

# Cases on Electronic Records and Resource Management Implementation in Diverse Environments

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# Chapter 23

## Creating a 21st Century State Publications Depository

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### **EXECUTIVE SUMMARY**

*The New Jersey State Library has managed a successful print depository program for the last 55 years. In the mid-1990s, many state government agencies began putting digital versions of their print publications on their Websites. Initially, the agencies continued to send print copies to the State Library, but by 1998, more and more agencies were using their Websites as the primary venue for their publications. State Library staff initially responded to this change by creating a Web page with a browsable list of links to publications. Technological changes resulted in more state government publications being produced in electronic formats and the list of Web page links became unsustainable. This chapter discusses the State Library's efforts to transition a successful 20<sup>th</sup> century print depository program into an equally viable electronic documents depository using very limited staff and no additional funding.*

### **ORGANIZATION BACKGROUND**

The New Jersey State Library (NJSL) is located in Trenton, NJ and with a staff of about 98 people, provides a full range of library-related services to the citizens of the state. The services offered by the State Library fall into three broad categories: services for public libraries, services for state government, and services for the public. Services for public libraries include *JerseyConnect*, which provides broadband

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connectivity and related services; *JerseyCat*, a statewide interlibrary loan system; and training for new public library directors and for public library trustees. The State Library also administers New Jersey library laws and the per capita state aid program for libraries. Services for state government include access to on-site research collections, extensive law, government documents, and genealogy collections, and comprehensive reference and research support. This encompasses access to over 100 databases, interlibrary loan services, and a collection of more than one million books, documents, and journals. Services for the general public include on-site access to all of the collections; borrowing privileges from the circulating collections; and services to people with print disabilities through the Talking Book and Braille Center. In July 1996, the New Jersey State Library became an affiliate of Thomas Edison State College. Under this arrangement, the College provides administrative oversight to the State Library, but the State Library's operations are primarily funded by the New Jersey State Legislature. In FY 2013, the direct funding for the State Library was maintained at \$5.194 million (Christie & Guadagno, 2012, p. B-159). The State Library's stated focus is "empowering people, organizations and government by providing access to information and libraries", and it continues to search for proactive and innovative approaches to "guide libraries and provide information to foster a literate, productive and competitive New Jersey" (The New Jersey State Library, 2010, para. 1).

The New Jersey State Library is one of the oldest state library agencies in the United States. "The library community in New Jersey recognizes March 18, 1796, as the State Library's founding date" (Shaw, 2012, p. 1). On this date, a resolution was issued assigning responsibility for management of the Legislature's collection of law books to the Assembly Clerk, Maskell Ewing, and authorizing the purchase of a case to hold these volumes. Many of these eighteenth century materials are still available in the collections of the New Jersey State Library and the New Jersey State Archives. Its start as the keeper of documents for the New Jersey state government remains a core part of the mission of the State Library. Beginning in 1957, with amendments in 1967 and 2011, the New Jersey state statutes have codified the State Library's role as a depository of state government publications. The New Jersey State Library is the primary depository for official publications of the state government that are intended for public distribution. These publications are variously referred to as New Jersey documents, state government publications, state publications and/or state documents, and include departmental annual reports, statistical reports, transcripts of legislative hearings, and special studies from the early part of the nineteenth century to the present. They are defined as public documents produced by New Jersey state government agencies, and are produced in many forms including reports, directories, statistical compendiums, bibliographies, newsletters, bulletins, state plans, brochures, periodicals, committee minutes, transcripts of public

hearings, and maps. State publications do not include official government records, administrative or training materials used only within an agency, or internal memos. The State Library runs a statewide depository network for state government publications, ensuring local access to these materials throughout the state and also creates electronic catalog records for the publications, so that local libraries can easily add these items to their own library catalogs.

## **SETTING THE STAGE**

Since 1967, New Jersey state statutes have required that state agencies send 75 copies of every publication to the State Library. NJSL would then distribute those publications to the libraries in the depository network in monthly shipments. In 1980, the New Jersey statewide depository network consisted of 62 libraries: “27 college libraries, 10 county libraries, 18 public libraries, and 7 out-of-state libraries” (Lane, 1980, p. 95). The goal of the program was to send copies of every document to all of the libraries in the program. While not all of the recipients maintained archival collections, this system ensured that many state government publications ended up in the collections of libraries all over the state. NJSL would also create full catalog records for many of the publications and add at least three copies of every publication to its collections. The documents were assigned call numbers using a specially developed classification system and State Library catalogers created full original MARC records for the documents, which were shared in the OCLC database. Depository network members could initially order library catalog cards for the materials, and later, with the development of library online catalogs, download the records from the State Library’s online catalog or directly from OCLC. Cataloging the materials in OCLC also made them visible to the interlibrary loan network. Under this configuration, the state government publications depository program worked very well until the 1990s.

In the mid-1990s, many state government agencies, including the New Jersey State Library, began putting digital versions of their print publications on their Websites. Initially the agencies continued to send print copies to the State Library, but by 1998, more and more agencies were using their Websites as the primary venue for their publications. State Library staff initially responded to this change by creating a Web page with a browsable list of links to publications. The New Jersey documents librarian would routinely monitor state agency Websites and attempt to identify new publications. Links would be changed or updated on the State Library’s Web page to reflect the changes on the agencies’ Websites. At the time, Web usability and design studies were in their infancy, so many state agency Websites were difficult to use and many of the publications were very difficult to find. Time and knowledge

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have improved the design of the Websites, but publications are still several clicks away from the agencies' home pages. As a subject specialist, the New Jersey documents librarian was attempting to create an easier way for the general user to find these materials. At this point in the process, library staff had yet to begin thinking about perpetual access to digital documents. Their focus was on identification and the provision of easy access. After a few years, it became clear that state government agencies saw their Web publications as an extension of their current priorities. State Library staff found that agencies would routinely remove a publication when an update was created, or in response to changing program needs. This meant that identifying documents and maintaining the *State Government Publications on the Web* page was becoming a full time job.

After about five years, it became clear that the State Library would be unable to maintain an accurate and working list of links to New Jersey state government publications. The librarians working with state government publications were also beginning to realize that unless they intervened, many digital state government publications would be unavailable to future users. A clear example is the proclamations and press releases of the Governor. Prior to the development of the Governor's Website, print copies of the Governor's press releases and proclamations were sent to various groups around the state, including the State Library. The State Library would compile and bind these documents, making them available for users. Once the Governor's Website was developed, the press releases and proclamations were only available on the Governor's Website and interested parties had to go to the Website to access them. Initially, it looked as if this was not going to be a problem, because an archive of all of the press releases and proclamations was available, along with those for the current year. However, when a new Governor was elected, the entire Website of the former Governor was replaced by that of the newly elected Governor on inauguration day. All of the former Governor's documents were no longer easily accessible. One could find some of them using the Website's search engine; others were completely gone. A similar loss of accessibility occurs for many different reasons across the full range of state government agency Websites.

## **CASE DESCRIPTION**

In an attempt to find a replacement for the *New Jersey Government Publications on the Web* page, and to ameliorate some of the problems relating to loss of accessibility, the State Library began to capture copies of documents and either print them and/or save them on its own Web servers. This process was aided by the fact that many state agencies had begun to release their documents in Adobe's PDF format, which made documents easy to save and print. The librarians were also interested

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in adding metadata to documents and integrating the electronic documents into the existing New Jersey documents collections. It was decided to focus on adding basic descriptive metadata, i.e., author/creator, title, publisher/issuing agency, date of publication, and at least one subject descriptor. Staff also considered adding the metadata directly to the PDF files. Early versions of Adobe Acrobat allowed the addition of rudimentary metadata, and the initial documents captured by the State Library were edited to add some levels of metadata. However, it was unclear how this metadata would aid users in finding the documents. There was also the larger problem of making it easy for users of the New Jersey documents collections to integrate print and electronic materials in their searches. The staff ultimately decided to create full MARC catalog records for the digital documents and use the library catalog record as metadata for the digital file. This decision also suggested a solution to the problem of how to organize the captured documents. It was decided that staff could use the existing documents classification scheme to organize the captured electronic documents.

New Jersey state government is a dynamic entity, with agency names and functions subject to change with each new governor. The documents librarians have long realized that attempting to organize the documents by agency would make for an unwieldy system. As a solution, New Jersey documents are assigned to one of three classes, each of which is assigned its own Dewey-based class number; monographs are 974.90, annual reports are 974.901, and periodicals are 974.905. Annual reports and periodicals are assigned a cutter number using the Sanborn table. The assignment of a cutter number is based on the predominant feature, usually the topic of the publication or the name of the issuing agency. Under this system, the *FAF Financial Aid Form for New Jersey Students*, published annually by the New Jersey Department of Higher Education, was assigned the call number 974.901 H419.8. When the Department of Higher Education became the Commission on Higher Education, and the document changed to *New Jersey Financial Aid Form: Application for Grants and Scholarships for the Year*, now published by the New Jersey Office of Student Assistance, it kept the same call number and all of the versions of the publication are collocated within the collection.

Monographs represent the largest portion of the collection. These are classified using a list of cutters developed specifically for this collection. A cutter number is assigned from the list based on the primary topic of the document, for example R128, is used to classify all documents about railroads. The year of publication is appended to the cutter, with a lower case alphabetic character differentiating various publications on the same topic received in the same year. An example is a document entitled *Marginal Railroad No. 13: New Jersey Inner Belt Line*, published by the Port Authority of New York and New Jersey in 1931. The call number for this title is 974.90 R128, 1931a, which indicates that it was the second document about

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railroads published in 1931 that was added to the collection. The call numbers are assigned as the documents are received, and every attempt is made to ensure that each monograph, annual report, and periodical has a unique call number.

The capture process began by creating a directory on a shared network drive, and as documents were located, they were saved in folders on it. The folders were organized to represent the planned classification scheme, i.e., there were folders for annual reports (901) and periodicals (905), each of which contained subfolders named for the unique cutter of the documents that they would contain. There was no folder created for monographs (90); instead, a folder was created for each of the cutters on the classification list. Saved files were renamed to assist with identification, e.g., if there was a PDF for the railroad report mentioned earlier, the file would be saved in a folder named R128, and the file would be named r1281931a.pdf. Annual reports were usually renamed to reflect the year of publication, e.g., fy2002.pdf, and periodicals were named to reflect either the enumeration of the issue, or if there was no available enumeration, the issued date was used as the file name. The files would then be uploaded from the shared network drive to a specially designated Web server. The files in the shared network drive serve as the working files and the Web server files were the production files. Both servers were also included in the State Library's routine backup schedule. Once the electronic versions of the documents were saved on State Library servers, a printout of the document would be sent to the Technical Services Department for cataloging.

When the State Library began capturing electronic publications, the default collection format for the New Jersey documents collection, and all of the other NJSL collections, was print. Materials could be added in other physical formats, but print was preferred. This preference for print led to the decision to make printouts of all captured documents. The printout of the electronic document served as the official non-circulating depository copy, with the Web server copy serving as the circulating copy. It was also felt that having a printout afforded the ability to re-scan the document if problems ever developed with the digital copy. The documents were printed on acid-free paper, and stored on the shelves in archival envelopes. The printouts also served as the "item in hand" for the catalogers, who created MARC records using the rules and protocols for cataloging print reproductions of electronic resources. The catalog records, including the URL pointing to the copy on the Web server, were added to OCLC and to the State Library's Horizon online catalog. The creation of MARC catalog records also made it possible to include information about the captured electronic documents in a shipping list.

As the staff began to capture Web documents, they began to realize that they simply could not find all of the relevant e-publications. In 2005, the New Jersey documents librarian began working with other NJSL staff and key legislators to amend the statutes requiring state government agencies to submit their publications

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to the State Library. Much of this process involved convincing legislators and other stakeholders that asking agencies to submit electronic publications would not require undue effort on the part of the agencies, and that the requirement was necessary to ensure that these documents would continue to be available for the citizens of the State. The initial versions of the legislation only required that agencies notify the State Librarian of the availability of publications. NJSL staff gave testimony at many committee meetings and met with individual legislators to educate them about the importance of digital preservation. Staff also worked to convince legislators of the importance of having a minimum number of paper copies available and of the benefits of having agencies submit their documents to the State Library. On January 17, 2012, Governor Chris Christie signed the provisions into law, requiring:

*[a]ll reports and publications produced by the State, or any agency of the State, that are to be submitted to the Governor or the Legislature, or made available to the public, shall be posted on the Internet in lieu of printing. ...In the case of a report or publication to be made available to the public, an electronic copy and a print copy shall be submitted to the State Librarian. If such reports or publications are printed, six copies shall be submitted to the State Librarian in addition to the one electronic copy. (New Jersey Legislature, 2012, P.L. 2011, c.184, p.1)*

### **Planning the Depository**

When it became clear that the legislation was going to pass, the staff of the State Library began planning for an expected increase in the number of digital documents that would have to be added to the collection. The State Library staff had to develop processes that would allow people to submit documents to the State Library and to develop the systems and workflows that would allow staff to process the received documents as efficiently as possible. The goals for the digital depository system were to make it easy for people in various state agencies to upload their documents directly to the depository, and to provide public access to these documents as quickly as possible. The staff also wanted to make the documents findable by the major search engines, which meant creating appropriate metadata for all of the records. Finally, the staff wanted to find a way to ensure stable and perpetual online access in a way that was a digital equivalent to the print collection of New Jersey publications.

The State Library staff also had some constraints that affected the planned solution to the digital documents concerns. There was no funding for additional hardware, software, or staff to develop and implement the solution. Like many state government agencies, the New Jersey State Library operates with a very lean staff. Technical support for all of the staff of the State Library is provided by two full-time staff in the Information Technology (IT) unit. These two staff members

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would also be the people who would provide the technical support for the new digital documents plan. The plan to provide access to the documents, as well as the plan for the scope of the digital publications collection and all of the related workflows, would have to be designed and implemented by existing staff as a new addition to existing workloads. The State Library also had to make use of available hardware, and find software that was available at little or no cost.

## **Technology Concerns**

The need for a low/no cost software solution led to the exploration of open source models. After some initial research, the staff decided to create a depository based on an implementation of Digital Object Architecture. Digital Object Architecture was developed to support the networked management of information resources in multiple formats over relatively long periods of time. The architecture consists of three core components: a depository which stores digital objects, a resolution system to map known identifiers to records containing information about the digital objects, and a registry which helps define collections of digital objects that may exist across various repositories (Corporation for National Research Initiatives, 2012a). Detailed information about Digital Object Architecture and implementations of the core components are available from the Websites of the Corporation for National Research Initiatives (CNRI) (Corporation for National Research Initiatives, 2010).

The depository function of the Digital Object Architecture is provided by the open source DSpace depository software (<http://www.dspace.org>). DSpace is a set of Java-based Web applications that allow users to create open access digital repositories. DSpace is supported by a strong developer community, is customizable, and comes with a built-in search engine, and a full set of modules to support the acquisition and administration of digital content. By default, DSpace uses Qualified Dublin Core as the metadata schema, but it can also be configured to work with other metadata schemas. DSpace was designed to facilitate the preservation of all types of digital content. It also helps to provide easy and open access to digital content in many formats including text, images, data sets, audio, and video files (About DSpace, n.d.). NJSL selected DSpace after consulting with other state library agencies that had used the platform to create their own state publications repositories, and receiving support from the State Library's Information Technology (IT) department. The resolution and registry functions of the Digital Object Architecture are provided by the Handle System (<http://www.handle.net>).

*The Handle System includes an open set of protocols, a namespace, and a reference implementation of the protocols... [enabling] a distributed computer system to store identifiers, known as handles, of arbitrary resources and resolve those*

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*handles into the information necessary to locate, access, contact, authenticate, or otherwise make use of the resources. This information can be changed as needed to reflect the current state of the identified resource without changing its identifier, thus allowing the name of the item to persist over changes of location and other related state information. (Corporation for National Research Initiatives, 2012b)*

Using the Handle System allowed the State Library to create uniform resource identifiers (URIs) for the documents in the depository. The staff believes that using Handle-based URIs, as opposed to standard URLs, will minimize future file location problems, i.e. file not found errors, caused by inevitable changes in the State Library's servers and Web pages. These software decisions meant that staff could begin planning the implementation of the New Jersey State government publication depository.

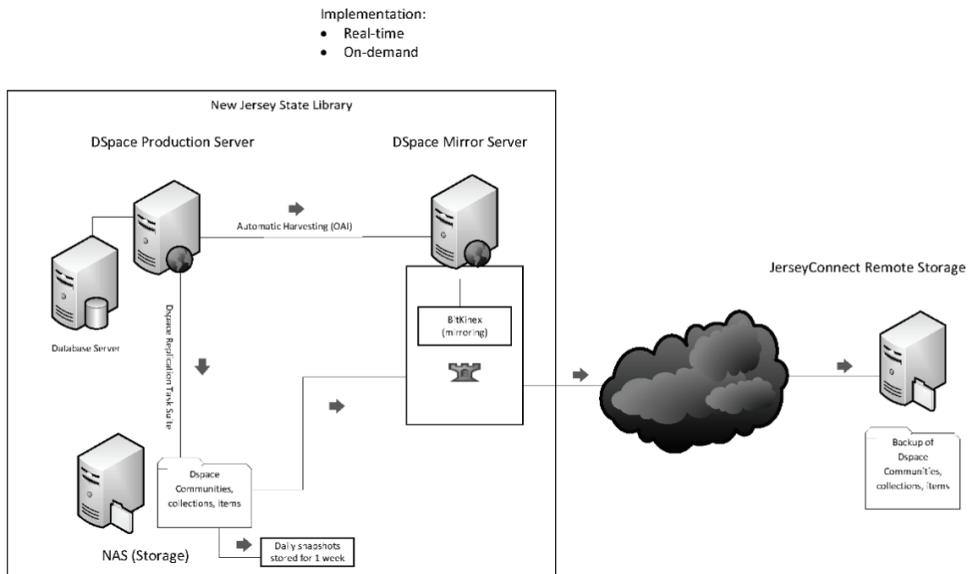
The IT department secured server space, and was responsible for the download and configuration of both the DSpace software and the technical details of implementing the Handle System. The system is currently running DSpace version 1.8.2. Thirty hours of technical support were required for system setup and configuration. The software runs on Microsoft Hyper-V virtual machines and includes the following components:

- Web server (Operating System: Fedora 17; 150 gigabytes of storage; 4gigabytes RAM)
- Database server (Operating System: Fedora 17; 50 gigabytes of storage; 1gigabyte RAM)
- DSpace Mirror server using OAI (Operating System: Fedora 17; 100 gigabytes of storage; 1 gigabyte RAM)
- DSpace test server (Operating System: Windows 7)

An additional twenty hours of technical support were required to develop the NJSL branded theme. This process consisted primarily of modifying the Reference theme supplied with the default install of DSpace, so that the depository Web interface could be seamlessly integrated into the existing NJSL Websites. One of the goals of the State Library staff was to ensure perpetual access to the documents in the digital depository. The IT staff supported this goal by creating a backup system for the depository that includes the DSpace Replication Task Suite, internal NAS (network attached storage) with daily snapshots stored for seven days, and external storage (WebDAV) provided by *JerseyConnect* using mirroring software called BitKinex. Figure 1 is a schematic of the NJSL depository setup showing the relationships between the Web server, database server, mirror server, document storage system (NAS), and off-site backup system.

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Figure 1. NJSL depository schematic (©2012 by Alain Tszanz. Used with permission.)



## Management and Organizational Concerns

An advisory group, consisting of two New Jersey documents reference librarians and two documents catalogers, was formed to begin the implementation of the non-technical and managerial aspects of the depository implementation. The advisory group made decisions about a range of issues including the layout of the collections of documents, workflow for adding documents into the depository, and whether the electronic documents already represented in the library's catalog would be retrospectively incorporated into the new depository. This group also provided the actual labor to create the initial structure of communities and collections, which was designed to mirror the 2011 official state of New Jersey listing of departments and agencies. This initial structure was populated with existing digital documents that were already a part of NJSL's collections. Using existing documents helped with development of workflows and also allowed the advisory group to adjust the depository structure and protocols to accommodate actual documents. Library staff and other state government employees served as test users to help refine the user interfaces and simplify the submission process.

One of the biggest concerns faced by the advisory group was having people from state agencies submit their documents. The new law makes submission a requirement, but there are no penalties for refusing to comply, so it is up to the State Library to encourage and support the submission of documents. NJSL's initial focus

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was to encourage submissions through process design. Ideally, documents would be submitted directly to the depository, but in recognition that more flexibility may be required, there are two ways that publications can be submitted to the depository. Agency representatives can email documents to a designated NJSL email address or they can create an account and upload the documents directly into DSpace. The documents submission process has been designed to make it very easy for people from various New Jersey government agencies to submit electronic documents directly to the depository. Users can attach files in any of the supported formats and a name, email address, and a password are the only information required to create a user account. This account automatically gives users permission to add documents to a collection called “New Documents.”

When submitting a document users are required to provide the name of the document and the name of the agency that published document. Users may also add descriptive keywords if desired. The next step in the process is to upload the document, a process that is very similar to attaching a file to an email. The final step in the process asks the user to review what they have entered and click a “Submit” button. When a document is added directly to the “New Documents” collection, it can only be viewed by NJSL staff. The submission process generates an email notification, which alerts staff that a new item is available and it needs additional processing. The streamlined submission process was developed to encourage the widest level of participation. Whether a technology novice or an expert user, NJSL staff believe most people working in New Jersey state government are familiar with filling out online forms, e.g. by using the automated time and attendance systems, and are also familiar with sending email attachments, and should, therefore, find the submission process easy to use.

Once the submission processes had been designed, the advisory group turned their focus to a second implementation problem: how to move the newly submitted documents into the permanent depository. Quality control concerns dictated that NJSL staff examine each submission, add additional metadata, and move the “new” documents into appropriate collections and communities. When “new” documents are available either in the email account or in the “New Documents” holding collection, NJSL staff performs additional processing before the records are added to the depository. The items added directly to the depository by users are examined to ensure that the attached file(s) match the user-supplied metadata. If there is a problem, NJSL staff will correct the metadata or if this is not possible, contact the submitter to resolve the problems. NJSL staff also adds additional metadata to specify the publishing agency, assigns a New Jersey documents call number, and adds subject keywords using the Library of Congress Subject Headings as a controlled vocabulary.

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A copy of the submitted file is saved to the New Jersey documents folders on a shared network drive. Whenever possible, the submitted file is also edited to add an electronic stamp indicating that the viewed document is a New Jersey State Library archived copy. The submitted document is then added to an appropriate collection based on the issuing agency. A printout of the title screen, annotated with the newly assigned call number, and the DSpace handle is then sent to the Technical Services department for cataloging. A full catalog record is created for the item, including the creation of name authority records as needed. These records are added to both OCLC's WorldCat and NJSL's Horizon catalog. If the catalogers assign subject terms that are not already in the DSpace metadata record, the subject terms from the catalog record are also added to the DSpace record. The URL field in the catalog record points users directly to the DSpace record using the URI assigned by the handle system. Items submitted via email are processed in the same way, except that NJSL staff creates the full DSpace metadata record rather than building upon a user-supplied skeletal record.

## **CURRENT CHALLENGES FACING THE DEPOSITORY**

The depository, officially named the *New Jersey State Publications Digital Library*, went live in January of 2012 and can be viewed at <http://dspace.njstatelib.org>. It is available as a link on the State Library Information Center's homepage, and includes digital books, photographs, and postcards from the Jerseyana collection as well as New Jersey state government publications. The depository is visible to major search engines, provides full text searching of all content, and also provides options to browse by collections, authors, titles, and subjects. As of November 2012, there were approximately 8,000 items available in the depository.

The biggest challenge to the success of the depository is ensuring the active participation of state government agencies. For NJSL's purposes, an agency is defined as any state governmental unit (department, bureau, office, or commission) that creates publications. If NJSL is unable to get agencies to regularly submit publications, the depository will not be the representative collection it was designed to be. Despite the passage of legislation and initial outreach to the heads of the various state government departments, only eleven agencies are currently submitting documents to the depository. The decentralized nature of state government document creation means that there is no single outreach approach that will work across agencies. Given current State Library staffing levels, it is not feasible to continuously track and contact every office that produces documents, but without time and effort spent on recruitment, the depository will fail to become a fully functioning state publications archive.

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Another challenge to the success of the depository is presented by the existing cache of digitized documents that were saved on NJSL servers and added to the library catalog prior to the implementation of the depository. Unless these documents are also included in the depository, users will have to search in multiple locations, and use several interfaces to locate digital NJ government publications in NJSL collections. Moving the documents to the depository also confers the benefits of the Digital Object Architecture, including the creation of a URI for each of the digital items and the availability of full-text document searching. There are approximately 12,000 documents that need to be removed from the Web servers and added to the DSpace depository. These documents also have OPAC records that would have to be updated to replace the existing State Library URL with the Handle System URI.

An additional challenge is posed by the capabilities of the newly created depository system. The collections of the New Jersey State Library are primarily print-based, and the existing expertise of the staff is in the management and use of print documents. Like many other organizations, New Jersey state government agencies are beginning to produce materials in multi-media formats, such as the data files used to generate the annual public school report cards, or the audio and video broadcasts of the Governor's state of the state addresses. In the past, print or other tangible equivalents for many of these items were also produced, and these equivalents were added to the State Library's collections. In the rare cases where there was no tangible equivalent, the item was simply not added to the collection. In the future, most non-print publications are not expected to have tangible equivalents. In order to have a comprehensive and representative collection of state government publications, the State Library must develop plans to include materials in non-tangible formats. The new depository will allow the collection of materials in multiple formats, but NJSL staff has yet to develop the expertise needed to catalog and provide access to these non-print materials.

## **SOLUTIONS AND RECOMMENDATIONS**

State Library staff is addressing these identified challenges in several ways. The first step in increasing submissions to the depository is the development of an active outreach plan. The initial messages in the outreach plan will emphasize the ease of submission, and the value to the agencies of having permanent, publicly accessible storage for their electronic content. A small team, consisting of a member of the NJSL Marketing department, a staff member with expertise in program promotion, a New Jersey documents reference librarian, and a staff member with knowledge of outreach, is working to develop a multifaceted plan to promote the depository to state agencies. The plan will include targeted mailings, strategic presentations at

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various state government venues and offices, and the development of relationships with targeted agencies using social media and direct contacts. The goal is to develop a set of relevant messages and scalable strategies that can be used to expand the knowledge of and participation in the depository. State Library management has shown support for the initial plan, and the team working on outreach hopes that additional resources will be made available to implement a full outreach effort.

The problem of adding the large cache of digital documents is being addressed in several ways. DSpace allows batch importing of metadata and files, so the initial efforts are focusing on finding ways to create metadata in batches. The IT staff is working on developing scripts that will automate the creation of metadata for groups of files. This will be especially useful in the creation of records for serials where, with a few predictable modifications, e.g. changing the publication date, the same metadata can be used for multiple items. The cache of documents also have MARC catalog records, which could serve as a source of metadata, so Terry Reese's (2013) *MARCEdit* software is being used to automatically generate Dublin Core metadata from the MARC records. This process is especially useful in processing the more than 10,000 monographs that are currently on the Web server and in the OPAC. Each of these items has unique metadata, so creating a scripted batch process is not as feasible. NJSL staff is also exploring the possibility of recruiting library school students to serve as digital library interns. NJSL staff would develop a processing protocol, and the interns could provide the labor to move the monographs from the Web server to the depository. Using library school students would also expose the depository to fresh eyes and ideas, which could help ensure that practices are in line with the most recent developments in the fields of digital libraries and e-archives.

NJSL staff is still working on adding multimedia items to the depository. The IT staff has developed the depository structures to support the acquisition of data, audio, and video media files. The deployment of the files has not been as easily resolved. Many of the audio and video files are not produced by state government entities, so storage and broadcast rights may have to be negotiated. Some of the data files require the installation of software for use, and staff has not decided how to support access to these files. NJSL catalogers must also develop the expertise necessary to create high quality catalog records to provide levels of access comparable to the access provided to print materials. It is expected that future work on the depository will continue to resolve key issues in each of these three areas.

Future development of the depository will also focus on the collection of accurate usage statistics as this is important for both accountability and for making improvements to the system. There are also plans to implement a SSL (Secure Socket

Layer) protocol and certificate system, as well as adding file authentication using a system of hashes/checksums. These additional security measures will help ensure that users are able to trust the content retrieved from the depository.

The 21<sup>st</sup> century New Jersey state government publications depository network is significantly smaller than in 1980, with only four academic libraries and one public library currently opting to receive monthly shipments of documents. The 2011 law will also significantly decrease the number of print publications that are available to ship to these libraries. However, the *New Jersey Publications Digital Library*, with its RSS feeds, search engine visibility, and replicable database will ensure that New Jersey state government publications continue to be preserved and are easily accessible for future users.

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## **KEY TERMS AND DEFINITIONS**

**Database Replication:** A method of frequently copying the information from a database on one computer or server to an identical database on other computers or servers, so that users in all locations share the same information.

**Document Depository:** A place or system designed for long-term storage of documents.

**Document Depository Network:** A coordinated system where documents are distributed to members of a group who agree to store the documents either permanently or for a specified period of time.

**Metadata:** Information that describes various aspects of a data object.

**State Government Agency:** An informal designation for an organizational unit of state government, usually responsible for a discrete scope of activities. An agency may be formally known as a department, bureau, office, commission, etc.

**State Government Publication:** Documents produced for public use by state government entities.