This testimony on the National Library Service for the Blind and Physically Handicapped, Library of Congress (NLS) provides information on: (1) NLS authority; (2) background; (3) functions and responsibilities; (4) Office of the Director; (5) director; (6) management; (7) budget; (8) division/section/office functions, including the Administrative Section, Publications and Media Section, Automation Office, and Research and Development Officer; (9) Materials Development Division, including the Materials Development Division Office, Bibliographic Control Section, Braille Development Section, Collection Development Section, Engineering Section, Production Control Section, Recording Studio, and Quality Assurance Section; (10) Network Division, including the Network Division Office, Consumer Relations Officer, Inventory Management Section, Music Section, Network Services Section, and Reference Section; (11) staffing; (12) appraisal; (13) staff profile; and (14) contact points. The appendix includes data on: selected trends in program activity, 1974-98; readers and circulation, 1994-98; summary of workload, 1996-2000; Braille/audio acquisition, 2000; machine production schedule, 1996-2000; Year 2000 machine/equipment acquisition; machine repairs, 1984-98; machine age distribution, 1999; network map; and digital talking book technical activity planning. (AEF)
Testimony Prepared By

Frank Kurt Cylke
Director

For Presentation To The

United States
National Commission on Libraries and Information Science

by

Carolyn Hoover Sung
Chief, Network Division

on

July 8, 1999

Kellogg Conference Center
Gallaudet University
800 Florida Avenue, NE
Washington, DC 20002

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## APPENDIX

- Selected Trends 1974-1998
- Readers and Circulation 1994-1998
- Summary of Workload 1996-2000
- Acquisition: Braille/Audio 2000
- Year 2000 Machine/Equipment Acquisition Chart
- Machine Age Distribution 1999
- Network Map
- Digital Talking Book: Technical Activity Planning
Authority

In accordance with the authority provided in 2 U.S.C. 135(a), 135(b), and 135(c), the National Library Service for the Blind and Physically Handicapped, Library of Congress (NLS), is responsible for administering the national program to provide reading materials for the nation's blind and physically handicapped residents and for U.S. citizens living abroad. These materials consist of books and magazines, as well as music scores and texts produced in raised characters, as sound recordings, and in other suitable formats.

Background

The staff selects and produces full-length books and magazines in braille and on recorded disc and cassette. Books are distributed to a cooperating network of regional and subregional (local) libraries where they are circulated directly to eligible borrowers. Magazines are mailed directly from the manufacturer to individual subscribers. Reading materials and playback machines are sent to borrowers and returned to libraries by postage-free mail. Established by an act of Congress in 1931 to serve blind adults, the program was expanded in 1952 to include blind children, in 1962 to provide music materials, and again in 1966 to include individuals with other physical impairments that prevent the reading of standard print.

The NLS program is funded annually by Congress. The fiscal year 1999 appropriation is $46,824,000. Regional and subregional libraries receive funding from state, local, and federal sources. Free matter postage for transport of appropriate library materials is provided through the U.S. Postal Service. The combined expenditure for the program approximates $111,000,000.
Any residents of the United States or citizens unable to read or use standard printed materials as a result of temporary or permanent visual or physical limitations may receive service. Surveys find that two million persons with some type of visual impairment are eligible and another million with physical conditions such as paralysis, missing arms or hands, lack of muscle coordination, or prolonged weakness may be eligible for the use of reading materials in recorded form.

Books are selected on the basis of their appeal to a wide range of interests. Bestsellers, classics, biographies, fiction, romances, westerns, and how-to books are in great demand. Titles expected to be extremely popular are produced in several thousand copies and circulated to borrowers within a few months of their publication in print form. A limited number of titles are produced in Spanish and other languages for readers whose primary language is not English. Registered borrowers learn of new books added to the collection through two bimonthly publications, *Braille Book Review* and *Talking Book Topics*. Through a union catalog available in computerized form and on CD-ROM, every network library and user has access to the entire NLS book collection and to the resources of cooperating agencies.

Seventy-two magazines on disc, audio cassette, and in braille are offered in 1999. Readers may request free subscriptions to *U.S. News and World Report*, *National Geographic*, *Consumer Reports*, *Good Housekeeping*, *Sports Illustrated*, *Spider*, and many other popular magazines. Current issues are mailed to readers at the same time print issues appear, or shortly thereafter. Magazines are selected in response to demonstrated reader interest by a group of users, network librarians, and NLS staff members.
Playback equipment is loaned free for as long as recorded materials are being borrowed. Talking-book machines are designed to play disc recorded books and magazines at 8 rpm and 16 rpm; cassette machines are designed for cassettes recorded at 15/16 ips and the standard speed of 1-7/8 ips on 2 and 4 sides. Readers with significantly limited mobility may request a remote-control unit; hearing impaired readers may be eligible for an auxiliary amplifier for use with headphones. A cassette machine with features designed primarily for elderly persons is available.

Individuals interested in music materials may receive them directly from the NLS Music Section. The collection consists of scores in braille and large type; textbooks and books about music in braille and large print; and elementary instruction for voice, piano, organ, guitar, recorder, accordion, banjo, and harmonica in recorded form.

Correspondence courses leading to certification in braille transcribing, literary, music, mathematics and braille proofreading are offered. A similar certificate in braille proficiency is also available. Voice auditions and informal training are given to volunteer tape narrators affiliated with local recording groups. A directory of volunteer groups that produce books for libraries and individuals is published frequently. Volunteers may call on NLS staff for their expertise in braille transcription and recording techniques.

Questions on various aspects of blindness and physical handicaps may be sent to NLS or to any network library. This service is available without charge to individuals, organizations, and libraries. Publications of interest to handicapped persons and service providers are free on request.
The consumer relations officer maintains regular contact with consumer
groups and individual users of the program to identify and resolve service
problems, to assure that users’ needs are being met and to help identify service
needs. Participating in surveys, evaluating new equipment, and serving on
advisory committees are some of the ways in which consumers contribute to
program development.

The research program is directed toward improving the quality of reading
materials and related equipment, controlling program costs, and reducing the time
required to deliver services to users. The current research focus is on
the application of digital techniques to NLS recorded material and the use of the
latest advances in computer technology to provide automated communications
links among NLS, participating libraries, book and magazine producers, and
distribution centers.

FUNCTIONS AND RESPONSIBILITIES

In brief, the National Library Service for the Blind and Physically
Handicapped is responsible for the:

- selection, copyright clearance, and procurement of reading materials for
  blind and physically handicapped individuals;
- distribution of the materials and relevant bibliographic information either
directly or through cooperating state and local network libraries;
- design, development, and procurement of sound reproduction equipment and
  its distribution either directly or through cooperating agencies;
- establishment of standards and assurance of quality products and services;
- training, guidance, and coordination of volunteers to augment national and
local resources;

- administration of a nationwide interlibrary loan program, and of an international gift, exchange, and interlibrary program;
- preparation for catalogs and other publications in printed form and in other media for blind and physically handicapped readers to ensure full use of the national program;
- provision of a national reference and referral service on all aspects of blindness and physical handicaps;
- development, maintenance, and circulation of a national collection of musical scores and texts; and
- monitoring network libraries for effective use of NLS/BPH resources at each site and providing guidelines and procedures manuals.

In short, NLS/BPH maintains active liaison with blind and physically handicapped individuals throughout the country, with cooperating state and local network libraries, with nonprofit and other organizations interested or active in services to blind and physically handicapped persons, and with federal, state, and local agencies.

NLS has, in the federal context, "custody" of all reading materials specifically intended for blind and physically handicapped individuals, including books and magazines in raised characters, sound recordings, and other applicable forms.

Office of the Director

The Office of the Director is responsible for formulating policy, program planning, and directing all activities, including coordinating both the Materials
Development Division and the Network Division; planning and implementing all automation activities, including assisting with those for the network of cooperating state and local libraries and agencies; coordinating information on research and development projects, evaluation programs, and surveys; providing liaison with other government or quasi-official agencies, such as the United States Postal Service; and administrative services related to operating the physical facility.

**Director**

As previously noted, the Director is responsible for administration, planning, policy formulation and recommendations, as well as direction and coordination of the entire program. He:

- Plans and develops the national program in accordance with the intent of Congress, library policies, technological progress, and the readers' requirements. Advises the Librarian of Congress and other Library officers on matters pertaining to proposed legislation, related programs for the blind and physically handicapped, relations with other government agencies, and policy formation. Responds to Congressional inquiries and requests; testifies before Congressional committees on budget and program matters.
- Has primary responsibility for formulating the annual budget estimate of NLS/BPH and for the justification and presentation to Congressional committees.
- Serves as principal representative of the Library of Congress in its relations with other national and international organizations interested in work which aids blind and physically handicapped persons, maintaining contact with leaders and officials of such organizations, and participating in conferences, conventions, and other such meetings. Conducts special Studies and
investigations, and makes recommendations for programs and cooperative undertakings, looking toward providing a more complete service to blind readers. Coordinates the sale and exchange of materials for blind and physically handicapped persons with organizations around the world.

- Has administrative responsibility for assuring that NLS/BPH procures materials and services at the lowest possible cost consistent with the quality and timeliness of delivery required to meet its needs. Serves as Contracting Officer for NLS book contracts and as contract advisor for all other contracts. Approves concepts, projects, bid packages, and award recommendations. Appoints and provides administrative direction to project monitors.

- Serves as the designated official responsible for the health and safety of NLS staff and for space planning, maintenance, and utilization of the recently renovated Taylor Street Annex, a separate facility distant from Capitol Hill.

- Directs the overall program.

**MANAGEMENT**

On assuming responsibility for the program in July 1973, the incumbent Director observed a need for a comprehensive review of management practices. His view was supported both by Library of Congress management personnel and by management-level staff personnel within NLS. Thus, in September 1973, he asked to participate in the Association of Research Libraries' "Management Review and Analysis Program (MRAP)." Once accepted, he appointed co-chairpersons and instructed the staff to democratically select a study team to review management practices to the point of changing what needed
to be changed and adding what needed to be added.

To ensure the greatest degree of objectivity, the initial study was based on data gathered from a variety of sources. Several questionnaires were designed to determine management, staff, and library network views of strengths and weaknesses and staff opinions about the organization. Interviews with Library of Congress administrators also helped staff understand more fully the environment in which they operate.

The study was done by and for all levels of staff. Over 95 percent were directly involved in a variety of ways: completing questionnaires, granting oral interviews, and participating on task forces or the study team itself. Study team and task force members reviewed existing files and pertinent documents such as internal and network memos and Library of Congress regulations.

Early in the program the study team began collecting information and drafting the sections on history, environmental trends, and mission, objectives and goals. About midway through the effort, task forces were formed to study the following areas of management practice: Planning, Policy, Management Information, Budgeting, Staff Development, Leadership and Supervision, Organization, Personnel, and Communication. The task forces were each composed of from four to six members representing all levels of the staff, and chaired by a study team member. Each task force had a slightly different method for data gathering. After the current status of each area was defined, the task force attempted to analyze the situation and to suggest possible solutions to any symptoms or problems that were discovered.

Task force findings were discussed with the study team to ensure that objectivity was maintained, content was accurate, and reasoning was logical. The
Director also made his comments on each report. Finally, ideas that evolved were assembled and four dominant themes identified: Concern for Staff, Written Guidelines and Standards, Information Flow, and Planning and Implementation.

Twenty-five specific recommendations were made. All were accepted and implemented.

A sophisticated, participatory management style emerged!

Based on long-range objectives, identified by the Director, and current year appropriations, each NLS section prepares specific performance goals for review and approval by NLS administrators.

Section heads and staff officers prepare monthly statistical reports which are submitted to the administration for management review. Personnel status reports are prepared and distributed quarterly. Quarterly meetings are scheduled to review progress on the goals.

A biweekly meeting of division chiefs, assistant division chiefs, section heads, assistant section heads, and staff officers is held to encourage sharing of information, to discuss new policies, and to explain projects and activities requiring program-wide input—for example, budget compilation. Each major organizational office—Office of the Director, Materials Development Division, and Network Division—holds regular meetings to resolve problems of an intersectional nature within those offices and to review progress on approved schedules, etc. Section heads are encouraged to hold brief meetings with their staff on a regular basis to provide for appropriate upward and downward communication. Each year there are two full meetings of the staff scheduled. These offer overviews of selected program activity, progress
reports, and discussions of topics identified by the staff.

Monthly reports are provided up through the organization. These are statistical where appropriate and narrative where not.

At the end of a twelve-month period division chiefs and section head performance ratings are based upon performance to the self-identified goals.

**Budget**

As noted, the management philosophy emphasizes direct involvement of the staff in setting forth and meeting specific goals. When preparing the annual budget, the director outlines major goals and objectives. Each section then sets its own goals and objectives within those guidelines, indicating how available resources and funds will be allocated. After much discussion and manipulation, an annual Management Plan is produced. This plan outlines the goals and details, who is responsible for each task, when the task is scheduled to be completed and how much money is required. In addition, the current budget is fitted within an overall five-year plan.

Staff involvement does not stop at developing the budget and setting the goals, but continues yearlong through the reports and meetings previously noted. Regular discussions are held to ascertain whether staff members are on target with respect to their tasks and goals. Revisions are made as needed.

Again, this style of management began with the MRAP assessment in 1973 and has worked reasonably well ever since.

Examples of success may be easily identified. Since 1974 the NLS budget has grown from just under $9.9 million to $46.8 million in fiscal 1999. Readership has increased more than 142 percent, from 318,300 to 769,000 in 1998. Production of cassette books has increased more than 2,898 percent, with 65
Division/Section/Office Functions

When considering the application of the NLS management style it is useful to review overall division and section responsibilities.

In the Office of the Director the Administrative Section is responsible for coordinating personnel transactions and maintaining all official files, travel, training, and other records concerning personnel administration; planning and implementing communication services; coordinating fiscal and contractual activities; and coordinating the management, operation, and maintenance of the physical facility.

The Publications and Media Section is responsible for planning and implementing the publications, general information, exhibit, and other public education programs.

The Automation Office monitors development, implementation, and maintenance of customized computer programs for production control of books/magazines, circulation systems, inventory systems, bibliographic cataloging systems, and network communications systems.

It also:

- Coordinates installation and training for new computer systems.
- Analyzes software and hardware needs of staff, orders software and hardware, and provides training for use of software when appropriate.
- Advises managers as to possible uses of computers/software.
- Coordinates use of databases.
- Advises network libraries on automation activities.

The Research and Development Officer directs projects to research and develop new products or systems for use by patrons or network libraries.
He also:

- Coordinates projects aimed at improving services to patrons or reducing costs of existing services.
- Advises on matters related to new products and services.
- Stays abreast of advances in technology related to production and distribution of braille and recorded books and magazines.

**Materials Development Division**

The Materials Development Division is responsible for managing activities related to the selection, development, production, distribution, control, and repair of reading materials and related equipment; establishing and assuring standards of quality for the products; monitoring contracts with and providing guidance to the agencies, organizations, associations, publishers, and firms that participate in providing reading resources and equipment; directing the activities of book and equipment advisory committees; and supervising the six sections that make up the division.

The **Materials Development Division Office** recommends policy formulation and program planning for research, development, design, production, testing, evaluation, procurement, initial distribution, inventory control, and logistical support of recorded books and magazines on disc, magnetic tape, audio cassette, braille books and magazines, playback equipment, and accessories.

The **Bibliographic Control Section** is responsible for bibliographic processing, maintenance, and control of reading materials included in the national collection; establishing national cataloging standards; coordinating union catalog activities for cooperating libraries and service organizations; managing production of the computer output microform catalog and related products; and participating in
Professional developments in bibliographic control.

The Braille Development Section is responsible for developing and implementing research projects relating to braille; serving as the Library of Congress authority on all braille codes and maintaining liaison with other national braille authorities; developing all technical braille specifications and initiating programs for product improvement; planning and preparing guides and teaching manuals based on the literary, math, and music codes for use by local braille transcription instructors who prepare students for certification; conducting teacher training workshops in the field; and training, certifying, and advising volunteers and others nationwide who produce and process books in braille.

The Collection Development Section is responsible for acquiring print books; evaluating and selecting appropriate reading materials to be recorded, transcribed into braille, or produced in any other form; maintaining an established flow of selections to initiate the production cycle; requesting copyright clearances; preparing concise, descriptive annotations for all materials produced; maintaining liaison with publishers and authors; coordinating collection development program activities, advisory committees, and the foreign-language program; and identifying titles for replacement or withdrawal.

The Engineering Section is responsible for the design, development, specification, production release, and configuration control of all audio product accessories and processes; determining the method of measurement for all technical specifications; certifying compliance of the pre-production models with the specification; maintaining awareness of state-of-the-art developments applicable to audio technologies; and conducting continual programs for product improvement and innovation.
The **Production Control Section** is responsible for overseeing the production of books selected for the program and in executing database operation and administration of the Management Information and Production Information Systems used. Responsibilities include supervising and coordinating production and distribution of reading materials in recorded, braille and other formats; scheduling and assigning materials for production to manufacturers and volunteer agencies; monitoring and controlling the status, cost and distribution of reading materials and containers in production; financial analysis and forecasting of contracts by media; and providing detailed reports for use by all levels of management and contractors to direct, evaluate, and control production operations.

The **Recording Studio unit of the Production Control Section** is responsible for scheduling and recording 100 titles annually; recording special projects as assigned by the director; purchasing and providing audio mastering tape for volunteer producing groups; determining narration requirements for titles to be recorded and providing guidance in this area to manufacturers and volunteers; and evaluating and testing new technologies directly related to audio/voice recording.

The **Quality Assurance Section** is responsible for guaranteeing that the quality and performance of all braille and audio products and processes meet the standards and specifications of NLS/BPH; ascertaining that all technical specifications can be verified by standard measurements as part of the production process, that all potential contractors for production of materials have adequate quality assurance capabilities, and that all contracts and specifications contain adequate provisions to guarantee that the products
will meet the required standards; and producing periodic reports on the performance of contractors.

**Network Division**

The Network Division is responsible for managing activities related to establishing, developing, guiding, and monitoring a network of more than 150 cooperating state and local libraries and agencies which deliver only machines offering direct library service to blind and physically handicapped residents of the United States, its territories and possessions, and U.S. citizens living abroad; maintaining close and active liaison with schools, health care facilities, and other organizations interested or active in services to blind and physically handicapped persons, with library schools, and with appropriate state and local agencies; determining user eligibility for service; monitoring the multistate center contracts; and supervising the four sections and staff officer that make up the division.

The Network Division Office monitors the national network of cooperating state and local agencies; recommends initiation, consolidation, or dropping of network agencies. It plans and formulates policies and procedures, sets goals and objectives both for the division and for the national network.

The Consumer Relations Officer is responsible for establishing and maintaining active liaison with individual users and consumer groups; conducting continuing user surveys; disseminating information about user inquiries to NLS/BPH and network libraries; providing information and reference assistance to readers; conducting user orientations and tours. The incumbent serves as an advisor to the director and assists in identifying appropriate program modifications.

The Inventory Management Section is responsible for controlling the national inventory, storage, retrieval, and handling of materials used in the
NLS/BPH program; distributing equipment, furnishings, and other items
delivered to NLS/BPH; monitoring, coordinating, and evaluating the activities of
two multistate centers; maintaining a procedures manual for use by the multistate
centers and a supplies catalog for use by network libraries; and supervising and
evaluating book redistribution procedures.

The Music Section is responsible for developing, maintaining, circulating and
promoting the use of national collections in the field of music, including the
collection of large-print books about music and musicians, music scores, and
instructional methods, and other special format music materials on cassette, disc,
and in braille; providing access to music periodicals; developing and maintaining a
noncirculating print reference collection of books about music and musicians; and
encouraging the development
of new techniques and materials for teaching music to blind and physically
handicapped individuals.

The Network Services Section is responsible for coordinating national
network activities, including both responding to inquiries about services and
coordinating responses to network inquiries; directing the interlibrary loan
programs; providing consultant services to identify problem patterns and to
evaluate performance in relation to established standards; compiling bibliographies
of special media materials; organizing the orientation program for network
participants; maintaining a procedures manual for use by network libraries; and
providing library service to U.S. citizens living outside the United States.

The Reference Section is responsible for providing to network libraries, other
professional groups, and the general public a national reference and referral service
on blindness and physical handicaps, except in the fields of
medicine and law; providing special and general reference services to the
staff of NLS/BPH; compiling and distributing information on resources in the fields
of blindness and physical handicaps for network libraries and the general public;
developing a collection of print materials on blindness and physical handicaps to
support the activities described above; maintaining records and preparing statistical
reports on network activities and program developments; coordinating an
automated mailing list incorporating data on readers, libraries, and organizations;
and providing consultant services on volunteer programs in network libraries.

SUMMARY

In sum the National Library Service for the Blind and Physically Handicapped
is managed in a manner which is designed to involve all professional staff and as
many of the clerical and administrative staff as wish and are able to participate. It
is a consumer driven organization with a service philosophy embodied in Arthur
Ransome's classic guiding principle: "Grab a chance and you won't be sorry for a
might have been."
Staffing

Staff are recruited through usual channels depending upon required competencies. Appointment practices adhere to Library of Congress standards which, in general, follow U.S. Office of Personnel Management requirements for Executive Agency adherence.

Appraisal

Performance evaluations are in accord with Library of Congress Regulation 2017-2. It is accepted that performance appraisal is a continuous process of observation and evaluation. It reveals how well actual performance meets requirements as to deserve special recognition. The following factors are considered by supervisors in appraising a staff member’s performance. These factors are not all-inclusive, rather, they serve to assist the rater in evaluating the staff member’s performance.

Appraisal Factors

- Quality of work
- Quantity of work
- Promptness in completing work
- Understanding of job techniques
- Understanding of Library of Congress programs
- Skill in dealing with the public and with staff members of this and other agencies
- Ability to plan projects
- Ability to carry out assignments
- Creativity and imagination applied to job
- Ability to get along with others
- Judgment
- Resourcefulness
- Initiative
- Adaptability
- Dependability
- Cooperativeness
- Leadership
- Conduct
- Industry
- Decisiveness
- Managerial effectiveness
- Effectiveness of oral expression
- Effectiveness of written expression

Staff Profile

In July 1999 one hundred and thirty-two staff members are employed.
Contact Points

Name: National Library Service for the Blind and Physically Handicapped

Sponsoring Agency: Library of Congress

Address: 1291 Taylor Street, NW
Washington, DC 20542

Telephone: 202-707-5100
800-424-8567

FAX: 202-707-0712

E-mail: fcyl@loc.gov
## SELECTED TRENDS IN PROGRAM ACTIVITY
### 1974-1998

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<th>FY 1974</th>
<th>FY 1998</th>
<th>% Change</th>
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<tr>
<td>Readership&lt;sup&gt;1&lt;/sup&gt;</td>
<td>318,300</td>
<td>769,000</td>
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<td>Circulation&lt;sup&gt;1&lt;/sup&gt;</td>
<td>11,222,800</td>
<td>22,500,000</td>
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<tr>
<td>Production--Books&lt;sup&gt;3&lt;/sup&gt;</td>
<td></td>
<td></td>
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<tr>
<td>Braille:</td>
<td></td>
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<tr>
<td>Titles</td>
<td>247</td>
<td>562</td>
</tr>
<tr>
<td>Volumes</td>
<td>25,000</td>
<td>74,400</td>
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<td>Recorded Disc:&lt;sup&gt;4&lt;/sup&gt;</td>
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<tr>
<td>Titles</td>
<td>761</td>
<td>0</td>
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<tr>
<td>Containers</td>
<td>639,500</td>
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<tr>
<td>Recorded Cassette:</td>
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<tr>
<td>Titles</td>
<td>65</td>
<td>2,123</td>
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<td>Containers</td>
<td>152,100</td>
<td>2,055,000</td>
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<td>Production--Magazines</td>
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<td>Braille:</td>
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<tr>
<td>Titles</td>
<td>21</td>
<td>32</td>
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<tr>
<td>Copies</td>
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<td>340,000</td>
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<tr>
<td>Titles</td>
<td>25</td>
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<td>Copies</td>
<td>2,929,100</td>
<td>3,100,000</td>
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<td>Libraries:</td>
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<tr>
<td>Regional</td>
<td>53</td>
<td>57</td>
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<td>Subregional</td>
<td>83</td>
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<td>Multistate Centers</td>
<td>0</td>
<td>2</td>
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<tr>
<td>Staff</td>
<td>99</td>
<td>121 (FTE)</td>
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<tr>
<td>Budget</td>
<td>$9,894,600</td>
<td>$46,561,000</td>
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<sup>1</sup>Readership totals include braille, recorded disc, and recorded cassette users.

<sup>2</sup>Refers to volumes and containers. Includes books and magazines.

<sup>3</sup>Excludes volunteer-produced materials.

<sup>4</sup>Phased out.

<sup>5</sup>Percent change from inception.

N/A = Not Applicable

12/30/98
### Five-Year Summary

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Readership</th>
<th>Percent Change</th>
<th>Circulation</th>
<th>Percent Change</th>
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<tbody>
<tr>
<td>1994</td>
<td>748,880</td>
<td>- 0.7%</td>
<td>21,937,100</td>
<td>+ 1.6%</td>
</tr>
<tr>
<td>1995</td>
<td>743,960</td>
<td>+ 0.5%</td>
<td>22,280,700²</td>
<td>+ 0.1%</td>
</tr>
<tr>
<td>1996</td>
<td>747,700</td>
<td>- 1.5%</td>
<td>21,830,200</td>
<td>- 2.1%</td>
</tr>
<tr>
<td>1997</td>
<td>736,700</td>
<td>+ 0.6%</td>
<td>21,892,000</td>
<td>+ 0.3%</td>
</tr>
<tr>
<td>1998</td>
<td>740,800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994-1998 change</td>
<td>- 8,080</td>
<td>- 1.1%</td>
<td>-45,100</td>
<td>- 0.2%</td>
</tr>
<tr>
<td>Average annual change</td>
<td>- 2,020</td>
<td>- 0.3%</td>
<td>-11,300</td>
<td>- 0.04%</td>
</tr>
</tbody>
</table>

### Braille

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Readership</th>
<th>Percent Change</th>
<th>Braille</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>28,450</td>
<td>- 1.1%</td>
<td>635,300³</td>
<td>- 1.0%</td>
</tr>
<tr>
<td>1995</td>
<td>28,130</td>
<td>+ 0.6%</td>
<td>628,700²</td>
<td>- 3.5%*</td>
</tr>
<tr>
<td>1996</td>
<td>28,300</td>
<td>- 0.7%</td>
<td>606,900</td>
<td>+ 0.1%</td>
</tr>
<tr>
<td>1997</td>
<td>28,100</td>
<td>+ 0.4%</td>
<td>607,700</td>
<td>+ 0.1%</td>
</tr>
<tr>
<td>1998</td>
<td>28,200</td>
<td></td>
<td>608,000</td>
<td></td>
</tr>
<tr>
<td>1994-1998 change</td>
<td>- 250</td>
<td>- 0.9%</td>
<td>-27,300</td>
<td>- 4.3%</td>
</tr>
<tr>
<td>Average annual change</td>
<td>- 60</td>
<td>- 0.2%</td>
<td>- 6,800</td>
<td>- 1.1%</td>
</tr>
</tbody>
</table>

¹Combines cassettes and discs.
²Periodical subscription lists purged.
³Reflects correction of erroneous data reported by a regional library.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>APPROPRIATION</strong></td>
<td>$44,951,000</td>
<td>$44,964,000</td>
<td>$46,561,000</td>
<td>$46,824,000</td>
<td>$47,727,858</td>
</tr>
<tr>
<td><strong>TOTAL READERSHIP</strong></td>
<td>776,000</td>
<td>764,800</td>
<td>769,000</td>
<td>773,000</td>
<td>777,000</td>
</tr>
<tr>
<td><strong>PERSONNEL (FTE)</strong></td>
<td>124</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
</tr>
<tr>
<td><strong>BOOKS AND MAGAZINES:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mass-produced books</td>
<td>2,489</td>
<td>2,621</td>
<td>2,685</td>
<td>2,405</td>
<td>2,405</td>
</tr>
<tr>
<td>Mass-produced magazines</td>
<td>79</td>
<td>79</td>
<td>77</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td>Total copies to libraries</td>
<td>2,185,000</td>
<td>2,300,000</td>
<td>2,395,000</td>
<td>2,450,000</td>
<td>2,450,000</td>
</tr>
<tr>
<td>Total volumes circulated</td>
<td>22,908,900</td>
<td>22,437,900</td>
<td>22,500,000</td>
<td>22,600,000</td>
<td>22,700,000</td>
</tr>
<tr>
<td><strong>MACHINES PROCURED</strong></td>
<td>49,100</td>
<td>54,800</td>
<td>62,400</td>
<td>60,800</td>
<td>58,113</td>
</tr>
<tr>
<td><strong>PER CAPITA STATISTICS:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure per reader</td>
<td>$57.93</td>
<td>$58.79</td>
<td>$60.54</td>
<td>$60.57</td>
<td>$61.42</td>
</tr>
<tr>
<td>Copies available per reader</td>
<td>2.8</td>
<td>3.0</td>
<td>3.1</td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Circulation per reader</td>
<td>29.5</td>
<td>29.3</td>
<td>29.3</td>
<td>29.2</td>
<td>29.2</td>
</tr>
<tr>
<td>(containers &amp; volumes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EXPENDITURE PERCENTAGES:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment and books</td>
<td>70.0%</td>
<td>70.5%</td>
<td>70.8%</td>
<td>72.2%</td>
<td>71.8%</td>
</tr>
<tr>
<td>Personnel</td>
<td>15.3%</td>
<td>14.9%</td>
<td>15.4%</td>
<td>15.6%</td>
<td>16.0%</td>
</tr>
<tr>
<td>(Compensation &amp; Benefits)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publications, research,</td>
<td>14.7%</td>
<td>14.6%</td>
<td>13.8%</td>
<td>12.2%</td>
<td>12.2%</td>
</tr>
<tr>
<td>travel, multistate centers,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>national bibliographic service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL (percent)</strong></td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*Includes magazines purchased from non-US sources.*

1/6/99
### ACQUISITION PLAN--BRAILLE MATERIALS

<table>
<thead>
<tr>
<th>Number of titles</th>
<th>Average number of copies</th>
<th>Average cost/ title</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Braille Books</td>
<td>488</td>
<td>63</td>
<td>$5,789</td>
</tr>
<tr>
<td>Magazines, General</td>
<td>27^{1}</td>
<td>1,139</td>
<td>$50,000</td>
</tr>
<tr>
<td>Magazines, LC-published</td>
<td>3^{2}</td>
<td></td>
<td>60,000</td>
</tr>
<tr>
<td>Miscellaneous (catalogs, bibliographies, manuals, braille training, etc.)</td>
<td>3^3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Subtotal (3110 funds)**: $4,615,000

| Magazines, Music | 2\^4                  |                     |             | 14,000     |

**TOTAL FUNDS**: $4,629,000

---

### ACQUISITION PLAN--RECORDED MATERIALS

<table>
<thead>
<tr>
<th>Number of titles</th>
<th>Average number of copies</th>
<th>Average cost/ title</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Recorded Cassette Books:</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>1,889</td>
<td>975</td>
<td>$5,029</td>
</tr>
<tr>
<td>Foreign</td>
<td>28</td>
<td>508</td>
<td>$4,107</td>
</tr>
<tr>
<td>Flexible Disc Magazines, General</td>
<td>0^{5}</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Recorded Cassette Magazines</td>
<td>39^{6}</td>
<td>3,000</td>
<td>73,846</td>
</tr>
<tr>
<td>Magazines, LC-published</td>
<td>2</td>
<td></td>
<td>300,000</td>
</tr>
</tbody>
</table>
| Miscellaneous (catalogs, bibliographies, manuals, mailing list maintenance, inventory control, automation support, etc.) | | | | $	ext{245,000}$

**Subtotal (3111 funds)**: $13,340,000

| Magazines, Music | 4^{7}                  | 24,750              |             | 99,000     |

**TOTAL FUNDS**: $13,439,000

---

1^{1}Includes magazines purchased from non-US sources.

2^{2}Includes catalog on computer disk.

3^{3}Magazines changed from flexible disc to cassette format.

4Container costs are included in these line items.
## Machine Production Schedule

**Fiscal Year**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Production completed</td>
<td>49,127</td>
<td>54,800</td>
<td>62,404</td>
<td>60,837</td>
<td>55,113</td>
<td>55,486</td>
</tr>
<tr>
<td>In production</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposed production</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capability exists</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**

- **C-1** = Cassette Machine (Source 1)
- **C-2** = Cassette Machine (Source 2)
- **E-1** = Easy Cassette Machine
- **CT-1** = Combination Cassette/ Phonograph Machine
- **A-1** = Phonograph Machine

**BEST COPY AVAILABLE**
### Proposed Fiscal Year 2000 Machine and Related Equipment Acquisition Chart

<table>
<thead>
<tr>
<th>Units</th>
<th>Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>58,113</td>
<td>$13,473,012</td>
</tr>
<tr>
<td>71,148</td>
<td>$</td>
</tr>
<tr>
<td>105,000</td>
<td>$</td>
</tr>
<tr>
<td>383,440</td>
<td>$</td>
</tr>
<tr>
<td>$14,032,600</td>
<td></td>
</tr>
</tbody>
</table>

Machines:
- Cassette book machines, $231.84/unit...
- Drawing Standards
- Miscellaneous (parts and accessories)
- Alternative Technology Development

(12/98)
FY 99
Age Distribution

Cassette Book Machines
Distribution by Age

Less than 10 yrs old 373,114 50.1%
More than 10 yrs old 371,541 49.9%

Talking Book Machines
Distribution by Age

More than 10 yrs old 104,858 72.2%
Less than 10 yrs old 40,304 27.8%
DIGITAL TALKING BOOK:  
Technical Activity Planning

In parallel with the National Information Standards Organization (NISO) development of a digital talking book standard, NLS will test digital methods and build expertise on topics directly relating to digital talking-book (DTB) features. This research will be accomplished through "hands-on" exercise of relevant software and possible use of the software in tests that include patron evaluators. Examples of this activity are summarized below:

1. Test and report on methods to vary the playback rate while maintaining the original pitch. This technique allows users to speed up or slow down talking books without the voice becoming squeaky or super bass. Several algorithms will be considered, such as Cool Edit (audio editing software reported to be used in the European Digibook project), KBX96000 (hardware with real time control that is under development at Discrete Time Systems Ltd.), and a software signal processor (Entropic's system that is restricted to NT and UNIX hosts). Effective real-time control is a necessary feature for patron evaluation but is not yet available. The promised but as-yet-unrealized MPEG4 standard may also be of interest here. An ideal test system would allow a patron evaluator to change the playback rate from half speed to triple speed while maintaining pitch and intelligibility.

2. Test and report on state-of-the-art audio coding and decoding algorithms for efficient storage of spoken audio. For economy and acceptance, emphasis will be on algorithms most likely to become standards in the consumer entertainment market. Coder/decoder examples include MPEG and AC3. These systems permit 10-to-1 data reduction with no perceptible loss of fidelity. Although it poses significant programming and control problems, integration of decoders into multimedia presentation software is essential.

3. Test and report on alignment of text with audio to provide efficient access to spoken audio via text search. There are two programs that are reported to do this: one that is embedded by IBM in a large workstation system and one from Entropic that runs on an NT or UNIX
host. Both algorithms are consistent with file structures discussed at the first NISO meeting. This technology promises to automate indexing of spoken audio by creating a file that maps it into searchable text.

4. **Test and report on alternative controls of multimedia software.** One possible approach is to experiment with simple programmable remote controls. This strategy allows development of user controls, particularly verbal feedback, independent of playback technology.

5. **Test and report on state-of-the-art text-to-speech algorithms as they become available.** In particular, acquire Microsoft's "Whistler" synthesizer which is said to be "natural". (Samples sound definitely less robotic than the standard DECTalk.) Since the algorithm is available only in C++ source code, we will need a compiler to support a suitable evaluation.

6. **Test and report on digital recording, editing, and duplication methods through the use of Digital Audio Tape (DAT) and direct-to-disk recording.** We have recorded one book on DAT in the NLS studios and are examining specs and performance reports on direct-to-disk systems such as those offered by Telex and Otari.

7. **Test and report on the use of common off-the-shelf multimedia authoring and presentation software for representing DTB segments.** This software is of interest because of its widespread commercial use, inclusion of user controls, and variety of data types supported. Examples include Macromedia's Director and Asymetrix's Toolbook.

8. **Evaluate products from Plextor, DAISY, RFB&D, and other sources as they become available.**

---

**REPORT SCHEDULE**

I. Written summary reports by topic:
   Third Monday in August, November, February, May

II. Verbal reports:
    Fourth Friday in August, November, February, May

Contact: John Cookson, Head, Engineering Section  
Telephone 202-707-0701; FAX 202-707-0712; email jcoo@loc.gov

7/16/97
I. DOCUMENT IDENTIFICATION:


Author(s): Frank Kurt Cylke

Corporate Source: National Library Service for the Blind and Physically Handicapped

Publication Date: July 8, 1999

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Linda C. Redmond
Reference Services Manager

Organizational Address: NLS/BPH, Reference Section
Washington, DC 20542

Telephone 202-707-9276 FAX 202-707-0712

E-Mail: reld@loc.gov Date: July 27-1999