

## *Session Abstracts for Thursday*

### **COPYRIGHT REFORM**

**Thursday 8:45a-10:45a Metropolitan Center**

**WELCOME** *David Seubert, President, ARSC*

This past year ARSC has been actively advocating in Washington for sound recording copyright reform to promote better preservation of and access to our recorded heritage.

**THE FIGHT FOR COPYRIGHT REFORM AND WHAT IT MEANS FOR YOU** *Tim Brooks, Historic Recording Coalition for Access and Preservation, Greenwich, CT*

**THE OUTLOOK FOR COPYRIGHT REFORM IN 2009 AND BEYOND** *Panelists: Jonathan Band, representing the Library Copyright Alliance, Washington, DC; June Besek, Executive Director and Director of Studies, Kernochan Center for Law, Media and the Arts, Columbia Law School, New York, NY; Walter F. McDonough, General Counsel, The Future of Music Coalition, Washington, DC; Gigi B. Sohn, President and Co-Founder, Public Knowledge, Washington DC; Corey D. Williams, Associate Director, Office of Government Relations, American Library Association, Washington, DC.*

### **THE NATIONAL PLAN FOR AUDIO PRESERVATION**

**Thursday 11:15a-12:30p Metropolitan Center**

**THE STATE OF AUDIO PRESERVATION IN THE UNITED STATES: A NATIONAL STUDY AND NEXT STEPS** *Patrick Loughney, Gregory Lukow, & Eugene DeAnna, Library of Congress, Washington, DC*

The National Recording Preservation Board and the Library of Congress have recently completed the Congressionally-mandated study of the state of audio preservation in the U.S. The study will be released in mid-2009. This presentation provides ARSC members with a preview of the study's findings. The study is organized around four areas related to audio archives and preservation: Collections; Technology; Education; and Copyright. The most important issues brought out in the study will be addressed by a National Plan for Audio Preservation, also directed by Congress. Drafting of the National Plan will be underway at the time of the ARSC Conference. In this session Library of Congress staff members also present a progress report on work to date drafting a National Plan for Audio Preservation. The review of work on the Plan summarizes components of the Plan and outlines outstanding unresolved issues. Conference attendees are invited to respond to the preliminary plan, provide additional ideas, and suggest solutions to the most challenging issues at hand.

### **REPERTOIRE & ARTISTS: NEW YORK IN THE TWENTIES**

**Thursday 11:15a-12:30a The Hill Room**

**LATE- AND POST-OTTOMAN MUSIC IN NEW YORK IN THE 1920s: KEY GREEK, ARMENIAN, TURKISH, BALKAN & ARAB CAFÉ PERFORMERS** *Ian Nagoski, Baltimore, MD*

As the Ottoman Empire crumbled at the beginning of the 20th century, many of its cultural heirs landed on Ellis Island. Among them were extraordinary musicians like Marika Papagika and Achilleas Poulos whose mastery equaled that of their celebrated contemporaries in the English language genres of jazz and blues, like Jelly Roll Morton and Charlie Patton. The spheres they operated in have been little-studied, unfortunately, due to the barriers of language and culture, but they recorded prolifically (Papagika alone recorded two hundred sides between 1918 and 1929) within a circle of brilliant performers, crossing cultural and historical boundaries. This presentation offers new primary research as well as newly-collated scholarship on the biographies of some of America's greatest and most neglected recording artists of the 20s, giving context, historical and biographical, to their repertoires and contributions, and a view of the scene in which they functioned which was as lively as Storyland, even if its influence was felt differently and its own story has been neglected in comparison by orders of magnitude.

**SAM MANNING: WEST INDIAN IMMIGRANT LIFE, MUSIC, AND THEATER IN THE HARLEM JAZZ AGE** *Steve Shapiro, Takoma Park, MD*

Trinidad-born Sam Manning immigrated to New York in the early 1920s. Following his 1925 Broadway role in John Howard Lawson's *Processional*, he became an impresario and singer, producing musical reviews on the Harlem stage. He worked with both traditional West Indian musicians and American jazz musicians, producing a significant body of recordings during this period – many of which represent an early fusion of West Indian music and jazz. Manning incorporated into his songs various themes about West Indian immigrant life, including longing for home, cold winters in New York, making ends meet, indulging in cultural fashions, domestic violence, women's sexual freedom, and relations between West Indians and American Blacks.

### **IN THE ARCHIVES**

**Friday 1:45p-3:15p The Hill Room**

**NAVIGATING THE AAA MESSAGE BOARD** *Brandon Burke, Hoover Institution Archives, Stanford University, CA*

In April 2007, ARSC launched the Associated Audio Archivists (AAA) Message Board, a web-based forum for the discussion of recorded sound collection management. Here AAA Committee Chair Brandon Burke demonstrates how the Board looks, feels and functions, including how to: register, post messages, add images to a message, set up RSS feeds, and perform searches. The presentation also features a demonstration of the Board's many useful features including: a job and internship section, several preservation forums, and a bulletin board for conference announcements, calls for papers, and other press releases. (Internet connection permitting, attendees are encouraged to bring laptops and participate.)

**ACCESS TO HISTORIC FIELD RECORDINGS: THE AMERICAN FOLKLIFE CENTER'S DIGITAL CARD CATALOG** *Margaret Kruesi, Library of Congress, Washington, DC*

The American Folklife Center, Library of Congress, has created a searchable, digital version of its card catalog in 2007-2008, under the title, "Traditional Music and Spoken Word Catalog". The cards represent individual cuts on field recordings, most made on instantaneous discs, between 1933 and 1950 by John A. Lomax, Alan Lomax, Zora Neale Hurston, Herbert Halpert, John Work, Helen Creighton, Sidney Robertson Cowell, and dozens of other early field collectors of folk music and spoken word in the United States and other countries. The card catalog was begun as a project of the WPA around 1940, and has been annotated by some of the collectors and by many researchers. Images of the cards are available in this online resource, which will be further developed to provide access to the digitized sound for as many of these historic recordings as possible. Here I discuss the development of this project, including technical specifications, and show its features and potential for providing direct access to these field recordings, which are the most used and requested recordings in the American Folklife Center's archive. I play selected field recordings and show related photographs from the field trips, which can also be integrated in this resource.

**TRANSFORMING THE COMHALTAS TRADITIONAL (IRISH) MUSIC ARCHIVE** *Breandán Ó Nualltáin, Comhaltas Ceoltóirí Éireann, Dublin, Ireland*

This presentation outlines the development of the Comhaltas Traditional Music Archive, a new internet-based resource. Comhaltas Ceoltóirí Éireann is a large non-profit organization involved in the preservation and promotion of Irish traditional culture. Through music classes, festivals and a world-wide network of branches, Comhaltas works to preserve Irish cultural traditions and transmit them to the next generation. For the last fifty years Comhaltas has slowly collected a heterogeneous music archive, including a large number of original audio and video field recordings. Classifying and presenting this material has been a challenge, as Irish and other primary oral artifacts do not fit perfectly within the hierarchal framework of library subject headings. Geographic associations, performers, tune titles and song settings all have a degree of "fuzziness" built in, and the eventual researcher may have access to more contextual information than the archivist. Given this reality, Comhaltas decided to create an internet-based archive platform that encourages researchers and students to add their own annotations and commentary to the source material. In addition, Comhaltas looked at new ways to group the collection, applying principles of "ambient findability" to create dynamic paths through related content. I present audio and video examples from the collection and explain how particular classification, encoding, indexing and distribution challenges were met to create a community-driven archive.

## **REPERTOIRE & ARTISTS: EUROPE GETS THE BLUES**

**Thursday 1:45p-3:15p The Hill Room**

**CROSS THE WATER BLUES: MUSICAL ARCHEOLOGY IN IMPERIAL GERMANY** *Dr. Rainer E. Lotz, Birgit Lotz Verlag, Bonn, Germany*

Musical archaeology reveals that African American musicians were among the pioneers of recorded music not only in the United States but also in Europe. The presence of African-American entertainers in Europe, the impact of African-American music in Europe around the turn of the century, and aspects of their cross-fertilization remain largely unresearched. Most of the early authors of scholarly books and discographies on blues and jazz were Europeans, who had little or no first-hand impressions of Sedalia, or New Orleans, or Clarksdale, or Chicago. Their only contact with the music was through recordings available to them in Europe from the 1920s up to the 1960s. And they did not have access to recording ledgers, black papers, and other such research material, that has only recently been discovered, or rediscovered. All blacks travelling overseas had to bear in mind that they performed for exclusively white audiences. Their niche in vaudeville entertainment was twofold: by exotic appearance and by eccentric performances. Exotic they were on account of their dark skin and facial features, and eccentricity was achieved by posing as knock-about clowns and by introducing African-American elements in dancing, singing and playing instruments – even though many, if not most – may not have had any affinity for African-American musical traditions. They had to provide a carefully balanced selection of popular tunes and Tin-Pan-Alley coon songs, spiced with both European elements – recognizable by their audiences – and black elements. Just how continental European audiences reacted to black performance styles we shall probably never know. Although, in contrast to Britain, the language barrier seems to have been something of a problem on the European continent, and in countries such as Germany, there had nevertheless been an ever increasing demand for what was then often advertised as "nigger song and dance" until the War dramatically changed the situation. Many of these performances left a legacy of recordings and moving pictures, as well as postcards, publicity shots, and illustrated publicity items. Thanks to their rediscovery we now have a much better understanding than only a few years ago. We shall have to amend the Blues, Gospel, Country, Music Hall and Ragtime discographies, and rewrite chapters of the early black music research literature.

**FROM BLUE HORIZON TO SAYDISC: INDEPENDENT RECORD LABELS IN THE BRITISH BLUES REVIVAL** *Roberta Freund Schwartz, University of Kansas, Lawrence, KS*

The blues revival in Britain in the 1960s created a widespread demand for blues recordings; a 1964 Melody Maker survey revealed that 41 out of 100 beat and R&B record buyers occasionally purchased blues records. While major labels like Decca and Pye dominated the commercial market, their offerings focused on major urban blues and soul artists. The specialty market, dominated by connoisseurs interested in a wider variety of artists and eras, was underserved by the major labels, so committed blues lovers took matters into their own hands. This paper will survey the turbulent independent blues record scene in 1960s Britain, an ever-changing kaleidoscope of labels with colorful names, shadowy origins, lofty goals,

and often surprising founders. Dozens of British musicians and collectors founded labels, licensing (or bootlegging) materials for reissue, importing 45s from the United States and reselling them in Britain, or recording new material for exclusive release. Many of these small concerns, reissuing rarities and recordings by artists outside the commercial mainstream, were laborers of love rather than serious commercial enterprises. Their limited edition discs were marketed directly to their target audience, and label owners rarely did more than break even. Most only issued a handful of recordings, though in the process they revived the stalled careers of American blues singers, provided much needed income and support to older artists, and introduced Britain to a wider variety of blues.

## HISTORICAL STUDIES

**Thursday 3:45p-5:30p Metropolitan Center**

**USE, STRUCTURE, AND FURNISHINGS OF EDISON LABORATORY ROOM 13** *Gerald Fabris, Edison National Historic Site, West Orange, NJ*

Room 13 of Thomas Edison's West Orange Laboratory Building Five is a significant location in the history of recorded sound. In the late 1880s, Theo Wangemann, Walter H. Miller, and Henry Hagen made some of the earliest commercial music recordings there. During the 1910s and 1920s, Edison used this same space to evaluate artists and repertoire for release on Diamond Disc records. Since Edison's lifetime, Room 13 has been "behind the scenes", used for museum collections storage. However, when Edison National Historic Site reopens, it will be unveiled as a regular stop on the public tour. In this presentation, I will survey historic photographs of Room 13 to illustrate how Edison changed the configuration and function of the room throughout his 44 years in the laboratory. I will compare these photographs to the actual room and furnishings that exist today, describing what remains authentic and intact. I will briefly discuss the process of refurbishing the room for the new public tour.

**3D IRENE: GROOVE IMAGING IN THE THIRD DIMENSION** *Peter Alyea, Library of Congress, Washington, DC*

For more than five years the Lawrence Berkeley National Laboratory and the Library of Congress have been collaborating on research projects that extract sound from grooved discs and cylinders using optical methods. Imaging hardware does not physically contact the surface of the media and is therefore well suited to the particular needs of audio preservation work. This non-contact imaging process does not degrade the media. Moreover, sound on damaged and broken media – inaccessible through traditional playback methods – can be rescued. A fast two dimensional (2D) scanner that produces access-oriented, digital-audio files has been funded by the National Endowment for the Humanities as part of the IRENE (Image, Reconstruct, Erase Noise, Etc) project. The 2D machine will soon be installed in a production environment as part of a pilot study. Recent improvements in three dimensional (3D) imaging technologies are yielding a 3D device capable of operating at speeds similar to IRENE. Funded by the Institute of Museum and Library Services, this imaging technology will soon move from the research phase into the production environment.

**ORIGINAL TELEVISION AUDIO AIR CHECKS REPRESENTING LOST TELEVISION BROADCASTS: 1946-1972** *Phil Gries, Archival Television Audio, Sea Cliff, NY*

Fifty years ago I founded Archival Television Audio, Inc. (ATA) as a resource for television companies, authors, researchers, radio stations, and individual collectors. I began recording audio from telecasts at a time when archiving television was an arcane pursuit. Today, 15,000 hours of TV audio air checks in my collection represent over 12,000 different broadcasts. I have also obtained from different sources the few remaining TV audio air check collections to survive – thousands of which are one-of-a-kind broadcast records representing every genre of television broadcasting. ATA has donated audio to major museums including the Paley Center for Media, the Library of Congress, UCLA Film and Television Archive, and the Museum of Broadcasting, as well as to individuals such as Don Pardo reading the first AP wire about the shooting in Dallas of President John F. Kennedy. No other air checks of these historic broadcasts are known. I have received 21 letters from Woody Allen (mostly hand written) in response to 41 audio air checks I have given him, representing lost TV appearances made before he directed his first film. Other appreciative correspondence has been received from Milton Berle, Mike Wallace, Walter Cronkite, Joey Bishop, Jonathan Winters, and Rachel Robinson. My presentation includes many unique television audio air check samples dating back to 1946, a description of the genesis of the archive, and the significance of its contents from its formation to the present time.

## REPERTOIRE & ARTISTS: CLASSICAL

**Thursday 3:45p-5:30p The Hill Room**

**ROLAND HAYES: A RECORDING LEGACY CONSIDERED** *Christopher Brooks, Virginia Commonwealth University, Richmond, VA*

Once called the "Black Caruso," Roland Hayes (1887–1977) was hailed as one of the greatest concert performers of the 20th century. During his 60 year career, the gifted American singer packed concert halls all over Europe, in South America, and throughout the United States. At the height of his popularity, he was one of the few artists along with Fritz Kreisler, Ignaz Paderewski, Tito Schipa, John McCormack, and Pablo Casals who could sell out famous venues like New York's Town Hall and Carnegie Hall; Washington's Constitution Hall; Boston's Symphony Hall, among others. He was the first African American musician to perform with a major orchestra in the country in 1923 which led to him singing with many great conductors of the world including Eugene Ormandy, Leopold Stokowski, Otto Klemperer, Bruno Walter, Pierre Monteux, Serge Koussevitzky, Sir Henry Wood, Willem Mengelberg, and Gabriele Pierne. Given his celebrity and popularity, Hayes' recorded legacy is relatively small when compared to his contemporaries like Marian Anderson, and Paul Robeson. When he was at his vocal height in the mid-1920s, he recorded relatively few works. This discussion will consider the issues surrounding this great artist and his recordings and how it had ultimately affected his legacy.

**RENE SNEPVANGERS: THE OTHER SIDE OF HIS RECORD** *Seth B. Winner, Seth B. Winner  
Sound Studios, Merrick, NY*

In 1948, Columbia Records turned the record industry on its ear when it introduced the Long Playing Record. The new format enabled classical record buyers to enjoy longer works without the interruption that was part of listening to the 78 rpm disc format that had been in use for over fifty years. One of the inventors of this format was Rene Snepvangers, whose work on developing a lighter pickup than what was being used at the time made the LP a reality. This presentation highlights live recordings that Mr. Snepvangers made on micro-groove cut lacquers while working at Columbia during the LP's development. Among the artists are: Jennie Tourel, Kathleen Ferrier, Eleanor Steber (in a recording session), Ernest Ansermet, Oscar Levant with Dimitri Mitropoulos, Leopold Stokowski, and Seymour Lipkin with Charles Munch. Not only will the importance of this collection be cited, but the technical problems concerning the original sound quality and playback will be discussed.

**TOWARD A BORIS DISCOGRAPHY: MUSSORGSKY AND THE SEARCH FOR THE HAMMERHEAD SHARK** *Robert J. Dennis, Recordings Collections, Harvard University, Cambridge, MA*

This talk investigates the textual aspects of discography by examining the unusual and fascinating history of Mussorgsky's Boris Godunov on record. This cornerstone of the Russian operatic repertory has a distinguished performance history on disc, though the opera, which exists in two distinct versions, has never been recorded in a form the composer knew or would recognize. This issue has been virtually ignored by critics and misrepresented by record companies. In order to place the earliest recordings of Boris Godunov in context, a look at the opera's checkered performance history is necessary: its initial rejection by the Directorate of the Imperial Theatres in St. Petersburg, its subsequent acceptance in a radically revised form, its fragmentary first performances, its revisions and re-orchestrations at the hands of other composers, and the gradual progression to a stable if inauthentic performing text which remained in use, within the Soviet Union and beyond, on stage and in the recording studio, for nearly eighty years. Renewed interest in the composer's original conception came in 1974 – the year of the opera's centenary – with the publication of a critical edition of the score. Yet every effort to record the opera in a form in which the composer left it (there have been ten complete recordings purporting to do so) has fallen short of an accurate representation of either of Mussorgsky's original conceptions. This investigation places the discographer's work within a broader musicological context, and stresses the interdependence of two disciplines in documenting the recorded history of an operatic masterpiece.

## *Session Abstracts for Friday*

### **RECOVERING THE EARLIEST SOUND RECORDINGS**

**Friday 9:00a-10:45a Metropolitan Center**

Audio archeologists continue to discover ever-earlier sounds of human expression as they excavate recordings presumed lost or unmade. Many sonic artifacts lay buried among the relics of past political empires: Russia under Alexander III for instance, or France under Napoleon III. In this session, three practitioners discuss their efforts to recover significant remnants of mankind's earliest recorded legacy.

**THE DAWN OF RECORDING: THE JULIUS BLOCK CYLINDERS** *Ward Marston, Marston Records, Swarthmore, PA*

The survival and discovery of one of the earliest and most important collections of wax cylinder recordings, ranging in date from 1890 to 1927, is a fascinating lost and found story. Its hero is a man of ingenuity, drive, and charm – among the first to both understand and realize the potential of the phonograph. The collection is a window into the past and a portal into the future. Hearing the voices of mythical artists raises goose bumps, and the study of their performances will keep scholars busy for years. This presentation recounts the discovery of the collection and overviews its importance, touches on why this collection is a Rosetta Stone of nineteenth century musical performance practice, and shares the excitement of hearing the sounds from the dawn of recording.

**ADVENTURES IN ARCHEOPHONY** *David Giovannoni, Derwood, MD*

Last year the First Sounds collaborative recovered airborne sounds recorded 17 years before Edison invented the phonograph. Reflecting on the impact and meaning of this discovery, a principal in the collaborative discusses ongoing efforts to identify and conserve, access and study mankind's very first recordings of its own voice.

**NEW DIRECTIONS IN PHONAUTOGRAPHIC HISTORY** *Patrick Feaster, Indiana University, Bloomington, IN*

Édouard-Léon Scott de Martinville gained widespread attention in March 2008 when sounds he recorded in the mid-nineteenth century were finally played back – a striking proof of concept. Since then, new findings have made it possible to reconstruct the course of Scott's sound-recording experiments in unprecedented detail, fundamentally reshaping our understanding of what he recorded when, how, and why. This presentation will trace Scott's ideas and efforts between 1853 and 1861 in light of recent archival discoveries, for the first time setting forth a history informed by the study of all his known phonautograms. It will also unveil an alternative playback method that has helped unlock a number of phonautograms that at first glance seemed unplayable. We will both see and hear various pre-phonographic records of speech, music, and noises, some of which provide our only evidence for key stages in the development of phonautography itself – for example, the shift from recording individual notes to attempting to capture continuous singing. We will hear even the famous "Au Clair de la Lune" in an entirely new way. The latest discoveries confirm that Scott's approach to phonautography differed markedly from that of others in the pre-Edison era. Scott's uniquely romantic sense of his invention's potential and his ambitious experiments with it have bequeathed us a legacy of primeval recorded sound that is, in retrospect, just as remarkable as the invention itself.

## REPERTOIRE & ARTISTS: JAZZ LEGENDS

Friday 11:15a-12:30a Metropolitan Center

### HOAGY AND BIX: THE SEED OF HARVESTRY *Rob Bamberger, Arlington, VA*

Jazz historian, the late Richard Sudhalter, suggested that there is a significant vein of effort during the 1920s to “[express] the emergent jazz language in compositional terms.” At the center of this for one community of white jazz musicians was French impressionism – music that used whole tone scales, parallel harmonies and extended chords. While far removed from the blues that are a central characteristic of early jazz, elements of impressionism were nonetheless very present in the jazz ferment. This was especially so for Bix Beiderbecke, one of the most revered cornetists of the 1920s. Beiderbecke was intensely drawn to the music of Claude Debussy and Maurice Ravel. He also greatly admired the composer of the “Adirondack Sketches,” Eastwood Lane, whose music was in turn influenced by Edward MacDowell, composer of “To A Wild Rose.” While spending several weeks in Bloomington, Indiana in the mid-1920s, Beiderbecke struck up a friendship with Hoagy Carmichael, destined to write such American standards as “Star Dust,” “Georgia On My Mind,” “Rockin’ Chair,” and innumerable others. Carmichael’s encounter and subsequent friendship with Beiderbecke would find reflection in some of Carmichael’s music. This presentation traces the cross-pollination between the impressionists, Bix Beiderbecke and Hoagy Carmichael, and how, owing to Beiderbecke’s early death in 1931, his musical vision came to be strongly vested with Carmichael. The presentation will include relevant examples from the 1920s recordings of both men.

### CHARLIE PARKER AND LENNIE TRISTANO *Eunmi Shimm, Worcester Polytechnic Institute, Worcester, MA*

Charlie Parker recorded “All of Me” in 1951 at Lennie Tristano’s studio in New York, with Tristano on the piano and Kenny Clarke playing on a phone book or a stack of newspaper. The recording is of special importance in two ways. First, it is the only recording of Parker’s performance of the tune, and second, it is in the key of A-flat major instead of the original C major; the former is the key in which Tristano routinely played “All of Me,” as evidenced by his recordings based on the harmonic progression, for example, “Line Up” and “Momentum” from the mid-1950s. Tristano (1919-1978) was a jazz pianist who forged an original voice during a period when bebop was the predominant musical style in jazz history. He respected Parker as the progenitor of bebop and one of the greatest figures in jazz history. Tristano is also known for criticizing contemporary jazz musicians for imitating Parker’s music: he once stated, “If I were Bird, I’d have all the best boppers in the country thrown into jail!” In this recording of “All of Me,” Tristano only plays a supportive role but provides a harmonic background different from what bebop pianists did. Accordingly, Parker plays an exquisite solo displaying rhythmic displacement and chromaticism, which were musical elements that Tristano extended in his later recordings.

## TECHNICAL PRACTICUM: ANALOG AUDIO TRANSFER

Friday 11:15a-12:30a The Hill Room

### PINK NOISE AND HOT JAZZ: RESTORATION TECHNIQUES, SUBTLE AND PROFOUND *Doug Benson, Off The Record, Thurmont, MD*

The 2006 release of “King Oliver, Off the Record: The Complete 1923 Jazz Band Recordings” by the newly formed label ‘Off the Record’, was the fulfillment of a dream. For many years, I had desired to own a complete reissue of these important recordings, starting with clean original transfers and finishing with consistent, thoughtful restorations. As a commercial studio engineer for many years, I took a serious interest in doing my own remastering work after establishing a pen-pal friendship with the late John R. T. Davies, and began my new ‘career’ in 2004 with “The Complete Hit of the Week” series on Archeophone. In 2005, jazz musician and scholar David Sager joined the crusade, and ‘Off The Record’ was born. The King Oliver set has received many positive reviews for its sonic quality as well as a Grammy nomination for David’s accompanying essay. Although I made a majority of the transfers myself (including Marty Alexander’s unique copy of “Zulu’s Ball” and “Workingman Blues”) other engineers graciously supplied several submissions. In order to maintain a consistent timbre between those transfers and my own, (since they were made with differing cartridges and pre-amps) I began to experiment with a little-known method involving pink noise and compensatory equalization. I had only read about the method; but upon hearing its result, I was an instant convert. In this session I explain and demonstrate the ‘Pink Noise Method’ and other applications of contemporary and affordable software that I use in my work.

### REPRODUCING CYLINDER RECORDINGS: AN EXAMINATION OF DIFFERENCES BETWEEN ACOUSTIC AND ELECTRONIC METHODOLOGY *Lance Christensen, Golden, CO*

Cylinder recordings can be reproduced by many means: using the original equipment, and recording with a modern microphone by inserting a microphone into the throat of the original reproducer, and by playing the cylinder with an electronic stylus or reproducer. Each provides a different reproduction, a different sound and a different vision of how the sound was perhaps meant to be reproduced. Is this reproduction a recreation of the original sound or one that is one created by modern technology and not part of what was originally intended? The cylinder of wax, celluloid and extended variety can be reproduced on a machine well-tuned with a concert horn, or with a professional microphone inserted in the reproducer, or by electronic reproduction means. All are different, giving a different sound. This presentation shows how the sound of the original cylinder was recorded with purpose, how it can be recreated by using the original instrument as a performing machine, and how the microphones and electronic reproducers of the 21st Century can make recordings of 100 years ago come alive again. A comparison of the reproductive processes and spectrographic analysis will show how these differ, and how they can alter our interpretation of these antique recordings.

## DISCOGRAPHY

Friday 1:45p-3:15p Metropolitan Center

**ONE CLICK HIT! THE INTERNATIONAL DISCOGRAPHY** *B. George, ARChive of Contemporary Music, New York, NY*

The International Discography (ID) currently offers a half-million citations, a portion of the over two million recordings in the collection, including basic metadata on 120,000 LPs, 150,000 CDs, 200,000 twelve and seven-inch singles (one of the only archives in the world offering 7" singles data), plus 80,000 world music discs. This is the first, easy to use, one click database, based on the recordings we own, available to all online. ARC saves all versions and formats of all popular music recordings from around the world. ID provides a one-line citation with enough detail to properly identify any sound recording. Users can sort by any field, and easily print or flow any find, including the entire ID, into their computer or phone. ID is the first step in our offering of full discographic entry data and audio downloads. The presentation will outline the creation process and use of the ID.

**WERMING FOR THE 21ST CENTURY: ADVENTURES IN COMPILING AN ON-LINE ART MUSIC DISCOGRAPHY** *Michael H. Gray, Alexandria, VA*

Drawing on decades of discographic experience as a compiler and a bibliographer, I chronicle my ongoing efforts to compile an on-line art music discography named WERM (World's Encyclopedia of Recorded Music) (classical only). The tale takes us into musty archives, distant radio stations, far-flung record companies and web sites around the world; it details successes, frustrations and suggests ways to improve the accessibility of information related to the project.

**IMPLEMENTING A NICKELODEON MUSIC ROLL DATABASE** *Matthew Jaro, Gaithersburg, MD*

Coin-operated nickelodeons were an important source of entertainment in the early Twentieth Century. Recorded music on records using the acoustic process did not have enough volume to be a feasible source of music for bars, dance halls, ice-cream parlors and other public places. Pneumatically-operated nickelodeons filled that need. Actual instruments (piano, xylophone, organ pipes, drums, triangle, etc.) were played by means of pneumatic bellows and valves controlled by paper rolls. There is a great legacy of music on these rolls (often never recorded on disk). The performances were taken and arranged from some of the best artists of the day. Since there is a declining interest in these rolls, the author wishes to preserve the information concerning their contents. This presentation describes and demonstrates a database of these rolls. Normalization and the use of pull-down lists are important aspects of database design in order to remove redundant information and reduce the probability of duplication. Each roll has a manufacturer, a roll number, and a number of selections. Each selection has a song title and arranger/performer (if known). Each song has a publication date, composer, song type and one or more possible aliases. "Private" tables are used to enter information pertaining to an individual collection. Original rolls may be "re-cut" by other companies. This information is also recorded. The design of the database, the implementation (using Microsoft Access), the collection of information, data entry, example queries and reports will all be discussed.

## IN THE ARCHIVES

Thursday 1:45p-3:15p Metropolitan Center

**A BRAVE NEW WORLD AT THE NATIONAL ARCHIVES** *Kate Murray & Jessica Sims, National Archives and Records Administration Preservation Lab, College Park, MD*

On June 19, 2009, the National Archives and Records Administration (NARA) will celebrate its 75th anniversary. Much has changed since 1934 but the most dramatic transformations in the Audio-Video Preservation Labs (AV Labs) are taking place right now. Although audio collections account for a very small percentage of NARA's vast holdings, which total about 225,000 items, several recent initiatives have moved them towards the forefront of NARA's preservation mission. The AV Labs, housed in Archives II in College Park, Maryland, are undergoing major reorganization at almost every level including staffing models, workflows, project management, and equipment. Perhaps most significant is the transition to a digital file system for both preservation masters for permanent retention as well as access copies. This seismic shift in process is part of a larger NARA Preservation Programs move away from analogue and/or physical media towards a networked and interoperable digital file-based system. As we work through this progression in the coming months and years, there are many issues still to be considered and resolved. This talk will explore NARA's AV Labs legacy past including important projects and milestones, its dynamic and changeable present including the adaptation of new levels of the intellectual control of information, as well as future directions including the integration of a mass file storage unit and tools which allow for batch processing and the creation of derivative files for accessibility.

**THE DUKE OF DENTON: RHODES BAKER'S ELLINGTON COLLECTION AT THE UNIVERSITY OF NORTH TEXAS** *Andrew Justice, University of North Texas, Denton, TX*

In the late 1960s, Houston attorney Rhodes Baker donated his lifelong hobby – a collection of over 1,000 Duke Ellington recordings – to the University of North Texas Music Library. Included in the collection are commercially-released 78s, 45s, and LPs featuring the Ellington Orchestra and sidemen, transcription discs, Air Shot 78s, and 88 reel-to-reel tapes of rare performances of the orchestra performing live on radio, television, and in concert (both in the United States and abroad), many of which are the only extant recordings. This presentation will describe the breadth and depth of the collection, include exemplary audio selections, discuss planned methods of preservation and description, and address the challenges of making the collection available to in-person and online users in the age of digital access and copyright concerns. By doing so, I hope to arrive at a clearer picture of what the collection means to Ellington scholars and fans, as well as offer insight to other institutions with similar collections.

**A PARTNERSHIP FOR PRESERVATION: UCLA AND THE LOU CURTISS SAN DIEGO FOLK FESTIVAL COLLECTION** *Aaron M. Bittel, UCLA Ethnomusicology Archive, Los Angeles, CA; Russ Hamm, San Diego Folk Heritage, San Diego, CA*

Over the course of 30-plus years as a record collector, folk music impresario, record shop owner, columnist, and radio host, Lou Curtiss has been intimately connected with the San Diego folk music scene – and he has the tapes to prove it. His vast audio library documents the scene from the early 1960s through the late 1970s, through recordings of the numerous festivals he organized (including the San Diego Folk Festivals) and other performances at local venues. The collection captures live performances of a vast array of notable musicians,

from Elizabeth Cotten to U. Utah Phillips, The Balfa Brothers to the Boys of the Lough. Finding funding for digitization projects has grown increasingly more challenging, particularly for private audio collections. Many grantors now suggest (some require) that individuals and smaller community organizations partner with larger, more well-known institutional archives and libraries for their preservation projects. In 2007 the San Diego Folk Heritage foundation was awarded a GRAMMY Foundation grant to digitally preserve and make accessible a portion of the Curtiss collection, in part because they chose to partner with institutional archives, including the UCLA Ethnomusicology Archive. Such partnerships combine the initiative, talents and content of private collections with the experience, reputation, and resources of institutional archives to assure quality-controlled, standards-based digital preservation with viable long-term accessibility for important cultural heritage materials. We will discuss how this partnership was arranged, the roles and relationships of the participants, and the benefits to each partner and to the collection.

## **TECHNICAL PRACTICUM: SIGNAL RECOVERY & DATA INTEGRITY**

**Friday 3:45p-5:30p Metropolitan Center**

**IT'S NOT JUST ANALOG: ISSUES AND PROBLEMS RECOVERING LINEAR DIGITAL AUDIO TRACKS** *Robert Heiber, Chace Audio, Burbank, CA*

It is well documented that acetate and polyester based analog audio media are highly susceptible to physical deterioration, making the recovery of the audio difficult to impossible in many instances. However, archivists and asset managers are now facing similar problems with digital formats that are often less than half as old as their analog counterparts. In fact, digital formats often display multiple issues that make recovery of the audio more challenging. The problems range from physical deterioration of the media to more critical problems such as format/equipment obsolesce, as well as poorly maintained equipment no longer capable of making recordings to factory specifications. Unlike analog recordings, which often yield audio under extreme conditions of deterioration, the loss of audio is complete when a digital format exceeds its error correction capabilities. Here we examine the issues that lead to a complete loss of audio and identify methods of recovering the tracks. This presentation focuses on linear, tape based formats like DAT cassettes, DTRS (DA-88) and ½" DASH tape that are quickly approaching the end of their useful lives.

**PHASE EQUALIZATION AND ITS IMPORTANCE IN THE PLAYBACK OF DISC RECORDS** *Gary A. Galo, Crane School of Music, Potsdam, NY*

The subject of phase equalization in the playback of disc records is generally neglected. A recording curve is normally described as a plot of velocity or amplitude from the lowest to the highest recorded frequencies. However, all analog filters produce frequency dependent phase shifts. The phase response of a disc record, though not as widely understood as its velocity and amplitude response, is nonetheless an important part of the disc's recording characteristic. In order to achieve the most accurate playback, it is essential to compensate for both the frequency response of the record as well as its phase response. With analog filters, such as those found in any analog phono preamplifier, phase correction happens automatically as a result of the playback equalization curve – proper phase response “comes along for the ride” with analog filters, so transfer and restoration engineers need not concern

themselves with it. The era of digital signal processing has made it possible to apply disc playback equalization in the digital domain. One of the advantages of digital filters is that they can be designed to affect only amplitude, and can be free of the phase shift problems inherent in analog filters. This is certainly beneficial in single-ended equalization applications, including the reduction of various noises on analog sources, as well as altering the tonal balance of an imperfect recording. However, it is not desirable when applying playback equalization to phonograph records, which must complement the recording characteristic. All phonograph records have an inherent phase response which “came along for the ride” when the recording characteristic was applied. When applying complementary playback equalization in the digital domain, it is essential that digital filters be designed to mimic both the amplitude and phase response of the recording. This presentation begins with a tutorial on the nature of phase and phase shifts, how analog filters produce phase shifts, and how complementary recording and playback characteristics result in a playback that is both flat in terms of frequency response, and phase-neutral. The phase characteristics of several common recording and playback curves for 78-rpm and LP records are examined. Though technical by its very nature, the concepts will be presented in a way that is both useful to audio engineers and understandable to those with minimal technical background.

**IF YOU TURN OVER ROCKS, YOU WILL FIND THINGS** *Jason Bachman, Preston Cabe, George Blood; Safe Sound Archive, Philadelphia, PA*

Preservation institutions rely on standards to achieve sustainability, but can we trust that those standards are being followed by the creators of our professional tools and user applications? How do we know these standards are being followed across institutional lines? This presentation shows what happens when you start thoroughly testing what tools create and what implications those results have for preservation – what we call “turning over rocks.” We are seeing a disconnect between standards and interoperability between tools (both in user/desktop and professional applications). Issues have been found with data integrity between analog-to-digital converters, interoperability of metadata in WAV files and ID3 tag “standards” for MP3s. Discussion also includes recent changes to WAV, Broadcast WAV and AES31-3 file specifications. Bugs in software have been discovered that the manufacturers either did not know about or did not care enough about to thoroughly test. We discuss how institutions and our industry can work together to find solutions. These solutions can be as simple as trial and error tests or working with our colleagues to make sure that we are all striving toward the same standards. Special emphasis is placed on cross-application and cross-platform interoperability as a proxy for long-term preservation renderability. Examples include how to perform tests with free and/or low cost tools.

## **REPERTOIRE & ARTISTS: A CULTURAL POTPOURRI**

**Friday 3:45p-5:30p The Hill Room**

**QUODLIBET FOR A POLYMORPHOUS POLYMATH: THE RAYMOND SCOTT COLLECTION AT THE MARR SOUND ARCHIVE AT THE MILLER-NICHOLS LIBRARY OF THE UNIVERSITY OF MISSOURI AT KANSAS** *David N. Lewis, Ann Arbor, MI*

Raymond Scott (1908-94) pursued multiple interests in a career that spanned 55 years; as composer, inventor, bandleader, electronic music pioneer, recording engineer and producer, radio and TV personality, commercial jingle architect, instrument builder and pianist. Scott was also an inveterate packrat who scrupulously collected his own work in

addition to anything else he could lay his hands on. Scott's personal collection, donated to the Marr Sound Archive by his widow, Mitzi Scott, in 1996, provides a glimpse into a unique alternative historic universe to radio, record and television production in the period 1932-1967. This talk addresses various formats in which Scott worked and the range of material he saved that has come down to us. This range would include telephone conversations recorded on uncoated aluminums in 1932, rehearsals of his famous Quintet and from the "Your Hit Parade" television program, of the so-called inter-racial "Million Dollar Band" of 1944 and his efforts to introduce electronic music into the field of commercial advertising in the 1960s.

**"THE MELODY THAT MADE YOU MINE": REMEMBERING MORTON DOWNEY** *Barry Stapleton, Ward Irish Music Archives, Milwaukee, WI*

Morton Downey was born in 1901 to Irish immigrant parents in Wallingford CT. By the age of 15 he quit school and sold candy on trains, acted in small time vaudeville, and was an agent for Victor Records. From 1923 to 1926 he sang with the Paul Whiteman Orchestra where he was the first band vocalist. He first recorded in 1923 for Edison Records under the pseudonym Morton James. In 1926 he was signed for Ziegfeld's Palm Beach Nights in Florida. Then he went on his own to London, Paris and Berlin and gained international stardom. In 1929 he made the movie Syncopation where he sang the hit song "I'll Always Be in Love With You" to his co-star Barbara Bennett who would soon become his wife. He eventually made two other films but moviemaking was not his style. Radio became his claim to fame. In the 1930's he signed with CBS. He was the featured singer at the New York World's Fair of 1939-1940 and the following year he signed with the Coca-Cola Company for a daily radio program, singing with the Raymond Paige Orchestra. In 1952 he signed an exclusive five-year contract with Coca-Cola that covered all of his radio and TV appearances. At the peak of his career in the middle 1930's Morton was receiving over 95,000 fan letters a week and earning, with nightclub and theatre appearances, as much as \$250,000 a year.

**1959: THE FIRST FULL YEAR OF THE STEREO LP** *Dennis D. Rooney, New York, NY*

After being introduced in the summer of 1958, the stereo LP began its gradual ascent to dominance as a sound carrier until the introduction of the Compact Disc a quarter century later. Throughout that first full year of commercial existence, the arrival of each new stereo LP was greeted with intense interest. Sound effects records, which had been in existence during the "Hi Fi" era, now brought railroad trains, aircraft and a pit-stop at Indianapolis into the listening room stereophonically. Many releases exploited the novelty of stereo through exaggerated left/right effects, such as the "ping pong" stereo sounds of bongo drums. Competing philosophies of stereophony were debated and the vagaries of early two-channel audio were liberally represented. The year ended with the release of the first complete recording of Das Rheingold, a production that deliberately used stereo to capture Wagner's sound-world in a way that had never been heard before on records. It became a best seller that challenged pop records on the American sales charts and spurred rapid general adoption of two channel audio playback. In addition to audio excerpts transferred from original stereo LPs, accompanying graphics will show display ads for many important records and playback equipment introduced that year as seen in the pages of High Fidelity and other contemporary American magazines devoted to audio recordings and reproduction.

## *Session Abstracts for Saturday*

### **ON COLLECTORS & COLLECTING**

**Saturday 9:00a-10:45a Metropolitan Center**

**WORLD PREMIERE OF "FOR THE RECORD"** *Leah Biel, Brooklyn College, Brooklyn, NY*

"For the Record" is a one-hour video documentary that examines the activity of record collecting from a positive view of 16 collectors, many of whom are ARSC members. Traveling from Toronto to Texas, from Connecticut to Kentucky, I visited most of the collectors in their home base where you will see them, their collections, and even some archival footage from ARSC conventions past. The video was done as my thesis for the Masters of Fine Arts degree at Brooklyn College, and ARSC will be the location of the "World Premiere." But there are some highlights, behind the scenes secret footage, some more Archival footage and some great out-takes presented exclusively here for one time only.

### **REPERTOIRE & ARTISTS: JAZZ RADIO IN WASHINGTON, DC**

**Saturday 11:15a-12:30a Metropolitan Center**

**JAZZ IN DC, ON THE AIR: A TRIBUTE TO THE LATE FELIX GRANT** *David Sager, Off The Record, Laurel, MD*

Felix Grant, DC jazz radio host for more than 40 years was a mighty force in Washington, DC and vicinity. It seems almost impossible today to realize that a jazz program was heard on Washington DC radio five nights a week. But it is true; beginning in 1953 the late Felix Grant hosted over WMAL-AM his four hour "Album Sound till Midnight" broadcast to the delight of music lovers in the nation's capital. He not only captivated fans but also help tune the ears of budding jazz musicians. So compelling was Grant's program and so great his popularity that when the station pulled the show off the air in an attempt to change the format, the outcry from the public was so great that Felix was promptly returned to his spot. Grant was also instrumental in popularizing Brazilian jazz in the United States as a result of his frequent travels there and returning with armloads of LPs of this exciting music to share with listeners. Felix's taped broadcasts, including many interviews with now legendary jazz musicians are housed in a dedicated archive at the University of the District of Columbia. His immense record collection, books and other musical ephemera resides there as well. Grant's tremendous legacy has continued in the hands of many fine programmers, whose numbers in rank have dwindled in recent years due to sharply defined changes in radio programming. In addition, advances in technology have resulted in a drop in dedicated, concentrated listening resulting in the rise of podcasts, programs archived on the internet, high definition radio and other ways to listen on demand. Also, the rise of popularity in a genre known as "Smooth Jazz" has had a hand in elbowing classic jazz radio out of the airwaves. What has been and what will be the effect of these changes on jazz radio and more importantly, on live jazz and on our culture? How will "narrowcasting" affect listenership? A distinguished panel discusses Felix Grant's legacy and the present state and future of jazz on the air: *Bill Mayhugh*, former WMAL host who's all



night program followed Felix Grant's; *Rob Bamberger*, popular host of WAMU's "Hot Jazz Saturday Night"; *Larry Appelbaum*, longtime host of WPFW's "Sound of Surprise" and jazz promoter; *Rusty Hassan*, veteran DC jazz programmer and host of WPFW's "Jazz & More"; *Judith Corey*, curator of the Felix E. Grant collection at the University of the District of Columbia; *Michael Turpin*, recording engineer and preservation advisor to the Felix E. Grant collection.

## TECHNICAL PRACTICUM: PRESERVATION WORKFLOW

Saturday 11:15a-12:30a The Hill Room

**SCALING UP: INCREASING AUDIO PRESERVATION EFFICIENCY THROUGH AUTOMATION AND PARALLEL TRANSFERS** *Mike Casey, Archives of Traditional Music, Indiana University, Bloomington, IN*

Workflow may be defined as a sequence of processes undertaken to transform inputs into outputs to repeatedly achieve a goal. Less formally, it may be thought of as the glue that ties processes together. Because audio preservation requires significant resources and audio collections are often large, it is critical to design workflows that are efficient and effective, conserving time and money while ensuring high-quality work. This presentation explores several approaches to increasing efficiency within an audio preservation system. It examines the development of workflow scripts at the Archives of Traditional Music as part of the Sound Directions project, automating the tasks that may be done faster and more accurately by machines. It also reports on research into the use of parallel or simultaneous transfers of analog originals, calculating the risks and benefits of using this procedure for the types of recordings found in research archives.

**FROM INGEST TO WEB-SITE: CREATING A PRESERVATION MASTER AND AUTOMATING ON-LINE ACCESS** *Rob Poretti, Cube-Tec North America, Ontario, Canada*

Creating proper digital preservation master can be a difficult task for many archives. Creating derivatives and placing them onto a web server along with the necessary meta-data for search engines and local database access requires IT expertise often not available to small archives. This paper examines a software solution (DOBBIN) that automates moving newly ingested audio materials to a preservation master repository, and creates browsing copies for intranet/internet web-sites and moves them, along with their associated meta-data, to web-servers. This XML based meta-data can allow a web-application or web-service to automatically create web-pages accessing those derivatives, providing a complete "input-to-output" solution with a minimum of human interaction. The automated workflows investigated include: quality analysis of audio recordings derived from QUADRIGA, CD Inspectors, and 3rd party digitization; defining valid preservation master criteria for quality analysis and other automated workflows; creating MD5 or FSC check-sums for valid preservations masters; moving preservation masters to primary and secondary repositories & testing check-sum validity; using quality analysis meta-data to drive automated derivative creation; automated derivative testing using recursive psycho-acoustic comparisons; exporting meta-data to the preservation/library or legacy databases; and defining criteria for creating automated reporting for any work process.

## REPERTOIRE & ARTISTS: POSTWAR INDIES IN WASHINGTON DC

Saturday 1:45p-3:45p Metropolitan Center

**BLUEGRASS, R&B, AND THE RISE OF INDEPENDENT RECORD LABELS IN WASHINGTON, D.C. AFTER W.W.II** *Kip Lornell, Silver Spring, MD; Jay Bruder, Alexandria, VA*

Washington, D.C., most notably through the local Columbia label that emerged as the most successful regional franchise of the original North American Phonograph Company, stood at the center of the early talking machine industry as inventors and investors vied for the attention and business of the Federal Government. A dramatic melt-down of the fledgling talking machine industry in the mid-1890's caused Columbia to shift its' headquarters to New York City, followed by Emile Berliner's departure in the early 1900s, leaving Washington without a major recording label. Unfortunately, this situation prevailed until after the Second World War when local entrepreneurs such as the Feld Brothers, Lillian Claiborne, Ben Adleman and many others ventured into the business with labels such as Super Disc, DC, Paragon, Loop, Quartet, Lewis, Lloyds, and Empire. While most of the material is unremarkable, the local record companies documented a vibrant rhythm & blues as well as bluegrass scene just as both styles emerged in the late 1940's and early 1950. Here we focus on the rhythm & blues and bluegrass recordings done by local record companies during the decade after the end of World War II.

**WORLDS OF SOUND: THE STORY OF SMITHSONIAN FOLKWAYS** *Richard Carlin, Atesh Sonneborn, and Andrea Kalin*

Based on the new illustrated history of Folkways Records, *Worlds of Sound: The Story of Smithsonian Folkways Recordings* (HarperCollins, 2008) and the forthcoming Smithsonian Channel documentary of the same name, this talk and video presentation presents the history of Moses Asch's landmark independent record label. When he opened his shoebox size recording studio in New York in 1940, Moses Asch had a larger-than-life-size dream: to document and record all the sounds of his day. He created Folkways Records and Service Corporation to achieve his goal, not so much a record label as a statement that all sounds are equal and every voice deserves to be heard. The Folkways catalog grew to include a myriad of voices, from world music to political speeches; the voices of contemporary poets and tree frogs; folk singers Lead Belly and Woody Guthrie and jazz pianists Mary Lou Williams and James P. Johnson; Haitian Voodoo singers and Javanese court musicians; deep-sea sounds and sounds from the outer ring of the earth's atmosphere. Until his death in 1986, Asch – with the help of collaborators ranging from the eccentric visionary Harry Smith to academic musicologists – created over 2200 LPs, a soundscape of the contemporary world that remains unequalled in breadth and scope. Folkways became a part of the Smithsonian Institution's collection shortly after Asch's death. Today Smithsonian Folkways continues to pioneer the "worlds of sounds" Moe Asch first dreamed of 60 years ago. Asch's vision was expansive and all-inclusive, and World of Sounds carries forward that spirit in a rich array of visuals and lively and quirky sidebars.

***ARSC'S TECHNICAL COMMITTEE PRESENTS***  
**PERFECTION VERSUS REALITY – STRATEGIES**  
**FOR PRESERVING BORN DIGITAL AUDIO**

**Saturday 1:45p-3:45p The Hill Room**

Much attention has been paid over the past decade to transferring deteriorating, obsolete analog recordings to digital files. Meanwhile, new audio formats that are digital from the start have emerged as the primary carriers of audio content. These born digital audio formats present a number of technical and conceptual challenges for archivists charged with acquiring and preserving them. This session explores the born digital landscape, addressing both the basics and complexities of current and future audio content formats..

**BORN DIGITAL BUT NOT EQUAL: A SURVEY OF DIGITAL AUDIO FORMATS, FROM PHYSICAL MEDIA TO FILES** *David Nolan, 92nd Street Y, New York, NY*

This survey of formats provides an understanding of the often confusing world of sample rates, bit depth, bit rates, and the wide variety of file formats – from high-resolution WAV files, to “CD-Quality”, to lossless and lossy data compression for storage and file transfer and delivery via IT and IP-based systems. Learn to spot the clues that show where your file has been and what it may have gone through before it got to you – from the original software or device used to record the audio, to any and all steps in the ever-increasing chain of digital copies that audio archivists must now contend with and assess when a digital audio file makes its way into the archive.

**STRATEGIES FOR PRESERVING BORN DIGITAL AUDIO** *Chris Lacinak, AudioVisual Preservation Solutions, New York, NY*

This presentation addresses overarching strategies and challenges of preserving born-digital file-based content. It explores parallels between the physical and file-based domains using established preservation principles as focus points. And it analyzes how to translate relevant collection management and preservation practices from the physical domain to the born digital file-based domain.

**CASE STUDY: THE INDIANA UNIVERSITY JACOBS SCHOOL OF MUSIC** *Travis Gregg, Jacobs School of Music, Bloomington, IN*

The Jacobs School of Music has been making live concert recordings since the 1940s, and continues to record approximately 500 concerts each year. These recordings are housed in the Cook Music Library and consist of a variety of media; primarily analog tape, Digital Audio Tape and CD-R. In mid 2006 the Jacobs School began to develop a file-based system for the creation, access, and long-term preservation of high-resolution audio recordings and associated metadata; and reached full implementation in January of 2007. This presentation overviews the development process, presents hardware and software solutions, and discusses workflow and data management issues.