

Project Abstract: Repository Services for Accessible Course Content

Across the country, colleges and universities are struggling to meet demand for accessible forms of course materials for students with an array of disabilities. At present, each institution is addressing this problem individually, at great expense, and often without full campus coordination, much less consortial collaboration. Locating digital files is difficult and entails numerous sources. The resulting accessibility enhancement/conversion work creates a large corpus of digital files in varying forms to manage on each campus. Over the course of one year, this planning project will bring together experts from disability/accessibility services with librarians, IT professionals, advocates, and legal counsel, to develop shared infrastructure within which universities can support their students with disabilities.

The inquiry and planning will be led by Laura C. Wood, Tufts University, in partnership with John Unsworth, Brandeis University; Michael Furlough, HathiTrust Digital Library; Jamie Axelrod, Northern Arizona University and Association on Higher Education and Disability; and J. Stephen Downie, University of Illinois Urbana-Champaign and HathiTrust Research Center. From May 2015 through February 2016, this steering committee will conduct focus groups with disability services professionals to deepen understanding of needs; recruit participants for working groups that will recommend specifications for repository services; convene a colloquy of stakeholders to discuss complex aspects of the service needs; and consult with an advisory committee of subject matter experts quarterly. In March and April of 2016 they will synthesize the research, recommendations, and analysis to create three products: a white paper summarizing the findings, a project work plan for the repository services project, and a paper to submit for publication.

In the interests of protecting copyrights and student confidentiality, these repository services will be designed to serve the immediate needs of school administrators so that they may increase the speed of access, the ease of use, and ultimately the educational experience and outcomes for students with disabilities. Approximately 11% of the 20 million enrolled postsecondary students have some disability. These disabled students are enrolled throughout the country in schools of every type. Repository services enabling schools to deposit their own accessible files, use files from other institutions, and reduce the number of searches required for content discovery will be a substantial and valuable contribution towards serving student needs by creating efficiencies through sharing. These efficiencies include reducing duplicated effort, increasing speed of accommodations, and reducing labor loads so that additional local needs can be met—all of which have the potential to improve the educational experience and success rate of students with disabilities. This year of planning should enable us to subsequently construct new infrastructure in a future project—infrastructure that will integrate with existing platforms and services.

Project Narrative

1. Statement of Need:

According to the US Government Accountability Office, 10.8% of students enrolled in postsecondary institutions in 2008 had a disability. This represents over two million students and this number is steadily increasing.ⁱ Students with disabilities share demographic distribution with the general population of postsecondary students in terms of race, age, and schools attended. These disabilities include one or more of the following conditions: a specific learning disability, a visual disability, a hearing impairment, deafness, a speech disability, an orthopedic disability, or a health impairment (Table 1). Although the population is a minority of total students, the vast majority of institutions report enrolled students with disabilities (88%), making accessibility an extensive and urgent issue in higher education.ⁱⁱ

Table 1. Distribution of disability types as estimated by two organizations in 2008.ⁱⁱⁱ

Disability Type	AHEAD	NCES
Learning Disabilities	28.16%	31%
ADD or ADHD	20.21%	18%
Psychological condition	15.59%	15%
Health impairment	9.25%	11%
Mobility impairment	6.20%	7%
Hard of hearing or deaf	3.25%	4%
Traumatic brain injury	2.79%	2%
Vision Impairment	2.61%	3%
Intellectual disabilities	2.40%	3%
Temporary impairment	2.01%	N/A
Autism	1.94%	2%
Speech/language impairment	0.72%	1%
Deaf-blind	0.09%	N/A
Other	4.79%	3%

When students request accommodations for a disability, schools are legally obligated to provide them for students who qualify. At most institutions, there is an established method to document and recognize students who meet the state and federal regulations, as well as university policy, for disability accommodations. Schools may have little time to prepare for a student's needs and little awareness of how many students may need support in any given year. Semester by semester, the courses and instructors involved in accommodations vary. A critical factor in the support of students with disabilities is the school's ability to rapidly serve those needs.

With respect to supplying accessible course content, the challenges for schools and students have been well documented. A key text is the Report of the Advisory Commission on Accessible Instructional Materials in Postsecondary Education for Students with Disabilities (AIM Commission Report, 2011) which studied the state of accessible materials and made eighteen recommendations to Congress.^{iv} In order to assist students, each school must obtain or create accessible equivalents, such as audio files, screen-readable text versions and/or braille versions of course materials. If publishers cannot provide appropriate versions, or do not respond to requests, then schools do the reformatting work themselves. Custom work and faculty consultations may be needed to translate/interpret images, graphs, or other supplementary materials embedded in texts or to convert the publisher supplied PDF into the needed file format. Multi-media material also present challenges, such as transcribing subtitles for films, or creating new versions of films with voiced descriptions for visual components.

Most course materials in today's college classroom are in copyright. Institutions navigate a variety of sources including Bookshare, AccessText, Learning Ally, and the HathiTrust Digital Library to see if digital formats already exist. They also request electronic copies directly from publishers, or through a mediated service (e.g. AccessText). Some publishers are relatively responsive to requests, but others are not. According to staff at Tufts University, some publishers can fill requests within one to five days, while others can take 2 weeks or longer (especially during the busy start of the semester). As a last resort, a school may need to scan a work from print. Regardless of original source, a digital file will then need to undergo significant reformatting before delivery to the student. Numerous institutions may be seeking the same texts at any given time, but they have no mechanism for sharing. The work that goes into a single file may represent many hours of labor and the quality of the results may vary depending on the school's resources. As these electronic files are created and provided to the specified students, the disability services office must wrestle with a significant file management problem. The files need to be secured for the sake of copyrights, but most courses are taught multiple times with some re-use of common texts. The ability to securely store, describe, and reuse these reformatted materials is necessary on every college campus.

While there are a variety of sources for digital text files that can be further processed for accessibility, the discovery abilities are insufficient and inefficient. Locally, a school may have hundreds or thousands of files to store and manage so that the files are identifiable for later reuse.^v Academic libraries have relevant skills and infrastructure for managing digital objects, from ingest and metadata creation to access controls and maintenance. Furthermore, as we have learned from watching the HathiTrust Digital Library grow from 2 to 13 million volumes in six years, consolidated repositories are highly efficient and make new study/scholarship possible.

Although the AIM Commission Report demonstrates that awareness of the issues are widely understood, much of the limited progress has been made by institutions acting independently, often in response to litigation. Recent legal actions have increased school awareness of the liabilities, but have not increased the efficiencies or cost effectiveness of disability services.

From legal settlements, a standard for accessibility is emerging. Namely, that “...the University must implement a policy that requires the deployment of accessible technology and course content in the University setting. To that end, the University shall conduct a review of the accessibility of its technology and instructional materials and shall ensure that, from the effective date of and consistent with the Settlement Agreement, all technology, including websites, instructional materials and online courses, and other electronic and information technology for use by students or prospective students, is accessible.”^{vi}

Such a policy should result in accessibility according to these standards:

“‘Accessible’ means a person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the same services as a person without a disability in an equally effective and equally integrated manner, with substantially equivalent ease of use. The person with a disability must be able to obtain the information as fully, equally and independently as a person without a disability. Although this might not result in identical ease of use compared to that of persons without disabilities, it still must ensure equal opportunity to the educational benefits and opportunities afforded by the technology and equal treatment in the use of such technology.”^{vii}

The legal basis for providing reformatted/accessible course content services in libraries and universities has recently been strongly reaffirmed by the US Court of Appeals, Second Circuit, which has ruled in *Authors’ Guild v HathiTrust* that the doctrine of fair use allows the libraries to provide full

digital access to copyrighted works to their print-disabled patrons.”^{viii} While libraries had previously provided limited services as “authorized entities” under section 121 of the Copyright Act, the Second Circuit’s opinion has reassured institutions and encouraged others to expand their services.

Our interests in accessibility emerge from the action and inaction of colleges and universities to date. Several services have been created which assist accessibility, such as Bookshare, AccessText, Learning Ally, and the HathiTrust. Yet these resources and services are insufficient for several reasons: the course materials needed are frequently unavailable in existing text collections; the turn-around time for special requests may not be fast enough; the text may be available in a digital file, but still need further work to make it usable for a specific circumstance/disability; the material may be available, but hard to discover, as a result of poor metadata or the need to search in numerous locations; or the course may be using a different edition of the work than what is available. The HathiTrust Digital Library (HDL) provides users with print disabilities access to both in-copyright and public domain texts. However, in-copyright texts are available only to users at the 100 members of HathiTrust, and its corpus is based on library collections which are typically devoid of textbooks.

If schools can contribute their own accessible files to a shared repository, use those contributed by other participants, and search in fewer locations to discover materials then we will have made a substantial stride toward reducing effort duplication, increasing service speed, and allowing schools to focus on specialized work for their local constituents.

2. Impact:

In response to the challenges outlined above, we propose to develop a shared repository for storage of these digitized files and associated metadata and examine if additional discovery services can be developed. Such repository services are complex in several respects, as they must address these issues: protection of copyrighted works from unauthorized use and downloading, protection of student records, support of academic freedom at universities, simplification of complex digital standards so that schools of any shape or size can participate and benefit, balance of metadata sophistication for ease of use, efficient discovery of resources, and scarcity of staff resources. We propose a repository that can accommodate files of a variety of formats, including multi-media. There are few existing sources for multi-media materials which may serve disabilities beyond print-disabilities. The specialized nature of multimedia files may make it necessary to sequence technical development, but the infrastructure ought to be constructed with the intention to include numerous and evolving file formats in the near future.

The benefits of such repository services would include:

- Creating a shared infrastructure for academic institutions for deposit, storage, description, and retrieval of accessible files in multiple formats as a cost-effective contribution to the national digital platform
- Reducing file storage redundancies on multiple campuses
- Eliminating the need for redundant infrastructure by individual institutions (and enabling participation for institutions who do not have equivalent storage capacity)
- Improving discovery of available content and delivery of content to end users
- Creating capacity for sharing multi-media materials, which have received less attention in other venues
- Engaging librarians in a vital aspect of course support for a minority population
- Increasing security of accessible files through updated authentication protocols and storage specifications.

These benefits serve the immediate needs of school administrators so that they may increase the speed of access, the ease of use, and ultimately the educational experience and outcomes for students with disabilities. The benefits empower schools to serve students better.

Downloadable content will be restricted to authorized users and these authorizations must be administered effectively. Adding to and using the resource should be as simple and user-friendly as possible. By bringing the expertise of librarians and repository specialists to bear on the work of accessibility services (see Outreach below), we should be able to unite key university personnel towards a common goal: providing scholarly resources and curricular support to a sizable (and growing) constituency in our schools. This is a valuable way to create a national infrastructure for academic libraries and to leverage work to the benefit of numerous institutions and individuals. To plan such an infrastructure, we first need to focus on soliciting input from numerous stakeholders. This planning project will culminate with three documents: a white paper to document the outcomes of the study, create specifications for the infrastructure, and increase awareness about the issues involved and available roles in course support for our disabled students; a project work plan to construct such a repository; and a paper to submit for formal publication.

Outreach

In this rapidly changing landscape, the project must do considerable outreach in order to discover what activity is currently underway at university campuses, glean lessons learned, and avoid duplication of effort. For example, in 2014 the Ontario Council of University Libraries (OCUL) launched a new service for OCUL libraries to increase accessibility of course materials which may yield insight into how to provide similar services in the US. Perhaps more importantly, the project must take the time to consult extensively with accessibility services professionals, advocacy groups, and legal experts, in addition to librarians and technologists. As a planning grant, this project intends to focus extensively on such outreach and conversation in pursuit of a project to make repository resources a reality. We expect there will be value in these conversations on their own merit, especially in increasing understanding of various constituent needs and concerns and in bringing together accessibility and library services professionals to collaborate. Yet ultimately, it is the ability to coalesce around an approach forward that should be the basis for measuring the project.

To date, libraries and archivists have been relatively removed from the accessibility services on campus. While exceptions exist, the majority of academic libraries are not responsible for providing alternative formats to students qualifying for accommodation. Concerns about copyright liabilities, lack of awareness of standards and protocols for creating alternate formats, limited resources for existing library services, and (correctly) perceived resource intensity for delivery of accessibility services has driven librarians to remain outside the support network for students needing accommodation, despite the profession's stated priority to supply information resources to our community(ies). We expect that this project will help to reduce the barriers between accessibility services and library services.

Librarians are well situated to consider the needs of metadata standards, format compatibility, partnerships with IT, database structure, interoperability, and technical standards that are relevant to this work and its scalability for institutes of higher education (IHEs). Furthermore, there is work to be done to establish best practices for metadata for these files. Although the number of students needing accommodation grows, it remains a minority population. As such, it is both wise and necessary to find ways to collaborate to solve or improve our shared predicament and find cost-efficiencies.

Scale and/or Replicability

A key question of the planning study will be to examine the appropriate scale for repository services.

It isn't clear at the outset whether a national repository would be the ideal or even feasible. However, if small clusters of institutions sharing a repository prove appropriate, then we will also attempt to design an architecture and service that can be replicated for additional institutional clusters. In other words, a shared repository for a consortium may create a model that can be used by other consortia, whether that be organized by geography, institution type, or other commonality.

Results

Over the course of a year, we intend to solicit input from a vast set of communities. We plan to hold at least four focus groups to gather information about the needs of professionals at 40 different institutions (more, if time permits). We also intend to gather up to 30 stakeholder participants to provide input and nuance to these complex issues, and expect to facilitate dialogue for those with differing perspectives. Via working groups, we plan to engage 15-30 volunteers to both educate them and involve them in creating solutions. These activities will culminate in the development of a project work plan so that identified needs can be addressed effectively through shared infrastructure. The planning (and subsequent construction) of this infrastructure is intended to improve educational outcomes for the 2 million students in post-secondary institutions with some disability by offering tools and the capacity to share for colleges and universities where these students enroll.

In addition to a project work plan, this planning grant will result in a white paper and at least one article for formal publication. We intend to share the white paper by publicizing it through various relevant organization venues, such as the AHEAD monthly newsletter, CNI announcements, and/or the HathiTrust membership meeting. Because we will have IRB approval, at the conclusion of the grant we will submit an article for formal publication in a journal such as *D-Lib Magazine*.

3. Project Design:

This planning project will bring together experts from disability services with librarians, IT professionals, and legal counsel to develop shared infrastructure within which universities can support their students with disabilities, while still attending to copyright concerns and student confidentiality. These planning efforts will result in specifications for a repository of course content generated by institutions as well as a governance and business model for maintaining it and mechanisms for sharing files. To facilitate the planning of repository services, we propose a planning process consisting of three discrete face-to-face meetings, as well as at least 15 virtual meetings throughout the course of the year, involving two defined committees and additional volunteers.

Committees:

Steering Committee: The Steering Committee will consist of five members: Jamie Axelrod, Stephen Downie, Michael Furlough, John Unsworth (co-chair) and Laura Wood (co-chair) and represent expertise from disability services, university libraries, and not-for-profit repository services involved in disability access. The steering committee will guide the project throughout the year. Meeting by phone or video conference monthly, this group of five individuals will be key to each phase of the work, including research, stakeholder engagement, and synthesizing the analysis to craft design specifications and a project work plan for constructing the repository. As co-chairs, Wood and Unsworth will direct the activities of the entire project, set agendas for the steering committee, and lead discussion at the face-to-face-meetings. Steering members Axelrod, Downie, and Furlough will serve on working groups, recruit volunteers and subject experts to participate, and lend their individual talents to the project. More information on committee members is below.

Advisory Committee: The advisory committee will provide guidance to the steering committee through the year, meeting by phone or video quarterly to supply requested feedback and help shape the

direction of the project. The advisory committee is intended to provide subject matter expertise to ensure that the developing project meets needs and considers complexities in this landscape. Information about committee participants is below.

Face-To-Face Meetings

Meeting 1: Research into needs

The steering committee will attend the AHEAD annual meeting in St. Paul, Minnesota July 15-18, 2015. Attended by 1500-2000 people, the AHEAD conference is a key event for professional development of accessibility services professionals serving the higher education market. AHEAD has agreed to assist us in attracting attendees to one of a series of focus group meetings, as well as provide meeting space. These focus groups will be a significant opportunity to inquire about workflow, unmet needs, resources restrictions, and other aspects of their current services to meet student needs. We will submit an IRB protocol for approval to proceed in using human subjects. The steering committee will also meet face-to-face at this conference to work on future steps of the project.

Key questions for meeting 1:

- How are university staff currently meeting demands?
- What capabilities and workflow would provide greatest assistance?
- What are the shortcomings of existing resources?
- What initiatives are underway to serve these needs? How can we prevent duplication of effort?

Meeting 2: Engaging broader constituents

There are many interested parties and relevant stakeholders in disability services and in library repositories. Trying to engage these stakeholders, including some who have seemingly opposing objectives, is a major challenge of this project. In addition to the help from the advisory committee, we intend to host a meeting in Washington, DC to convene additional groups for consultation and discussion. The Coalition for Networked Information (CNI) has stated its support for our project and offered to provide meeting space co-located with the CNI Fall 2015 meeting in December. This venue makes it easier to bring in additional participants who are attending the meeting (with library and IT expertise) or who are nearby (various advocacy groups and private individuals).

Key questions for meeting 2:

- If a repository service is created, what are the key concerns of various stakeholders?
- How might we adapt the plans to address those concerns?

Meeting 3: Synthesizing the work

The third and final face-to-face meeting will bring together the work of the steering and advisory committees, and the input from the other constituents to draft the specifications for the repository. At this meeting, we will also bring in additional subject matter experts to consult if there are outstanding questions or concerns needing more study. The meeting will be held in Boston to minimize travel needs for steering committee members.

Working Groups

Following Meeting 1, the steering committee will subdivide some of the key issues into working group charges. We expect that by having three to five working groups to focus on elements of the project we can involve a broader set of ideas into the design. Each group will have five to twelve members, recruited from the networks of participants in the grant. Members of these groups will meet via conference call from September to February. At the outset, we expect the working groups will be organized into three groups tackling these issues: IT and metadata, business/governance model, and legal considerations. However, we acknowledge that these intentions may change.

Key questions for the working groups:

- IT and Metadata
 - What technical architecture can be used to facilitate the work, but minimize maintenance costs?
 - What metadata is necessary to differentiate files and enable discovery yet minimize data entry and training for those adding materials?
 - What existing infrastructure can be leveraged to meet our needs?
- Business/Governance Plan
 - What scale is most effective for organization?
 - Would such a collaborative resource best be organized within existing consortia? By region? Nationally? Or by other categories of institution type?
 - Based on the system design, what is the ongoing cost to develop and maintain the system and what business model is best suited to sustain it?
 - What funding model can ensure sustainability? What governance model?
- Legal Considerations
 - Who is the end user of the repository service? Accessibility Services staff use or approved students or both?
 - How can the system protect and respect copyright holders and mitigate/reduce legal liabilities?
 - How can we balance the concerns of publishers with the concerns of disability advocates?

David Wedaman from Brandeis will serve as a project manager for the working groups. In this capacity he will keep the steering committee updated and both guide and staff the working groups to keep them on track.

In consideration of business models, while special funding will be required to create repository services (i.e. after the planning project concludes), ongoing care, maintenance, and further development of these services will require ongoing funds. There will be costs for the technology to run the repository and store content, for quality assurance processes, and for administration (adding users, billing invoices). Based on the specifications and capabilities of the services, the project will need to estimate the ongoing costs and identify a practical way to ensure the system can be sustained.

With respect to technical infrastructure, the project participants are not beginning with a selected technology in mind. The intention is to confirm and deepen our understanding of existing needs, consider how these opportunities can integrate with existing platforms and services. There is continual movement in assistive technologies, publisher practice, and other factors. Certainly the inclusion of HathiTrust in the project is significant.

HathiTrust operates a preservation and access repository certified by the Center for Research Libraries as a Trusted Digital Repository under TRAC guidelines. Approximately 63% of its 13 million digitized volumes are currently in copyright and available only for full text search to the general public. However, students with a print disability enrolled at HathiTrust member institutions may access these materials when needed for research and instructional purposes. Currently this access is provided by a proxy staff member, usually in the libraries or the campus's disability services office. The staff member obtains the OCR-derived full text on behalf of the student. Although these files are sometimes further corrected and enhanced by staff or students, those corrected versions are not returned to HathiTrust for future access. HathiTrust is currently reviewing methods for improving these services to users with print disabilities and its participation in this effort will inform that activity.

The scope of inquiry of our project will be much broader than HathiTrust, but HDL is clearly a major factor in the landscape.

4. Project Resources:

Personnel:

Steering Committee

Laura Wood will serve as PI for the project and co-chair of the Steering Committee. Tufts University's growing demand for accessibility services has driven the inquiry for the project. As President elect for the Boston Library Consortium, Wood will recruit participation from the member libraries as well as from Tufts itself. Wood will manage the finances of the project. She has over 10 years of experience managing library budgets as a director, as well as an MBA degree from Emory University. Wood has a demonstrated passion for collaborative projects and has previously chaired a committee to design the specifications for an online duplicate serials exchange.

John Unsworth will co-chair the Steering Committee. As Vice Provost, University Librarian and CIO at Brandeis University, Unsworth will bring several participants to the project in volunteer capacities with a range of expertise. Unsworth has extensive experience with technology intensive projects to enhance scholarship and helped to establish digital humanities as a field. He also serves on the Steering Committee for the HathiTrust Research Center (HTRC) and was a founding co-director.

The Association on Higher Education and Disability (AHEAD) is a professional membership organization for individuals involved in the development of policy and in the provision of quality services to meet the needs of persons with disabilities involved in all areas of higher education. AHEAD is actively involved in all facets of promoting full and equal participation by individuals with disabilities in higher education; and supporting the systems, institutions, professions, and professionals who attend to the fulfillment of this important mission. They will provide the critical connection to disabilities services professionals at a wide range of institutional types. Jamie Axelrod, president-elect of AHEAD, will provide significant leadership in the first phase of the work by coordinating with AHEAD, recruiting participants for focus groups, and assisting with the analysis of the focus group conversations. Through the remainder of the project, he will provide continuing expertise and/or referrals for input.

HathiTrust Digital Library (HDL) is an organization that includes over 100 academic and research institutions working to transform scholarship and research in the 21st century. The partnering institutions currently own and maintain a trusted digital repository of more than 13 million volumes, digitized from partner library collections and other sources. The repository has become a unique preservation and access platform, supporting cutting-edge initiatives in open access, copyright, and computational research. Eligible patrons at partner institutions can receive special access to in-copyright materials in HDL in order to provide services for students with disabilities. The materials must be held currently or have been held previously by the institution's library. Executive Director Mike Furlough will provide expertise from the experience of HathiTrust in running a shared repository and defending their practices in legal proceedings.

The HathiTrust Research Center (HTRC) enables computational access for nonprofit and educational users to published works in the public domain and, in the future, on limited terms to works in-copyright from the HathiTrust. The HTRC is a collaborative research center launched jointly by Indiana University and the University of Illinois, along with the HathiTrust Digital Library, to help meet the technical challenges of dealing with massive amounts of digital text that researchers face by developing cutting-edge software tools and cyberinfrastructure to enable advanced computational access to the growing digital record of human knowledge. Co-director Stephen Downie's participation

will connect our project to the expertise of highly secure authentication to digital content, computational infrastructure, and data storage. In collaboration with the University of Illinois, MLIS graduate students of HTRC will provide transcription and analysis of focus group data and will assist in drafting the final white paper.

Advisory Committee

Prudence S. Adler

Prudence S. Adler is the associate executive director of the Association of Research Libraries (ARL). Her responsibilities include federal relations with a focus on information policies, intellectual property rights, telecommunications, issues relating to access to government information, and project management for the ARL GIS Literacy Project. She is a staff liaison for ARL's Accessibility and Universal Design Working Group.

Jack Bernard, Esq.

Jack Bernard is Associate General Counsel of the University of Michigan. Mr. Bernard serves as HathiTrust's primary legal advisor and has been intimately involved in the development of practices and policies with a special emphasis on copyright issues.

Karen Keninger

Karen Keninger is the director of the National Library Service for the Blind and Physically Handicapped (NLS), part of the Library of Congress. The NLS works collaboratively with about 100 libraries throughout the country to circulate free braille and audio materials to eligible borrowers. The service is involved with copyright clearance and procurement of reading material; design, development, and procurement of sound reproduction equipment; establishment of standards and assurance of quality products and services; and the development, maintenance, and circulation of a national collection of musical scores and texts in special formats.

Mark Riccobono

Mark Riccobono is President of the National Federation of the Blind, the nation's oldest and largest organization of the blind. He previously served as Executive Director of the NFB's Jernigan Institute, which develops innovative education, technologies, products, and services that help the world's blind to achieve independence.

Robin Seaman

Robin Seaman is Director of Content Acquisition for Benetech's Bookshare initiative, the largest online library in the world of content for readers with print disabilities, working across all publishing sectors in the U.S. and internationally to forge partnerships. She is also the lead for Benetech's "Born Accessible" Initiative, which works with publishers to help them create content that is not only born digital but is "born accessible." She has over 25 years' experience working in print and digital publishing.

Other Personnel

Harriet Chenkin

As administrative staff for the director of Tisch Library, Harriet Chenkin has extensive experience in a range of functions, including event and travel planning, scheduling, minute taking, and other coordinating tasks. She will provide administrative support for the project.

David Wedaman

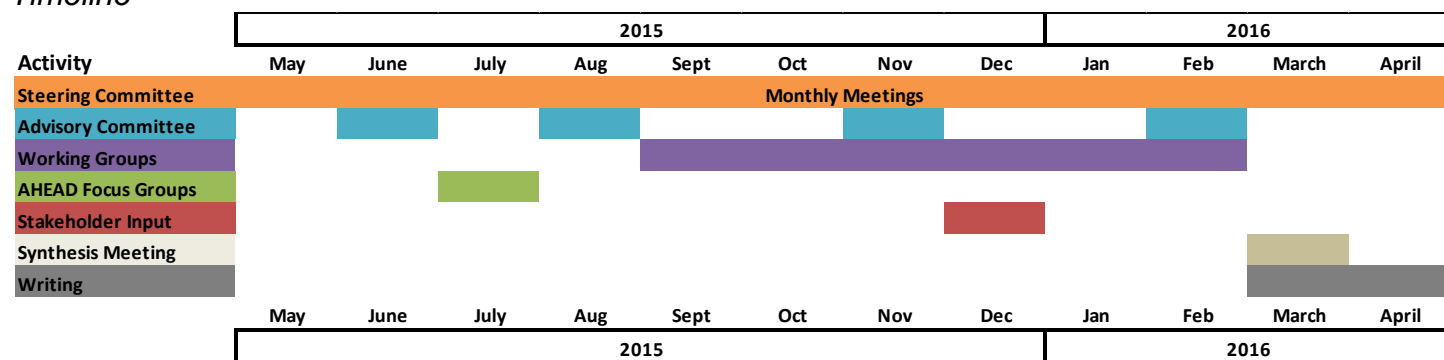
In almost 30 years in higher education, Dr. Wedaman has managed a variety of IT and library services and projects; he has also served on, chaired, or served as staff to many administrative

committees, including those on online learning, teaching with technology, library services, academic honesty, course management and assessment systems, and strategic planning. He served on advisory boards for the National Institute for Technology in Liberal Education, EDUCAUSE, and the Charles River Center for the Public Internet. As a trustee of the NorthEast Regional Computing Program for almost 10 years, he served as conference chair, treasurer, vice-chair, and chair. He's helped create and manage a variety of inter-institutional, collaborative initiatives, on topics from research on library and IT staff perceptions, to new models of professional development, to improving organizational learning.

Facilities, equipment, and supplies

The majority of the support for this project is virtual or personnel. For the in-person meetings, AHEAD has offered to supply meeting space for the focus groups in July, CNI has offered meeting space in December, and either Brandeis or Tufts will host the final meeting in March 2016. Conference call connections are available from Tufts. There will be a few expenses, such as catering and AV at the CNI meeting, catering at the final meeting, and transcription services for the taped focus groups and December meeting proceedings. These have been included in the budget and justification forms.

Timeline



ⁱ U.S. Government Accountability Office (2009). Higher Education and Disability. No. GAO-10-33. (<http://www.gao.gov/assets/300/297433.pdf> last viewed Jan 7, 2015), p.37.

ⁱⁱ Department of Education, National Center for Education Statistics. (2013). *Digest of Education Statistics, 2012* (2014-015), Chapter 3. (<http://nces.ed.gov/fastfacts/display.asp?id=60> last viewed Jan 3, 2015), p.3.

ⁱⁱⁱ This table represents the distribution of the 10.8% of students with a disability, as found by the 2011 National Center for Education Statistics (NCES) survey data and the 2011 AHEAD survey data report. Survey data is for students enrolled in 2008-09. *Reports of the Advisory Commission on Accessible Instructional Materials in Postsecondary Education for Students with Disabilities* (2011) <http://www2.ed.gov/about/bdscomm/list/aim/meeting/aim-report.pdf> (last viewed January 5, 2015) p. 15-16.

^{iv} *Reports of the Advisory Commission on Accessible Instructional Materials in Postsecondary Education for Students with Disabilities* (2011) <http://www2.ed.gov/about/bdscomm/list/aim/meeting/aim-report.pdf> (last viewed January 5, 2015). Excerpts from this report can be found in Supportingdoc1.pdf.

^v Tufts University supplied roughly 75 texts in fall 2014. A state university or community college with a significantly larger student body could be handling significantly more each term. It would not take many semesters to amass a “library” of substance.

^{vi} Department of Justice. Settlement Agreement Between the United States of America, Louisiana Tech University, and the Board of Supervisors for the University of Louisiana System Under the Americans with Disabilities Act. DJ #204-33-116. Exhibit 1. <http://www.ada.gov/louisiana-tech.htm> (last viewed January 6, 2015)

^{vii} Office of Civil Rights. Resolution Agreement South Carolina Technical College System OCR Compliance Review No. 11-11-6002. <https://www2.ed.gov/about/offices/list/ocr/docs/investigations/11116002-b.pdf> (last viewed January 6, 2015)

^{viii} *Authors Guild, Inc. v. HathiTrust*, No. 12-4547-cv, 2014 U.S. App. 278-1 (2nd Cir. June 10, 2014) p. 31 lines: 5-7

Original Preliminary Proposal

Planning Grant: National Digital Platform – Advancing Digital Resources

Executive summary: Across the country, colleges and universities are struggling to meet demand for alternative forms of course materials for students with an array of disabilities. At present, each institution is tackling this problem individually, at great expense, and usually without full campus coordination, much less consortial collaboration. The resulting work creates a large corpus of digital files in varying forms to manage on each campus. This planning project will bring together experts from disability/accessibility services with librarians, IT professionals, and legal counsel, to develop shared infrastructure within which universities can support their students with disabilities, while still attending to copyright concerns and student confidentiality. These planning efforts will result in a proposal for a repository of course content generated by institutions as well as a governance and business model for maintaining it and mechanisms for sharing files.

Problem Statement: It is wonderful that a growing number of students are able to pursue their academic careers despite a wide spectrum of disabilities, but colleges and universities are struggling to keep up with the needs of these matriculating students. After enrolling, each student is responsible for seeking support services. Therefore, schools have little time to prepare for a student's needs and little awareness of how many students may need support in any given year. Semester by semester, the courses and instructors involved in accommodations vary. Accessibility support includes a wide range of accommodations for numerous conditions, but here we are focused on digital files collected or created as a means to support students who are formally recognized as needing accommodation according to state and federal regulation and university policy as a result of disabilities (sensory, learning, attentional, psychiatric, etc.).

In order to assist these students, each school must obtain or create accessible equivalents, such as audio files, screen-readable text versions and Braille versions of course materials. If publishers cannot provide appropriate versions, or do not respond to requests, then schools do the work themselves. Custom work and faculty consultations may be needed to translate images, graphs or other supplementary materials embedded in texts. In the process of creating one version (e.g. an MP3 audio file), schools may create multiple files (e.g. first a scanned image file, then a word-processed text file, then the final audio version). In some cases audio-visual materials need to be created, such as transcribing subtitles for films, or creating new versions of films with voiced descriptions for visual components.

Most course materials in today's college classroom are in copyright. Outside of the HathiTrust corpus, there are very few readily available copies of in-copyright texts in digital form. Some publishers are relatively responsive to requests, but others are not. Numerous institutions may be seeking the same texts at any given time, but they have no way to share. Once the files are obtained, accessibility offices can provide access to students. But these offices are then faced with a significant file management problem: how to store all these files so that they can be re-used for other students with disabilities? The files need to be secured for the sake of copyrights, but most courses are taught multiple times with some re-use of common texts. Accessibility services staff are ill-equipped to manage these files efficiently. But campus libraries do have relevant skills and infrastructure for managing digital objects, from ingest and metadata creation to access controls and maintenance.

Proposal: In response to this difficulty, we propose to develop a shared repository for storage of these digitized files and associated metadata. Downloadable content will be restricted to authorized users and these authorizations must be administered effectively. The system should be designed to acknowledge the staffing constraints felt in many institutions, so adding to and using the resource should be as simple and user-friendly as possible. In this rapidly changing landscape, the project must do considerable

outreach in order to discover what activity is currently underway at university campuses, glean lessons learned (e.g. Ontario Council of University Libraries) and avoid duplication of effort.

Repository access restrictions: It is essential that universities protect copyrighted works deposited in the repository, just as they do for the materials they receive currently. In some cases, the university or college must provide evidence that the student has purchased the print copy in order to obtain licensed, reformatted files from a publisher. Therefore the working assumption is that this repository may need to be restricted to specified university personnel responsible for accessibility services to students, unless the material is out of copyright. In the likely event that we would be providing mediated access via university personnel, rather than students themselves, there is the added benefit of protecting student confidentiality (because no student records will be involved in the system). HathiTrust Research Center's experience with authentication and secure infrastructure is valuable and further exploration is needed.

Major questions for the planning study to address:

- How are university staff currently meeting demands? What capabilities and workflow would provide greatest assistance? To what extent are they seeking the same content?
- Who is the end user of the repository service? Accessibility Services staff use or approved students?
- How can the system protect and respect copyright holders and mitigate/reduce legal liabilities?
- What scale is most effective for organization? Would such a collaborative resource best be organized within existing consortia? By region? Nationally? Are there other categories of institution type, rather than geography, which might assist in creating a successful result?
- What technical architecture can be used to facilitate the work, but minimize maintenance costs?
- What initiatives are underway to serve these needs? How can we prevent duplication of effort?
- What metadata is necessary to differentiate files and enable discovery yet minimize data entry and training for those adding materials?
- Based on the system design, what is the ongoing cost to develop and maintain the system and what business model is best suited to sustain it?

Participants and Process:

Principle Investigator: Laura C. Wood, Director of Tisch Library, Tufts University

Co-chair of Steering Team: John Unsworth, CIO, Brandeis University

Planning Partners: Mike Furlough, CEO, HathiTrust and J. Stephen Downie, Co-Director, HathiTrust Research Center

Technology Leads: Paul Bergen, Director of Educational and Online Learning Technology Services, Tufts University and Joshua Wilson, Associate CIO for Academic Technology, Brandeis University

The planning process includes a targeted call for participants in a colloquy to define the landscape, share current activities, and identify working groups for further study and planning. Working groups will develop proposals for the project and submit them to the steering team. The steering team will use the working group reports to generate a final proposal for system design and business model for a project grant. Funding would be used to reduce travel and hospitality expenses for in person meetings, and for administrative support. The process would run May 2015-April 2016, for \$50,000.

Conclusion: In order to support the success of students with disabilities, libraries and universities must collaborate and share, using traditional expertise and skills for a new and growing subset of our populations. There is potential for a national digital platform for accessibility. If we are invited to submit a full proposal, a full budget will be included and members of the steering team will be specified.