	Policy & Int'l. Affairs	3		191,626										
	Associate Register/Mg	2		180,857										
	Administrative Office	7		281,596										
	Automation Group	8		477,609										
		42	9%	2,488,395	13%	22,162,696	2,959,784							
			subtotal	18,632,961	100%			87,100	All other 794,525	All other 174,805	All other 293,700	All other 208,200	All other 122,400	
Acquisitions							658,974	3,700	26,700	3,800	1,300	4,100	3,000	
Licensing							1,538,456	12,900	75,200	36,000	685,600	10,000	64,345	
CARP							295,699	4,500	6,000	15,000	114,300	2,000	51,000	
GRAND TOTAL		478	100%				24,655,825	108,200	902,425	229,605	1,094,900	224,300	240,745	27,456,000

Source: info from Facilities Team

On-site facilities cost		
Square ft./person	150	(industry average for admin type space)
Cost/sq. ft.	$0	
Cost/person	$0	(On-site buildings already fully paid for)

Off-site facilities cost		
Square ft./person	150	(industry average for admin type space)
Cost/sq. ft.	$28	(estimate from Staubach Company)
Cost/person	$4,200	

Source: Price Waterhouse March 1994
Indirect Cost Rate Analysis

On-site rate	21.40%	applied by Library to work they perform for outside Govt. entities
Off-site rate	15.90%	applied by Library to work they perform for outside Govt. entities
Copyright local rate	3.10%	applied by Licensing and CARP to work they perform for outside entities; EXCLUDED FROM OUR ANALYSIS

POTENTIAL FEE RECEIPTS FOR COPYRIGHT CLAIMS

CLAIMS		Current Recovery			Full Cost On-site		Productivity Improvements On-site		Claim Type On-site	
Code	*Description*	Fee	Completions	Computed Receipts [1]	Fee	Computed Receipts	Fee	Computed Receipts	Fee	Computed Receipts
SE	Serials	$20	81,206	$1,624,120	$45.93	$3,729,775	$38.44	$3,121,442	$44.18	$3,587,584
G/SE	Group Serials	$10	5,980	$266,560 [2]	$10.00	$266,560 [2]	$10.00	$266,560 [2]	$10.00	$266,560 [2]
G/DN	Group Daily Newspapers	$40	1,669	$66,760	$45.93	$76,657	$38.44	$64,154	$44.18	$73,734
TX	Textual Material	$20	198,631	$3,972,620	$45.93	$9,123,080	$38.44	$7,635,090	$40.46	$8,036,535
MP	Motion Pictures	$20	18,602	$372,040	$45.93	$854,386	$38.44	$715,034	$47.50	$883,528
PA	Performing Arts	$20	148,612	$2,972,240	$45.93	$6,825,718	$38.44	$5,712,431	$41.46	$6,161,337
SR	Sound Recordings	$20	33,938	$678,760	$45.93	$1,558,765	$38.44	$1,304,528	$47.50	$1,611,933
RE	Renewals	$20	32,220	$644,400	$45.93	$1,479,858	$38.44	$1,238,490	$51.91	$1,672,567
VA	Visual Arts	$20	98,200	$1,964,000	$45.93	$4,510,306	$38.44	$3,774,667	$50.30	$4,939,686
CA	Supplementary Informatio	$20	2,495	$49,900	$45.93	$114,595	$38.44	$95,904	$405.58	$1,011,921
MW	Mask Works	$20	837	$16,740	$45.93	$38,443	$38.44	$32,173	$410.07	$343,227
Total			622,390	**$12,628,140**		**$28,578,143** [3]		**$23,960,473** [3]		**$28,588,614** [3]

[1] Total amount differs slightly from actual FY 1995 receipts, accounting for time lag between completion of claim and posting of receipt.

[2] Assumed no fee change for group serials under full cost recovery
(Fee) x (# of completions) does not equal receipts for group serials.
Fees are assessed per item in a group, whereas "completions" figure reflects number of groups.

[3] Differs slightly from cost worksheets owing to Group Serials computation. Margin of error < .1%

POTENTIAL FEE RECEIPTS FOR COPYRIGHT CLAIMS

CLAIMS			Current Recovery		Full Cost Off-site		Productivity Improvements Off-site		Claim Type Off-site	
Code	*Description*	Fee	Completions	Computed Receipts [1]	Fee	Computed Receipts	Fee	Computed Receipts	Fee	Computed Receipts
SE	Serials	$20	81,206	$1,624,120	$47.20	$3,832,674	$40.05	$3,251,901	$45.41	$3,687,502
G/SE	Group Serials	$10	5,980	$266,560 [2]	$10.00	$266,560 [2]	$10.00	$266,560 [2]	$10.00	$266,560 [2]
G/DN	Group Daily Newspapers	$40	1,669	$66,760	$47.20	$78,772	$40.05	$66,835	$45.41	$75,788
TX	Textual Material	$20	198,631	$3,972,620	$47.20	$9,374,773	$40.05	$7,954,195	$41.61	$8,264,249
MP	Motion Pictures	$20	18,602	$372,040	$47.20	$877,957	$40.05	$744,919	$48.80	$907,752
PA	Performing Arts	$20	148,612	$2,972,240	$47.20	$7,014,030	$40.05	$5,951,180	$42.63	$6,334,593
SR	Sound Recordings	$20	33,938	$678,760	$47.20	$1,601,769	$40.05	$1,359,050	$48.80	$1,656,127
RE	Renewals	$20	32,220	$644,400	$47.20	$1,520,685	$40.05	$1,290,253	$53.31	$1,717,528
VA	Visual Arts	$20	98,200	$1,964,000	$47.20	$4,634,738	$40.05	$3,932,427	$51.66	$5,073,293
CA	Supplementary Informatio	$20	2,495	$49,900	$47.20	$117,756	$40.05	$99,912	$414.01	$1,032,964
MW	Mask Works	$20	837	$16,740	$47.20	$39,504	$40.05	$33,518	$419.56	$351,168
Total			622,390	**$12,628,140**		**$29,359,217** [3]		**$24,950,750** [3]		**$29,367,525** [3]

[1] Total amount differs slightly from actual FY 1995 receipts, accounting for time lag between completion of claim and posting of receipt.

[2] Assumed no fee change for group serials under full cost recovery (Fee) x (# of completions) does not equal receipts for group serials. Fees are assessed per item in a group, whereas "completions" figure reflects number of groups.

[3] Differs slightly from cost worksheets owing to Group Serials computation. Margin of error < .1%

Copyright Full Cost/On-site Rate

		BASIC				
	Allocation Basis	Receiving & Processing	Examining	Cataloging	Information & Reference	Register of Copyrights & Other
Compensation/Benefits	FY 1995 Budget	4,094,128	6,517,219	5,439,977	3,151,588	2,959,784
Travel	Usage	0	0	0	0	87,100
Postage/Telephone	# of employees	201,125	212,760	179,516	131,313	69,812
Printing/Photoduplication	# of employees	44,250	46,810	39,496	28,890	15,359
Other Services	# of employees	74,347	78,648	66,359	48,540	25,806
Office Supplies	# of employees	52,703	55,752	47,041	34,410	18,294
Books & Materials/ADP Equipmt.	# of employees	30,984	32,777	27,655	20,229	10,755
Subtotal		4,497,536	6,943,965	5,800,044	3,414,970	3,186,910
General & Administrative[1]	% of Comp/Bene	876,143	1,394,685	1,164,155	674,440	633,394
Facilities- Estimated Cost		0	0	0	0	0
Subtotal		5,373,680	8,338,650	6,964,199	4,089,410	3,820,304
Total Cost						28,586,243
Completed Registrations1995						622,390
Cost per Registration						**$45.93**

[1] Price Waterhouse, Indirect Cost Rate Analysis, March 1994

Copyright Full Cost/Off-site Rate

		BASIC				
	Allocation Basis	Receiving & Processing	Examining	Cataloging	Information & Reference	Register of Copyrights & Other
Compensation/Benefits	FY 1995 Budget	4,094,128	6,517,219	5,439,977	3,151,588	2,959,784
Travel	Usage	0	0	0	0	87,100
Postage/Telephone	# of employees	201,125	212,760	179,516	131,313	69,812
Printing/Photoduplication	# of employees	44,250	46,810	39,496	28,890	15,359
Other Services	# of employees	74,347	78,648	66,359	48,540	25,806
Office Supplies	# of employees	52,703	55,752	47,041	34,410	18,294
Books & Materials/ADP Equip	# of employees	30,984	32,777	27,655	20,229	10,755
Subtotal		4,497,536	6,943,965	5,800,044	3,414,970	3,186,910
General & Administrative[1]	% of Comp/Bene	650,966	1,036,238	864,956	501,102	470,606
Facilities- Estimated Cost		508,200	537,600	453,600	331,800	176,400
Subtotal		5,656,703	8,517,803	7,118,600	4,247,873	3,833,916
Total Cost						29,374,895
Completed Registrations1995						622,390
Cost per Registration						**$47.20**

[1] Price Waterhouse, Indirect Cost Rate Analysis, March 1994

Copyright Productivity Improvements/On-site Rate

		BASIC				
	Allocation Basis	Receiving & Processing	Examining	Cataloging	Information & Reference	Register of Copyrights & Other
Compensation/Benefits[1]	FY 1995 Budget	3,275,302	5,213,775	4,351,982	2,521,270	2,959,784
Travel	Usage	0	0	0	0	87,100
Postage/Telephone	# of employees	201,125	212,760	179,516	131,313	69,812
Printing/Photoduplication	# of employees	44,250	46,810	39,496	28,890	15,359
Other Services	# of employees	74,347	78,648	66,359	48,540	25,806
Office Supplies	# of employees	52,703	55,752	47,041	34,410	18,294
Books & Materials/ADP Equipmt.	# of employees	30,984	32,777	27,655	20,229	10,755
Subtotal		3,678,711	5,640,521	4,712,049	2,784,653	3,186,910
General & Administrative[2]	% of Comp/Bene	700,915	1,115,748	931,324	539,552	633,394
Facilities- Estimated Cost		0	0	0	0	0
Subtotal		4,379,626	6,756,269	5,643,373	3,324,205	3,820,304
Total Cost						23,923,776
Completed Registrations1995						622,390
Cost per Registration						**$38.44**

[1] Assumes 20% improvement in productivity for all divisions except "Register of Copyrights & Other"

[2] Price Waterhouse, Indirect Cost Rate Analysis, March 1994

Copyright Productivity Improvements/Off-site Rate

		BASIC				
	Allocation Basis	Receiving & Processing	Examining	Cataloging	Information & Reference	Register of Copyrights & Other
Compensation/Benefits[1]	FY 1995 Budget	3,275,302	5,213,775	4,351,982	2,521,270	2,959,784
Travel	Usage	0	0	0	0	87,100
Postage/Telephone	# of employees	201,125	212,760	179,516	131,313	69,812
Printing/Photoduplication	# of employees	44,250	46,810	39,496	28,890	15,359
Other Services	# of employees	74,347	78,648	66,359	48,540	25,806
Office Supplies	# of employees	52,703	55,752	47,041	34,410	18,294
Books & Materials/ADP Equipmt.	# of employees	30,984	32,777	27,655	20,229	10,755
Subtotal		3,678,711	5,640,521	4,712,049	2,784,653	3,186,910
General & Administrative[2]	% of Comp/Bene	520,773	828,990	691,965	400,882	470,606
Facilities- Estimated Cost		508,200	537,600	453,600	331,800	176,400
Subtotal		4,707,684	7,007,112	5,857,614	3,517,335	3,833,916
Total Cost						24,923,660
Completed Registrations1995						622,390
Cost per Registration						**$40.05**

[1] Assumes 20% improvement in productivity for all divisions except "Register of Copyrights & Other"

[2] Price Waterhouse, Indirect Cost Rate Analysis, March 1994

Copyright Cost by Claim Type/On-site

Claim Type		BASIC										
Code	*Description*	Receiving & Processing	Examining	Cataloging	Information & Reference	Register of Copyrights & Other	G&A [1]	# of employees across divisions	Facilities cost per claim type	Total Cost per Claim Type	Completed Claims	Cost per Claim
SE	Serials	586,814	611,629	932,540	445,566	415,810	595,225	60	0	3,587,584	81,206	$44.18
G/SE	Group Serials	43,213	45,040	68,672	32,811	30,620	43,832	4	0	264,189	5,980	$44.18
G/DN	Group Daily Newspapers	12,061	12,571	19,166	9,158	8,546	12,233	1	0	73,734	1,669	$44.18
TX	Textual Material	1,435,354	1,496,052	1,664,827	1,089,862	1,017,078	1,333,362	136	0	8,036,535	198,631	$40.46
MP	Motion Pictures	134,422	215,059	190,142	102,067	95,250	146,588	15	0	883,528	18,602	$47.50
PA	Performing Arts	1,073,905	1,718,110	770,706	815,414	760,959	1,022,243	104	0	6,161,337	148,612	$41.46
SR	Sound Recordings	245,244	392,359	346,900	186,213	173,777	267,440	27	0	1,611,933	33,938	$47.50
RE	Renewals	232,829	638,633	181,837	176,787	164,981	277,500	28	0	1,672,567	32,220	$51.91
VA	Visual Arts	709,616	1,764,001	604,876	538,810	502,827	819,556	82	0	4,939,686	98,200	$50.30
CA	Supplementary Information	18,029	35,477	764,059	13,690	12,775	167,890	15	0	1,011,921	2,495	$405.58
MW	Mask Works	6,048	15,035	256,319	4,593	4,286	56,946	5	0	343,227	837	$410.07
	Subtotal	4,497,536	6,943,965	5,800,044	3,414,970	3,186,910	4,742,817	477	0	28,586,243	622,390	

Total		
	BASIC DIVISION	23,843,426
	ACQUISITIONS DIVISION	701,574
	LICENSING DIVISION	2,422,501
	CARP	488,499
	FY 1995 BUDGET	$27,456,000

[1] Price Waterhouse, Indirect Cost Rate Analysis, March 1994

Copyright Cost by Claim Type/Off-site

Claim Type		BASIC										
Code	*Description*	Receiving & Processing	Examining	Cataloging	Information & Reference	Register of Copyrights & Other	G&A[1]	# of employees across divisions	Facilities cost per claim type	Total Cost per Claim Type	Completed Claims	Cost per Claim
SE	Serials	586,814	611,629	932,540	445,566	415,810	442,247	60	252,897	3,687,502	81,206	$45.41
G/SE	Group Serials	43,213	45,040	68,672	32,811	30,620	32,567	4	18,623	271,547	5,980	$45.41
G/DN	Group Daily Newspapers	12,061	12,571	19,166	9,158	8,546	9,089	1	5,198	75,788	1,669	$45.41
TX	Textual Material	1,435,354	1,496,052	1,664,827	1,089,862	1,017,078	990,676	136	570,400	8,264,249	198,631	$41.61
MP	Motion Pictures	134,422	215,059	190,142	102,067	95,250	108,914	15	61,898	907,752	18,602	$48.80
PA	Performing Arts	1,073,905	1,718,110	770,706	815,414	760,959	759,517	104	435,982	6,334,593	148,612	$42.63
SR	Sound Recordings	245,244	392,359	346,900	186,213	173,777	198,705	27	112,929	1,656,127	33,938	$48.80
RE	Renewals	232,829	638,633	181,837	176,787	164,981	206,180	28	116,281	1,717,528	32,220	$53.31
VA	Visual Arts	709,616	1,764,001	604,876	538,810	502,827	608,922	82	344,240	5,073,293	98,200	$51.66
CA	Supplementary Information	18,029	35,477	764,059	13,690	12,775	124,741	15	64,192	1,032,964	2,495	$414.01
MW	Mask Works	6,048	15,035	256,319	4,593	4,286	42,310	5	22,577	351,168	837	$419.56
	Subtotal	4,497,536	6,943,965	5,800,044	3,414,970	3,186,910	3,523,869	477	2,005,217	29,372,512	622,390	

Total		
	BASIC DIVISION	23,843,426
	ACQUISITIONS DIVISION	701,574
	LICENSING DIVISION	2,422,501
	CARP	488,499
	FY 1995 BUDGET	$27,456,000

[1] Price Waterhouse, Indirect Cost Rate Analysis, March 1994

COPYRIGHT COST ALLOCATION BY CLAIM TYPE -- FY1995

CLAIM TYPE		BASIC				
		Receiving & Processing	Examining	Cataloging	Information & Reference	Register of Copyrights & Other
Allocation Basis ==>		% of total claims	% of division employees in section x weighted average # claims for division	% of division employees in section x weighted average # claims for division	% of total claims	% of total claims
Code	*Description*					
SE	Serials	13.05%	8.81%	16.08%	13.05%	13.05%
G/SE	Group Serials	0.96%	0.65%	1.18%	0.96%	0.96%
G/DN	Group Daily Newspapers	0.27%	0.18%	0.33%	0.27%	0.27%
TX	Textual Material	31.91%	21.54%	28.70%	31.91%	31.91%
MP	Motion Pictures	2.99%	3.10%	3.28%	2.99%	2.99%
PA	Performing Arts	23.88%	24.74%	13.29%	23.88%	23.88%
SR	Sound Recordings	5.45%	5.65%	5.98%	5.45%	5.45%
RE	Renewals	5.18%	9.20%	3.14%	5.18%	5.18%
VA	Visual Arts	15.78%	25.40%	10.43%	15.78%	15.78%
CA	Supplementary Information	0.40%	0.51%	13.17%	0.40%	0.40%
MW	Mask Works	0.13%	0.22%	4.42%	0.13%	0.13%
		100%	100%	100%	100%	100%

Examining Division Workload

Literary Section (includes 2 of 5 fm. Gen Mgmt team)		
SE	81,206	28%
G/SE	5,980	2%
G/DN	1,669	1%
TX	198,631	69%
CA	624	0.22%
Total claims	288,110	100.00%
Performing Arts Section (includes 2 of 5 fm. Gen Mgmt team)		
MP	18,602	9%
PA	148,612	74%
SR	33,938	17%
CA	624	0.31%
Total Claims	201,776	100.00%
Renewals Section		
RE	32,220	98%
CA	624	2%
Total Claims	32,844	100%
Visual Arts Section (includes 1 of 5 fm. Gen Mgmt team)		
VA	98,200	98.53%
MW	837	0.84%
CA	624	0.63%
Total Claims	99,661	100.00%

Cataloging Division Workload

Technical Support		
CA	2,495	74.88%
MW	837	25.12%
	3,332	
Audio Visual		
MP	18,602	35.41%
SR	33,938	64.59%
	52,540	
Literary (includes 2 of 5 from Gen Mgmt)		
TX	198,631	100.00%
Performing Arts (includes 1 of 5 from Gen Mgmt)		
PA	148,612	89.69%
RE-53%	17,077	10.31%
	165,689	
Serials (includes 1 of 5 from Gen Mgmt)		
SE	81,206	91.39%
G/SE	5,980	6.73%
G/DN	1,669	1.88%
	88,855	
Visual Arts (includes 1 of 5 from Gen Mgmt)		
VA	98,200	86.64%
RE-47%	15,143	13.36%
	113,343	

G&A Distribution by Claim Type

Total BASIC budget	23,843,426
Total BASIC comp/salary	22,162,696
Total g&a expense, on-site	4,742,817
Total g&a expense, off-site	3,523,869

	Cost/claim type by division	% of total	on-site base	on-site g&a amount	off-site base	off-site g&a amount
Serials	2,992,359	12.55%	4,742,817	595,225	3,523,869	442,247
Group Serials	220,357	0.92%	4,742,817	43,832	3,523,869	32,567
Group Daily Newspapers	61,501	0.26%	4,742,817	12,233	3,523,869	9,089
Textual Material	6,703,173	28.11%	4,742,817	1,333,362	3,523,869	990,676
Motion Pictures	736,940	3.09%	4,742,817	146,588	3,523,869	108,914
Performing Arts	5,139,094	21.55%	4,742,817	1,022,243	3,523,869	759,517
Sound Recordings	1,344,493	5.64%	4,742,817	267,440	3,523,869	198,705
Renewals	1,395,067	5.85%	4,742,817	277,500	3,523,869	206,180
Visual Arts	4,120,130	17.28%	4,742,817	819,556	3,523,869	608,922
Supplementary Information	844,030	3.54%	4,742,817	167,890	3,523,869	124,741
Mask Works	286,281	1.20%	4,742,817	56,946	3,523,869	42,310
Totals	23,843,426	100.00%		4,742,817		3,523,869

Charging Publishers for Cataloging

The following pages provide a detailed analysis of how we derived the revenue potential associated with charging publishers for cataloging. We began by breaking down the FY 1995 budget for cataloging. We then computed the percentage of Cataloging in Publication (CIP) items each cataloging division completed. Applying this percentage to the total cost of each cataloging division, we were able to derive the cost of the CIP function.

A summary of each page follows:

Page(s)	Description
J-19	Describes the revenue potential from the CIP function if the Cataloging service unit remains on Capitol Hill
J-20	Illustrates derivation of the CIP items cataloged as a percentage of total items by division
J-21	Explains the LC Revenue potential from the CIP function if the cataloging service unit moves off site

CIP COSTS BY TEAM -- FY1995

	Allocation Basis	Dewey	Special Materials	CIP	Cataloging Policy and Support	Arts and Sciences	History and Literature	Regional & Coop	Social Sciences	Office of the Director	FY 1995 Budget
FTE filled		18	63	46.5	60	87.5	114.5	101.5	123.5	3	617.5
Compensation/Benefits	FY 1995 Budget	$1,219,216	$3,372,338	$2,092,773	$3,536,033	$5,010,056	$6,352,595	$5,836,671	$6,626,406	$254,746	$34,300,834
Travel	# of employees	$2,516	$8,804	$6,499	$8,385	$12,228	$16,002	$14,185	$17,260	$419	$86,298
Postage	# of employees	$2,507	$8,774	$6,476	$8,356	$12,186	$15,947	$14,136	$17,200	$418	$86,000
Printing	# of employees	$1,691	$5,917	$4,368	$5,636	$8,219	$10,755	$9,534	$11,600	$282	$58,000
Rental of Equipment	# of employees	$9	$31	$23	$29	$43	$56	$49	$60	$1	$300
Other Services	# of employees	$3,369	$11,792	$8,704	$11,231	$16,378	$21,432	$18,999	$23,117	$562	$115,585
Training	# of employees	$1,598	$5,594	$4,129	$5,327	$7,769	$10,166	$9,012	$10,965	$266	$54,826
Computer Services/ Docum	# of employees	$600	$2,102	$1,551	$2,002	$2,919	$3,820	$3,386	$4,120	$100	$20,600
Sub-total		$1,231,506	$3,415,353	$2,124,522	$3,576,999	$5,069,798	$6,430,772	$5,905,972	$6,710,728	$256,795	$34,722,443
Overhead	21.4% of Comp & Ber	$260,912	$721,680	$447,853	$756,711	$1,072,152	$1,359,455	$1,249,048	$1,418,051	$54,516	$7,340,378
Facilities cost estimate	$0 per FTE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Cost		$1,492,418	$4,137,033	$2,572,375	$4,333,710	$6,141,950	$7,790,227	$7,155,019	$8,128,779	$311,310	$42,062,821
CIPS catalogued as percentage of total		36%	4%	100%	15%	17%	14%	2%	15%	15%	
FY 1995 Budget $ for CIP cataloging		$537,270	$165,481	$2,572,375	$650,056	$1,044,131	$1,090,632	$143,100	$1,219,317	$46,697	$7,469,060.24
Total CIP cataloging volume											40276
Cost per CIP item catalogued											$185
Average price of book received											$41.51
Net cost											$143.94

Comp/Bene's as based on percentages for actuals

	Dewey	sm	cip	cat policy	a/s	h/l	r/coop	soc science	office of dir	total
	$1,099,746	$3,041,886	$1,887,704	$3,189,540	$4,519,125	$5,730,110	$5,264,741	$5,977,091	$229,784	$30,939,727
percentage of total	4%	10%	6%	10%	15%	19%	17%	19%	1%	

	#CIPs catalogued FY95	Total Completions	% of Total
Arts & Sciences	12095	69809	17%
History & Literature	11930	83658	14%
Regional & Coop	1201	63990	2%
Social Sciences	14310	97698	15%
Special Materials	740	17936	4%
Total	40276	333091	
All Monographs Catalogued	276348		
Dewey	40276	113452	36%
Policy Support	cips as percentage of total		15%
Office of Director			15%

CIP COSTS BY TEAM -- FY1995

	Allocation Basis	Dewey	Special Materials	CIP	Cataloging Policy and Support	Arts and Sciences	History and Literature	Regional & Coop	Social Sciences	Office of the Director	FY 1995 Budget
FTE filled		18	63	46.5	60	87.5	114.5	101.5	123.5	3	617.5
Compensation/Benefits	FY 1995 Budget	$1,219,216	$3,372,338	$2,092,773	$3,536,033	$5,010,056	$6,352,595	$5,836,671	$6,626,406	$254,746	$34,300,834
Travel	# of employees	$2,516	$8,804	$6,499	$8,385	$12,228	$16,002	$14,185	$17,260	$419	$86,298
Postage	# of employees	$2,507	$8,774	$6,476	$8,356	$12,186	$15,947	$14,136	$17,200	$418	$86,000
Printing	# of employees	$1,691	$5,917	$4,368	$5,636	$8,219	$10,755	$9,534	$11,600	$282	$58,000
Rental of Equipment	# of employees	$9	$31	$23	$29	$43	$56	$49	$60	$1	$300
Other Services	# of employees	$3,369	$11,792	$8,704	$11,231	$16,378	$21,432	$18,999	$23,117	$562	$115,585
Training	# of employees	$1,598	$5,594	$4,129	$5,327	$7,769	$10,166	$9,012	$10,965	$266	$54,826
Computer Services/ Docum	# of employees	$600	$2,102	$1,551	$2,002	$2,919	$3,820	$3,386	$4,120	$100	$20,600
Sub-total		$1,231,506	$3,415,353	$2,124,522	$3,576,999	$5,069,798	$6,430,772	$5,905,972	$6,710,728	$256,795	$34,722,443
Overhead	15.9% of Comp & Benes	$193,855	$536,202	$332,751	$562,229	$796,599	$1,010,063	$928,031	$1,053,599	$40,505	$5,453,833
Facilities cost estimate	$4200 per FTE	$75,600	$264,600	$195,300	$252,000	$367,500	$480,900	$426,300	$518,700	$12,600	$2,593,500
Total Cost		$1,500,961	$4,216,154	$2,652,572	$4,391,228	$6,233,897	$7,921,734	$7,260,303	$8,283,027	$309,899	$42,769,776
CIPS catalogued as percentage of total		36%	4%	100%	15%	17%	14%	2%	15%	15%	
FY 1995 Budget $ for CIP cataloging		$540,346	$168,646	$2,652,572	$658,684	$1,059,762	$1,109,043	$145,206	$1,242,454	$46,485	$7,623,199.00
Total CIP cataloging volume											40276
Cost per CIP item catalogued											$189
Average price of book received											$41.51
Net cost											$147.76

Comp/Bene's as based on percentages for actuals

	Dewey	sm	cip	cat policy	a/s	h/l	r/coop	soc science	office of dir	total
	$1,099,746	$3,041,886	$1,887,704	$3,189,540	$4,519,125	$5,730,110	$5,264,741	$5,977,091	$229,784	$30,939,727
percentage of total	4%	10%	6%	10%	15%	19%	17%	19%	1%	

Interlibrary Loans

The following pages provide a detailed analysis of how we derived the revenue potential associated with charging for interlibrary loans. Because appropriated funding figures were not available for the Loan Division *per se*, we relied on information from the Fiscal Officer within the service unit of the Associate Librarian for Library Services. The Fiscal Officer provided us with an estimate of the amount of compensation and benefits related to the Loan Division. We calculated the cost of postage using figures provided by the Chief of the Loan Division.

A summary of each page follows:

Page(s)	Description
J-23	Provides what we believe to be the most realistic model for charging interlibrary loans. Presents the assumption that the loan rate to libraries does not include a subsidy for loans to Congress
J-24	Same as page J-23; however, presents the further assumption that overhead costs are appropriated and thereby excluded from the full cost analysis
J-25	Shows the full cost recovery potential of subsidizing loans to Congress in the interlibrary loan rate
J-26	Same as page J-25; however, presents the further assumption that overhead costs are appropriated and thereby excluded from the full cost analysis

LOAN DIVISION

FY 1995

Budget (Personals only) $2,004,348
Number of FTEs 51

	Appropriated			Fee-Recovered							
	Congress	Judiciary	Special Borrowers	U.S. Govt. Libraries	U.S. Research Libraries	Total	Cost / Request	Net Comp/ Benefits Cost	Postage		Net Cost Recovery
Requests	40,262	2,273	1,164	8,065	37,667	89,431	$ 22.41				
Fills	32,440	1,805	908								
Fills				4,493	16,376	20,869		$ 467,674	$ 110,188	$	577,862
									Overhead	$	100,082
									Total	$	677,944
									Cost/loan	$	**32.49**

Notes:

A) Derived cost of fill by multiplying fills to libraries (20,869) by cost/request ($22.41)
B) Derived cost/loan by dividing total cost by fills to U.S. Govt. & U.S. Research libraries
C) Postage calculated based on 1995 distribution of books and photocopies, at $6.00/book and $3.00/photocopy
D) Net effect: loan rate to libraries does not include subsidy for loans to Congress

Assumptions:

A) Congressional requests will be filled and paid for through appropriated funds
B) Unit costs derived from total requests but applied to filled requests
C) To calculate full cost recovery, need to add overhead charges to cost/request
D) The Loan Division could not be located off-site given its requirement to access the collections

LOAN DIVISION

FY 1995

Budget (Personals only) $ 2,004,348
Number of FTEs 51

	Appropriated			Fee-Recovered							
	Congress	Judiciary	Special Borrowers	U.S. Govt. Libraries	U.S. Research Libraries	Total	Cost / Request	Net Comp/ Benefits Cost	Postage		Net Cost Recovery
Requests	40,262	2,273	1,164	8,065	37,667	89,431	$ 22.41				
Fills	32,440	1,805	908								
Fills				4,493	16,376	20,869		$ 467,674	$ 110,188	$	577,862
									Overhead	$	-
									Total	$	577,862
									Cost/loan	$	**27.69**

Notes:

A) Derives cost of fill by multiplying fills to libraries (20,869) by cost/request ($22.41)
B) Derives cost/loan by dividing total cost by fills to U.S. Govt. & U.S. Research libraries
C) Postage calculated based on 1995 distribution of books and photocopies, at $6.00/book and $3.00/photocopy
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	Fee-Recovered									
	Congress	Judiciary	Special Borrowers	U.S. Govt. Libraries	U.S. Research Libraries	Total	Cost / Request	Net Comp/ Benefits Cost	Postage	Net Cost Recovery
Requests	40,262	2,273	1,164	8,065	37,667	89,431	$ 22.41			
Fills	32,440	1,805	908			35,153				
Fills				4,493	16,376	20,869		$1,255,453	$ 110,188	$ 1,365,641
					Subtotal Fills	56,022			Overhead	$ 268,667
									Total	$ 1,634,308
									Cost/loan	**$ 78.31**

Notes:

A) Derived cost of fill by multiplying total fills (56,022) by cost/request ($22.41)
B) Derived cost/loan by dividing total cost by fills to U.S. Govt. & U.S. Research libraries
C) Postage calculated based on 1995 distribution of books and photocopies, at $6.00/book and $3.00/photocopy
D) Net effect: subsidizes "appropriated fills" (35,153) in cost/loan

Assumptions:

A) Cost of filling Congressional requests will be subsidized by fee charged for non-Congressional loans
B) To calculate full cost recovery, need to add overhead charges to cost/request
C) Cost/request is derived including Congressional requests, but applied only to filled requests
D) The Loan Division could not be located off-site given its requirement to access the collections

LOAN DIVISION

FY 1995

Budget (Personals only) $2,004,348
Number of FTEs 51

	Fee-Recovered										
	Congress	Judiciary	Special Borrowers	U.S. Govt. Libraries	U.S. Research Libraries	Total	Cost / Request	Net Comp/ Benefits Cost	Postage	Net Cost Recovery
Requests	40,262	2,273	1,164	8,065	37,667	89,431	$ 22.41			
Fills	32,440	1,805	908			35,153				
Fills				4,493	16,376	20,869		$1,255,453	$ 110,188	$ 1,365,641
					Subtotal Fills	56,022			Overhead	$ -
									Total	$ 1,365,641
									Cost/loan	**$ 65.44**

Notes:

A) Derived cost of fill by multiplying total fills (56,022) by cost/request ($22.41)
B) Derived cost/loan by dividing total cost by fills to U.S. Govt. & U.S. Research libraries
C) Postage calculated based on 1995 distribution of books and photocopies, at $6.00/book and $3.00/photocopy
D) Net effect: subsidizes "appropriated fills" (35,153) in cost/loan

Assumptions:

A) Cost of filling Congressional requests will be subsidized by fee charged for non-Congressional loans
B) Overhead costs are not applied
C) Cost/request is derived including Congressional requests, but applied only to filled requests
D) The Loan Division could not be located off-site given its requirement to access the collections

Charging Commercial Researchers

The following page shows how we calculated the two hourly rates to charge commercial users for reference librarian services within the Library reading rooms. The "loaded" hourly rate includes a charge for overhead. The "unloaded" hourly rate does not.

Charging Commercial Researchers

Division	Provide List of Commercial Researchers?	Average Grade of Reference Librarian	Unloaded Hourly Rate[1]	Overhead[2]	Loaded Hourly Rate	Average "free" service (in hours)
Serials & Govt. Periodicals	Yes	GS-12	23.54	5.04	28.58	0.5
Manuscripts	Yes	GS-12	23.54	5.04	28.58	< 2 hrs (max.)
Prints & Photographs	Yes	GS-12	23.54	5.04	28.58	
MBRS	Yes	GS-12	23.54	5.04	28.58	No limit
American Folklife	No	GS-12	23.54	5.04	28.58	1

DIVISIONS NOT INCLUDED IN ANALYSIS:

Humanities & Social Sciences
Science & Technology
European Division
Hispanic Division
Geography & Map
Music
Africa & Middle East Division
Asian Division

[1] Assumes a GS-12, Step 5, FY 1995 rate

[2] 21.40%, on-site rate from Price Waterhouse's March 1994 Indirect Cost Rate Analysis

APPENDIX K

Selected Site Visits

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
National Archives & Records Administration (NARA)	Sam Watkins - Acting Director of IRM Services 301-713-6730 Ext 269	• Information is managed based on an IRM plan, complete with organization and strategic plan. This organization has the support of the entire agency. • NARA maintains the gross catalog for the material stored in its warehouse, while originating agencies maintain the detail catalog. • Search and retrieval of material is based on a collection which could consist of hundreds of boxes. • IT environment is based on a 21-year-old mainframe-based technology • No single integrated system to track all material managed by NARA. Therefore, it is almost impossible to easily locate material without a considerable amount of labor expenditure. • Digital information pose the single largest challenge to NARA's future. A strategic plan to address this issue is currently being developed. • Outsourced the management and administration of the network environment. Currently supports 1100 workstations across the nation. The service has been adequate and cost effective. • Frame Relay technology to enable remote access to facilities. This was found to be more cost effective than leased dedicated lines.	• Develop an IRM function, focused on information requirements for the overall organization. Based it on an information strategy that links tasks to the organization's missions. • Outsourcing of the Library's network management and administration could result in a more efficient and cost effective IT organization. • Leveraging Frame Relay technology to replace dedicated lines for connecting users to the current environment could realize potential savings.
Smithsonian Institution	Vincent Marcalus - Director of Office IT 202-357-1678	• The Smithsonian has 6500 employees and budget of $350M, with an additional $650M from private funds and endowments. It operates 60-80 offices nationwide. • A CIO recently hired to develop an information strategy. There is no integrated IT infrastructure within the organization today. Each curator manages their own collection as they see fit. Personal PC-based information repositories are used to manage these collections. The CIO's primary goal is to develop an IRM strategy. • AMERITEC's Notice product is used to manage 18 branch libraries. • LC is heavily relied on for copy cataloging. Internal catalog records are seldom created. • A fiber backbone is already in place connecting the facilities in Washington. 4000 PC and 36 file servers are currently connected on this WAN. • Currently supports only 275 simultaneous remote connects to its SIRIUS catalog. This is a flow control to system usage to outside sources. • Discussions recently began with vendors to outsource network management functions. • Currently 7 different mail systems are utilized to share information across the organization. These systems will be centralized to one in the near term.	• Hire a CIO tasked with development of an IRM strategy. • Outsourcing of network management and administration could result in a more efficient and cost effective IT organization.

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
Patent & Trademark Office (PTO)	Jim Lynch - Comptroller 703-308-5125	• LC has had a CIO position for over 8 years. This position has ensured that the information is a lever in day-to-day operations and has kept a clear focus on the use of technology as an enabler. • Mission-driven strategy-based planning process is used to track IT activities within the organization. • The "job jar" approach to task management was abandoned a couple of years ago in favor of a more project focused approach with better status and cost/benefit visibility. • A disciplined evolutionary systems development approach was adopted over the past several years. This maximizes new capability availability in the most efficient timeframe, while ensuring adequate controls over the development life cycle. • It was found that the key to successful enabling of the organization was training. User buy-in to the process was needed early in the life cycle. The importance of training to achieve IT success could not be overestimated. • Agency migrated from a custom development activity to the procurement and adaptation of commercial solutions. • It was determined that the knowledge base of the users in terms of technology understanding was changing the way of doing business. Technology is viewed as an enabler, not a support function. • Users were not forced to use technology. The philosophy was that good tools will automatically receive support. • Senior level buy-in in order to implement a technology-enabled environment is MANDATORY. • The importance was learned of leveraged use of contractors not simply outsourcing. • The most effective means of negotiating with the unions was found to be allowing management to define what will change and the union to define how to implement that change.	• Secure top level leadership; establish an organization chartered with carrying out an IRM function. • Development of Strategic planning is critical to success. • Project-based goals and objectives with business-based decision-making is required for better visibility in determining the cost/benefits of delivering capabilities to meet organization goals and objectives. • A disciplined evolutionary development model is a must in the development of systems. • Training of staff and obtaining user buy-in are the keys to successful change.

Corporation for National Research Initiatives (CNRI)	Bill Arms - Senior Technologist (703) 620-8990	• Not for profit corporation designed to tackle problems that were not being addressed by government, academia, and the commercial environment
		  • INTERNET Society
		  • Gigabit Network project
		  • Original digital library project - funded by ARPA and now co-funded by the Library of Congress
		• Currently developing the Library's technology for copyright and digital library management. The key to the copyright technology is the unique data handles required to locate the material and provide for secure handling of information in a digital environment. Work is ongoing with universities in the digital library effort to define storage and access methods, cataloging techniques, and finding aides.
		• The development approach is research based. Very little documentation is produced. Requirements are not clearly documented. Very little time is spent analyzing the implications of delivering a system rather than a pilot which can be scaled to an operational system.
			• The library should properly leverage commercial companies to help them develop their enabling technologies.
			• The library should review the life cycle development approach for CORDS and NDL. Care should be given to the specification of the operational system and staffing requirements to meet that need.
			• The library needs to remain open to other methods for handling data identification and encryption of information other than just the material prepared by CNRI.

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
Carnegie Mellon lowry@andrew.cmu.edu	Charles Lowry - University Librarian 412-268-2446 Fax: 412-268-6944	• A strategic plan is linked directly to the mission and individual performance of their employees. • The plan has created buy-in from all Stakeholders to ensure successful implementation of technology plans. • A partnership with SIRSI developed a replacement for the current Integrated Library System (ILS). The ILS is the heart of the library processing environment. It includes orders, acquisition, cataloging, and circulation functions. • OCLC and the Library of Congress (LOC)) cataloging material are heavily utilized for copy cataloging. The budget would be significantly impacted if LOC did not create the catalog records. In addition, a better means of sharing catalog records between OCLC, LOC and other major cataloging universities is desired. It can take up to several weeks for a catalog record at LOC or another university to be distributed through OCLC and back to CMU. • "Book jobbers" and "approval plans" are used to procure material. The material comes back near shelf ready; only CMU processing is required to get the material ready for use. • Work with commercial companies is ongoing to develop new search and retrieval technology to augment the simple Boolean retrieval process available today. These tools could have a significant impact on the future of library search and retrieval systems. • CMU's future view of the "library without walls" involves librarians in acquiring resources, authenticating the integrity of the sources, assisting users to more effectively utilize available information. • A commercial product is currently utilized to manage the serials catalog. A commercial index is used to support the search and retrieval process.	• The library must develop a strategic plan. This document must be a living document which ensures proper focus by linking it to the mission and the appraisal and rewards system of the library. • The library must adopt an ILS approach to track the movement of material in and through the library environment. All business and operations decisions can be enabled via information extracted from this facility. • The library must partner with a commercial company to develop its next generation ILS product. This approach permits focus on the operational needs of providing enabling technology to customers without involvement in the development process.
Purdue University	Cheryl Kern-Simirenko - Assoc Dean 317-494-2900 Fax: 317-494-0156	• Reliance on LOC and OCLC for the catalog materials is heavy. Only a small amount of catalog material is created. • This is a Dewey Library, not LOC, and therefore additional effort is required to prepare the catalog for use. • An ILS system called Thor is currently leveraged. This system is to be replaced in 2 years. $1.5M has been budgeted to its replacement. • Thor+ was a project initiated at Purdue to leverage information stored in the GPO's WAIS server. The material was not being effectively utilized due to presentation and access methods employed. Purdue saw the need to add value by improving the user interface and access strategy. The result is a feature filled information repository which contains all of the data stored in Thomas as well as other material linked in an easy-to-use manner. Purdue sees the leverage of user interface and data access work to be key for the libraries of the future. • More emphasis has been placed on the training aspect of information research support than on the need for cataloging. The library wants users to know how to do research with the available tools and those that will become available in the near term. • The library belongs to the CIC (Big Ten plus 3) which has begun to discuss an approach for leveraged collection management and acquisition plans. This organization will more cost effectively manage the assets at each university, while leveraging the buying power of the entire network.	• The library must adopt an ILS approach to track the movement of material in and through the library environment. All business and operations decisions can be enabled via information extracted from this facility. • The library must partner with a commercial company to develop its next generation ILS product. This approach permits focus on the operational needs of providing enabling technology to the customers without involvement in the development process. • Technology refreshment must be a planned activity, with a budget and project plan. • The library must establish a process for collaboration with other libraries to share acquisition and collection management objectives. This sharing facility will allow all libraries in the network to see each others' acquisition and collection plans. Coordination will be accomplished to better optimize spending while assuring that all individual collection goals are being compromised.

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
Chicago Public Library	Diane Purtill - (Acting) Head Librarian Central branch 312-747-4070	• An ILS facility is used to manage catalogs and circulation in a distributed library environment. There currently are 82 branches in the library system. Every branch has access to the central catalog and can obtain any book in the inventory in 24 hours. All material is automatically tracked, with information statistics provided to library management in support of business decision making. • The library contracts out facilities management, custodial services, and security. It believes its facilities are cleaner, better planned, and more secure than when this effort was done in house. In addition, it is seen as more cost effective. • Annual decisions are based on a strategic plan linked to the library mission. This plan was prepared "bottoms up" and, as a result, is embraced by the entire library. • "Book jobbers" and "approval plans" are utilized to procure material. The material comes back in near-shelf-ready manner; only Chicago Public Library processing is required to have the material ready for use. • An increasing amount of the cataloging process is being outsourced. This began with foreign language material and is moving to sound and video material cataloging. • Fees are currently collected for research assistance for database and INTERNET access. • A decision has been made to leverage technology in the branch offices because of the political pressures of providing like services even though the allocated space may vary. Each branch will be equipped with enabling technology to provide the same level of access across the library network.	• The library must adopt an ILS approach to track the movement of material in and through its environment. All business and operations decisions can be enabled via information extracted from this facility. • The library must partner with a commercial company to develop its next generation ILS product. This approach permits focus on the operational needs of providing enabling technology to the customers without becoming involved in the development process. • The library should consider those activities that are not part of its strategic vision as candidates for outsourcing. • The library must develop a strategic plan to focus and prioritize the decision making process. • The library must view technology as an enabler to support customers, not as simply a support organization. It is integral to the mission.

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
Indiana University	Judy Dye - Librarian 812-855-5968 FAX: 812-855-3386	• Partnership with a commercial company is developing the multimedia library of the future today. They have created a linked library and education environment has been created which effectively leverages technology to support both library access and educational information needs. The networking and file management for this high volume and high capacity environment are postured to grow well into the 21st century. • A "lights out" type environment has been developed to operate this facility. Full-time staff are not required to monitor operations of this environment. • The key to copyright in the future is believed to be identification of the object, tracking ownership,ensuring information integrity of the material, and the ability to secure payment for information usage. The concern is that the educational usage of information not be lost in the tracking and cost recovery model. • All activities undertaken within the library are based on a line item found in a strategic plan. Technology is seen as an enabler in support of customer's mission. • "Book jobbers" are not currently used for acquisition of materials, but this approach is being considered as a cost-cutting measure. • Focus has begun on the internal value of "intellectual capital" available from the faculty. The goal is to better harness and exploit this information. • OCLC is leveraged for creating authority records for cataloging purposes. The library creates 15% of the new catalog records for the material procured. • Apartnership with a commercial firm will develop and deliver an ILS product. The product will benchmark test this summer and be rolled out across the system later this year. Tremendous leverage is anticipated from this information facility by streamlining the organization, process, and technologies. • Preservation is a big issue at most research libraries around the country. It is believed that the only approved method for preserving materials is microform. This is because there are no standards for storing digital information long term. Technology changes every 18 months and libraries cannot afford the lifecycle cost associated with continual change of storage methods. The libraries would like LOC to take a leadership role in this effort.	• The library's innovation in multimedia storage, catalog, and information dissemination should be leveraged within LOC. • The library must adopt an ILS approach to track the movement of material in and through its library environment. All business and operations decisions can be enabled via information extracted from this facility. • The library must partner with a commercial company to develop its next generation ILS product. This approach permits focus on the operational needs of providing enabling technology to customers without becoming involved in the development process. • The library must develop a strategic plan to focus and prioritize the decision making process. • The library must view technology as an enabler to support customers, not as simply a support organization. It is integral to the mission.

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
Online Computer Library Center (OCLC)	Terry Noreault 614-764-4392 Fax: 614-764-2344	• The Center has been providing library catalog records for over 24 years to more than 25,000 libraries around the world. There are 34M records in the catalog database, one-third of these records are created by the Library of CongressThe Center has 90 percent of the catalog market. • The current 20+ year old technology is the same used at LOC. The only distinction is that the Center began an upgrade project 4 years ago to fix the year 2000 problems and developed the necessary tools to handle the global replace function not currently available to LOC catalogers. • The Center has been working on tools and techniques to streamline the catalog process. It has worked with LOC on the electronic CIP process and with publishers and book jobbers to improve the availability of catalog records once the material is available in the marketplace. • The concept of cuttering and the impact on the libraries around the country was discussed. LOC spends an estimated $2-3M annually to create this index, saving libraries around the country tens of millions of dollars annually. • The Center also believes LOC's efforts significantly lower costs for libraries around the world. • This is a high volume transaction organization. It processes 150-200 transactions each second. It tracks 540M books across the 34M catalog records for inter-library loans. It handles 8M loans each year, with 4M being non-returnable reproductions. • LOC is one of the biggest customers both in terms of revenues and effort. • Over 270 languages are represented in the Center's catalog, involving several million records. Several different character sets are currently supported for the display of this material. The Center is anxious to see a standard and hopes UNICODE will become that standard soon. • Work is ongoing with LOC and CNRI to determine the future of cataloging. This would involve redefinition of the concept of meta data used in cataloging to better support the digital age. • OCLC is working on certification for ISO-9000, which is for international system development organizations. • There is an outstanding disaster recovery plan that will be tested in a hot backup scenario in the near future. There are redundant, fault tolerant systems to ensure availability of information. There is also an uninterruptible power supply to ensure the equipment remains on-line. • The Center believes LOC sets the standards in cataloging, trains the community, and provides the quality validation required to ensure that the overall product's integrity is maintained. It believes that it would be extremely hard to replace the intellectual capital currently available at LOC. • Preservation is a big issue at most of the research libraries around the country. The libraries believe the only approved method for preserving materials is microform. This is because there are no standards for storing digital information long term. Technology changes every 18 months and libraries cannot afford the life cycle cost associated with continually changing storage methods. The libraries would like LOC to take a leadership role in this effort.	• The library must collaborate more with OCLC to ensure a more timely support of catalog record development can be accomplished to meet the needs of the library community. • The library must develop a strategic plan to focus and prioritize its decision-making process. • The library must view technology as an enabler to support customers, not as simply a support organization. It is integral to its mission. • The library must take a leadership role in the development of standards for digital information processing, cataloging, and display. It must provide the leadership for the future of the library digital environment.

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
UC Berkeley plyman@library.berkeley.edu	Peter Lyman - Univ. Librarian 510-642-3773 FAX: 510-643-8179	• There has been a 40 percent reduction in library staff over the past 6 years, mostly in the cataloging area. • "Book Jobbers" and "approval plans" are utilized to obtain near-shelf-ready books. The library is are currently looking to outsource this same processing for the foreign material purchases. • An in-house-developed ILS is used to manage library information. It grew out of a inventory control system and now encompasses most library operations. It currently does not support acquisition and the library realizes that the system needs to be extended because information needed for business decision making is being lost. • Journal or serial purchases have been reduced as one of the cost-cutting measures. • The library has been involved with LOC's NDL project from inception. It originally developed the concept of meta data cataloging for collections and findings aides. These approaches have been embraced by LOC and are currently managed and distributed by LOC. Berkeley is developing a strategy for detailed catalog records and content /collection-based records. • The operating budget is $27M per year with $7M set aside for material purchases. • They School of Library Science was recently closed down and a new school opened called the School of Information and Technology, where library science is only one part of the course material. Through this has begun the realization of the true information value of the library in the world. • The library has outsourced a number of different functions not critical to overall objectives. These include serial processing and hard copy generation / reproduction. • The library believes LOC cannot and should not try to catch up to industry in the area of technology operations leadership. Instead, libraries should become the thought leaders in the area of publishing initiatives, cataloging futures, copyright, and digital information strategies. • Berkeley library believes that a paradigm shift is required in the cataloging area. Cataloging today works well for books but not for journals, because of journals' volatility. It will be almost impossible to handle digital information. There will be a need to develop standards in format, tagging, and indexing. This requirement is similar to the effort to create the MARC record over 35 years ago. • The library believes multimedia will further complicate the catalog process unless standards are developed and agreements reached for formats to index and store material in a preservation media. • Berkeley takes a business approach to library operations. It is beginning to review services against needs and the cost to accomplish them. It is also looking into partnerships to achieve synergy and growth without additional expense. • The key to copyright in the future is not to be locked into linear thinking. There is a need to track value of data and value added in terms of access and presentation methods.	• The library must adopt an ILS approach to track the movement of material in and through the library environment. All business and operations decisions can be enabled via information extracted from this facility. • The library must partner with a commercial company to develop its next generation ILS product. This approach permits focus on the operational needs of providing enabling technology to the customers without becoming involved in the development process. • The library must develop a strategic plan to focus and prioritize its decision-making process. • The library must view technology as an enabler to support customers, not as simply a support organization. It is integral to its mission. • The library must take a leadership role in the development of standards for digital information processing, cataloging, and display. It must provide the leadership for the future of the library digital environment.

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
UCLA ecz5gwl@mvs.oac.ucla.edu	Gloria Werner - Head Librarian 310-825-1201 FAX: 310-206-4109	• The library is working with a number of other California schools to collaborate on acquisition and collection building strategy. This is seen as a cost saving measure for UCLA. • Ms. Werner was the former Librarian for NLM and understands the role as the "Library of last resorts" for the medical community. NLM collaborates well with other organizations to ensure that all material is collected and, if no one is collecting it, NLM does. There is a great deal of information sharing in this environment. NLM funds many of the activities executed on behalf of the medical community. • The in-house developed ILS environment is currently being replaced. Its origin dates back to the 1960s when it was used to support serials processing. It has evolved over time into a complete ILS but the technology is now too costly to maintain. • The library orders over 90K serials each year. An extremely high number compared to other major research facilities. • About 100K records for cataloging are created each year. This is about 15 percent of the new material received annually. 60 percent of the new material is copy cataloged from OCLC. • Databases are never synchronized with OCLC once data is created and loaded into their system. The cost/benefit of synchronizing is not seen as compelling enough to develop the capability. • The library operates in a union environment and has "incentivized" the staff around project goals versus assigned duties and responsibilities. The staff has been empowered to make changes. • There is movement to a fee for service allocation across the university. The library's funding will be based on the amount of service it provides to other organizations on campus. The need to maintain close contact with customers and their needs will be increased to ensure the needed funding levels required for operations are available. This has forced the library to think more of technology as an enabler and a service provider rather than a support entity. • A current staff of 20.5 FTEs manage the library infrastructure and the Web space for the entire campus. Included in this group are six programmers used to support new capability development. The philosophy is "buy what we can and build what we must." This leverages the budget. • Preservation is a big issue at most research libraries nationwide. The libraries believe that the only approved method for preserving materials is microform. This is because there are no standards for storing digital information long term. Technology changes every 18 months and libraries cannot afford the lifecycle cost associated with continually changing storage methods. The libraries would like LOC to take a leadership role in this effort.	• The library must adopt an ILS approach to track the movement of material in and through the library environment. All business and operations decisions can be enabled via information extracted from this facility. • The library must partner with a commercial company to develop its next generation ILS product. This approach permits focus on the operational needs of providing enabling technology to the customers without becoming involved in the development process. • The library must develop a strategic plan to focus and prioritize its decision-making process. • The library must view technology as an enabler to support customers, not as simply a support organization. It is integral to its mission. • The library must take a leadership role in the development of standards for digital information processing, cataloging, and display. It must provide the leadership for the future of the library digital environment. As a part of this leadership the library must help establish a direction and focus digital information preservation.

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
MIT sean@mit.edu	David Ferriero - Head of public services 617-253-7058 Fax: 617-253-8894	• The entire MIT operation is driven by a strategic plan that is manually updated and rewritten every 4-5 years. An outside consultant and methodology is used to help develop the plan. The plan looks at both internal needs and external benchmarks in order to keep abreast with community / industry "best practices". It is used as a communication tool to help the staff see where they want to be at the turn of the century. It is used for staffing requests and budget planning, as well as to validate and prioritize delivery plans. • An ILS has been employed to help manage information. The ILS was recently extended to include acquisition planning. • "Book jobbers" are currently not used and therefore the library has to create its own skeletal catalog record as each new item is received. A great deal of copy cataloging is based on information contained in the OCLC database. • Currently, the library only catalogs if there is a record in OCLC or the book or journal has been checked out. At the end of one year staff checks to see if the material is cataloged; if not, a catalog record is created. • Currently, 75 percent of the purchasing budget is spent on serials. • There is a large volume of off-site storage material (500K). These items are accessible within 24 hours. The material is climate-controlled and open to the public. The library also uses and pays for storage at Harvard's large off-site storage facility. Access to this material is available in 48 hours. 20 percent of the entire holdings for the library are in these facilities. • The library is currently working with a vendor to develop a client/server, web-enabled ILS facility. • It is currently studying the concept of digital thesis submission and electronic document storage and retrieval. It is believed that a new set of tools must be built to better enable the searching strategy process. These tools cannot be based only on Boolean expressions. They must be based on heuristics, word expansions, and word vector processing with a heavy usage of linguistics. The library's experience has proven that people tend to use the digital environment to find what they need and then come to the library to retrieve the entire document for analysis. • The library believes LOC is the glue that holds the entire cataloging function together. MIT's insistence on adhering to standards and constant quality control checks have enabled other libraries to rely on the information without fear. • Staff would like to see LOC in more of a collaborative leadership role rather than the current dictator role. They want to understand LOC's acquisition and collection strategy to determine where they need to collect to ensure coverage. There will always be collection overlap but it poises problems when there are gaps in coverage. • The current copyright approach does not work. There is minimal incentive for a publisher to register work. The legal system protects them and therefore they only view copyright as an insurance policy against claims. In addition, publishers don't have to make the shipment to LOC a priority and that has an impact on the availability of catalog records. LOC must become a leader in this area.	• The library must adopt an ILS approach to track the movement of material in and through the library environment. All business and operations decisions can be enabled via information extracted from this facility. • The library must partner with a commercial company to develop its next generation ILS product. This approach permits focus on the operational needs of providing enabling technology to the customers without becoming involved in the development process. • The library must develop a strategic plan to focus and prioritize its decision-making process. • The library must view technology as an enabler to support customers, not as simply a support organization. It is integral to its mission. • The library must work with industry and other libraries to develop a better means of handling copyright in the digital age.

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
Harvard University dale_flecker@harvard.edu	Dale Flecker - Chief Tech Library 617-495-3724	• The library is a very decentralized library. Its environment consists of 11 separate and autonomous facilities under one federation. There are a total of 35 research libraries across the campus. Each library is funded through tuition and endowments. A portion of money is set aside for university level automation, but the budget is quite small. • A large off-site storage facility is managed and maintained. It is financed on a usage basis fee. Money is borrowed to build the facility outside the university and then the note is paid off as the facility is used. • Mr. Flecker was involved in the ITS study for LOC's cataloging directorate. He believes that LOC could best benefit from the installation and operation of an ILS environment. Harvard and a group of other research libraries formed a consortium to assess such requirements as scalability of currently available ILS products. It met with all of the vendors and explained their requirements. It is currently developing a scalability test to ensure that the product selected meets the university's needs well into the future. LOC participated in the latter period of this study. Harvard is currently in the process of replacing its current ILS with a commercial package. It has been using a 8-10 year planning model for system installation to retirement. • Preservation is a big issue at most of the research libraries around the country. It is believed that the only approved method for preserving materials is microform. This is because there are no standards for storing digital information long term. Technology changes every 18 months and libraries cannot afford the lifecycle cost associated with continually changing storage methods. The libraries would like LOC to take a leadership role in this effort. • Harvard's collection approach has been to buy almost everything it sees. This includes foreign language material. The library relies heavily on LOC to locate and buy foreign material. • Cataloging is by exception. The library catalogs the material which is of most high importance. The system periodically and automatically searches to see if other cataloging material is available and the records. • Mr. Flecker in his assessment of LOC, believes it actually manages only 15M volumes. LOC should not count the copyright material it temporarily stores. Harvard currently has 8.5M items in its holdings. • The library believes the nation is losing large amounts of its culture, especially in the technical area, because of the ever changing technology process. Video games and machine "look and feel" are two examples of the culture which may be lost. This is similar to 1960 census information which is locked in technology.	• The library must adopt an ILS approach to track the movement of material in and through the library environment. All business and operations decisions can be enabled via information extracted from this facility. • The library must partner with a commercial company to develop its next generation ILS product. This approach permits focus on the operational needs of providing enabling technology to the customers without becoming involved in the development process. • The library must develop a strategic plan to focus and prioritize its decision-making process. • The library must view technology as an enabler to support customers, not as simply a support organization. It is integral to its mission. • The library should consider moving more of its holdings to climate controlled off-site storage.

Site	Point of Contact	Key Findings	Applicability to the Library of Congress
New York Public Library hkodrish@nypl.org	Ms Heike Kodrish - Dep. Dir. Research Libraries 212-930-0711 FAX: 212-869-3567	• The library manages a completely closed stack environment with access to any volume in less than an hour. It uses its own shelving system based on book size. This system reduces shelf space requirements by 30 percent over normal library operations. • The library started its strategic planning process in 1992. It now has an operational focus with buy-in at all levels of the organization. The plan looked both internally and externally to ensure that the library could remain competitive with other research libraries in the country. It also captured the good ideas of the organization in terms of future task initiatives. • The library is opening up a new library called Science, Business and Technology. $100M will be spent to bring this library into operation. An opportunity was taken during this new library roll out to look at the services being delivered, how staff were being incentivizing, how projects were being managed, and the progress of tasks. Time was spent training the staff to think in a new paradigm. The approach was to move to a more caring, open communication environment. Outside consultants were used to build teams and teach people about interpersonal skills as well as on the new technology which was going to be deployed in the new library. The result was an organization that move the union away from job description limits to goal-setting project management approaches. • The library is financed through endowments. Funds have become more limited and therefore the library has had to assess the services provided and the cost/benefit of those services. There was a need to better optimize the decision making process for these projects. • They focused their library's collection on four business thrusts: small business, international, senior citizen, and banking. • The key to success has been obtaining and sustaining top management support as the organization is transformed. • "Approval plans" and "book jobbers" are currently used. Unwanted books are discarded. It costs more to process and send these books back than simply writing them off as a loss. • 30 percent of what is acquired has no catalog. There are three levels of catalog: full, enhanced minimal, and minimal. This is similar to LOC's process. There is a goal of zero arrearages, and staff works hard to maintain that level even when LOC changes catalog priorities. These have impacted this library over the past 5 years, requiring their workload to go as LOC refocuses its attention. The classification system is extremely robust. It can handle 1200 unique classes of dance where LOC can only support 40. The system is much more granular in its search methods. • LOC's changes in collection policy and cataloging have a devastating impact on the library. It may need to expand its collection if LOC drops. It has a difficult time knowing when this occurs. It also relies on LOC to identify and purchase foreign material. Without LOC's involvement, the library could not continue to cover all of its collection needs. • Library staff voiced concern over LOC's involvement in raising funds to finance New York library project. These funds take money that could potentially have been obtained by the library. The library doesn't want to compete because LOC may have an unfair advantage.	• The library must develop a strategic plan to focus and prioritize its decision-making process. • The library must view technology as an enabler to support customers, not as simply a support organization. It is integral to its mission. • The library must train and empower its staff to become change agents. The technologies to be introduced over the next five years will have a significant impact on the library's current operations. Establishing a project goal methodology which measures achievement of goals will enable the library to make the necessary changes it will need to make well into the 21st century.

APPENDIX L

Selected Bibliography

SELECTED BIBLIOGRAPHY

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APPENDIX M

List of Acronyms

List of Acronyms

AAP	Association of American Publishers
ABC	Activity-Based Costing
AFSCME	American Federation of State, County, and Municipal Employees
ALA	American Library Association
AOC	Architect of the Capitol
ARL	Association for Research Libraries
ARPA	Advanced Research Projects Agency
ASRS	Automated Storage and Retrieval System
BWS	Bibliographic Work Station
CAFM	Computer-Aided Facilities Management
CARP	Copyright Arbitration Royalty Panels
CCB	Configuration Control Board
CICS	Customer Interface Control System
CIP	Cataloging in Publications
CIS	Copyright Imaging System
CNRI	Corporation of National Research Initiatives
COE	Condition of Employment
COINS	Copyright Office IN-process System
COO	Chief Operating Officer
COPICS	Copyright Office Publication and Interactive Cataloging System
CORDS	Copyright Office Recordation and Deposit System
CREA	Congressional Research Employees Association
CRS	Congressional Research Service
CSC	Computer Sciences Corporation
CSOC	Collections Security Oversight Committee
CSP	Competitive Solution Process
DOS	Disk Operating System
EC	Electronic Commerce
ECIP	Electronic Cataloging in Publication
EDI	Electronic Data Interchange

EEO	Equal Employment Opportunity
EEO/AA	Equal Employment Opportunity/Adverse Action
FLRA	Federal Labor Relations Authority
FMCS	Federal Mediation and Conciliation Services
FSIP	Federal Services Impasse Panel
FTE	Full-Time Employee
GAO	General Accounting Office
GLIN	Global Legal Information Network
HRS	Human Resources Services
IIA	Information Industry of America
ILS	Integrated Library System
IRM	Information Resources Management
ISS	Integrated Support Services
ITS	Information Technology Services
LC	Library of Congress
LCR	Library of Congress Regulation
MAP	Management and Planning
MAPC	Management and Planning Committee
MARC	Machine Readable Cataloging
MARS	Microcomputer Assisted Rating System
MIT	Massachusetts Institute of Technology
MUMS	Multi-Use MARC System
NARA	National Archives and Records Administration
NDL	National Digital Library
NDLF	National Digital Library Federation
NFC	National Finance Center
NIH	National Institutes of Health
NUC	National Union Catalog
OCLC	On-line Computer Library Center
OPM	Office of Personnel Management
PATS	Posting and Applicant Tracking System
PBS	Public Broadcasting System

PSD	Protective Services Division
PTO	Patent and Trademark Office
R&D	Research and Development
SCORPIO	Subject-Content-Oriented Retrieval for Processing Information On-line
SMS	Serials Management System
SPO	Special Projects Office
TCF	Tracking Control Facility
UCLA	University of California at Los Angeles
ULP	Unfair Labor Practices
VSAM	Virtual Storage Access Method
WETA	Washington Educational Television Association