1. Introduction

The University of Chicago and the Ethnologisches Museum der Staatliche Museen zu Berlin, Abteilung für Musikethnologie, Medien-Technik und Berliner Phonogramm-Archiv (BPA) jointly propose a three-year collaborative project which will preserve, document, and make accessible a carefully selected body of the most significant early twentieth-century audio recordings from South Asia along with related documentation. This three-year collaborative project encompasses a wide chronological and geographical focus, including scholarly field recordings and commercial recordings made in the current South Asian nation-states of Afghanistan, Bangladesh, Bhutan, Burma, India, the Maldives, Nepal, Pakistan, Sri Lanka and the Tibetan region of China, ranging from the earliest acoustic recordings made in 1898 through 1947, the date of independence in South Asia. The project will select recordings for digitization from all genres of music from collections currently held in Berlin, in Chicago, and by private collectors and sister institutions in South Asia. This project will adhere to international copyright laws and act ethically with respect to the creators and their heirs of the works we handle. The result will be the addition of digital copies of at least 890 field recordings (most from wax cylinders), 8,500 shellac discs, 750 photographic images, and 550 archival documents to the stock of research materials available freely via the Internet for non-commercial use. The audio files, field photographs, and archival documents will be prepared according to international standards for preservation reformatting and all of the recordings included in the project will be cataloged fully with the bibliographic data made accessible to scholars and librarians. The exchange of digital resources and expertise in digitization between Berlin, Chicago and colleagues in South Asia is central to the project.

This project addresses the significant lack of easily accessible early-era audio recordings from the South Asian subcontinent, which are a prerequisite for research by musicologists, anthropologists, historians, and many others in the humanities. It is common for libraries in the United States, Europe and South Asia to hold recent critical studies about early musicians of colonial India and yet not have a single original recording. The scholarly significance of these recordings as well as their importance to the preservation and study of South Asian recorded heritage ensures their wide usage by both the scholarly community and the general public.

2. Significance

There are several compelling intellectual rationale for recovering South Asia recorded heritage. First, digitizing recordings from both field research and commercial record companies distinguishes the project from previous approaches. Historically, the ethnographic study of South Asian music has emphasized the collection of repertories and genres that supported constructs of authenticity, embedded either in the classical traditions or in the religious and regional exclusiveness of folk music. Such distinctions reflected both the colonial heritage of anthropological and ethnomusicological projects and the nation-building programs of South Asian societies. Commercial recording, in contrast, sought to create and disseminate expressive culture that would be consumed widely. Accordingly, commercial studios more readily recorded repertories and genres regardless of whether they affirmed constructs of authenticity. Stylistic hybridity, for example, in the recordings of music from popular theater and religious rituals reflected change along the shifting social and musical borders of a modern society. The historical distinctions between these two approaches to recording have precluded the study of the musical resources of the subcontinent from the perspective of hybridity. Even more than in most approaches to ethnomusicology, those working on classical, tribal, folk, popular, film, and religious musical traditions of South Asia rarely looked at the borders between traditions. Important scholarly studies produced a paradigm shift in the 1990s which was critical to a new ethnomusicology of India, but this new approach rarely has been extended to commercial audio recordings. Allowing scholars to explore the ways that field and commercial recordings overlapped will be a critical contribution of this project.

Second, the audio resources digitized and made available through this project will support new ways of understanding and disseminating expressive culture in South Asia. By looking at a continuum of links and connections rather than artificially constructed distinctions, this project will stimulate new ways of understanding the audio heritage of the subcontinent. It will preserve the ways in which field and commercial recordings overlap and intersect. This project will not separate "music as sound" from its...
wider expressive context. Dance, theater, religious devotion, poetry, and speech often converge in the recordings the project will preserve. Preserved together, they will become a critical resource for scholars from the many disciplines contributing to South Asian studies.

Third, by expanding common domains of expressive culture, the project hopes to **encourage new methodological approaches for considering the relationship between national and global histories.** Some of the recovered audio files from this joint DFG/NEH project will be included in a series of CD publications with accompanying analysis and interpretation. It is hoped that these publications will foster a reconsideration of the history of South Asian music similar to the recategorization which occurred in American music during the 1990s when the Smithsonian Institution published a collection CDs drawn from commercial recordings of "American folk music" from the 1950s.

Fourth, the project will **create a model framework and infrastructure** for future collaborations between repositories and institutions in South Asia, Europe, North America, and elsewhere. At the technical level, the collaboration will foster a better understanding of the best methods to preserve, digitize, document and disseminate the recorded heritage of South Asia. In addition, the existence of a framework will encourage and contribute to additional projects such as the recently funded University of Chicago proposal focusing upon recordings to improve advanced language pedagogy.

Most importantly, this project will **promote and sustain a community of scholarship** not only through the collaborative production of new digital resources but also through additional institutional collaboration, academic conferences and publications outside the immediate scope of the project. For example, the newly formed Center for Ethnomusicology at the University of Chicago has joined with the BPA to participate in the Humboldt-Forum in Berlin. The University of Chicago, led by faculty member Philip Bohlman, will also propose “Expressive Culture in South Asia” as the theme for the second bi-annual Hebrew University/University of Chicago Seminar on South Asia. Both institutions also hope to bring the materials produced by the project to the attention of a wider audience through publication of CDs by the BPA that will complement exposure given to the resources on the Internet at the Digital South Asia Library.

The Recovery of South Asia Recorded Heritage project is also significant for its several products and the consequences of our approach. 1) The infrastructure created by this joint project will both result in the digitization of at least 9,000 important audio recordings as well as facilitating continuing, coordinated efforts to **preserve the audio cultural patrimony** of South Asia. Project participants will continue their exchange of expertise beyond the end of this project in such important areas as long-term preservation, metadata standards, and intellectual property issues. 2) The project's initiation of a **union catalogue** covering analog field and commercial recordings from the critical acoustic period and the early microphone era will permit researchers to discover what has been recorded in South Asia and in which collections the recordings are held. 3) The project will foster a greater awareness of **South Asia's large and influential audio heritage**. That heritage is generally little-appreciated and under-protected even though it was an important force in the creation of modern consciousness in the region. 4) Early recordings will serve as a basis for **revival of endangered performance traditions**. 5) In South Asia, the project's engagement with colleagues will give impetus to a **new audio archive movement**, equipping younger archivists and librarians with the required tools and methods for musicological curatorship. Program staff will receive training on the job, expanding their expertise.

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2Expenses related to the production and distribution of these CDs will be borne by the BPA. No DFG or NEH funds will be used.

3*Anthology of American Folk Music*, Smithsonian Folkways 40090/A 28746–A 28751.

4Documentation of gramophone record production in India is not well developed despite the pioneering efforts of a few enthusiasts such as Michael Kinnear and Suresh Chandvankar. Further, holdings of major repositories such as the British Library National Sound Archive are often uncataloged for lack of staff with appropriate language expertise.
The Collections

This joint project will build upon the foundation laid by Professor Carl Stumpf of the Phonogram Archive in Berlin for research on the world's traditional music where early field recordings by such luminaries as Erich Moritz von Hornbostel, Georg Schünemann, Robert Lachmann, Carl Meinhof, Felix von Luschan, and Richard Thurnwald have been collected. The BPA, often described as one of the most important ethnomusicological archives in the world, is part of Ethnological Museum in Berlin. Much of the traditional music held can only be found fragmentarily in the countries of origin. The collection was built by outfitting geographers, linguists, ethnographers, missionaries, and colonial officers with Edison phonographs and cylinders. The resulting recordings fueled rigorous musicological analysis and interpretation under the directorship of von Hornbostel in a comparative musicology program which came to be known as the "Berlin School". The Archive continues to document musical traditions throughout the world and now holds more than 150,000 musical recordings or more than 10,000 hours of audio-visual materials encompassing many world cultures. Recording media in the collection include Edison-phonogram cylinders,\(^5\) analog and digital tapes, and many types of discs -- from 78 rpm shellac discs to LPs and CDs. The sound recordings are often accompanied by transcription, photographs and other documentary evidence describing the people, musical instruments, cultural context, and technical details of the recordings. The international significance of the collection was recognized by UNESCO in 1999 when the cylinder recordings were listed in the Memory of the World Register.

The South Asia holdings at BPA are comprised of 120 collections, eighty-nine of which are from India. These collections consist mainly of audiovisual recordings made during field research as well as recordings from concerts in Berlin. These 120 collections include various recording media covering the gamut from wax cylinders (more than 500) to digital media. The chronological span represented by the recordings encompasses the beginning of the twentieth century to the present. The collection continues to expand with the September 2008 acquisition of the former International Institute for Traditional Music\(^6\) in Berlin.

The Archive is renowned throughout the world for its techniques in preserving, restoring, and copying its holdings and for the facilities which support its mission. Beginning in 1907 the Archive produced copper galvanoplastic negatives, known as "galvanos" from its wax cylinder holdings and has used those galvanos to generate positive wax copies for the Archive, collectors, and other archives around the world. BPA is increasingly relied upon by museums, broadcast companies, and music lovers as a service center for the field of non-European music.

In 1998 the BPA began an ambitious publishing program aimed at making its valuable historical recordings more widely known and accessible. The Berlin Wax Cylinder project, a part of the larger program, has been financed by the Stiftung Preußischer Kulturbesitz and the Stiftung Deutsche Klassenlotterie Berlin to digitize about 7,000 cylinders and make them accessible on modern recording media.

\(^{5}\)This Edison phonogram collection comprises slightly more than 30,000 cylinders -- 2,747 original wax cylinders, 14,000 negative copper galvanos, and 13,667 positive copies.

\(^{6}\)The International Institute for Traditional Music was founded in 1963 by Yehudi Menuhin and Alain Danielou. Danielou, in his time one of the world's most important researchers on Indian music, made research on non-western musical cultures the institute's main focus. For over thirty years, the Institute organized concerts and produced numerous publications including the well-known UNESCO Collection of Traditional Music of the World series and the internationally renowned journal The World of Music. A huge collection comprised mainly of audio recordings, photographs and videos was accumulated prior to the Institute's closure in 1996. That collection is now housed at the BPA.
The University of Chicago is home to top-rated programs in musicology\(^7\) and South Asian studies as well as many other distinguished humanities programs. Those programs are supported by extensive and historically rich library and archival collections.\(^8\)

The Library's century-long commitment to South Asia has produced a collection worthy of the University's role as a leader in international scholarship. The South Asia collection, described at [http://www.lib.uchicago.edu/e/su/southasia/](http://www.lib.uchicago.edu/e/su/southasia/), has the further advantage of being part of one of America's finest research libraries. The Library's leadership in South Asian studies can be measured in its ambitious collection program, abundant services to readers, strength of staff, efficient provision of inter-library loans, and imaginative projects to further scholarship.

The Library's commitment to South Asia is part of a wider dedication to area studies at the University of Chicago. Together with its South Asia holdings, the collection of materials on Southeast Asia, East Asia, Eastern Europe, Latin America, Africa, and the Middle East amount to more than 3,240,000 volumes and comprise one of the world's great resources for area studies. These collections and their support by faculty and staff allow cross-cultural and cross-regional scholarship on topics such as Islamic studies, where the sources and issues cut across all of Asia as well as other regions.

The Library supports scholarship on virtually all topics related to South Asia through an ambitious program of collecting contemporary materials that complement the foundation of a century of collection development. More than 664,090 volumes comprise the South Asia collection. There are 412,163 volumes of books and 251,927 volumes of serials in more than thirty languages of the South Asian subcontinent. The Library also holds more than 11,200 sheet maps and a vast array of photographs, and posters, and since 1959 has been the most comprehensive participant in the Library of Congress' overseas programs for acquisition of audio and video recordings on South Asia. The University of Chicago is the only academic library in the U.S. to collect in all languages of the region. The collection is widely regarded as the most comprehensive university library collection of South Asia materials in North America.

Since 1994 the Southern Asia Department has purchased private collections in South Asia and retained the collections in country for development in collaboration with South Asian partner institutions.\(^9\) The India collections are in Chennai, Hyderabad, Pune, and Kolkata while others are located in Karachi, Pakistan and Kathmandu, Nepal. Two such collections of audio recordings are described in Section 3 below. Additional, strong partnerships link Chicago with libraries, archives, and academic institutions in the subcontinent, England, and Japan. Examples include the Archive and Research Center for Ethnomusicology, the Centre for Studies in Social Sciences, Calcutta, the Society of Indian Record Collectors, and EMI Archive in London.

Extensive services are provided to readers and institutions beyond the University. In addition, requests to explore the collection from scholars from across America and throughout the world are routinely accommodated.

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\(^7\)Ethnomusicology at the University is located within the Department of Music and is academically linked with the Department of Anthropology following the tradition of interdisciplinary collaboration which permeates the institution.

\(^8\)Noteworthy examples pertinent to this proposal include the Chicago Jazz Archive, the Wieboldt-Rosenwald Collection of German Folksongs, and the Language Archive.

\(^9\)The principal reason for this approach is that the finest collections are often held by private collectors. This is true for audio recordings just as it is for ink print publications. Prior to our purchases the private collections were often inaccessible to scholars or accessible only after payments of exorbitant fees. It would be inappropriate to remove the collections to Chicago given their cultural significance in the South Asian countries.
**Probable audiences**

This project will be of benefit to scholars, appreciators of South Asian music, and to members of the general public. Scholars and a wide variety of others will be interested in the project's outcomes because they will have access to audio recordings many of which were previously inaccessible. As noted elsewhere in this proposal, scholars will have new resources for exploring expressive culture in South Asia. Further, the cost-free availability of these recordings in a high quality digital format will allow contemporary composers and musicians to manipulate, sample or incorporate these earlier recordings into their own compositions. The recordings will also be a new corpus for contemporary musicians, dancers, theater troupes and others to draw from in staging new artistic performances. Additionally, the recordings will aid tribal communities and other traditional performing communities in South Asia to maintain their heritage.

Project staff will take several steps during the project to expand awareness of the digital recordings. They will place articles and notices in scholarly journals, newsletters, and listservs. Musicians, other performers, and the general public in South Asia will be targeted through the placement of articles and notices in newspapers, magazines, and other forms of media. Efforts will be made to collaborate and share digital files with governmental bodies (such as Sangeet Natak Akademi in India), non-governmental organizations (such as those working with tribal communities in South Asia), and community and cultural organizations both in the subcontinent and internationally.

**3. History, Scope, and Duration**

Following World War II the vast majority of the Phonogram Archive’s cylinder collection was located in the Russian sector while the corresponding documentation was in West Germany. The collection was effectively inaccessible until Germany’s reunification. In the 1990s, soon after the cylinder collection was returned to the Ethnological Museum, the BPA began transferring the holdings from analog to digital resources for preservation purposes. Several research projects considered how best to make the historical cylinder collections accessible with modern technology. The historical collections were catalogued and approximately half of the cylinder collections were digitized with funding from the Deutsche Klassenlotterie Berlin. The BPA also initiated the *Historical Sound Documents* series of CDs that publishes sound recordings along with extensive field notes. Project ILKAR, a new program that runs from 2008 to 2011, supports research on the preservation of cylinders and tape recordings and their long-term storage. These ILKAR activities are providing the BPA with the necessary expertise and equipment to carry out digitization under the Recovery of South Asia Recorded Heritage project.

From 2006-2008, the Berlin Archive participated in two digital library projects (DISMARC and ethnoArc) to improve access to the BPA collections. The BPA led the activities related to metadata for both of those projects. A metadata scheme and a union catalogue for music archives were among the project outcomes. Additionally, project staff created an export mechanism for BPA's local collection database and addressed intellectual property rights (IPR) issues related to the presentation of resources on the Internet. These previous projects created a foundation of knowledge and expertise upon which the BPA will build in carrying out metadata work for the proposed DFG/NEH project.

The University of Chicago has laid the groundwork for this proposed project through several recent and continuing programs, projects, and activities. The University's Library hosts the Digital South Asia Library (DSAL)\(^\text{10}\) which contains a widely adopted and expanding set of Internet resources with a special emphasis on reference materials. DSAL will host the recordings and other resources created under this project and make them accessible via the Internet in a fashion similar to the approach under

\(^{10}\)A public resource since its founding in 1999 in collaboration with the Center for Research Libraries, DSAL is located at http://dsal.uchicago.edu/ are organized under the following headings: Reference Resources, Bibliographies and Union Lists, Images, Indexes, Maps, Books and Journals, Statistics. Audio and Video will soon be added to these. Uses of the DSAL Web site have routinely exceeded 2,200,000 per month over the past half year. Readers from virtually every country in the world have visited the site.
creation in presenting the audio files from the *Linguistic Survey of India*.\(^\text{11}\) The South Asia Union Catalogue (SAUC)\(^\text{12}\) is one of the most recent additions to DSAL resources. SAUC will host the discographic information from the Recovery of South Asia Recorded Heritage project.

In 2004 the University of Chicago Library purchased a private collection of extremely rare 78 rpm recordings from Mr. V Sundaram with support from the University's Library Society. The shellac discs, in excellent condition, dated between 1921 and 1950, include classical music, folk music, comic music, political speeches and drama sets. Examples of recordings include works of the revered female vocalist M.S. Subbulakshmi and early recordings of percussion pieces on the rathi tavil, an instrument with ancient origins used in temple processions. Drama sets constitute a category of particular importance and are accompanied by printed text of the plays and songbooks that provide essential aural details on dialect, thespian style, and early practices of singing dialog in the theater, all of which informs the development of Indian cinema. There are also political speeches by luminaries of the Indian Congress and recordings addressing social issues of the day such as alcoholism and the needs of the untouchables.

The Roja Muthiah Research Library, our sister institution in Chennai, India, is in the last stages of negotiations for purchase of the V.A.K. Ranga Rao collection which consists of more than 34,500 gramophone records of music, drama, and speeches in at least forty Indian languages and dialects and many foreign languages. That collection will be available for digitization under this project.

Finally, Dr. Suresh Chandvankar's Endangered Archives Programme project titled "Digitising Archival Material Pertaining to 'Young India' Label Gramophone Records" is an important resource which will be associated with this project. Dr. Chandvankar is the Secretary of the Society of Indian Record Collectors, a body founded in 1990 to bring together music lovers and freely disseminate information about early recordings from India, the artists, and the care and preservation of old discs. The Society publishes *The Record News*, a quarterly journal.

**Scope**

The extent of materials which will be considered for selection under this project is concisely defined as including:

- the geographical area encompassed by the current South Asian nation-states of Afghanistan, Bangladesh, Bhutan, Burma, India, the Maldives, Nepal, Pakistan, Sri Lanka, and the Tibetan region of China;
- the chronological period from the earliest acoustic recordings made in the subcontinent in 1898 through 1947, the date of independence in South Asia;
- the entire range of carrier media for recorded sound created during the chronological period but with special attention to wax cylinders and shellac records;
- all genres of musical content, broadly construed; and
- recordings of music held in Berlin, in Chicago, and by private collectors and sister institutions in South Asia.

Within this broad definition of scope, the project will be constrained only by rigorous adherence to intellectual property laws. Preference will be given in selection to the oldest recordings.

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\(^{11}\) Please see the description in Appendix 2 along with a screen shot from a functioning prototype site at [https://mahimahi.uchicago.edu/drupal_test/lsi/LSI/5702AK](https://mahimahi.uchicago.edu/drupal_test/lsi/LSI/5702AK).

\(^{12}\) The South Asia Union Catalogue is a cap-stone program gathering existing bibliographic records and combining them with new cataloguing created under current projects to create a definitive statement on publishing in the South Asian subcontinent. SAUC intends to become an historical bibliography comprehensively describing books and periodicals published in South Asia from 1556 through the present. In addition, it will become a union catalogue in which libraries throughout the world owning copies of those imprints will register their holdings. SAUC is in the early stages of creation with funding from the Ford Foundation, the U.S. Department of Education, and the National Endowment for the Humanities. The program will soon be expanded to encompass audio, cartographic, and video resources.
Duration

This project will yield results throughout the three-year duration of funding and beyond. The description here is principally of plans for sustaining the project, maintaining and updating the resources, and broadening efforts to recover South Asia recorded heritage. The most important bases of support are the two institutions making this application. The BPA enjoys strong support from the German government and the University of Chicago has liberally supported its programs in ethnomusicology, South Asian studies, and the Library. That support will enable the continuing production of CDs in the Historical Sound Documents series13 from BPA. The publication of at least one volume in the Chicago Studies in Ethnomusicology series14 will be possible, as noted in more detail elsewhere in this proposal, through a subvention from several units on the University campus. The Library in Chicago has demonstrated its commitment to the Digital South Asia Library through generous support for data archiving and staff support to maintain the Web servers over the past decade. That support will continue into the distant future, in part, because DSAL has become an important international resource. The addition of several thousand digital audio recordings to the site will further increase the importance of DSAL and increase traffic to the site well beyond the already significant current monthly levels exceeding two million visits. The South Asia Union Catalogue program will use cash credits generated from loading unique records to the Online Computer Library Center (OCLC) database to support the creation of additional records in South Asia, Berlin, and Chicago after the project is concluded and to complete that cataloguing to the high standards and full levels which have characterized the South Asia Union Catalogue program. Finally, the University of Chicago has just been awarded a four-year grant from the U.S. Department of Education. A segment of that new project will permit Chicago to digitize more than 9,800 gramophone records containing speeches, drama, and other recording of value for advanced language pedagogy.

After the end of the funded phase, Chicago and BPA will continue to work together to further develop the music collections of South Asian as part of the DSAL on the basis of the infrastructure established in the project. Several infrastructural building blocks will be created by the proposed project such as an exchange routine for metadata and digital objects, additionally IPR issues specific to the exchange of material between the Germany and the US will be addressed. Thus, it will be possible to continue work with regular staff in Berlin and Chicago as digitization and acquisition of material continues.

Two intellectual projects will sustain the collaborative engagement between Berlin and Chicago. First, the Division of the Humanities established a new Center for Ethnomusicology at the University of Chicago in 2009. With ongoing collaboration between Lars-Christian Koch and Philip V. Bohlman at the University of Chicago (a three-year Alexander von Humboldt-Stiftung Trans-Atlantic Cooperation Grant), the Chicago Center for Ethnomusicology has joined with the expansion of the Berlin Phonogram Archive in the Humboldt-Forum in Berlin. Second, the Project Co-Directors and Philip Bohlman will propose "Expressive Culture in South Asia" as the theme for the second bi-annual Hebrew University/University of Chicago Seminar on South Asia. If approved, the seminar would be held in 2012. The recordings and other documentation created under this project would serve as an excellent resource for seminar participants.

4. Methodology and Standards

Project work will be coordinated from locations in Berlin, Chicago, and Chennai (formerly Madras). All project participants are committed to follow the methods and standards described in this section. Throughout the three years of funding project staff will monitor the bodies which set relevant standards and implement changes to practices as necessary.

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13One thousand CDs are produced of each title in the series. Sales for each title are usually in the range of 50 to 100 per year. Prices are calculated to recover costs but not to make a profit for the BPA.

14Print-runs for Chicago Studies in Ethnomusicology are initially about 1,000. Royalties from sales are divided evenly among the principal authors or editors. Almost all volumes are published in paperback and priced less than $30.00 for a book with accompanying CD.
The methods to be used under this proposed project have been created and refined over more than a decade at the Berlin Archive and the University of Chicago. Successfully completed projects which laid the foundation for this collaborative engagement between Berlin and Chicago are described in the History of Awards section and elsewhere in this narrative. Many of Chicago's previous initiatives have been implemented in collaboration with colleagues in South Asia. South Asian librarians and archivists often exhibit a passion for documenting and caring for their cultural patrimony and are able to combine that passion with deep knowledge of local languages. This combination of interest and expertise has added to project success.

This project will follow the DFG Practical Guidelines on Cultural Heritage and recommendations of the Digital Library Federation as a general framework for digitization and preservation as well as the more specialized guidelines established by the International Association of Sound and Audiovisual Archives (IASA) for audio documents which are not covered by the DFG guidelines.15

Preparation and Processing of Material

The Project Directors have established guidelines for the selection of recordings to ensure that the digitized resources are diverse enough in genre and geographical origin to meet the needs of South Asia scholars from numerous disciplines. Project staff will implement the guidelines in selection of individual recordings for digitization. The Advisory Board will review those item-level decisions periodically throughout the project and comment on necessary adjustments. The Board will also oversee the selections in terms of IPR and ethical treatment of composers and performing artists. Selection decisions will encompass audio recordings as well as documents and photographs accompanying field recordings. Please see the selection guidelines in Appendix 2.

Preparation for digitization will differ based on the media and the location of work. In Berlin, wax cylinders will receive visual examination and, when there is more than one copy available, the copies will be physically collocated. Audio tape will be examined to determine if there has been any physical degradation.17 The project ethnomusicologist in Berlin will organize field notes, photographs, and other documents which have recently been acquired and not yet fully integrated into the BPA archive. In Chennai, cleaning shellac discs will be the principal preparatory activity. Project staff will use the record cleaning equipment recommended by the National Sound Archive at the British Library. (Please see Appendix 2 for details on the equipment.)

Audio transfer from analog to digital will be executed in Berlin and in Chennai. Signal retrieval from original carriers will be carried out using high quality playback machines that match the speed and format of the original recording and that are properly cleaned and aligned. The BPA already owns appropriate equipment which was acquired through other projects such as ILKAR. Equipment for Chennai will be purchased following specifications prepared for the British Library's Endangered Archives Programme by the National Sound Archive in London. Additionally, the team in Chennai will use an optical scanner developed by Lawrence Berkeley National Laboratory under grants from the National Endowment for the Humanities and the Institute of Museum and Library Services. The transfer from analog to digital will take place using professional hardware as specified in IASA TC-04. To ensure a high quality standard, Albrecht Wiedmann, the chief sound technician at the Berlin Archive will train staff in Chennai and periodically assess the quality of work in India.

Digital audio files will be stored unprocessed and without data reduction using the broadcasting wave (EBU tech 3285), preferably, or alternatively the wave format with a preferred resolution of 192 kHz/24 bit and minimal resolution of 96 kHz/24 bit. Material that has been digitized in the past will be re-


17In Berlin, preparatory steps for cylinders and tapes will be covered by the ILKAR project, described elsewhere in this proposal.
evaluated. If a considerable increase in quality is expected it will be digitized again, otherwise older
digital masters will be preserved in the current resolution. Most notably, some shellac recordings were
digitized in Berlin in the late 1990s with resolution of 48 kHz/16 bit. MD5 will be employed to check the
integrity of files. The digital audio files will be converted to a compressed format, most likely MP3, for
convenient access via the project's Web site. WAV files will also be made available for scholars who
need high quality audio for their research.

Project staff in Berlin and Chennai will digitize documentary information related to audio
recordings. They will use flat-bed scanners and high resolution digital cameras already held by the BPA
and the Roja Muthiah Research Library. Quality control will be applied to ensure that the following high
standards are met. Images will be scanned at a resolution of 300-600 dpi, depending upon the source, and
stored in 24 bit TIFF or lossless JPEG2000 file formats. Scanned texts will be stored as image and as
full-text in Unicode if recognized by OCR software. In important cases, translations or transliterations
from handwritten texts will be provided in accordance with recommendations of the Advisory Board.

The project's high quality metadata will permit users to locate the project's digital resources
efficiently and precisely. The project ethnomusicologist in Berlin will augment existing digital metadata
describing the BPA's South Asia holdings which have been selected for digitization. The existing
metadata is often only available for the collection level and not for sub-units or individual documents.
This documentation of holdings will continue the metadata creation begun under DISMARC and
ethnoArc, two previous digital library projects co-funded by the European Union. BPA metadata for
commercial recordings will be converted to MARC21 format and metadata for field recordings will be
converted to Encoded Archival Description format for exchange with Chicago and presentation on the
project Web site. The descriptive records will include technical information about the digital files
including a description of the original carrier, its format and state of preservation, and the equipment
required to replay the original media.

Professional cataloguers in Chennai will create full bibliographic and related authority records for
each of the 78 rpm gramophone records digitized under NEH funding. All records will be reviewed by
staff to ensure that high standards are met. Specifically, the standards are those of Anglo-American
cataloguing rules, second revised edition, and the Library of Congress Rule interpretations. (Program
staff are well qualified to meet these standards and will receive additional training from the Library of
Congress and the University of Chicago Library.) All records will be created using digital images of
record labels as the chief source of information with supplementary information coming from catalogues
produced by the record companies and, occasionally, from consultation of archives held by record
manufacturers. Cataloguers with special training in authority control will collect information on personal
names and titles to create authority records if records do not already exist. These new name and uniform
title authority records will contain the established entry along with dates of birth and death or period when
the person flourished, if known; cross-references; notes on sources consulted in establishing the standard
form and its cross-references; and other necessary information. The cataloguers will draw upon
information in provisional authority records available at the BPA and collaborate with colleagues at the
BPA in completing the German data. As with bibliographic records, the authority records created for the
South Asia Union Catalogue will contain parallel fields (880) for alternate graphic representation of non-
roman scripts. South Asia scholars have often called for the addition of cataloguing data in the scripts
used in the publications and recordings, arguing that it is easier to read catalogue data in the original
characters than in romanization. (Appendix 2 contains sample records including 880 fields in Perso-
Arabic characters.)

Project staff will disseminate metadata from the BPA and Chennai via the South Asia Union
Catalogue. Further, during the second year of the project staff will begin loading the full electronic
catalogue records to OCLC. Those bibliographic data will also be made available to European and South

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18The Digital Library Federation's Benchmark for Faithful Digital Reproductions of Monographs and
Asian national databases and individual libraries. Archival metadata from BPA will also be disseminated to Europeana at regular intervals using an established export routine based on Open Archive Initiative (OAI) technologies.

**Organization of and Access to Material**

The Digital South Asia Library (DSAL) will host the project Web site, maintain the digital audio files and related documentation from field recordings with persistent URIs, and deliver the resources to users. The South Asia Union Catalogue (SAUC) will deliver the project's metadata to users. (Please see specimen entries in Appendix 2.) Both DSAL and SAUC are maintained by the University of Chicago. Technical information about DSAL and detailed statements on the standards to which DSAL adheres are enumerated at http://dsal.uchicago.edu/techinfo.html. These include standards for archiving and preservation, Dublin Core, PURL, Unicode, XHTML, and compliance with the Web Accessibility Initiative standards set by the World Wide Web Consortium. SAUC utilizes software fully compliant with the Z39.50 protocol. The SAUC system permits users to search and retrieve bibliographic information in Unicode encoding from its Internet server. Additionally, Berlin materials will be referenced from Europeana and other cultural heritage portals such as BAM (http://www.bam-portal.de).

This project will adhere to **intellectual property rights** and **copyright** laws and **act ethically** with respect to the composers, artists, and their heirs of the works we handle. This commitment has roots in solid traditions of ethical behavior by the BPA and Chicago in building and maintaining collections in collaboration with colleagues in South Asia. The implications of this commitment in Berlin will be shaped by the fact that the BPA’s collection consists primarily of unpublished collections of sound recording and supporting documentation. In contrast, the collection to be treated by the University of Chicago and colleagues in South Asia consists of commercially released gramophone records. But, common to our work under DFG and NEH funding will be the principle enunciated by Prof. Anthony Seeger. “Our ethical treatment of the artists and the communities from which they have come must be of primary importance in our positions on intellectual property, decisions about preservation, and strategies for institutions survival.”

We will be alert to the responsibilities attendant upon our “position of arbiter between the traditional ideas of ownership, restrictions of the donor, and current copyright law.” In recognition of the fact that mere possession of recordings is not grounds for unrestricted use, we will

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19 The URL for DSAL is http://dsal.uchicago.edu/.

20 The Web site for SAUC is at http://sauc.uchicago.edu/.

21 Copyright on the commercial gramophone records within scope for this project, all of which were published in colonial India prior to 1947, has expired and the recordings are in the public domain even though copyright may still subsist in the musical compositions. The basis for this understanding regarding recordings is that Section 4 of the *Indian Copyright Act, 1914* states that audio recordings were protected by copyright for ten years following publication. The 1914 Act remained in force until it was repealed and superseded by the *Indian Copyright Act, 1957*, enacted in January 1958, and in Pakistan with *The Copyright Ordinance, 1962*, Ordinance No. XXXIV of 1962. This means that records published through 1947, ten years before enactment of the 1957 Act in India and the 1962 Act in Pakistan, are in the public domain. This understanding is also consistent with common understandings of the impact the 1996 Uruguay Round Agreements Act of the General Agreement on Tariffs and Trade has had on intellectual property protection in the U.S.


23 *ibid.*
"[collaborate] with the communities from which their collections originate as well as those they serve" and will “operate in a legal manner.”24 We also recognize that copyright may subsist separately in compositions and the recording of those compositions. This potential for dual copyright can complicate attempts to understand the current status of a work or recording and the meaning of fair use with respect to those recordings. The project has engaged Prof. Seeger, a highly regarded leader in ethnomusicology archives and a recognized authority on rights management, to assess the project’s performance relative to copyright and ethical standards. As an example of repatriation, we will take every step possible to inform descendants of arrangements we have made for digital preservation of recordings and will offer copies of those recordings on appropriate media to those who have inadequate access to the Internet. In these repatriation efforts we will collaborate with the Archives and Research Center for Ethnomusicology in India.

**Storage, Maintenance, and Protection of Data**

**Storage** of digital objects and the corresponding metadata will be on professional mass storage systems in Chicago, Berlin and to a limited extent also in Chennai where files will be stored only temporarily. Digital objects will be stored in high quality and open formats (WAV, TIFF, XML, and so forth) as described above. Likewise, the metadata produced by the project will be stored in formats following such standards as MARC21 and EAD to guarantee their long-term usability. Further, the data from Chicago and the Berlin Archive will be shared with each other and stored on each other’s systems which will provide additional protection through redundancy.

The DSAL plan for **maintenance of data** includes the following procedures to ensure the integrity of the storage media: periodic checks of completeness and functionality of the media; periodic refreshing and/or copying the resources in order to guard against the degradation of media; migration to new media or new formats; saving files in their primary format; and preserving the technology used in the creation/storage of the files.

The University of Chicago Library Digital Repository will be responsible for **data archiving** to ensure the long-term preservation of the digital objects and metadata created under this DFG/NEH project. Standards deployed for archiving the digital resources created by this project follow what are becoming standard practices for libraries and archives. Additionally, the professional staff working for the Digital Repository constantly monitor developments in best practices and make appropriate adjustments to local practices. It is noteworthy that the University of Chicago Library is an active member of the Digital Library Federation, a body which is in the forefront of research and establishment of standards for maintenance of data and data archiving. The Ethnological Museum in Berlin will also archive the full set of the project’s digital resources on its data storage system. Please see Appendix 2 for more information from the University of Chicago Library's Digital Repository mission statement.

**5. Work Plan**

**5a. Tasks and Agents**

The **University of Chicago**, a principal participant in the Digital South Asia Library, will be the administrative home for the project's work on early commercial gramophone records. Staff in Chicago will purchase hardware and software and deliver the equipment to Chennai; design the project Web resources in collaboration with colleagues in Berlin and create the site on DSAL; collect digital assets from Chennai and Berlin each quarter and integrate those digital audio files and related graphic materials on the DSAL server; collect bibliographic records and archival metadata from Chennai and Berlin and add those records to the South Asia Union Catalog (SAUC); and ensure that mechanisms for data storage and archiving are functioning properly.

The **Phonogram Archive** in Berlin will be responsible for project activities related to field recordings. Staff will create metadata mapping for export of legacy data to MARC21 and EAD formats;

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assess the condition of wax cylinder recordings, galvanos, shellac discs, and audio tapes prior to transferring the audio from analog to digital; digitize associated field notes, photographs, and other related resources; perfect the documentation of the BPA's South Asian holdings; and both deliver new digital resources to Chicago and collect from Chicago the digital objects created in Chennai. The chief sound technician at the BPA will train staff in Chennai. Using its own resources, BPA will create CDs for its series of historical recordings from selected recordings digitized under this project.

The Roja Muthiah Research Library (RMRL) in Chennai will be the main operational base for cataloguing the audio recordings, preparing electronic records for an historical discography, and transferring the analog recordings on selected discs to digital format. RMRL’s collection of gramophone records will receive an assessment for conservation needs. Subsequently, the recordings will be converted to digital audio files in the WAV format and copies for general use generated in MP3 format. Graphic material on the record sleeves will be captured as digital images. Any pamphlets included in boxed editions will be scanned. The digital recordings and bibliographic data will be delivered to Chicago each quarter. Throughout its work RMRL staff will review all products for quality.

5b. Schedule

The following Gantt chart offers a synoptic view of project activities. Please consult the detailed work plan and schedule of project activities in Appendix 1 for a more comprehensive statement on tasks, agents, and their deployment.

5c. Evaluation

A key aspect of our program review is that evaluation is integral to the design of the project itself. Evaluation will not simply be external and focused on project results. Rather, it will be internal as well, expected to generate programmatic changes if necessary, and to note shortcomings. Every half year the project co-directors will meet with staff to assess performance measures such as the use of grant funds, work performed, the results of project activities, outcomes of the activities, and the impact of the project.
on those who use the resources created. These reviews will result in adjustments, as necessary, to the project's procedures and practices. They will also be linked to semi-annual performance reports.

In addition we will engage three external reviewers to evaluate the project's efficacy. We will invite Anthony Seeger, Professor, Ethnomusicology and Director, Ethnomusicology Archive, University of California, Los Angeles, to assess the project at the end of the second year and Wolfgang Bender, Director, Center for World Music, University of Hildesheim (previously Director, African Music Archive, University of Mainz) and Rudolf Brandl, Director, Phonogrammarchiv Vienna, Austrian Academy of Sciences, at the conclusion of the three-year project. Each will be charged with assessment of qualitative and quantitative data assembled during the semi-annual internal evaluations. They will address the project's success in producing promised products; our adherence to best practices regarding copyright and ethical treatment of composers, performing artists, and their heirs; the impact of the project; and make recommendations for future collaborative activities by BPA and Chicago.

6. Nature of Collaboration and Staff

The Recovery of South Asia Recorded Heritage project builds upon the long-standing commitment of both the Berliner-Phonogramm Archiv (BPA) and the University of Chicago to South Asian studies. Both have long-established relationships with institutions in South Asia and elsewhere that will help to achieve the project's goals. The collaboration envisioned by the project will allow both institutions to accomplish more than they might have separately. For example, the University of Chicago will avail itself of its close ties to the Library of Congress to arrange for consultation with BPA experts and training for technicians at institutions in South Asia that will contribute recordings and metadata to the project. In this particular case, the BPA will provide technical expertise and experience that complements the collections held by the University of Chicago at sister institutions in South Asia such as the Roja Muthiah Research Library (RMRL) in Chennai. Through its connections with the South Asia Union Catalogue and the Digital South Asia Library, the University of Chicago will reciprocate by helping the BPA to improve and more widely disseminate information about its existing collection of recordings from South Asia. Both institutions will also continue to expand their existing collections in ways that contribute to the project as demonstrated by the BPA's September 2008 acquisition of the former International Institute for Traditional Music in Berlin and University of Chicago's involvement in the purchase of private music collections and the submission of grant proposals complementary to this one.

The collaboration will not, however, be limited to the preservation, production and dissemination of digital recordings and the accompanying metadata. Both institutions share a commitment to encourage scholarship that will benefit from the resources created by the project through additional institutional collaboration, academic conferences and publication. In particular, the University of Chicago's newly formed Center for Ethnomusicology will join with the expansion of the BPA in the Humboldt-Forum in Berlin. Furthermore, the project's co-directors and University of Chicago faculty member Philip Bohlman will propose “Expressive Culture in South Asia” as the theme for the second bi-annual Hebrew University/University of Chicago Seminar on South Asia. Beyond academia, both institutions hope to bring the materials produced by the project to the attention of wider audience. The BPA will publish a series of CDs with historical recordings that will hopefully complement the exposure given to the resources on the Internet at the Digital South Asia Library in Chicago.

Following are succinct statements on the project's principal staff, their duties, qualifications, and the amount of their time which will be committed to the project. Curricula vitae for project staff are attached as Appendix 4. The vitae substantiate the qualifications of each staff member to undertake the duties described below. The Advisory Board is also described with more details included in the section titled “Consultants and Advisory Board Members” below.

In the United States

Project Co-Director. James Nye, Bibliographer for Southern Asia at the University of Chicago, will direct the project in the United States and South Asia. He will hold general administrative and fiscal responsibility, co-organize and co-chair meetings of the project's Advisory Board, supervise the
staff employed in Chicago, notify scholars, archives, and libraries about the project, and work with the Project Director in Germany. Nye has been the Bibliographer for Southern Asia at the University since 1984. The University of Chicago Library will contribute 15% of his time for three years for work as project director.

Project Manager. Samip Mallick, Project Manager for the Digital South Asia Library, will coordinate the project's activities in Chicago and in India. He will be responsible for general fiscal oversight of this project. He will also collaborate with colleagues at the BPA in designing the project Web resources and creating the site on DSAL. Mallick will be engaged for .15 FTE under the NEH grant.

In Germany
Project Co-Director. Prof. Dr. Lars-Christian Koch, Leiter der Abteilung, Musikethnologie, Medien-Technik und Berliner Phonogramm-Archiv, will direct the project in Germany. He will hold general administrative and fiscal responsibility, coordinate activities in Germany (including outreach activities), co-organize and co-chair meetings of the program's Advisory Board, supervise the staff employed in Berlin, and guide the production of CDs in the BPA series with resources created under this project. Prof. Koch has been Director for the BPA since 2003. The BPA will contribute 15% of his time for three years for work as project director.

Chief Sound Technician/Ethnomusicologist. Albrecht Wiedmann, M.A. in ethnomusicology and training as sound technician, employed at BPA since 2005 will train staff in Chennai and supervise project digitization in Chicago and Berlin. The BPA will contribute 5% of his time for three years.

Scientific Assistant. Maurice Mengel, M.A. in ethnomusicology, led the BPA's metadata initiatives in former projects and will supervise metadata activities in the proposed project. The BPA will contribute 5% of his time for three years.

Ethnomusicologist. The BPA will hire an ethnomusicology with a regional specialization in South Asia to select items from the BPA’s collections which are in scope for the project, map metadata from the BPA’s internal format to the standards used in Chicago, revise new metadata created by the Sound Technician, prepare authority files, and conduct post-processing of the digital objects. The ethnomusicologist will be engaged for .66 FTE under the DFG grant.

Sound Technician/Cataloguer. The BPA will hire a project staff member to perform digitization (transfer from analog to digital) for various media (cylinders, shellac, texts, photos), create metadata at the item level, and conduct post-processing of the digital objects. The Audio Technician will be engaged for .5 FTE under the DFG grant.

In South Asia
Director of South Asian Operations. Sundar Ganesan, Director of the Roja Muthiah Research Library, Chennai, India, will have responsibility for project activities in South Asia, supervising staff employed for this purpose at the Roja Muthiah Research Library and overseeing the selection of recordings for treatment. He will also have responsibility for maintaining the working relationship with other libraries and private collections involved in the project. Ten percent of his time will be committed to this work during the duration of the project.

Head of Cataloguing. R. Prakash, Assistant Director and Head of Documentation at the Roja Muthiah Research Library, will lead the team responsible for cataloguing the physical gramophone records acquired from V.A.K. Ranga Rao and the digital copies produced from those records. His team will create records for the recordings and associated name authority records in MARC21 format and distribute those records to Chicago each quarter. Fifteen percent of his time will be committed to this work during the three years of the project.

Head of Digitization. V. Kumar, Technical Officer for Digitization at the Roja Muthiah Research Library, will lead the team digitizing gramophone records and scanning related resources such as the record labels. He will also be responsible for quality control related to the digitization activities and will supervise the quarterly transfer of resources from Chennai to Chicago. Fifteen percent of his time will be committed to this work throughout the project.
An Advisory Board for this joint project will be appointed in June 2010. Members, from institutions in Europe, the United States, and South Asia who will be asked to participate include: Sanjoy Bandopadhyay, Rabindra Bharati University; Suresh S. Chandvankar, Society of Indian Record Collectors, Mumbai; Pekka Gronow, University of Helsinki; Monika Hagedorn-Saupe, Institute for Museum Research, National Museums in Berlin; Daniel M. Neuman, University of California, Los Angeles; and Regula Burckhardt Qureshi, University of Alberta. Additionally, Philip V. Bohlman, University of Chicago, will serve as a special advisor to the project. Please see Consultants and Advisory Board Members for more details.

7. Dissemination

The Recovery of South Asia Recorded Heritage project will disseminate its digital assets as free resources via a Web site associated with the Digital South Asia Library (DSAL), the South Asia Union Catalogue (SAUC), and the Phonogram Archive site. Use of the Internet as the principal means of dissemination is appropriate given the increasing centrality of the World Wide Web as a source of scholarly resources. It is additionally beneficial that DSAL and SAUC will be used as the vehicles for dissemination since scholars and citizens alike have come to rely on these sites as providers of accurate and useful reference resources related to South Asia. At present, DSAL receives more than 2,200,000 visits per month. This project will allow DSAL to expand its base of digital objects and further its mission of supporting scholarship.

The following resources will be made available: 1) Metadata in the forms of bibliographic, authority, and archival records will be available on SAUC, OCLC, and spk-digital, a BPA-affiliated Web resource currently under construction. Those records will also be offered to other libraries around the world. The carefully created metadata will permit users to locate the digital audio and other digital objects created under this project. 2) Digital audio in MP3 and WAV formats will be distributed through DSAL and the BPA. CDs containing selected audio recordings will be available from BPA. Scholars who need high quality WAV versions of the audio files for their research will need to complete a simple registration form with an agreement which has been deactivated during the period of proposal review by NEH and DFG.25 Strict adherence to international and relevant national copyright law and ethical treatment of composers, recording artists, and their heirs will be a base principle governing our release of digital recordings for public use. 3) Transcripts of selected recordings will be available via the project Web site and from the BPA. 4) High resolution scans of field notes and photographs will be distributed via the BPA site and DSAL. We may also deliver gramophone record labels and covers from selected commercial recordings.

Separate funding from the University of Chicago and the Berlin Archive will allow us to produce and distribute at least one monograph in the *Chicago Studies in Ethnomusicology* series and CDs published by BPA.

Finally, we plan to seek separate funds for a travelling public exhibition on wax cylinders and shellac recordings, their conservation and restoration. The intention is that this exhibition would be displayed in India, Germany, and the United States. It would draw upon our experience in conducting this project and the digital objects we will have created.

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25 Please see [https://mahimahi.uchicago.edu/drupal_test/lsi/LSI/5702AK](https://mahimahi.uchicago.edu/drupal_test/lsi/LSI/5702AK) for a demonstration Web site and a page image from that site in Appendix 2 under the heading “4) Screen shot of Digital South Asia Library Web page.”