PERFORMANCE!
The Newsletter of the Society of American Archivists’ Performing Arts Roundtable
Issue for Spring/Summer 2004

[The Performing Arts Roundtable: Encourages the exchange of information on historical and contemporary documentation of music, dance, theater, motion pictures, and other performance media. (from the SAA Web site)]

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Message from the Roundtable Chair  
*By Bridget Carr*

I hope to see you all in Boston next month. The Performing Arts Roundtable will meet on Thursday, August 5th, from 5:30 – 7:00 p.m. At this year’s meeting we will join with the Recorded Sound Roundtable group after our business meeting. I would again like to give one of our members a chance to give a 20-minute joint presentation about a performing arts archives and recorded sound issue or project useful to both us and the Recorded Sound Roundtable. Last year Karen Spicher of Yale University gave an interesting talk on music manuscript cataloguing that she followed up with an article that appeared in the Fall/Winter issue of *Performance!* Anyone interested should contact both me bcarr@bso.org and Nathan Georgitis nathan_georgitis@hotmail.com as soon as possible so we can finalize that part of the meeting’s agenda. More information on the joint session will be distributed as a separate message soon.

At this summer’s meeting, we will also need to appoint or elect a new Roundtable Chair as my two-year term is coming to a close. If you are interested in serving or would like to nominate someone, please send me an email prior to the meeting at bcarr@bso.org. Involvement in a Roundtable is a rewarding way to become involved with SAA.

On another note, please join Performing Arts Roundtable members for dinner on Wednesday, August 4th. This social event is in addition to our meeting on August 5th. We will meet in the registration area of the Park Plaza Hotel at 5:00 p.m. and will proceed to Symphony Hall for a quick tour of the Archives, followed by dinner at the Top of the Hub (atop Boston's Prudential Center). The Top of the Hub is a little pricey (appetizers average $14 and entrees from $21 to $40) and if you object to this as a choice, please let me know. There are lots of restaurants within walking distance of the Park Plaza and Symphony Hall. I will need to make a dinner reservation, so please e-mail me or telephone me if you would like to attend this Performing Arts Roundtable event! I'd like to hear from you all by Monday, August 2nd if at all possible via e-mail or telephone.

Hope you can come.

**News Items**

**Session Suggestions for the Boston Meeting**

There are a few sessions at the SAA convention that will be of particular interest to archivists for performing arts organizations and collection repositories. Above all, come to the Performing Arts Roundtable on Thursday, August 5th beginning at 5:30 p.m. Then considering going to the following:


Session 63, “MIC: Moving Image Collections – One-Stop Shopping through Collaboration.”

**Boston Symphony Orchestra Preservation Assessment Grant**  
In January 2004, the Boston Symphony Orchestra (BSO) Archives received a NEH Preservation Assessment Grant. The grant enabled the BSO to hire a consultant -- Peter Brothers of Specs Brothers – for a formal assessment of the orchestra’s audio and video holdings. His final report includes guidelines for prioritizing the materials most at risk, recommendations for transferring them to a more stable, accessible format, and further recommendations regarding storage and public accessibility. It is hoped that the report will help the BSO secure further funds for future preservation and reformatting projects.

**Wednesday Evening Tour of BSO Archives and Dinner in Boston**  
Please take note of the invitation in the message above by roundtable chair Bridget Carr. Roundtable members can take a tour of the Boston Symphony Orchestra archives and then enjoy a group dinner on Wednesday evening, August 4th. If you will be at the convention and can make this event, please RSVP to the phone number or email address provided.

**Documentation in Japan**  
Dance, as you might expect, is alive in Japan and the Asian perimeter. And Yukihiko Yoshida, a graduate student at the Graduate School of Media and Governance in Keio University, is a member of the Japanese Research Network in Dance Research, Japanese Society for Dance Research and Japan Art Documentation Society. Yoshida is interested in the work we in SAA are doing and in exchanging information about developments in Japan and the Pacific Rim. This contact offers the promise of a future "Report from the Field". Yoshida had a conference presentation on Dance Documentation at the Japan Art Documentation Society this June. He also constructing image database on Japanese and German modern dance. He also will be presenting a paper at the World Dance Alliance (WDA) Asia Pacific conference in Taipei in August. And Yoshida has provided a web site address for reaching the international World Dance Alliance organization [www.mydancealliance.org](http://www.mydancealliance.org).  

Contact address for Yukihiko YOSHIDA: Dance Critic, Dance Researcher  
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**Byrd Hoffman Foundation News**  
The Byrd Hoffman Foundation, which maintains the Robert Wilson Archives, has an informative web site <www.robertwilson.com/> and publishes the *Robert Wilson*
Quarterly Newsletter. For more information on the latter, contact Managing Director Jan Kengelbach at <jan.kengelbach@robertwilson.com>.

Notes on Collaboration 1: Pittsburgh Performing Arts Convention
Pittsburgh, PA was the locale in early June for what was described as the first National Performing Arts Convention. Meeting simultaneous, with some events crossing boundaries, were Dance/USA, the American Symphony Orchestra League, Chorus America, and OPERA America. If this continues and if it has not been done, it may behoove archivists for the performing arts field to insist on a session at a future joint meeting that can discuss what archivists do and how they do it.

If any reader attended and would like to write a brief account of the meeting, please contact the editors.

Notes on Collaboration 2: ”Taking Care of All Our History” Consortium Begins
The July issue of the AASLH (American Association for State and Local History) publication History News Dispatch reported on the creation of a new joint organization. The new “Taking Care of History” consortium includes archival and archives-supporting agencies among its members. It is to be hoped more information will be forthcoming over the next few months.

Reports from the Field
Editor’s Note: This section is intended to be an avenue for the exchange of information to members of the roundtable about collections or other topics of importance on the performing arts.

There is only one report from the field in this issue. Lisa Carter, who will be one of the presenters for Session 62 at the SAA meeting in Boston, discusses the problems posed in digitizing large sets of audio-visual materials.

Gathering Momentum: Digitizing Time-Based Media

By Lisa R. Carter

The crux of the challenge for archiving the performing arts rests in the very nature of performance. At its base, live performance is transitory; no matter how you try, you cannot really recapture the feeling of attending that performance and being in a specific place at a specific time. Even when the performance is meant to be recorded, as an event moving through time, the experience of
the whole of the performance is complex to convey if broken down into smaller, discrete instances. A series of still images capturing a performance doesn’t have quite the same impact as a continuous, contiguous stream of moving images with sound.

Therefore, by its very nature, performance is best captured on time-based media such as recorded sound disks, audiotapes, film and video. Through the act of recording, a performance is captured so that it can be experienced multiple times, by many people in different places at any time, thereby enhancing accessibility to that art. Digitization of media holds the promise of being able to copy a performance through many generations without the loss of quality inherent in analog reformatting as well as the potential for an even wider audience to experience the performance at their convenience over the Internet. Yet because of its very nature as time based, performance as captured on analog media can be quite a challenge to digitize.

A high quality analog recording will have nearly infinite levels of variation between minimum and peak points of the signal, in both audio and video. By the very nature of digital capture these variations have to be quantified and represented on some sort of numeric scale. The larger the set of numbers that are allocated to this representation, the closer to the analog original the digital file will be. Inversely, when a minimal range is assigned the quality of the digitized file is lessened. But as the numeric sets increase in size, increased storage space is required to hold the resulting digital file. This rate of storage space across time is measured as bits per second; more commonly referred to as megabits per second or Mbps. The balance that the archivist must attempt to achieve is between the highest quality and a manageable storage cost.\(^1\)

It is compression that makes the development of a digitization project for time-based materials such a challenge. Archivists face determining how much compression is too much or too little and what really is lost when content is compressed. A conservative approach might be to “save everything”, in other words, capture media using an uncompressed method, so that we don’t miss anything or have to trust that an algorithm can reliably put samples back together the way they should be. But uncompressed media brings its own set of challenges, specifically, storage size and cost.

To replicate through digital means every complexity of an image or sound in just one instance of visual or aural information (such as a frame) is challenging enough, requiring a high resolution, bit depth, etc. Since a typical video is 29.97 frames per second, capturing 29.97 of those still images per second at a very high resolution and color bit depth exponentially increases the file size of overall digital media object. Given the potential enormous size of digital media objects most digital moving images and sound require some amount of compression. The quality of the file therefore depends on how much compression and the quality of the algorithm used to compress and decompress the signal.

\(^1\) Thanks to Paul Stackhouse, Jr. at KET for providing conceptualization details.
As an example, a developing archival standard for digital video is MPEG2 50 Mbps I-frame only. An I frame is a key frame used to build a moving image, not unlike a frame of film. Assuming 50 Megabits are captured every second and a video is 60 minutes long or 3600 seconds and since there are eight bits to a byte, that means an hour video would be 22,500 MB or 22.5 GB. A typical DVD only stores 4.7 GB. Storage costs run between $0.50 and $3.00/GB, so for KET to store an hour of video at 50 Mbps I-frame would cost $67.50 per hour. Multiply that by the number of hours in, as an example, the KET television archives (4500 hours) and it could cost $303,750 just to store all of those videos digitally. This doesn’t even address the costs of personal and equipment necessary to get it into a digital format in the first place.

Because it cannot cover such a large cost, KET has chosen to digitally reformat its 1” and 3/4” video as either 8 Mbps or 4.5 Mbps Variable Bit Rate essence files with a 4:2:0 color sampling rate. Cost certainly wasn’t the only deciding factor. First we revisited the expected use of the videos we would be digitizing. It was determined that they would primarily be used for research, historical reference and preview, rather than re-editing into a production, so a higher compression method (meaning lower quality) was more acceptable. Additionally, the purpose of the digitizing project was mostly discovery, rather than preservation. We didn’t have enough descriptive information gathered about the videos to make good appraisal decisions by determining which videos were worth preserving over time without watching every tape. Also, in testing and with confirmation from PBS, we agreed that there was no point in capturing ¾” source material at more than 4.5 Mbps or 1” source material at more than 8-15 Mbps because the visual quality of the original images would not be enhanced by a higher capture rate. In the case of older ¾” tapes or material that has been dubbed several times, digitization will never improve the poor visual quality of the original. In addition, in making an effort to diversify their storage strategy, KET wanted their backups stored on DVD. To avoid transcoding for the backups, KET selected a DVD compliant video standard, 8 Mbps, 4:2:0 for its essence files. PBS has also set their criteria for standard definition program distribution at 8 Mbps 4:2:0, “after extensive viewing of different bit rate encodings at PBS.”

This decision has several implications:

Video compressed to 8 Mbps suffers from pixilation in very high motion situations. Variable Bit Rate was selected to compensate for motion, where a higher bit rate would be required, while saving storage space in shots with talking heads, where a lower bit rate is acceptable. But there is still evident loss of resolution, pixalization and the introduction of artifacts into fast movement sequences.

In addition, such highly compressed files are not precisely editable. This makes it unlikely that the producers will choose to use these video sources in future productions. Because of this lack of functionality and the compressed nature of the files, in archival terms these files cannot be considered preservation masters. And while these files are compliant with the PBS delivery
standard, as essence files they are not up to PBS’s Contribution File standards, which PBS envisions as “eventually replacing the videotape archive version”.2

While archivists have no easy answers, we are being asked to grapple with some of these same issues from a broader perspective. The current mantra of digital project development in archives is “Digitize at the best quality you can afford”. What is the solution when the best quality you can afford (or can ever hope to afford), is not good enough for preservation?

Current best archival practice asserts that “In the digital world, preservation is the creation of digital products worth maintaining over time.”3 What are the criteria for a digital video worth maintaining over time? Best practices for digital reformatting of video need to be developed, including solutions for mid-level “preservation” and the delineation of options for acceptable loss.

What is preservation? Preservation in the archival world has been pinned to the longevity of a physical object. With magnetic media, longevity is ineffectively short. Preservation for electronic materials has to be reconceived around the longevity of content. Taking a cue from the Library of Congress, we should “assure long-term, uninterrupted access to the intellectual content of . . . collections, either in original or reformatted form.”4

There are no easy answers to these questions at this time. As archivists, we are having to reconceive our traditional notions of preservation in the face of preservation reformatting time-based media through digitization. While best practices and standards are currently being established for sound materials, video is still unsettled at this time. And yet magnetic media may not wait for the best practices to settle in, as the earliest magnetic recordings are reaching the end of their expected life span. For now, the development of digital projects must weigh source characteristics of the original media with current technology’s capabilities and the expected use of the digital objects to determine what compromises need to be made between cost, quality and accessibility.5 But it is clear that archivists must rise to this challenge in order to capture the documentation of movement and sound and share it with future generations.

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2 Email from Jerry Butler to Paul Stackhouse, 27 May 2004.
Lisa R. Carter lcarter@ket.org is the Audio-Visual Archivist at the University of Kentucky Libraries, Special Collections and Archives (http://www.uky.edu/Libraries/Special/av). Currently, she is managing a collaborative project with Kentucky Educational Television (http://www.ket.org) to organize, preserve and digitize their video archives. Ms. Carter is active in the Association of Moving Image Archivists (http://www.amianet.org), having served on their Board of Directors, the Conference Committee, the Local Television Task Force and Strategic Planning Group. She is also a member of the Midwest Archives Conference, Kentucky Council on Archives and Association for Recorded Sound Collections. Ms. Carter consults on a variety of audio-visual projects, most recently managing the development of an infrastructure for the National Television and Video Preservation Foundation (www.ntvpf.tv).

**Editor’s Corner**

**Your Newsletter**
As always, the editors encourage feedback from the roundtable membership concerning this newsletter. Is *Performance!* serving you well? Can you suggest improvements? Are you interested in contributing an article or news item to a future issue? Remember, this is your newsletter, let your voice be heard!

**Missed Issue**
For the record, there was no issue distributed in April 2004.

The expectation for the issuance of the next issue of the newsletter is December 2004.

**Readership Survey Form**
Please see page 9 for a “Readership Survey Form.” This gives you the chance to provide your editors with feedback.

**Newsletter Distribution**
The method for distributing this newsletter is as a Word document sent as an attachment to an e-mail message to the subscription list maintained by the editors. The distribution figure is currently more than 80 people.

This Issue Initially Distributed Electronically on July 22, 2004
Readership Survey Form, Summer 2004

In line with the “Your Newsletter” paragraph on page 8, your editors offer the following readership survey form as a means of better serving the membership of the SAA Performing Arts Roundtable. Please complete the form (then cut and paste) and return it to co-editor George Bain <bain@ohio.edu>.

Note: The philosophy of the co-editors is to explore problem-based topics or concerns that offer or pose solutions.

1. Please mark your first, second and third priorities in the space provided:
   I would like “Reports from the Field” articles on
   ____ Establishing an organizational archives
   ____ Acquiring collections in a repository
   ____ Appraisal issues
   ____ Reference-related problems/issues
   ____ Arrangement and description issues
   ____ Preservation-related topics
       ____ physical collection
       ____ technical problems
   ____ Access topics
   ____ User education topics
   ____ Digitization concerns
   ____ Administration
   ____ Education and training
   ____ Grant programs or granting agencies
   ____ Other - please add specific suggestions:

2. Please indicate a topic on which you are willing to write an article (ca. 1000 words):

   ________________________________________________________________

3. Please suggest the name of another person you believe would do a good job of writing an article and a topic on which the person would be qualified to write:

   ________________________________________________________________

4. Please suggest any new sections or features that would be useful to you as an archivist concerned with the performing arts

Thank you for taking the time to respond to this survey.