

Building a Collections Collaborative at Yale University

Proposal to the Andrew W. Mellon Foundation

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Submitted: 16 July 2004

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Executive summary

Yale University is requesting \$409,434 from the Andrew W. Mellon Foundation to support a three-year collaborative initiative, beginning 1 November 2004, to enhance access to and use of library and museum collections across the university, focusing particularly on those that fall outside of the core collections of publications and artifacts acquired by these repositories. Generally termed “special collections” in libraries, these collections comprise an extraordinary wealth of resources for teaching, learning, and research, but are often inadequately visible and accessible because of the need for specialized resources and skills to acquire, preserve, organize, and provide access to them. They serve as both a microcosm of the need for greater integration across Yale collections as well as a universe of underutilized collection materials in their own right.

The availability of rich museum and library collections to enhance the education of Yale undergraduate and graduate students is tempered by the lengths to which faculty and students must often go to discover and integrate them into courses and research. Despite ongoing efforts by many of the repositories to engage faculty and students and make their collections available, the resources needed for such sustained effort are inadequate and must compete with those needed for essential collection preservation and management. Yale’s collections have been generally developed to meet curricular and research needs in particular disciplines. While recognizing and continuing to strengthen these traditional purposes, Yale also must respond to growing interdisciplinary approaches and the need for more specialized technological approaches to preservation and access that are best met through collaborative action.

Support from the Mellon Foundation will allow Yale to bring together its libraries and museums in a concerted effort to improve access to and care of these collections. The initiative will be coordinated through the principal investigator, a senior staff member of the library, and guided by a joint steering committee, established by the Office of the Provost, with membership from repositories across the university and the Yale faculty. In addition to establishing a comprehensive agenda for these collections, the initiative will also provide matching funds for collaborative projects that will pursue shared approaches and systems that advance the agenda. The outcomes of the initiative will include: 1) the development and testing of technical systems to provide comprehensive and integrated access for users to collection holdings across repositories, 2) the development of training programs for reference staff to increase the number of staff knowledgeable about collections at Yale and to improve their ability to assist users in discovering them, and 3) the establishment of appropriate methods of sharing resources across repositories to expedite the processing and availability of Yale collections. At the same time, it will develop a sustainable structure through which Yale repositories can discuss issues of common concern, share information on investigations and developments that they pursue, and develop collaborative programs and projects to address those issues and leverage their specialized knowledge and resources.

The initiative will be particularly mindful of relevant work underway in individual institutions and collaborations outside of Yale whose agendas and endeavours are particularly complementary or relevant, and will incorporate the findings and accomplishments of that

external work whenever possible. Yale will also use the initiative to broaden its participation in wider professional collaborations and projects with its colleague institutions.

At the conclusion of the project, Yale plans to have transformed its internal collections environment so that access to these collections and support for their use is more fully integrated into the life of the university and supportive of scholarly research and so that Yale takes advantage of and participates more completely in the development of a more comprehensive and integrated access structure for collections across institutions.

History and significance of library and museum collections at Yale University

For over 300 years, Yale University has been a collector and recipient of an extraordinary wealth of museum, library, and archival artifacts and collections. These range from rare books, manuscripts, and ancient clay tablets to paintings, prints, and drawings, from maps, photographs, sound and video recordings to musical instruments, natural history specimens, coins, and other items of significant cultural, historical, and scientific importance. Set alongside an extraordinary library corpus of printed collections, these artifacts and collections represent Yale's intense commitment to understand, interpret, represent, and preserve the human and natural past on every continent and in every age of history. These collections continue to grow in size and diversity, supported by the creativity of Yale's faculty and staff and the generosity of Yale's alumni and friends around the world.

Yale has acquired and maintained these unique resources in order to make them accessible and preserve them for the Yale and research communities. They are a critical resource for many areas of Yale education and scholarly research and are readily available to students, faculty, and researchers from outside Yale. The university's collections are carefully managed according to professional standards, and are preserved in environmentally controlled museums or in secure, closed storage areas. Individual descriptions of many of these collections can be found in Appendix 1 of this proposal.

While Yale recognizes its responsibility to the larger research and library communities to make its unique collections available, and supports that commitment with programs and services to disseminate information and provide assistance, the fundamental motivation for the university's investment in these collections is to provide undergraduate, graduate, and professional students with the research resources needed for their education. The recent report by the Committee on Yale College Education (CYCE) notes the value of these collections, particularly in the arts, for undergraduate education and recommends action to integrate them more fully into teaching and learning activities.

Such integration for the student and integrated access for the research community depends upon a level of collaboration and accessibility across the Yale museums and libraries that, while long desired, has been impractical due to limited resources and highly specialized and differentiated means of organizing the various unique collections under consideration. The most desired outcome of Mellon Foundation support will be to enable Yale museums and libraries to collaborate on and coordinate access to their special and unique holdings and to encourage the broadest and most creative uses of those collections in teaching and research. We expect to make significant and substantive progress in establishing an environment and protocols for collaborative action amongst Yale repositories and in creating sustainable technical and reference systems to improve access to Yale collections.

Yale collections have a range and depth that reflect the university's long-standing dedication to acquire, preserve, and provide access to them. At his 1993 inauguration, Yale president Richard C. Levin identified the commitment to the preservation of Yale's collections as one of the

defining characteristics of the university. Implicit in this commitment is the recognition that Yale has put these collections at the center of its learning, teaching and research environments. The high esteem and appreciation that the university has for these resources is reflected in the substantial programmatic and financial support that it has provided over many years.

Located in over a dozen libraries, museums, and departments, these collections have grown and developed to reflect the evolving educational and research needs of the university. There is a long history at Yale of faculty and departments as the driving forces behind the creation of these collections, acquiring them and supporting their care as active teaching and research resources. This history has resulted in the many specialized collections, with targeted missions and constituencies, spread across the entire campus. The model continues to work well in ensuring that the collections are living entities, reflecting the particular needs of their primary clientele in what they collect and how they provide access.

There are, nonetheless, significant connections amongst these localized collections in form of material, provenance, and subject matter. For example, prints, drawings, photographs, and other still images are present in every repository, often as the primary form of expression, as in the Lewis Walpole Library's collection of satirical prints or the Fry Collection of Medical Prints and Drawings at the Medical Historical Library, as components of a more comprehensive collection, as in many of the holdings of the Beinecke Rare Book and Manuscript Library, or as comprehensive collections in a particular field, such as the print, drawing, and photograph collections of the Yale Center for British Art and the Yale University Art Gallery. Both the Peabody Museum of Natural History and Manuscripts and Archives in Sterling Memorial Library have collections from Yale's great scientists and explorers, Hiram Bingham, James Dana, O.C. Marsh, and Addison Verrill. The performing and visual arts are well documented in the collections of the Yale Art Gallery, the Yale Center for British Art, and the Music and Arts libraries, as one would expect, but there are equally important holdings as well in the Divinity Library, Beinecke, and Manuscripts and Archives. There are countless other examples of these intersections across the university

The localization of these collections physically and programmatically close to their primary constituents has worked well and is a particular source of strength and direction for them. A growing realization of the importance and relevance of these collections to programs and endeavours in other parts of the university, however, has encouraged the first steps towards their wider and more integrated accessibility, and technology can provide key tools to accomplish this. This increasing sense of interconnectedness along with the ambitions in the CYCE report for "wider pedagogical use of the collections" in the undergraduate curriculum at Yale present a compelling and urgent case for furthering these efforts, and suggests that the most effective way of pursuing them is in a collaborative fashion.

The CYCE report (available at: www.yale.edu/cyce/report/cycereport.pdf) addresses a wide range of challenges facing the Yale College curriculum. While it specifically notes the need for greater integration of Yale collections in undergraduate education, especially in the visual arts, its broader theme of reaffirming and strengthening the aims of a liberal arts education "to train a broadly based, highly disciplined intelligence" is particularly relevant to the goal of improving access to those collections. These collections provide a wealth of raw material, frequently

untapped by other researchers, with which students can develop and hone their skills in a variety of disciplines. The richness and range of collections at Yale provides opportunities not only for “training [the mind] in various modes of inquiry” but also for stimulating the “discovery of new interests and abilities, not the development of interests fully determined in advance” that the report promotes.

The universe of collections at Yale is a broad and diverse one and the challenges to making them more accessible and making that accessibility more integrated are immense. A starting point for pursuing that collaborative agenda is the existence of manuscripts, archives, prints and photographs, maps, unpublished audio and moving image materials, musical scores, architectural records, oral histories, and similar materials that are often grouped under the rubric of “special collections” in libraries. While museums do not use that term, they too possess collection materials in these same genres and formats that may fall outside of the core focus of their collections. It is in this intersection of museum and library holdings that Yale proposes to begin its exploration of comprehensive and integrated access to collections across the university.

The specific missions and core collections of individual repositories impose different priorities for the management of their “special” collections. The museums, whose primary collecting focus is the artifact or specimen, also possess important archival and manuscript documentation, such as working papers, documentation, and field notes. Conversely, the libraries, whose primary collecting focus is published works, also have strong interests in archival and manuscript collections and may also possess important art works or other objects acquired as part of a personal or other collection. In each case, these materials may not be readily or even appropriately managed by the practices and protocols established for the core collections, and thus in that context present “special” collection characteristics that might best be addressed by cooperative and shared expertise across repositories.

In addition to the issues that arise from the varying administrative placement of the collections, the formats, audiences, and professional practices vary widely across the spectrum of library and museum repositories. Bridging these differences to provide comprehensive and integrated access requires a much clearer understanding about the range of collections and the practices used to describe and provide access to them, and a sustained investment in exploring how to exploit existing commonalities and encourage the development of new ones.

Opportunities and challenges

Yale has a long history of supporting collaborative efforts to provide widespread access to its collections across the academic and scholarly world. It is a founding member of the Research Libraries Group and has participated in many of RLG’s endeavours to provide access to special collections, including taking a leading role in the development of methods for integrating catalog records for many types of unpublished materials in online library catalogs. Yale was also an early implementer of the Encoded Archival Description definition that has become the professional standard for sharing of archival finding aids across repositories. Yale has been a strong supporter of and active participant in the Association of Research Libraries agenda on

hidden collections (<http://www.arl.org/collect/spcoll/>), playing a leading role in developing techniques for identifying the scope of uncataloged or inadequately described materials and prioritizing them for processing. Just recently, Yale hosted one of the largest preconference meetings of the Rare Book and Manuscripts Section of the American Library Association on the theme of “Ebb & Flow: The Migration of Collections to American Libraries.”

In addition to participating in profession-wide activities on descriptive systems and standards, and collections, there have also been collaborative efforts to make the library and museum collections at Yale more visible, including the publication of a special collections brochure (attached as Appendix 2), a special collections website (www.library.yale.edu/special_collections/), and a biannual special collections fair. All of these activities have included participation by a wide range of Yale museums and libraries, and have provided audiences with a high level picture of these collections at Yale.

Yale repositories have also participated in collaborative efforts to provide support to faculty for integrating the use of primary source material into their courses. Many of the materials incorporated into projects supported by the library’s Electronic Library Initiatives (ELI) program, a focused effort to facilitate and study the use of digital images and other materials in teaching, learning, and scholarship, come from these collections. Yale has also been an active partner in the Mellon-funded grant project to the Survivors of the Shoah Visual History Foundation to make digitized versions of their Holocaust testimonies available for use in courses.

Given the range and depth of Yale’s library, museum, and archival collections, they have also become indispensable resources for the international community of scholars and researchers and a significant percentage of users in each repository come from outside the Yale community. The richness of these holdings has been recognized with the establishment at Yale of the Mellon-supported Special Collections Humanities Fellowship, which brings post-doctoral researchers to Yale to work in and teach from the collections, with an emphasis on multi-disciplinary and multi-collection endeavors. Other current projects undertaken by Yale repositories that aim to bring the riches of Yale collections to the wider research community include:

- Along with five other archival repositories in the U.S. and Europe, the Divinity Library is creating an Internet Mission Photography Archive (IMPA) and will contribute digitized photographs from its missions-related archival and manuscript collections.
- The Peabody Museum is engaged with other natural history museums and biodiversity communities in developing standards and knowledge sharing initiatives (e.g., the Global Biodiversity Information Facility) that allow for distributed digital access to biodiversity data. While not ad hoc initiatives, however, they lack a strong library community linkage to related resources such as historical map data and archival records.
- An international research and exhibition project focused on the work of the 20th century architect, Eero Saarinen, is making the Saarinen collection in Manuscripts and Archives a central shared resource for all of the participants.
- The Yale Library is leading and coordinating Project OACIS (Online Access to Consolidated Information on Serials), a collaborative database project that will create a

public and freely accessible, continuously updated listing of Middle Eastern journals and serials, including those available in print, microform, and online.

- The Economic Growth Center Digital Library (EGCDL) at Yale, with support from Mellon, has digitized a selection of Mexican state statistical abstracts and made them accessible to the global research community. The project addresses issues and challenges unique to statistical materials, such as evaluating whether common digitization practices and standards are ideally suited to statistically-intensive documents; automating metadata production for thousands of PDF files and Excel tables; and designing a user interface to present the PDF versions of the statistical abstracts along with individual tables from the series.
- The Babylonian Collection has implemented a project, also with funding from Mellon, that aims to assure that all the books and journals housed in that collection, many of them specialized (and often uncommon) materials are fully and properly catalogued and widely available for scholars and students the world over.

All of the repositories work with faculty to select holdings of particular relevance to their courses and to assist them with integrating those holdings into their teaching. Many students use the collections as sources for their own investigations, both as part of their assigned course work and as independent research, and the repositories are continually reviewing their ability to understand and support how they work. Beyond the ongoing support that the repositories provide to faculty and students, many of them are also taking concrete steps to improve their ability to serve these constituents.

The Yale Art Gallery, as an example, has recently appointed its first curator of academic initiatives in the museum's department of education to help integrate the Gallery's collections into teaching throughout the University, emphasizing interdisciplinary connections as well as ties to History of Art and the School of Art; the Yale Center for British Art has made a similar appointment with many similar goals. Manuscripts and Archives, as part of its participation in the Survivors of the Shoah Visual History Foundation grant has provided intensive support for the integration of Holocaust survivor testimonies in Yale courses. Leo Buss, Professor of Ecology and Evolutionary Biology and Geology and Geophysics, and Curator of Invertebrates at the Peabody Museum has offered an undergraduate seminar in "The Collections of the Peabody Museum" to enable freshman and sophomores to explore selected scientific problems through the use of the biological and geological collections that led to their resolution. The Beinecke Library has provided a full array of master classes for graduate students in topics drawn from their collections, such as "Pictures as Primary Sources for American History" and "Maps as Historical Tools."

Yale must find appropriate ways to transform its collections environment that will respect and take advantage of individual repository missions, constituencies, and accomplishments, but that also provide comprehensive and integrated access to their holdings and adequate resources, individually and collectively. The extraordinary strengths of Yale's collections and these ongoing efforts of Yale repositories to acquire, preserve, and provide access to them should not obscure the untapped potential and complex issues that are shaping the Yale collections environment. Interdisciplinary studies, the demands and opportunities presented by new technologies, ambitions for integrating Yale's collections more completely with undergraduate

education, and limited resources are stressing the model of closely focused and often isolated collections.

The greatest concern is the challenge that the current environment poses for the student or researcher. Despite the efforts noted above, the dissemination of knowledge about many Yale collections is not comprehensive or fully integrated; users often need to rely on information in separate databases or local catalogs, ad hoc referrals from knowledgeable staff, and serendipity to discover collections relevant to their needs. In addition, the long tradition of different descriptive standards and control languages among museums, libraries, and archives create complex problems for integrated descriptive standards and presentation.

Many of the collections are also not represented in existing shared systems at Yale, such as Orbis, the library's online public catalog, or the finding aids database, because they have not received adequate processing. The library's "Unlocking Special Collections" report (Appendix 3) identifies over a dozen collections in the library system alone that are uncataloged or otherwise described inadequately. While standards and systems for describing collections exist and are used by many of the repositories, not all have the resources to implement these standards or to enter descriptive information into existing access systems. The result is a set of collections that are well-described and readily accessible alongside holdings that are described in local catalogs, inadequately described, or unprocessed. This disparity is not just a characteristic of the individual repositories, but applies equally to uneven access to holdings within an individual repository. The two-fold challenge is to create the architecture that will support integrated access across different domains that have their own descriptive practices and to provide the resources that will enable repositories to describe their collections expeditiously in ways that are supported by that architecture.

The collaborative challenge

Yale repositories have been energetic in exploring and implementing ways to improve the visibility, accessibility, and management of their collections, but these efforts are often restricted to a single repository or collection. Digital image initiatives, for example, are generally localized and disconnected. Incompatible data structures, if continued, will make it difficult to support federated searching or harvesting of image metadata. Scanning and conversion operations and skills are also localized, preventing straightforward implementation of large-scale projects that a production environment could facilitate, and requiring individual repositories to acquire the knowledge and skills required for these projects independently. Shared knowledge of encoded text techniques is limited to specific document types, such as EAD for finding aids. Individual repositories are building expertise and beginning to utilize other applications, such as TEI for Holocaust testimony descriptions, but there is no established mechanism for communicating this experience more widely.

This situation does not reflect an unwillingness on the part of repositories and individuals to share their specialized experience and knowledge, but the absence of structural mechanisms to encourage such exchange in the face of increasing demands for resolution of specific, local issues and needs. Collaboration across collections at Yale is now seen as a luxury that is

recognized as desirable and needed, but which requires intellectual space and time that is in very short supply.

Yale's range of collections and the manner in which they are configured in separate repositories provide the basis for an exemplary experiment in developing such a collaborative environment. The diversity of collections provides a critical mass for testing the possibility of integrating a wide range of material types into a shared method of discovery and accessibility. What are the crucial factors that will determine whether a federated search across natural history specimens, paintings, rare books, institutional records, and music scores makes sense to the user?

Equally compelling is the relative autonomy of the various entities that hold collections at Yale. In another context, the Yale ethos has been described as one of "fierce independence." Determining the conditions under which an environment can be created in which that independence is not tamed but leveraged for the common benefit of all collections and their users would be a significant contribution to understanding how and where true collaboration within and across institutions can work. The innovative and important work that Yale repositories have accomplished in understanding the digital landscape, mastering new techniques, experimenting with new approaches to faculty and students, and developing best practices can be so much more valuable if it can be tested against a wider set of situations and adopted where appropriate and useful.

There are three broad areas, in particular, that hold great potential for improving this environment: comprehensive and integrated access, mainstreaming collections reference, and adequate processing resources.

1. Comprehensive and integrated access

The present base of integrated access systems at Yale is limited in its capabilities and comprehensiveness. The major shared systems are Orbis, the library's online catalog, and the finding aids database. Orbis provides users with access to catalog records for print and manuscript materials held in the libraries and in some museum collections; since MARC is not the most suitable format for many core museum holdings, however, the majority of museum holdings are not represented in Orbis. The requirement for MARC records also limits the suitability of Orbis for providing information on large collections of individual items; the investment of cataloging time to represent each item is greater than all but a few repositories can afford and even then coverage is rarely comprehensive.

The library initiated the finding aids database to search and deliver inventories and guides to archival and manuscript collections. Based on the Encoded Archival Description (EAD) standard in the archival profession, the database now includes finding aids for holdings of the Arts Library, Beinecke, Divinity Special Collections, Manuscripts and Archives, and Music Library, with other collections expressing interest. The case of the finding aids database is symptomatic, however, of one of the major issues confronting Yale collections and a brief explanation of its development will illustrate the point.

Three Yale repositories (Beinecke, Divinity, and Manuscripts and Archives) followed up on reports of the development of a standard for encoding finding aids underway at the University of California, Berkeley, to explore the project and its goals and decided to become early implementers and testers of the standard. With funding for the software and hardware provided by the Beinecke, an ad hoc group of staff met over the course of two years to learn and apply EAD to their individual finding aids. The group agreed on a set of basic assumptions and decisions for application of the standard and the initial configuration of the system. The Library Systems Office provided installation and maintenance of the platform but each repository developed its own method of authoring or retrospectively encoding its finding aids. As a result, any other repository that wishes to contribute encoded finding aids to the database must develop its own infrastructure for creating and maintaining them. While the original repositories have gladly provided advice and pro bono assistance to these repositories, this is not a sustainable model for support. Discussions are now underway to develop a common toolset and training that could provide this type of assistance and ongoing support, but funding and collaborative models are not yet obvious.

In other areas, such as discovery and delivery systems for digital images, most repositories have developed their own individual systems. A few repositories have used the Beinecke's locally developed Digital Library model, while others have gone in different directions. Some collections are also available through the Luna Insight application, particularly for teaching support.

The Yale Art Gallery has begun to post object records for works of art from The Museum System (TMS), its internal collections database, through "E-Museum," the electronic link within TMS to the Internet, and will continue to expand this offering. E-Museum will be linked to the World Wide Web through the gallery's web site beginning in the fall. TMS does not, however, include archives or other documentary collections at the gallery. In a separate initiative, the Art Gallery is working with ArtStor on a project to make digital images of the early Italian paintings available. The gallery has been an active participant in the University's "Imaging America" project from its inception and has provided digital images of American works in the collection for that project.

The result of these individual projects is that the student or other researcher wishing to search for images at Yale needs to understand the different searching protocols and features of each system, and the scope and content of each one. Federated searching initiatives are in progress. In the Luna Insight system the ability to search across seven local and remote image collections is already in place. Similar cross-collection searching capabilities in the Beinecke Digital Library software are in the advanced stage of development. In June, the library began implementation of the MetaLib portal application from Ex Libris, which will provide federated searching across a variety of electronic resources, both local and remote. Harvesting of metadata is under discussion but requires an organizational commitment and structure, as well as systems that will support this effort. The library is currently expanding its integrated access initiatives but resources to pursue such efforts must be reallocated from other tasks.

Geographic information systems knowledge and experience are dispersed across a few repositories and applications but a cross-campus committee under the co-sponsorship of the

Information Technology Services and the library have worked collaboratively to coordinate efforts and services including maintaining a central web site for direction and instruction to campus resources [<http://www.yale.edu/gis/>]. The Electronic Library Initiatives program has introduced and is evolving a concept of cross-unit support teams that provide faculty collaborative support from across campus with expertise in pedagogy, technologies, and content identification and research, as needed.

Individual repositories have often built local systems because of the absence of central university-supported applications, but also because they may have particular local needs that existing systems cannot satisfy. While exploration and analysis may provide the rationale and impetus for building large shared systems, the use of federated searching applications and data harvesting techniques can allow repositories to continue to build and maintain individual systems that satisfy local requirements while contributing the information in those systems to an integrated interface that provides students and other researchers with cross-collection searching.

2. Mainstreaming collections reference

Students and researchers identify collection materials of interest to them at Yale in a variety of ways. Because Yale collections are physically separated, most reference service for them is local and personal; it takes place at the individual Yale repository and is tailored to the individual researcher's inquiry. This also reflects the distinctive nature of many of the access tools for collections and the particular knowledge about their holdings that resides in the collections staff.

Many Yale repositories have done much to integrate collections information into the online library catalog and other discovery tools and thereby have improved the likelihood of a researcher discovering these holdings when conducting a general search of the library's holdings. Outside of specific repositories, however, the user must rely on the library staff providing general reference service, who may not have regular direct contact with the full range of Yale's collections, how they are represented (or not) in the online catalog, and other tools that would assist in the discovery process. In order to learn about museum collections, users generally have to consult directly with curators in their respective departments. The familiarity on the part of staff providing reference assistance with Yale collections beyond published resources is more a function of personal interest and serendipity than any established knowledge base, training, or communication mechanisms for developing and maintaining skills in broad collections reference; this is especially true with regard to collections in Yale museums. Equally, museum public services staff lack an ongoing mechanism for learning about areas in which library collections intersect with the interests of their constituents.

While in-depth reference and assistance with collections will always require a deep level of experience with the intricacies of these materials, steps to mainstream a fundamental level of awareness, knowledge, and skill in front-line staff providing reference services deserve exploration. These same staff are often responsible for working closely with faculty in bibliographic instruction and on focused projects to identify and integrate library holdings into courses. Increasing their knowledge of and enhancing their ability to deal with the full range of

Yale collections could be a promising avenue for increasing the regular use of these materials in teaching and research.

3. Processing resources

The issue of resources for arranging, describing, and managing collection materials is a long-standing one at Yale and elsewhere and directly affects our ability to provide students and researchers with timely and effective access to collections. Yale's ambitions for taking the first step in preserving the record of human achievement, by identifying and acquiring collection resources that are the primary documentation of those activities, have always been tempered by the availability of shelving and storage space and processing resources to preserve and provide access to them in a reasonable period of time. While the scarcity of such resources is a valuable constraint on overambitious acquisition, it has also been an obstacle to the expeditious preparation for research use or exhibition of those collections that are acquired.

This is especially true with large documentary collections that contain media and digital materials that require greater and specialized investments in staff, supplies, equipment, and services than smaller, more traditional collections. Of special concern is the absence in many cases of established standard practices that can make such processing routine. Individual Yale repositories often are skilled in or have developed techniques for such materials, but this knowledge is rarely shared in a systematic way with other repositories, within and outside of Yale, that might benefit from work that has been done.

It is impractical and uneconomic for Yale to replicate in each collection the specialized knowledge, skills, and resources needed to meet the expectations and needs of modern, technology-literate users or to meet the access and management needs posed by those collections in new media and formats. This is especially true for the smaller repositories that do not have direct access to a base level of resources that would give them the agility and flexibility to meet those challenges that most directly affect their mission and constituents. The sharing of knowledge and resources to address common issues across the collections at Yale is generally ad hoc with little prospect of or attention to shared support.

In addition, methods of processing vary greatly across Yale repositories. In many instances, this differentiation is desirable, but further discussion of basic principles and assumptions can help explore whether different techniques and practices can help existing resources go further than they now do, especially in the area of public access. Similarly, such discussions may also identify economies of scale in operations and activities that could allow, in certain circumstances, more and timelier processing of the special materials in museum and library collections now posing the greatest challenges, but also representing highly important, and in many cases, largely hidden, assets. These opportunities present themselves in managing and providing access to collections created and maintained in newer technological forms of collections, as well as in traditional practices. The technical infrastructure and knowledge for the management and delivery of digital video that Manuscripts and Archives has developed in the Shoah Foundation project, for example, could provide the basis for a common environment for such materials across the university. In the more established activity of processing of archival

and manuscript materials, the exploration of shared processing staff and space, particularly for smaller repositories, could provide high quality and timely arrangement and description of these collections without the need for redundant development of expertise and resources. In identifying and implementing such endeavours and experiments as part of this initiative, the participating repositories are likely to discover other areas where common action can provide significant savings and efficiencies in operations.

Engaging with colleague institutions

Yale is not alone in facing these opportunities and challenges. Peer institutions, including large research libraries, museums of all types, archival and manuscript repositories, and historical societies, are wrestling with similar constellations of issues affecting their ability to acquire, manage, and provide access to collections. Demands for integrating the use of collections more effectively and easily into the curriculum, calls for comprehensive and integrated access that transcends organizational and format boundaries, and the need to rethink processing practices to make collections available more expeditiously define the collections environment in many institutions, ranking with the preserving and providing access to born-digital resources as the most pressing issues before us.

Yale has much to learn from projects already underway in other places. A few are of particular relevance and interest to the Yale environment.

- The Digital Consulting and Production Services at Cornell University and the University of Michigan's Digital Library Production Service provide models for production-oriented operations for creation, conversion, and management of digital resources.
- The Harvard Library Digital Initiative has established a program of digital infrastructure and support that provides a model for system-wide capabilities, including an internal challenge grant program for digital projects. Also at Harvard, the Open Collections Program seeks to provide subject-based digital collections from across the university for teaching, learning, and research.
- The Mellon-funded Archivists' Toolkit project, based at the University of California, San Diego, is focused on developing standard tools for the description and management of archival and manuscript materials.
- The University of Virginia's Institute for Advanced Technology in the Humanities has pioneered mechanisms and structures for providing support to technology-intensive faculty projects.
- Manuscripts and Archives at Yale has developed protocols for prioritizing work on modern manuscript collections and university archives; the possible application of this approach to materials in other Yale repositories would benefit from insights gained from similar efforts at other institutions, such as the work done at the Historical Society of

Pennsylvania. A panel on the two approaches is scheduled for the 2004 annual meeting of the Society of American Archivists.

- Yale is already in partnership with the Shoah Foundation, Rice University, and the University of Southern California in defining practices and systems for the delivery of digital video over the Web for educational purposes and has also consulted with New York University's Digital Library Team on these issues.
- The comprehensive programs of the University of Chicago's Special Collections Research Center can suggest ways in which to Yale's support for teaching from the collections can be enhanced.
- The American Council of Learned Societies has sponsored a national commission on cyberinfrastructure in the humanities and social sciences that is investigating issues and approaches affecting the digital research environment in these disciplines. Its recommendations and subsequent initiatives flowing from its work will be of direct relevance to Yale's collections endeavours.

In Yale's current environment, however, most interactions are based on departmental or individual connections; there is no established method for a university-wide investigation, assessment, or engagement with these types of initiatives and learning from them. Collectively, Yale repositories and staff have individual knowledge of many of these activities undertaken by colleague institutions. The framework envisioned in this proposal must be informed by the achievements of these projects and issues that they are still facing in a systematic and ongoing way and Yale must contribute more systematically and institutionally to the discussion and investigation of critical collection issues and to approaches for addressing them.

Building a collections collaborative at Yale

Building on its strong history of collections and its commitment to their continued development, Yale University proposes to strengthen their visibility, accessibility, and integration in teaching and research by establishing a collections collaborative. The collaborative will engage all of the major collections in the university, and will develop and sustain the framework required to advance the objectives of:

- fostering the widest possible knowledge of and integrated access to collections holdings across Yale libraries, museums, and departments;
- acquiring, creating, and distributing resources and expertise to deal with collections issues;
- fully integrating collections into the life and programs of Yale University, particularly the curricula of Yale College and of the graduate and professional schools; and

- improving user access to and experience with collections by developing and making available consistent and reliable discovery, access, and use mechanisms.

While there have been collaborative and individual efforts to pursue these objectives at Yale, as noted above, they have generally been ad hoc and opportunistic. There has been no sustained effort to explore how these objectives may be achieved in the context of a broad shared vision of how vital these collections are to the Yale educational experience and scholarly research, and how that vision can be achieved through coordinated efforts. The focus of this three-year initiative is two-fold:

- Developing the structure and mechanisms to foster and sustain a collaborative engagement amongst Yale collections, particularly with regard to the intersection of “special” collections held by the museums and libraries. An important outcome of this initiative must be a sustainable structure and process that will not only guide the collaborative’s work through these first three years, but will also enable it to become an ongoing venue for the exchange and leveraging of knowledge and expertise, for identifying and prioritizing projects amongst the repositories, and for generating the resources to pursue the most promising of those projects.

The Center for Language Study at Yale, established with help from the Mellon Foundation, offers a possible model in which repository programs remain localized and focused, but are complemented by university resources available to them for dealing with common issues. As noted in the CYCE report, the Center has “created a community among language teachers; supplied a place where shared issues of language pedagogy can be addressed; offered incentives for curricular experiment and support (including technological support) for new teaching practices; and provided a way to keep in touch with enlightened developments outside of Yale.” A similar approach with regard to providing access and managing Yale’s collections could be equally transforming.

- Supporting a limited number of projects that supporting a collaborative collections agenda as established by the collaborative’s joint steering committee. The projects might build on existing efforts to address currently identified needs, especially in constructing shared toolkits, technological capacities, and federated discovery systems; conduct surveys and assessments that sharpen the picture of the state of Yale collections and their needs; or sponsor awareness and training opportunities in focused areas to broaden the base of knowledge amongst repository staff and enhance Yale’s understanding of particular collection issues and developments. It is assumed that the projects will be targeted at improvements in the three areas identified as opportunities and challenges above: comprehensive and integrated access, mainstreaming collections reference, and processing resources. The steering committee will solicit project proposals from Yale’s collections and prioritize them for collaborative funding based on their significance to the agenda, plan of work, and availability of matching resources.

Responsibility for setting the research, communication, and project agenda for the collaborative will rest with a steering committee convened by the University Provost with representatives from

all of Yale's collections. The Provost will also appoint a representative to provide a broad university perspective to the work of the collaborative, and faculty representatives from Yale College and the graduate and professional schools will be recruited. The steering committee will also ensure that faculty, library selectors and area studies curators, curators in the museums, and other subject specialists are kept informed of the collaborative's agenda and progress and have ample opportunity to contribute and respond to it. The University Library will provide the institutional home and administrative support for the initiative.

Yale is requesting \$409,434 from the Andrew W. Mellon Foundation for the first three years of the collaborative's work. The three-year initiative will begin on 1 November 2004 and conclude on 31 October 2007. The funding, detailed in the attached budget, will support:

- the 40% assignment of the principal investigator, a senior library staff member, for three years to coordinate the initiative;
- annual collection retreats for the steering committee, collection staff, and invited guests, led by an outside facilitator with a perspective independent of any one Yale repository, to plan and track a collections agendas and to communicate the collaborative's findings to colleagues at Yale and in other institutions;
- visits by Yale staff to other institutions, and presentations and consultations by invited guests from other institutions and initiatives to strengthen Yale's ability to benefit from and contribute to accomplishments and projects external to the university;
- an incentive fund for collaborative projects selected by the steering committee and matched by Yale resources.

The collaborative will pursue its work in three phases: developing consensus on broad principles and assumptions and a collections agenda; identifying and selecting appropriate projects that support the goals of the agenda; and determining a sustainable mechanism for continuing to advance these goals beyond the term of the funded initiative. The collaborative will identify numerous opportunities for projects that advance the agenda, including some that may be suitable for funding from sources such as the library-museum collaboration grants program of the Institute of Museum and Library Services or that may become university development opportunities.

Phase 1. Setting and tracking the agenda

The first order of business for the initiative will be to assemble comparable information about the existing environment in Yale collections, including best practices and descriptive standards, information systems, areas of particular concern, known areas of collaboration and activity in place or under discussion, and opportunities and issues that affect the ability of integrating collections into the curriculum. This survey will build on the existing database of digital initiatives assembled by the Provost's Office recently and will be constructed so as to provide a baseline of information that can be reexamined near the end of the three years to provide an

assessment of progress and changes. Comprehensive information on initiatives underway in peer institutions that address collaboration issues will also be assembled and disseminated.

The design and conduct of the survey and compilation of its results, along with the formation and launch of the steering committee, will take approximately four months, following which, the initiative will sponsor the first of three annual retreats for the steering committee and other key individuals with the goal of agreeing on principles of collaboration; protocols for decision-making, implementation of projects, and participation; and a preliminary agenda of priorities. The retreats will also include attendance and presentations by colleagues in other institutions who have explored and worked on similar collection issues and will thus offer an opportunity for a larger discussion of collaborative models in and across repositories.

Phase 2. Pursuing collection-based projects

Following the establishment of baseline information and setting of the collections agenda, the steering committee will engage with the second focus of the initiative: the selection of projects that it will support or sponsor to meet the objectives of the collaborative. These projects will provide immediate and long-term benefits to collection users at Yale as well as fostering the culture and framework for continuing to bring Yale repositories together in an ongoing engagement to serve the Yale and research communities better. Candidate projects will require a 1:1 match in Yale resources – funding or dedicated staff time – in order to qualify for support from the incentive fund. They will also require a detailed project definition and plan of work that will provide a schedule and milestones that can be easily tracked, and will provide regular updates to the steering committee in their progress.

The selected projects will address the three areas identified above that hold the greatest potential for transforming Yale's collections environment. The initiative could provide support, for example, to efforts already under discussion that would provide harvesting of image metadata from multiple systems across campus for a cross-repository image gateway. Developing an ongoing series of informational and training sessions for all library and museum staff who provide reference service so that they are better able to direct users to these collections, whatever their location, would increase the possible points of discovery of these materials. Implementing shared standards, facilities, and procedures for processing and providing access to the increasing range and number of moving image materials would provide the economies of scale that will enable all repositories to make these collections readily available to users instead of providing access on an ad hoc basis, as is often the case. There are a great number of similar projects in these areas that would advance the goals of comprehensive and integrated access and expedited processing and availability of Yale collections. The challenge for the steering committee will be to select those that will make the most immediate impact for users, that address known areas of common concern where existing efforts can be quickly ramped up, and that will advance the capacity of Yale repositories to understand and work collaboratively on shared collection issues.

The work of the collaborative will reinforce many initiatives and discussions already underway at Yale and provide a structure and means for pursuing them more vigorously and expeditiously. The focused attention on these collections in this initiative will provide Yale with a testbed for

targeted projects that will explore many of the issues and challenges that integrated access over a wider range of collections will present. For example, any investigations or steps taken to provide cross-searching or harvesting of information in archival and manuscript finding aids with descriptions in the Peabody Museum's EMu collections management system will provide greater understanding of the commonalities and differences in the standards, capabilities, and technologies of the systems as a baseline of knowledge for more extensive cross-searching of museum collections and library holdings.

Many of these developments are the result of focused attention to integrated library activities, made possible with the hiring in 2003 of an Associate University Librarian for Integrated Library Systems and Technical Services. Initiatives now underway include:

- implementation of a shared rescue repository for digital assets as an interim step as the library develops a full digital preservation repository;
- revival of the Encoded Archival Description group that is drafting recommendations for shared authoring tools and training supported with central library resources, a policy body, and designation of a position with specific central responsibility for finding aids;
- implementation of federated searching capabilities, including for digital images maintained in separate systems; and
- establishment of a federated mechanism for leveraging systems expertise that is spread throughout the library.

Similarly, the Special Collections Subcommittee of the library's Collection Development Council has initiated a number of important projects to raise the visibility of these collections at the university. The work of this subcommittee will be a particularly valuable source of inspiration and ideas for the collaborative since it has been the only established body that has focused specifically on special collections issues.

All of these projects can be informed by the collaborative work of this initiative. The creation of testbeds, greater familiarity with the range of systems in use, communication between collections and technical staff in different repositories, and a better understanding of common user needs will be explicit objectives of the initiative that will reinforce the work or discussions already underway.

The steering committee will evaluate each proposed project based on its ability to advance the collaborative collections agenda and its plan of work. Multi-repository participation in each project will be mandatory, but different constellations of repositories may elect to participate in different projects. Preference will be given to those that build on existing Yale initiatives or address identified Yale needs, but the committee will also encourage projects that explore issues that have not been adequately addressed at Yale.

The collaborative will also inform – and be informed by – the work of the university's Digital Landscapes group that is a forum for exchange of information amongst university departments

and that is considering models that would rationalize and leverage information technology efforts and resources across Yale. The library has recently formed an internal “uPortal development team” charged to actively research and develop channels, or feeds, for the University's uPortal implementation. These channels will provide customizable integration of diverse information resources for faculty, staff and students. Channels already deployed include 'Library Books Out', which displays current patron information outside of the Library Management System. The Library is a key partner in the University's concerted effort to enhance the uPortal in time for the fall semester. Making customizable collections information a prominent resource in the uPortal environment would support the objectives of this initiative.

As noted above, the Committee on Yale College Education has addressed the issue of integration of Yale's collections into undergraduate teaching and learning, especially in the arts. The schools, departments, museums, libraries that are directly concerned with the arts have already begun discussion of ways in which they can work together and individually to respond to the ambitions of the committee's report. The library's ELI projects and similar initiatives such as the Shoah Foundation project also address this issue and have explored assessment techniques that will be valuable to measuring the collaborative's progress. Projects that address the routine integration of collections in the existing and evolving array of learning management systems will be particularly appropriate.

Phase 3. A sustainable framework

Yale has a long-standing and continuing commitment to its collections and to their vital role in teaching, learning, and research at Yale and in the wider research community. The invitation to submit this proposal has accelerated and enlivened a discussion that had already begun in the university and the enthusiasm of the repositories and individuals who contributed to the development of this proposal reflects the shared recognition of the urgency and importance of moving in the directions suggested here. The measures of success for this initiative will not be limited to the development of comprehensive and integrated access systems, improved collections reference mechanisms, or the more effective marshalling of processing resources. Equally important will be the transformation of the collections culture at Yale so that collaborative engagement on collections issues and challenges becomes an integral part of the development of these resources. Once Yale has used this initiative to establish a framework for collaboration, the support of those structures and mechanisms will become a regular feature of the university's commitment to its collections.

The existence of this collections framework will facilitate the continued pursuit of collaborative projects across Yale and with other institutions. The lack of an established and ongoing framework for addressing collection issues is directly responsible for the localized and ad hoc nature of Yale projects and initiatives and has hindered a comprehensive perspective on Yale collections and integrated access to them. Consultations with collection directors and staff during the development of this proposal have already revealed a number of intriguing suggestions for cross-repository and cross-collection projects. In the absence of these consultations, identifying such projects would have been entirely serendipitous since there is no

venue in which such ideas can be raised and discussed. These ideas can now be the basis for discussion of pooled resources and common funding applications through a number of avenues.

This framework will also include a commitment to Yale's wider engagement with and contribution to the professional communities and institutional colleagues who are faced with the issues of facilitating access to and management of collections resources. The initiative will provide an opportunity for fostering that engagement through the dissemination of its project plans, reports, surveys, minutes, and other documents on a publicly accessible web site, as well as through exchanges of visits and presentations by invited guests. The initiative will encourage publication of investigations and findings through traditional professional channels and provide a local venue for reports to the Yale community and others on the accomplishments of the initiative and its projects.

The primary outcomes of the initiative will be the transformation of Yale's collections environment to facilitate greater collaboration amongst Yale repositories and integrated access to their collections, as well as concrete and sustainable systems to achieve that goal. In addition to annual reports on progress, individual project reports, and other documentation that Yale will make publicly available as noted above, Yale will submit a final report to the Mellon Foundation that describes the changes in Yale's collections environment over the course of the initiative, based on measurable information from surveys and information gathered at its outset and conclusion, assesses the implications of these changes, and identifies further directions and challenges.

The Mellon Collections Collaborative at Yale will be a major impetus for transforming collections-based education, research, and management at the university. It will provide a formal structure in which the directors and staff of Yale's far-flung collections can meet to identify common issues and engage in dealing with them systematically across the campus. While this will not affect the current reporting lines for those collections or their ability to take independent action, the success of this initiative will provide the concrete evidence – through the projects it undertakes to provide wider and more integrated access – that effective collaborative structures and systems can be built in the Yale environment alongside those that address local circumstances.

Establishing sustainable structures and applications that accomplish this goal will require consensus on those capabilities and standards that local systems must meet in order to contribute to the larger systems and reference environment that can provide access to all Yale collections. In such an environment, it is conceivable and likely that similar functions and requirements will be identified across a range of Yale repositories and that they will choose to pool their skills and resources to acquire or develop and maintain common tools. It will supercede the current ad hoc and serendipitous discovery of such commonalities and replace it with a framework in which the

exchange of perspectives and the quest for common ground become the norm. The implications of such a transformation in the way that Yale thinks about and supports its collections will advance the goals of greater integration of these extraordinary collection resources into teaching and learning at Yale and make them even more visible and accessible to the larger research community.