

Network Library Handbook for Implementation of the Digital System

**National Library Service for the
Blind and Physically Handicapped
Library of Congress**

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Network Library Handbook for Implementation of the Digital System

INTRODUCTION

The National Library Service for the Blind and Physically Handicapped (NLS), Library of Congress (LC), is in the process of implementing new delivery systems that use digital media for reading materials of the free national library program. A digital talking-book player, a digital flash-memory cartridge, and a cartridge mailing container will update the current cassette-based materials. Patrons may choose between a standard player and an advanced model. An additional new delivery system, Braille and Audio Reading Download (BARD), allows patrons to download books from the Internet. The new systems will completely replace the analog recorded cassette (RC) technology by 2013.

This handbook is intended to assist the staffs of cooperating network libraries by clarifying issues related to the transition to the new technology. To this end, NLS has included brief descriptions of the major components of the digital systems and some discussion of ways network library operations will be affected by the implementation.

Network libraries are reminded that while the transition begins in 2009, cassette books will be produced through 2010. Network libraries will continue to maintain RC collections and cassette book machines (CBMs) for patron use as long as there is a demand. Please do not recall cassette players from readers who receive digital players. Patrons who subscribe to cassette magazines will need CBMs to read them. In addition, more than 30,000 RC titles will not be converted to digital. Patrons who choose these selections will need CBMs.

NLS encourages network libraries to access the transition timeline through the Digital Transition Information link on the Network Library Services web site (www.loc.gov/pics) for the most up-to-date information regarding the transition.

1. DIGITAL TALKING BOOKS (DBs)

The digital talking book (DB) is the centerpiece of the digital system. Rather than using an analog audio recording of the narration of a print book, as is done with RC books, DBs use a digital recording of the narration. For audiobooks, digital technology offers several advantages over analog technology, including improved audio quality, more rapid and comprehensive navigation of content, simplified methods of duplication, reusable media, and electronic delivery.

DB production begins with the creation of an audio master that contains the narration of a book's contents in raw audio files in WAV format. Navigation points, along with metadata (files that determine how the book is structured and how it may be read by the reader), are inserted. Next a compression algorithm, or CODEC, called Adaptive Multi-Rate Wideband Plus (AMR WB+) is applied to the audio and metadata files. This significantly reduces the memory required to store the book with minimal, usually imperceptible, degradation of audio quality. Then an encryption algorithm is applied to create digital rights management (DRM), which allows only authorized users (patrons, NLS staff, NLS contractors, network library staff, and certain volunteers) in the program to use DBs. DRM ensures copyright protection for publishers and authors of the books produced as DBs, as required by the Chafee Amendment. An NLS book is not a digital book until it includes AMR/DRM features.

At this juncture in the production process, NLS performs quality assurance (QA) inspections to ensure that DBs are ready for distribution in the program. DBs are stored on cartridges (rather than cassettes) and will be mailed in containers similar to those used for RCs. Further information on DBs produced on cartridges follows, and more details, including production specifications, can be found at www.loc.gov/nls/specs/.

All DBs produced by NLS are available for distribution via the Internet using an NLS-operated download web site, Braille and Audio Reading Download (BARD), which is further described in Section 3 of this handbook.

1.1 DB Cartridge

The DB uses a customized cartridge containing a flash-memory chip. Most chips will have one gigabyte (GB) of memory, and virtually any title in the NLS collection will fit on a single cartridge. Each cartridge has a Universal Serial Bus (USB) 2.0 connector and is approximately the same size as an audiocassette, but with a slightly different shape. One end of the DB cartridge has a round finger hole that enables easier handling. All NLS DB cartridges are white, while network and personal-use cartridges are mint green.

Cartridges are labeled with bibliographic information in both print (using adhesive label stock) and braille (overlays). Cartridges are durable and do not require rewinding or any other type of resetting or reinitializing by library staff. Returned cartridges, however, must still be inspected for obvious damage to connectors, shells, and labels.

DBs must also be inspected for agreement between cartridge and container labels and to ensure that no foreign objects are in the container with the cartridge. Further details on the DB cartridge, including specifications for production, labeling, and

packaging, can be found at www.loc.gov/nls/specs/. Information regarding direct purchase of cartridges by network agencies for their own use is presented in Section 2.6.

1.2 DB Container

The DB container is made of blue plastic and measures 6 inches long by 4-3/4 inches wide by 3/4 of an inch thick. It has virtually the same design, length, and width as the RC container, but only about half the thickness, and is stackable. The container holds a single cartridge and is labeled in the same manner as the RC container, but has a unique bar code to assist with inventory tracking (see Section 1.3). External brackets will hold the standard 3-by-5-inch mailing-address card used by network libraries.

Network library staff must inspect returned DB containers for damage, including the snap straps and mailing-card holder and label. As noted earlier, library staff must also ensure cartridge-container agreement as DBs return to circulation.

Further details about the DB container, including specifications for production, labeling, and cartridge packaging, can be found at www.loc.gov/nls/specs/. Information regarding direct purchase of DB containers by network libraries for their own use is presented in Section 2.7.

1.3 DB Container Bar Codes

A number of libraries add labels with bar codes to RC containers in order to facilitate copy-specific tracking. These labels cause difficulty when NLS recycles the containers. NLS has therefore opted to assist libraries that use bar codes to track inventory by labeling each container with a permanent, unique number.

A bar code will be applied at production on the long side of the DB container opposite the title side. The bar codes will be unique numbers, starting with 1 and eventually reaching 99,999,999,999. The bar-coded containers, however, will be distributed in a totally random manner, not sequentially.

The bar-code number will not be related to the book inside the container. When the DB cartridge is eventually recycled, the container may be reissued with a different book, but its bar code will not be changed.

The unique number is supplied to assist network libraries whose circulation systems are copy specific. The bar codes are compatible with CUL, KLAS, and READS. Libraries may use the number to track books as long as the titles are in their systems. When the book is recycled, libraries must remove the container number from the circulation system.

Network libraries whose circulation systems are not copy specific should ignore the bar code on the DB mailing container.

1.4 DB Production Levels

The production of DB titles is being coordinated with production plans for digital playback machines and for RC books during the transition period, fiscal years (FY) 2008 through 2013. The plans for FY 2008 and 2009 were published in Network Bulletin 08-01 (January 11, 2008). Actual production levels beyond FY 2009 will depend on the funding available for DB production, cartridge costs, and production costs, as well as cartridge return and reuse rates. Current plans for production of titles on DB cartridges are as follows:

FY	Number of Titles	Average Number of Copies per Title
2008	650	516
2009	2,000	575
2010	2,000	700
2011	2,000	892
2012	2,000	925
2013	2,000	925

As for the production of retrospective titles (i.e., titles produced in digital format and previously released on RCs) on DB cartridges, current plans allow for all libraries to select title/copy combinations that do not exceed the total copy quota assigned to them by NLS (based on readership). In FY 2008, NLS assigned for production and distribution 220,000 copies of retrospective titles that network libraries selected from among 10,000 titles. In FY 2009, NLS will produce and distribute about 198,000 copies selected by network libraries from among 12,000 titles.

1.5 DB Copy Allotment

The new system will have two copy allotments for DBs: one for new titles and the other for retrospective titles. Copy allotment for new titles will be an ongoing, continuous operation, while the allotment for retrospective titles will be discrete and for a limited number of cycles (two or three).

NLS calculated quota-driven copy allotments for network libraries using reported readership as the basis for allocation of copies of new titles on cartridges, and planned production for FY 2008 accordingly. In a similar manner libraries were allocated quotas of retrospective titles based on readership and the total number of copies of retrospective

titles to be produced during the year. Approximately 10,000 retrospective titles were offered, and network libraries selected title/copy combinations within their allocated quotas. This cycle closed at the end of August 2008. A similar cycle of copy allotment for retrospective title DBs is currently in process.

1.6 Collection Shelving

NLS is not recommending a particular type of collection storage for DBs. Network libraries must decide the most appropriate type of storage to use based on collection size, available storage space, available quantities and types of shelving, and circulation-system support.

One fundamental decision that must be made is whether DBs will be interfiled with RCs in collection storage or stored in separate shelving. To facilitate interfiling of DBs with RCs, NLS has designed the DB container so that it has the same footprint as the RC container (although it has only about half the thickness). DB containers can be stacked on top of RC containers as well as on top of other DB containers. The numeric portion of the title number is the same for RCs and DBs, both retrospective and new titles, thus facilitating interfiling if desired. DB containers are blue; RC containers are green.

Whether or not DBs and RCs are interfiled, libraries will employ one of the following four types of collection storage, depending on the type of shelving and circulation-system support available and their own preferences:

1. Number-sequence shelving
2. Terminal-digit shelving
3. Random shelving: title-specific
4. Random shelving: copy-specific

Libraries will be able to download DBs from the NLS download system and, therefore, will not be required to house a master digital collection for in-house duplication. Any DB title in stock will serve equally well as a master for the duplication process. This eliminates the need for a dedicated storage area for a master collection, as well as the need to remove copies from circulating inventory to serve as masters.

1.7 Return and Reuse of DB Cartridges and Containers

The return and reuse of NLS-owned DB cartridges and containers will be an important component of future operations of the digital system. By reusing both cartridges

and containers, NLS will be able to produce more titles and more copies and will have a supply of containers to hold them.

After several years of circulation in library collections, probably beginning in FY 2011, network libraries will be asked to weed excess copies of DBs from their collections in a manner similar to that for RCs. Assuming the Web Excess and Redistribution Program (XESS) protocol is used for DBs, interlibrary exchanges will use weeded copies first.

Once any XESS process is completed, all remaining copies will be forwarded to an NLS reconditioning contractor. The contractor will receive, log in, and track (separately) cartridge and container receipts by library, recondition them (i.e., inspect cartridges and containers for usability and dispose of unusable units, remove labels and residual glues/adhesives, and erase the content), and forward them to mass duplicators for reuse as instructed by NLS.

NLS will track return statistics for cartridges and containers for each library to verify that network libraries have returned the quantities requested. Noncompliance with the policy may affect future book distributions.

1.8 Web Excess and Redistribution Program (XESS) for DBs

NLS has not yet decided whether to have an XESS process for DBs similar to that used for RCs. It may be that an XESS process will not be used and all weeded copies will be forwarded directly to an NLS reconditioning contractor. Alternatively, a web-based XESS process is being considered, as is whether libraries will be credited for copy allotment when they make copies available to other libraries through the XESS process.

Because it will be several years (FY 2011 at the earliest) before libraries will actually begin weeding and returning DB copies for reconditioning and reuse in mass duplication of new titles, a policy decision is not imperative at this time. NLS will inform network libraries of the procedures to be followed once the decision is made.

1.9 DB Sampler

A small sample collection of DBs and digital playback machines will be produced and distributed to all network libraries at the time of the “prelaunch,” a large-scale field test of the new digital delivery system described in Section 11 of this handbook.

Fifty-four DB titles that represent the wide variety of books in the NLS collection have been selected for the prelaunch. Two copies of each title will be issued to every regional and subregional library in the network. *A Digital Talking-Book Sampler*, a booklet that describes the prelaunch titles, will be distributed in braille, cassette, and

large-print versions to network libraries in FY 2009. (See Section 11.2 for more information.)

Two types of DBs will be in the sampler: titles produced since 2004 with encoded markers that enable flexible navigation of the book content and earlier titles, originally produced in an analog format and later converted to digital, with no navigation markers.

1.10 Bibliographic and Catalog Information

In March 2008, NLS notified network libraries of changes to bibliographic systems and cataloging records related to DBs. NLS has updated catalog records in the Voyager system to include information pertinent to DBs, and catalog records for current DB titles, in both abbreviated and full Machine Readable Catalog Record (MARC) formats, are also available for distribution from the NLS Network Library Services web site.

Approximately 14,000 catalog records are in the Voyager system for both retrospective and new DB titles. As both new and retrospective DB titles are added to the NLS collection, catalog records are added to the system. Records for retrospective DB titles bear the tag “May be available only for download.” (Not all network libraries will receive copies of all retrospective titles on cartridges.)

As noted, the NLS web site already contains a limited number of catalog records in both abbreviated and full MARC format available for download by network libraries. In the spring of 2009, MARC records for retrospective DBs in the Voyager catalog will be made available for download on the NLS web site. Network libraries may download records from the Network Library Services web site for the retrospective titles they ordered on cartridges or for all retrospective titles produced by NLS.

1.11 Network Library Digital Recording

In order to offer network library-produced digital books and magazines through BARD, NLS must ensure that the products are of satisfactory quality for network-wide distribution. To that end, network library staffs must have guidelines for producing digital materials and receive training. The quality of the resulting products must be verified prior to posting on BARD.

NLS developed guidelines for producing digital recordings of both magazines and books by network libraries and forwarded them to network libraries on May 3, 2008. These guidelines are also available at www.loc.gov/nls/specs/.

Network-library recorded books and magazines that pass QA inspection will be added to BARD on an ongoing basis, and the policies and procedures for adding these materials to the system will be distributed to network libraries when finalized. It is anticipated that locally recorded magazines, then books, will be added to BARD during the transition. Materials that do not pass QA inspections may be listed in the *NLS International Union Catalog* (which is accessible online), but not in BARD.

2. DUPLICATION OF DBs BY NETWORK LIBRARIES

Digital technology will enable network libraries to duplicate copies of DBs, both NLS and locally produced titles, using a simpler process and producing superior audio quality than was possible with RC duplication. Cartridges used for library duplication must be owned by individual libraries, since a write-protect key in the NLS cartridges prevents them from being used by parties other than NLS or NLS contractors.

Aside from obtaining the write-protection and duplication software discussed below, librarians will be responsible for purchasing all equipment, software, and materials required for in-house DB duplication and to perform the duplication using their own staffs.

2.1 Downloading DBs for Duplication

Network library staff will also be able to download DB files for duplication from BARD (see Section 3). Libraries may download any of the more than 13,000 titles for immediate duplication and/or save them to a local hard drive or server for future use.

Blank cartridges purchased by patrons and network libraries will not have write-protection. Network libraries will therefore need to enable write-protection on cartridges they acquire. NLS will provide write-protection software in the near future.

2.2 Duplication Software

NLS will provide to the network software that performs the following functions:

- Digital Rights Management to protect locally produced titles (availability to be announced [TBA])
- Write protection (availability TBA)
- Duplication software for PCs (availability TBA). NLS has developed software that enables a PC to simultaneously duplicate multiple copies. How this software will be delivered to the network and what hardware configuration will be required to utilize it continue to be investigated. However, the development and implementation of such a distribution process will remain a

lower priority until the transition is initiated and any production problems for both players and books are eliminated.

2.3 Duplicating DBs

Network libraries will be encouraged to experiment with single-book duplication during the prelaunch test. As noted, libraries must obtain their own cartridges for in-house duplication of DBs. NLS will provide each network library with a USB patch cord (Type A male/Type A female), a sample blank cartridge that is not write-protected, and a sample recorded digital book that is write-protected. These items will be distributed in 2009 along with the prelaunch players.

Using available library-owned cartridges, the software application for enabling writing to these cartridges, and DB files from either BARD or a copy of a DB cartridge from local collection storage, the duplication process is relatively simple for one-at-a-time production.

In order to use a downloaded NLS book, a library or a patron must have a personal computer (PC), a high-speed Internet connection, a USB patch cord, and a blank (non-write-protected) cartridge. One-at-a-time downloading of an NLS book from either BARD or a local server does not require an NLS digital player. In fact, a book cannot be downloaded directly to an NLS player, even if the player has a blank cartridge inserted. A book must be loaded directly onto a non-write-protected cartridge using the USB patch cord before it can be read in the player. Once the cartridge is loaded, it may be played in an NLS digital player.

2.4 Labeling DBs

After duplication, library-produced DBs should be labeled in both print and braille. NLS will provide label-making software and training (including guidelines) to network libraries for DB-label production. Library training for DB duplication and label creation is further discussed in Section 2.5.

Network libraries will be responsible for providing the necessary equipment and staffing for labeling DBs duplicated in-house. NLS will provide guidance on the appropriate types of equipment and labels to be used.

2.5 Training for Downloading, Duplicating, and Labeling DBs

An NLS contractor is developing several training programs for network library staff that will facilitate transition to the digital-based system. One of these programs will provide guidelines and training for downloading DBs from BARD and copying those DB

files onto one or more cartridges, for using NLS-supplied label-making software, and for producing labels for DB cartridges.

The front-end development of the training programs has been completed, and the programs themselves are now being produced. The web-based tutorials will be available to network library staff on the NLS Network Library Services web site. It is expected that the training programs will be ready for library staff use sometime in 2009.

2.6 Purchase of DB Cartridges by Network Libraries

Network libraries may purchase blank cartridges in lots of 1,000 or more at a predetermined price directly from the manufacturer, Northstar, which has the contract to produce USB-flash cartridges for the digital system. Northstar will furnish network libraries with cartridges at prices defined by a formula in its contract.

Libraries unable to purchase cartridges in large lots may arrange to purchase them in quantities of fewer than 1,000 by contacting the American Printing House for the Blind, Independent Living Aids, or the National Audio Company. (See Operations Alert 08-52, December 9, 2008.) Network libraries may also refer patrons to these companies to purchase cartridges for personal use.

Blank cartridges purchased by patrons and network libraries will not have write-protection. Network libraries will therefore need to enable write-protection on cartridges they acquire. NLS will provide write-protection software in the near future.

2.7 Purchase of DB Containers by Network Libraries

The NLS contract with the manufacturer of the DB containers allows network libraries to purchase containers directly from the manufacturer. The only differences between containers purchased by network libraries and NLS containers will be the color (blue for NLS and gray for network libraries) and the absence of the molded "The Library of Congress" logo.

2.8 Collection Support

To support network libraries that may not initially have downloading and duplication capability, NLS will make a small collection (one copy of each retrospective title of older items converted to digital format) available in each multistate center. Libraries may obtain a book for a patron through interlibrary loan; however, the limited number of copies available may well mean a lengthy waiting time for the patron. (This will be similar to the interlibrary loan procedures for BRA unique hand-copied braille titles.)

3. NLS BRAILLE AND AUDIO READING DOWNLOAD (BARD)

In addition to mailing DBs on cartridges, NLS will make digital books and magazines available to network libraries and program patrons through the Braille and Audio Reading Download (BARD) site. NLS began BARD as a pilot project for testing digital magazines, then expanded it into a pilot project for digital books.

NLS plans to convert BARD from a pilot project to a production system with the memory, processing, and telecommunications infrastructure necessary to support all network library and patron users throughout the program. The conversion of BARD to a production system is scheduled for implementation in FY 2009. Ultimately BARD will contain all NLS digital magazines and book titles. Use of BARD requires high-speed Internet access.

3.1 Training for Use of BARD

In coordination with a contractor, NLS is developing several training programs for network library staff to facilitate the transition to the new digital system. One of these programs will provide training for network library staff in verifying and registering patrons for using BARD, as well as for the download process itself.

3.2 BARD Activity Information and Reporting

NLS will continue to record both summary level and detailed information on book and magazine circulation generated by network library patrons who use the BARD system.

4. MAGAZINES

NLS produces and distributes directly to patrons 45 audio magazines (including *Talking Book Topics* and four music magazines) and 33 braille magazines (including sports schedules and music magazines). Production and distribution of these publications will continue in the current formats.

4.1 Digital Magazines in RC Format

The production and distribution of direct circulation magazines (including *Talking Book Topics*) in RC format are planned to continue through FY 2010, even though cassette technology is rapidly approaching obsolescence. Readers who continue to obtain audio magazines via direct circulation instead of online will need CBMs to read them. NLS will plan for the transition of all magazines to digital format before the costs of analog production become prohibitive.

4.2 Downloading Digital Magazines

All NLS audio magazines are produced in digital format and are available on BARD.

4.3 Network Production of Digital Magazines

See Section 1.11 of this handbook for information on network library production of digital magazines.

5. MUSIC IN DIGITAL FORMAT

NLS stores music scores and instructional materials and distributes them directly to patrons. Music materials will also be included in the transition to digital technology.

5.1 Conversion of Audio, Braille, and Large-Print Books and Braille and Bold-Note Music to Digital Format

Existing music books and scores will be converted to digital format, and ultimately all braille music books will be converted as well. Many musical scores in braille already exist on the NLS Web-Braille site.

Existing music titles in audio format will also be converted from analog to digital. Existing music books and scores in large-print format will be scanned and added to the Web-Braille collection.

5.2 Updates of Voyager Catalog for Digitized Music

In addition to developing digitized audio, braille, and large-print music collections, NLS is creating and modifying online records in the Voyager catalog to include music materials that have been digitized. The braille music collection is already online and audio materials will be added soon.

5.3 Revision of Music Material Documentation

Documents associated with the music program such as circulars, factsheets, articles, and forms are being revised to reflect all changes for the digital transition. Plans are to make all music periodicals available on BARD; several audio titles are already offered. Information concerning further changes in the music program will be communicated to network libraries via the NLS web site, newsletters, and bulletins.

5.4 Music in Braille Available on Web-Braille Site

Musical scores in braille already exist on the NLS Web-Braille site.

6. DIGITAL TALKING-BOOK MACHINES (DTBMs)

The digital talking-book machine (DTBM) is the core of the digital delivery system. A DTBM will be used to play a DB just as a CBM is used to play an RC book: the user loads a cartridge into a playback machine, then accesses and plays the content. But DTBMs offer several advantages over CBMs, including smaller size, lighter weight, longer operating time on battery power, greater reliability, better durability, lower cost, and—in conjunction with DBs—improved audio quality and more rapid and comprehensive navigation of content.

6.1 Basic Characteristics of DTBMs

The DTBM is about 6 inches wide by 9 inches long by 2 inches thick and weighs 2 pounds. The body of the player is charcoal grey to create maximum visual contrast between the background of the case and the colors of the controls. The DTBM can be operated on A/C power or on power from a rechargeable battery. The announcements played by the machine can be set for English or Spanish, and user guides in both large print and braille will be provided in a plastic envelope with each unit. The user guide in audio format is stored on the DTBM.

Two DTBM models will be produced by the manufacturer: a standard model (DS1) and an advanced model (DA1). The advanced model is exactly the same size as the standard model, but has a second row of controls between the power, sleep, and volume controls and the speaker. These additional controls are for setting and retrieving bookmarks and for navigating content. Further descriptions of the players' features may be found on the NLS public web site at www.loc.gov/nls.

6.2 DTBM Production Schedule

A DTBM production contract was awarded in June 2008 to Shinano Kenshi Corporation Ltd./Plextor-LLC, with a base period of three years and four option years. DTBMs will be ready for prelaunch use in 2009. Eight libraries will each receive 544 machines for testing; all other cooperating libraries will receive one of each player model.

Mass production of DTBMs is scheduled to begin after completion of the 10-week prelaunch and will continue until the network's cassette machine inventory has been effectively replaced. Future production will continue at a maintenance level sufficient to offset loss, damage, and net readership growth.

6.3 Allocating DTBMs from NLS to MLAs

Allocation of DTBMs to machine-lending agencies (MLAs) will be based on the program readership served as reported annually to NLS by network libraries, similar to the allocation of CBMs. A total readership count, to determine the proportion of new DTBM production for each MLA, will be equal to the number of individual readers plus seven times the number of institutions served. MLAs will be provided estimated totals of their DTBMs before they receive the first shipment.

6.4 Processing New DTBMs

New DTBMs will be shipped to MLAs by the manufacturer in overpack (multiunit) boxes containing eight units. The outside overpack boxes on each skid will be labeled in both bar-code and print formats for the eight individual units in the box. The individual boxes will be labeled with the unit's model and serial number. Also accompanying the overpack box will be a certificate of mailing (a manifest or packing list) that shows the model type and number of machines inside and the serial numbers of all the units. In advance of a shipment to an MLA, the manufacturer will send a copy of the certificate of mailing to both the NLS equipment control officer (ECO) and the NLS Blind and Physically Handicapped Information Control System (BPHICS) contractor. The latter will enter the shipment information into BPHICS for reconciliation with the MLA receipt of the shipment.

MLA staff will enter DTBM inventory data (model and serial number) into their own library circulation systems (LCSs) in a manner similar to that for CBMs. MLAs will also file reports with the BPHICS system for the new DTBMs received from the manufacturer. These reports will be used in the shipping/receiving reconciliation process.

6.5 Distributing DTBMs from MLAs to Patrons

NLS released the Digital Player Distribution Policy, which explains how MLAs are to distribute digital talking-book players to patrons, in Network Bulletin 08-41 on October 17, 2008. A revision to the *Network Library Manual* addressing this process is forthcoming.

In summary, veterans must be given first priority for distribution of the DTBMs, as required by the enabling legislation for the free national library program. After meeting the needs of veterans, cooperating libraries and MLAs shall address the needs of persons belonging to or eligible for the NLS centenarian group, the 10-Squared Talking-Book Club. After the needs of these groups have been met, libraries shall assign machines to those on their waiting lists. When no one remains on the library's waiting

list, machine assignment shall be at the library's discretion. NLS encourages all MLAs to establish policies for the further distribution of DTBMs and apply them consistently.

6.6 Patron Suitability of DTBMs

The standard player is best suited for people who read most books straight through with only minimal use of navigation features. The Fast-Forward and Rewind buttons on both player models allow the user to move in short time intervals or by chapters. The extent covered is determined by how long the button is held down. The player uses announcements and tones to inform the users about its functions.

The advanced player is designed to help people read books in a more flexible manner. It provides navigation features for moving through audio magazines, cookbooks, reference works, academic material, scripture, and how-to books, among others, by chapter, section, page, and other small units of information. Patrons may also set or retrieve a large number of bookmarks. In addition, an Info button allows patrons to identify their current place in the book.

6.7 Inspection and Maintenance of DTBMs

Documentation for DTBM inspection and maintenance procedures is currently being written by NLS. Two documents are being developed: *Digital Talking-Book Players, Models DS1 and DA1, Library Guide* and *Digital Talking-Book Players, Models DS1 and DA1, Service Guide*. The service guide, the more comprehensive of the two, contains detailed information about the inner workings of the DTBM that is not included in the library guide.

When finalized, both documents will be available on the NLS web site. The guides will be living documents, that is, they will require periodic revisions. For this reason, the hardcopy versions of both documents will be issued in loose-leaf binder format so updates can be easily incorporated.

After further feedback on the draft DTBM inspection and maintenance documentation is received, reviewed, and assimilated by NLS, revisions will be made and the final guides will be produced.

6.8 Warranty Repair of DTBMs

The DTBM production contract includes a 13-month manufacturer's warranty on the machines that requires the manufacturer to repair the units at no additional cost to NLS if defects not caused by abuse occur within the warranty period.

Warranty repair procedures will be similar to those currently used for CBMs, whereby entries to BPHICS are made by the MLAs when returning a machine for warranty repair or receiving the repaired unit back. BPHICS entries are made by the manufacturer when receiving a defective unit, when returning the repaired unit to the MLA, and when forwarding a unit to NLS for disposal.

6.9 Nonwarranty Repair of DTBMs

NLS is planning for DTBMs to be maintained by a combination of volunteers, MLA staff, and commercial repairers. MLAs will be responsible for organizing their own staff and volunteers to perform DTBM repairs, while NLS will contract for commercial repairs, which is the way CBM repairs are currently handled.

The procedures used by MLAs and authorized repairers to order batteries and replacement parts will be essentially the same as those currently used for ordering CBM batteries and parts: replacement parts will be ordered from NLS headquarters, while batteries will be ordered from the MSCs.

6.10 Training in Use of DTBMs

An NLS contractor is in the process of developing several training programs for network library staffs to facilitate the transition to the digital system. One of these programs will provide training for network library personnel who assist patrons with using DTBMs both in person and over the phone. Another will train staff members who handle DTBMs within MLAs. The training will cover how to inspect DTBMs and distinguish between performing maintenance and making repairs; how to perform maintenance functions required before reissuing returned machines, such as bookmark removal and cleaning; and how to implement warranty-repair procedures.

The front-end development of the training programs has been completed and the programs themselves are now being produced. The resulting web-based tutorials will be available to network library staff on the NLS web site. It is expected that the training programs will be beta tested by prelaunch library staff.

As noted in Section 6.1, user guides in both large print and braille will accompany the players.

6.11 DTBM Chrome Labels

NLS will supply MLAs with customized adhesive chrome labels to be applied to the DTBMs.

7. DIGITAL SYSTEM EFFECTS ON THE COMPREHENSIVE MAILING LIST SYSTEM (CMLS)

Implementation of the digital system will affect the Comprehensive Mailing List System (CMLS) in two areas: assignment of players and registration of patrons who use BARD and Web-Braille.

7.1 Changes in Procedures and Information Systems Related to CMLS

As cited in NLS Network Bulletin 08-04 (February 8, 2008), NLS will use the CMLS system to track the assignment of players to patrons. NLS requested that network libraries and LCS vendors update the CMLS database field names in their systems so that fields currently used for equipment code 2 and equipment code 3 were redesignated for the digital players.

The CMLS contractor completed the changes to the system in July 2008, and NLS requested that network libraries and LCS vendors make all required changes to their systems by June 30, 2008. As of July 1, 2008, disc players and combination machines are tracked only by the BPHICS database, and DTBMs and CBMs are tracked by the CMLS database.

Additional information on these changes is described in the above-referenced bulletin. Contact the NLS CMLS coordinator if further information is needed.

7.2 BARD Patron Registration in CMLS

CMLS also maintains records of patrons registered for the online programs BARD and Web-Braille. It is therefore very important that network libraries record patron participation in BARD (publication code DDB9) and Web-Braille (code WBB1) in CMLS accurately and in a timely manner. By complying, network libraries ensure that their patrons who access reading materials online will maintain their active status.

All network libraries should reconcile their database files with CMLS at least once every 2 years. Libraries may schedule a reconciliation process by completing and submitting the online form at www.loc.gov/nls/networkdocs/reconciliation2009.html to the CMLS coordinator.

8. DIGITAL SYSTEM EFFECTS ON BPHICS

As stated in NLS Machines and Accessories Report 08-01 (March 7, 2008), NLS will use BPHICS to track player inventory. In that report NLS asked network libraries and LCS vendors to update their LCSs and establish fields to track the players and accept serial numbers with a minimum of eight numeric characters.

The BPHICS contractor completed the required changes to the system, although the new fields will not be selectable until the DTBM manufacturer has begun allocating new machines. NLS asked that network libraries and LCS vendors make all required changes to their systems as soon as possible, and according to reports, all LCSs have been modified accordingly.

Changes to the format of the monthly machine report (MMR) are also being made by the BPHICS contractor. Two rows will be added to the MMR and several other BPHICS reports to show the two DTBM models. CBM models C76 and C78 will no longer be tracked in the MMR. Those lines will be reassigned to DTBM models DS1 and DA1. Activity for C76 and C78 models must still be reported and will be tracked by BPHICS. The revised MMR will show a combined CBM and DTBM total, but will not show the machine types separately.

Contact the NLS ECO if further information is needed.

9. DIGITAL SYSTEM EFFECTS ON PICS

NLS has made enhancements to the Production Information Control System (PICS) required for the implementation of the digital delivery systems.

9.1 Quota-Driven Copy Allotment in PICS

Copy allotment functionality in PICS has been changed to accommodate quota-driven allotments for DB titles (both new and retrospective) and RCs. The quota-driven aspect of copy allotment for audiobooks is a new feature and a constraint from the perspective of libraries.

NLS has notified network libraries of these changes through network bulletins. Libraries are already using this new feature for copy allotment of RC titles and retrospective DB titles, and will shortly use it for new DB titles. To aid library staff, a cumulative counter that shows the number of copies a library has ordered was added to the copy allotment screen next to the library's quota.

9.2 Deployment of Final PICS System

The final version of PICS, including an online Help screen, was released in December 2008.

10. TRAINING NETWORK LIBRARY STAFF FOR IMPLEMENTATION OF THE DIGITAL SYSTEM

NLS is working with a contractor to develop four training programs for network library staff that will facilitate the transition to the digital system. NLS is also considering development of two additional training programs.

10.1 Current Training Programs

The NLS web-based training plan is on schedule. The training tutorials, PowerPoint slides, and web-based training tools for machine use and instruction, machine inspection and maintenance, and DB download and duplication will be available for field testing during the prelaunch test when machines are distributed to network libraries. The training will be ready for final rollout after undergoing rigorous testing by prelaunch participants and network libraries.

Training materials for BARD enrollment and level-one support will be tested approximately one month following the distribution of DTBMs. Prelaunch libraries will also be the first to use and test these training materials. They will provide feedback that will be used to update and add any needed content before final rollout to the entire network.

10.2 Future Training Programs

NLS is planning to develop two additional training programs. The first will be for creating in-house (i.e., library-produced) digital recordings. It will include written guidelines for production and a handbook addressing AMR WB+, DRM, digital markup, and requirements for long-term digital-data storage. The second program will provide training for searching the Voyager catalog system and is likely to include tutorials, FAQs, and webinars and be available on both the Network Library Services and the NLS public web sites.

11. DIGITAL SYSTEM PRELAUNCH

Before the full-scale launch of the digital system, NLS will conduct an extensive and comprehensive field test, referred to as the prelaunch, in 2009. The following paragraphs describe the plans for this test.

11.1 Prelaunch Sites

Eight regional libraries (two selected from each of the four regional conferences) will field test DBs and DTBMs and certain other aspects of the digital talking-book system (e.g., making BPHICS and CMLS entries) during the prelaunch. These libraries are the Braille Institute Library Services of California; the Florida Bureau of Braille and

Talking Book Library Services; the Iowa Department for the Blind, Library for the Blind and Physically Handicapped; the Braille and Talking-Book Library of Massachusetts; the Wolfner Library for the Blind and Physically Handicapped of Missouri; the New York Public Library, Andrew Heiskell Braille and Talking Book Library; the Texas State Library and Archives Commission; and the Utah State Library Division Program for the Blind and Disabled. Their geographic locations and various operational sizes contribute diversity to the test. JBI International (formerly Jewish Braille Institute) will also participate.

11.2 DTBM Production and Allocations for Prelaunch

Fifty-four digital books produced since 2004 will be available on cartridges to the eight participating network libraries. These titles were selected to provide diversity of subject matter, broad appeal, and relatively high-audio-quality books.

Five thousand DTBMs will be produced and allocated to the sites participating in the prelaunch, with each prelaunch library receiving 544 machines. Each machine-lending agency will receive one standard and one advanced player. The libraries will distribute the machines to patrons participating in the prelaunch testing. The prelaunch libraries will also beta test the network library training program.

These libraries will also receive an appropriate number of copies of 54 DB titles and copies of *A Digital Talking-Book Sampler*, a publication that describes the titles, for distribution to participating patrons. This document will be provided in braille, cassette, and large print.

11.3 Bibliographic System Updates for Prelaunch

The bibliographic records for the 54 titles being produced for the prelaunch have all been updated in the Voyager catalog system and are ready for use by network libraries. Both abbreviated and full MARC records for these titles will be available, along with the records for many other DB titles available on BARD for download by libraries in the first quarter of FY 2009. See Section 1.10 of this handbook for further information on bibliographic record updates for the digital system.

12. PATRON INFORMATION ABOUT THE DIGITAL SYSTEM IMPLEMENTATION

12.1 Time Required for the Transition

The total implementation of the digital talking-book system will require 6 years. Funding constraints dictate the length of the implementation period. In the early years

DTBMs and DBs will be in short supply, but they should be distributed to patrons as soon as network libraries receive them. Network libraries are required by law to give priority to veterans.

12.2 Role of *Talking Book Topics*

Talking Book Topics will continue to announce the release of audiobook titles in RC and DB formats. This bimonthly publication will be available on the NLS public web site and will continue to be produced in large-print and cassette formats. It will also be available on BARD.

12.3 Patron Instruction on the Use of DBs, DTBMs, and BARD

Instructions in both large print and braille on how to use DBs and DTBMs will be distributed with every player. As previously noted, each DTBM has a built-in audio user guide to help readers learn to use the functions of the machine. Network libraries will also have NLS contractor-prepared, web-based training programs to train their staffs to assist patrons in the use of DBs and DTBMs.

Web-based training will also be available to prepare library staff to assist patrons with matters related to downloading materials from BARD.

12.4 Veteran Preference for Program Materials

The enabling legislation for the free national library service requires that veterans be given preference in the distribution of NLS materials, and this includes DTBMs and DBs. Eligible veterans who want digital access must be served before any other group of patrons. The legislation also includes allowing veterans who wish to continue using CBMs and RCs during and after the transition to receive that service for as long as it continues.

12.5 Patron Purchase of DB Cartridges

Several nonprofit firms designated by NLS are authorized to buy DB cartridges from the manufacturer, typically in large lot sizes, and resell them to interested network libraries and patrons, typically in small lots. The prices that these authorized resellers must pay the manufacturer for specific lot sizes are detailed in their contract with NLS, while the prices that network libraries and patrons will pay the resellers are still to be determined. NLS will not play any role in the purchase of cartridges from the manufacturer by the authorized third parties.

13. OUTREACH CONCERNING IMPLEMENTATION OF THE

DIGITAL SYSTEM

13.1 NLS Outreach

Information about the implementation of the digital system has been made available on the NLS web site. In addition, since 2005 NLS has distributed the newsletter *Flash* to keep network libraries, patrons, and other stakeholders updated on the progress of the digital transition.

13.2 Network Library Outreach

Network libraries are encouraged to develop and implement outreach activities at the state and local levels. NLS, through the Publications and Media Section, will develop a number of products such as images of digital players and cartridges, posters, and brochures for network use. However, best estimates at the end of 2008 indicate that even with a production rate of 20,000 digital players per month, it will be at least 21 months after production begins before sufficient players are available to meet the needs of current individual patrons. Network libraries should plan outreach efforts accordingly and take care not to generate an unreasonable early demand for digital players and books.

13.3 New Applications for Service

NLS has modified applications for individual patrons. An interim application for individuals is now available in both English and Spanish on the NLS web site at www.loc.gov/nls/ and also in hardcopy.

A new, revised application for individuals and an accompanying factsheet describing digital players will be available in 2009, first in English and shortly thereafter in Spanish. Libraries should continue to use the interim application until DTBMs actually begin to arrive. When appropriate, network libraries should begin using the new application. Both the English and Spanish versions will be available in hardcopy and on the NLS web site.

Network library-produced applications for individuals should be based on the new NLS application for individuals. Network libraries must submit drafts of their revised applications to the NLS Network Division for approval prior to printing them.

14. RECORDED CASSETTE BOOKS

NLS will continue to produce audiobooks in recorded cassette (RC) format for 2 years into the transition to the digital system. The current plans for production and allocation of RC titles are described in the following paragraphs.

14.1 RC Production

NLS has developed plans for production of new book titles in RC format for FY 2008 through 2010. The plans for FY 2008 and 2009 were published in Network Bulletin 08-01 (January 11, 2008). Actual production levels of RCs achieved in future years will depend on the funding available for RC production and duplication. The phaseout of new title production in RC format is being coordinated with the increasing production of DBs (considering both titles and copies) and DTBMs.

The current plans for production of new titles in RC format by fiscal year are as follows:

FY	Number of Titles	Average Number of Copies per Title
2008	2,000	694
2009	2,000	443
2010	2,000	199

14.2 End of RC Production

NLS anticipates that production of RC books will end after FY 2010, primarily because of technological obsolescence. By that time, DBs and DTBMs should have largely, but not entirely, replaced RCs and CBMs as the primary delivery mechanism for audiobooks in the NLS program.

14.3 RC Copy Allotment

In FY 2008 NLS began a quota-driven copy allotment process for network libraries ordering new RC titles that will continue through FY 2009 and FY 2010. These quota-driven allotments allow the average number of RC copies produced to decrease during the transition. Copies must therefore be allocated on the basis of readership. The required functionality for these revised RC copy allotment procedures has been incorporated into the PICS system.

15. CASSETTE BOOK MACHINES (CBMs)

During the transition to the digital system, CBMs will continue to play a crucial role in the program. Even after DBs have largely replaced RCs for new book titles, CBMs will still be needed to read both RC magazines and RC book titles not converted to digital format.

15.1 CBM Inventory Management by MLAs

Production of new CBMs ended in early 2007. As a result, available CBMs in network library inventories and NLS inventory at the Multistate Center West (MSCW) will decline during the early years of the transition because of normal attrition. Furthermore, DTBMs will not completely replace CBMs for several years after the transition. Thus it will be increasingly important for MLAs to manage their inventories of CBMs effectively during the early years of the transition.

15.2 Repair Parts for CBMs

With the approaching obsolescence of cassette technology, NLS has identified and purchased several CBM parts in “lifetime buy” quantities. Certain other CBM parts are still available on the market and so NLS procurement and inventory management of these will be little changed. NLS is watching closely, however, for any signs of obsolescence and unavailability. MLAs and repairers should order repair parts as necessary to fix CBMs, but distribute them as efficiently as possible.

CBM batteries should be readily available during the transition, and NLS is not overly concerned about their future availability. MLAs should continue to order CBM batteries from the MSCs using the current procedures.

15.3 CBM Repair

NLS will continue repair of C1 machines. However, repair of E1 machines was discontinued at the end of 2008. NLS will continue to authorize any CBM repairs performed by SWR and Cintrex, and the logistical procedures now employed for handling these repairs (BPHICS entries, etc.) will remain unchanged.

Repair of CBMs by volunteers will continue. NLS will continue to provide CBM repair parts and guidance for performing CBM repairs to volunteer repairers as supplies permit.

15.4 CBM Disposal

Disposal procedures for CBMs will remain unchanged after the transition begins. MLA staff or other repairers must request approval for disposing of a unit from the NLS ECO, who then must authorize the disposal. Upon receipt of authorization from the ECO, the MLA will pack and ship the unit to UNICOR in Leavenworth, Kansas, for disposal. If these procedures change in the future, NLS will inform MLAs.

16. MULTISTATE CENTERS

The implementation of the digital system will have only a minor impact on the relationship that network libraries have with multistate centers (MSCs). The following paragraphs describe the current plans for MSC operations in the future system.

16.1 Continuing MSC Functions

MSCs will continue to provide virtually all of their existing services to the network.

16.2 New MSC Functions for Digital System

New services will be performed by MSCs to support the implementation of the digital system, two of which are relevant to the network. Network libraries will order DTBM batteries from the MSCs, in the same way they now order CBM batteries. The MSCE QA program for library-recorded materials will expand to include review of materials recorded in digital format. As indicated in Operations Alert 09-09 (February 21, 2009), “NLS will make a small collection (one copy of each retrospective title converted to digital format) available in each multistate center.”

ACRONYMS AND ABBREVIATIONS

AMR WB+	Adaptive Multi-Rate Wideband Plus
BARD	Braille and Audio Reading Download
BPHICS	Blind and Physically Handicapped Inventory Control System
CBM	Cassette book machine
CMLS	Comprehensive Mailing List System
CUL	Consortium of User Libraries
DB	Digital talking book
DRM	Digital rights management
DTBM	Digital talking-book machine
ECO	Equipment control officer
FAQ	Frequently Asked Questions
GB	Gigabyte
KLAS	Keystone Library Automation System
LC	Library of Congress
LCS	Library circulation system
MARC	Machine-Readable Catalog Record
MLA	Machine lending agency
MMR	Monthly machine report
MSC	Multistate center
MSCW	Multistate Center West
NLS	National Library Service for the Blind and Physically Handicapped
PICS	Production Information Control System
QA	Quality assurance
RC	Recorded cassette
READS	Reader Enrollment and Delivery System
TBT	<i>Talking Book Topics</i>
USB	Universal Serial Bus
XESS	Web Excess and Redistribution Program