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Project Number: 48-RGF-NEJA

NEJA DIGITAL HISTORIC JAZZ PRESERVATION

An Interactive Qualifying Project Report

submitted to the Faculty

of the

WORCESTER POLYTECHNIC INSTITUTE

in partial fulfillment of the requirements for the

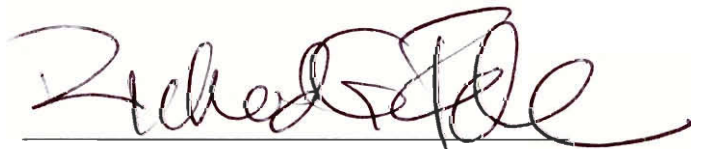
Degree of Bachelor of Science

by

A handwritten signature in black ink that reads "Lee A. Whalen". The signature is written in a cursive style and is positioned above a horizontal line.

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Date: October 14, 2004

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Professor Richard G. Falco, Major Advisor

Abstract

The outlining of a methodology for the digital preservation of historically significant data in various media - text, audio, video, and photographic - is vital to regional jazz societies such as the New England Jazz Alliance (NEJA). Utilizing research and experimentation both in the field and at research workstations, a codified approach to preserving these media using the NEJA online database while adhering to industry-standard digital formats and protocols was created.

Table Of Contents

| <u>Chapter</u> | <u>Page</u> |
|------------------------------------|-------------|
| 1. Introduction | 1 |
| 2. Literature Search And Review | 6 |
| 3. Methodology | 15 |
| 3.1 Leo Curran | 17 |
| 3.2 Mamie Moffitt/Miriam Estrella | 23 |
| 3.3 Mae Arnette | 25 |
| 3.4 Rockie Blunt | 29 |
| 4. Conclusions | 30 |
| Acknowledgements | 32 |
| Appendix A "Field Research Manual" | 33 |
| Appendix B "CD-ROM Contents" | 35 |

An Introduction

The heritage of Jazz is dying. The great artists of yesteryear are wheelchair- or coffin-bound, and the current crop of jazz phenoms are finding it difficult to withstand the marketing machine of the latest vapid, bubblegum-driven pop princesses. The jazz saga is slipping away, much of it lingering in the minds of those who lived it so many years ago. With each elderly jazzer that passes away, be they a forgotten legend or merely an enthusiastic aficionado of the genre, a little more of that rich history is lost.

There are very few resources available today that act to preserve and publicize the rich history of jazz, and fewer still are those that take advantage of modern-day Internet accessibility to appeal to a worldwide audience. No evidence could be found to show that there was an online database to which educational institutions or jazz historians could contribute at will. There are large historical collections that reside at institutions such as the Smithsonian, Rutgers Jazz Institute, and the Kansas City Jazz Institute, but in each case scholars must physically go to these places to browse the archives. Their contents may be listed online, but physical access is generally a requirement to be able to peruse the information that is available.

In 2002, the New England Jazz Alliance, in conjunction with WPI, created a wholly online public database that, by virtue of worldwide distribution via the Internet, is far more accessible and, by virtue of professional review through a third-party organization, is just as accurate a resource as it's more illustrious hard-copy real-world counterparts.

The objective of this project is twofold: to test and evaluate the New England Jazz Alliance (NEJA) online history database for its overall efficiency and usability, and to create a standardized interview and submission process for researchers and historians to follow in their submissions to the site. Another aspect of this project was field data collection for later post-production work, with eventual submission to the NEJA database as fully realized articles. Digitally-recorded personal interviews, scanned documents/photographs, and digitized previously-recorded audio was collected with the aid of a laptop computer, flattop scanner, and a digital voice recorder with download capability.

As detailed in their mission statement, NEJA is an organization whose purpose is fourfold*:

- To promote the New England Jazz Hall of Fame
- To make jazz music more accessible to all people, especially the young
- To celebrate and perpetuate the jazz tradition
- To call attention to today's outstanding New England Jazz Artists.

To further these goals, NEJA keeps an up-to-date online calendar of jazz performances throughout New England. They also maintain a permanent exhibit, the New England Jazz Hall Of Fame, which travels from site to site honoring many of New England's outstanding jazz performers. Finally, NEJA also maintains a digital archive of photographs, articles, and audio that relate to the rich jazz tradition of New England.

The history database, which is the focus of this IQP, is broken down into two general categories, General Library and Authored Articles. The Authored Articles* section is restricted to serious researchers and biographers who chronicle the life and music of specific New England jazz artists through their music (audio clips), photos, biographies, articles and interviews with additional links to other related web sites. It is this section that will receive the bulk of the project's newly-digitized media. The General Library is designed for browsing and research, and can include such unusual memorabilia as maps of old jazz clubs, photos, artist's music clips, interviews, and transcriptions. The entry fields are less specific than that of the Authored Articles Section, and everyone with a password can submit materials of a general nature.

The NEJA database had never been thoroughly tested or even utilized before this project began back in November of 2003. This researcher was the first to collect field data, organize data for post-production, and ultimately submit data to the database using the online forms. These actions served a dual purpose: the server-side software would be rigorously tested, patched, and tested again during the submission process, and the database would be seeded with finalized articles providing templates for future submitters to use. The trial-and-error experience of submitting to the database was then distilled into a concise manual to aid future contributors in adding their own material. The manual describes recommended equipment and procedures required for a painless field collection, post-processing, and upload to the database. The main sections of the field manual are as follows:

- Hardware and software

- Digitizing the data
- Post-production editing work
- Submitting finalized material to the NEJA History database

Many issues were expected to be addressed during the initial testing phase. The first issue to crop up was that NEJA realized a more robust server was needed. One was put into production well before the site was made public, which headed off a possibly disastrous launch. A large part of the IQP was the adoption of the position of liaison between the NEJA Web Design Coordinator and the Jazz Researcher. This required a great number of meetings between these two parties, as well as continual contact with Jeremy Hitchcock (the NEJA Webmaster), the post-production team back at the WPI facilities, and various conversations with and presentations for the NEJA board members.

In order to further my understanding of the project as a whole, I was invited to attend a lecture/demonstration at the Marriott Hotel in Framingham, MA with all of the above people to ask questions regarding the various workings of the entire system, as well as to answer any questions that the NEJA board might have had concerning my work and the progress thus far.

The overriding goal of this project was to standardize and streamline Field Data collection into a how-to manual so that others doing future field research may collect data in a sufficient quantity, and of sufficient quality, to be accepted into the NEJA History database. In order to produce said manual, this researcher had to make use of

his extensive technical background. A working knowledge of computers in general, and specifically HTML and SQL database administration, as well as various techniques in image, video, and audio processing, was invaluable in allowing him to understand the delicate balance between user functionality and mindless technolust. Some basic knowledge of field interviewing techniques, greatly enhanced by many conversations with Professor Falco, allowed him to distill the most poignant information from the interview subjects.

Literature Search And Review

Since it was understood that the focus of the project was to create guidelines for researchers in the field, it was important that all of the tools used for research interviews, and digital manipulation be researched thoroughly. A primary goal of this project was to create a succinct “how to” Field Research Manual. (See Appendix A) A comparative study of hardware used for data gathering was undertaken, including such devices as: audio recorders, digital scanners, digital cameras, and laptop computers. Once the data were securely on the laptop computer, there was some post-processing work to be completed by the Research Team before submitting to the NEJA site. This was done in order to make the content suitable for home users to download expediently. Using Government-published standards and some common sense, file size issues, graphics format, and optimum resolution were decided upon, all of which ultimately contributed to the ease-of-use on the NEJA site, both for the researcher (contributing author) and the website “visitor”.

The Field Research Manual, designed as part of this IQP, will be distributed to interested researchers, academic institutions and jazz societies along with the software package previously created for easy input of data into a NEJA online History Database. Assuming the Field Research Manual guidelines are followed to the letter, individual researchers and/or institutions will make purchases according to the manual's recommendations. In some cases different hardware options were presented, however, the serious nature of financial investment by an individual or an institution brought additional incentives for a good literature review and appropriate recommendations.

Audio recorder –

Audio recording was a priority issue during this project. Since the field interview would have to be recorded, it was felt that it would be best to have the recording in a digital format. Herein lies the findings on acceptable audio recorders and the minimum features needed.

After several meetings with the Primary Researcher (Professor Richard Falco), the Research Team (Prof. Falco, Mike Drnek and Octavio Cassavantes), and the NEJA Web Master (Jeremy Hitchcock), it was decided that digital media was the best option because of the computer download capability, and the ability for the Research Team to edit the audio at a later date. Since audio clips (smaller, edited portions of the recorded field interview) would certainly be used by the Research Team, it was considered important to have audio in an easily editable format. Digital media also has an advantage over analog media, such as recording tape, in that specific points in the interview can be queued up very quickly instead of having to deal with the tedious process of rewinding and fast forwarding a cassette tape.

After some initial research, a review for the “Olympus DW-90” recorder gave an excellent starting point for discovering what would be needed in a field audio recorder. Patrick Woo, a professional technology reviewer, wrote an online review at <http://www.neoseeker.com/Articles/Hardware/Reviews/olympusdw90/3.html> where he described the Olympus DW-90 device as an all-around great digital recorder, with some flaws. Since the company reported an “acceptable” audio quality of 15.5khz (mono) this recorder appeared to be more than ample for a recorded field interview.

However, it could only record 22 minutes of audio before it became necessary to download the recording into a computer. Even Patrick Woo appeared to contradict the Olympus quality claim when he wrote , “...the DW-90 has no ability to expand storage. It’s advertised as having a 90 minute capacity. However, they don’t tell you that this is at the lowest sound quality mode until you break open the box. At this mode, the recordings I made were horrible.” This made the DW-90 unsuitable for NEJA field purposes.

After further research, a review of the Olympus W-10 was found at <http://www.pcmag.com/article2/0,1759,808554,00.asp>. Sally Grotta, the reviewer for this device, wrote that “ The Olympus W-10 digital voice recorder, comes close to being the perfect pocket-size device for preserving audio”. According to the article, the W-10 had all the necessary requirements: PC download capability, 15.2khz recording quality, and 90 minutes of recording time at that quality. While both units were capable of download to a PC, the greater audio capacity in High Quality mode and the ease in carrying the unit around made the W-10 the clear winner over the bulkier DW-90. The DW-90 had a mere 22 minutes of audio space at a reasonable recording quality of 15.2hz, where the W10 had 90 minutes. After further consultation with the Lead Researcher, the W-10 was deemed suitable and brought into the field. The extra recording time on the unit proved invaluable for some of the longer interviews that the Research Team anticipated, and the device performed admirably at all stages of the project.____

Digital Scanner –

Document digitization was quite important to field work as well. Since flatbed scanners are the *de facto* method for quickly and methodically digitizing large numbers of documents, there is a wide range of scanners available with many features, some useful and some extraneous. It was important to choose one that carefully balanced image quality and scanning speed, as well as graphic file output. While researching different scanners, a PC Magazine review written by S. Jae Yang detailing the Hewlett-Packard ScanJet 5400C proved most helpful:

<http://www.pcmag.com/article2/0,1759,369005,00.asp>

The “OneTouch” feature of the scanner was especially helpful, in that Field Researchers merely had to put an item on the glass, hit the “Scan” button on the scanner, and all the relevant programs needed to crop, scan, and save the resulting digital image would automatically pop up, saving us valuable time trying to discern which programs were needed.

The 2400x2400 resolution of the HP 5400C scanner was more than ample for our scanning needs, and it was nice to know that the extra “resolution headroom” was there if needed. Even though this model used the slower USB 1.1 protocol, the scanning speed ended up being much quicker than a newer USB 2.0 model HP scanner that was used in conjunction on one occasion in the field. S. Jae Yang, the PC Magazine reviewer, wrote, “The 5400c is only a USB 1.1 scanner, but it's still lightning-fast. It was the fastest scanner in our roundup when connected at 1.1. With its elite-tier image quality and usability, the HP ScanJet 5400c should be on your short list no matter what type of user you are.” The newer model, a HP 5550C, scanned

images at a MUCH higher resolution, and the resulting image was several hundred megabytes in size. Since the picture is manually scaled down by the Research Team as per the NEJA website specifications, this gross discrepancy in scanning resolutions turned out to be a hindrance. In general, it is believed than any scanner that can scan in at 1200x1200 resolution (about half of what the HP 5400c can do), connect to a laptop via at least USB v1.1, and not be excessively heavy to the point where it is a hindrance to carry it into the field, will be of sufficient quality to produce database-ready images.

Digital Camera –

Sometimes there was an item in the field that was far too large to scan. In those instances, a digital camera was used to get a high-resolution image of it for inclusion into the NEJA History database. As with scanners there is a dearth of affordable models, each with different features to consider. Researching various models, this ZDNet review for the Nikon CoolPix 2100 was very helpful:

http://reviews-zdnet.com.com/Nikon_Coolpix_2100/4505-6501_16-20856885-2.html?tag=glance

At 7 ounces, this camera wasn't breaking any backs carrying it into the field, but it's bulky frame made it too unwieldy to stick into a pants pocket. However, the reviewer described the camera as follows: “The [camera's] performance ranks above average for a camera in this price and megapixel class.” It had a standard resolution of 2 MegaPixels, which equates out to “pretty close to film camera” quality.

Although there now exist 5-, 6-, and even 7-MegaPixel (MP) cameras, 2 MPs is sufficient enough for field work. It provides enough detail to digitally capture large objects, and is sharp enough for taking recent photographs of interviewees. One minor downside to this particular camera was in the way it transferred images to the PC. The Nikon requires a CompactFlash card which, while providing a way to cheaply and easily increase the amount of information it can hold, also requires the Field Team to carry a CompactFlash (CF) Reader, which allows the data to be downloaded to the laptop PC, into the field.

A camera that can download directly to the laptop via USB might be preferred in some instances where field kits must be kept to a bare minimum, but other than that, the CF Reader is only a minor hassle compared to the quality of image that is acquired. The ZDNet reviewer says of the camera, “The Coolpix 2100 produces some of the best images we've seen from a 2-megapixel model. It delivers excellent white balance and color reproduction, as well as a broad dynamic range with very little noise.” This is high praise coming from a professional organization as thorough as ZDNet. In the field, the CoolPix 2100 performed as well as ZDNet said it would, producing images that were of excellent quality, and outputted in a format that was easily editable by the Research Team for the web.

Laptop Computer –

In order to get the most out of the interviews, a laptop was needed to occasionally store the data that was acquired through the audio recorder and digital camera. A laptop was also needed to run the scanner. Luckily, Worcester Polytechnic Institute provides

laptops to all of their students involved in projects. With a 4 gigabyte hard drive, 64 megabytes of RAM, and a Celeron 466 Processor, the Compaq Armada E300 certainly is not a “high end” machine by any stretch of the imagination. However, for the use it was being put to, it was adequate. The HP scanner required the most amount of computing power, the scanner specs published at

<http://h10025.www1.hp.com/ewfrf/wc/document?lc=en&cc=us&docname=c00014015&product=59064&dlc=en&lang=en>

put the minimum required specifications at a Pentium 1-class processor, 64 megs of RAM, and 90 megs of free hard drive space. It is also recommended that the field laptop have some type of network connectivity, either via 802.11b/g wireless or via a LAN card. This would allow easy uploading of the raw images for the post production work by the Research Team at their workstation, where high-end image editing can be done.

Ultimately, our search and review led all parties, including the Lead Researcher, Research Team, Webmaster, and the Field Team, to choose the hardware that was used in the field. The following is a distillation of findings based on numerous meetings with the various parties, individuals, and organizations.

It is recommended that an HP 5400C scanner be used in the field, or one that can at least scan with a resolution of 1200x1200 pixels. Some name brands, such as MicroTek, Canon, and Epson, make several models that can cheaply and easily fulfill this requirement. Even though the HP is technically a “mid-level consumer model”, it's simple interface, quick scanning speed, and fast file transfer make it the ideal

model for field usage, despite “better”, more expensive models being available. It is recommended that the Olympus W-10 recorder, or one that can record a 15.2khz audio file for times approaching one hour, be used in the field. Radio Shack, Belkin, and Rio all have models that meet or exceed this requirement. Rio, as of this writing, even has a model that records direct to MP3 for longer recording length and greater efficiency in space management that can be attached via USB in such a way that the device appears as a second hard drive on the PC, providing for greater ease of use and convenience in the field. The Nikon CoolPix 2100, again despite being merely an “entry level camera”, is ideal for field work. The types of photographs being taken, and the amount of post processing that the images will be subjected to anyway, make any higher resolutions available in other cameras superfluous. Hewlett Packard, Kodak, and Canon all make similar “entry level” models that, so long as they are capable of image capture at a minimum of 2 MegaPixels, should produce excellent picture results.

Finally, the laptop that was available, the Compaq Armada E300, was just barely adequate. It is recommended that a laptop with at least a Pentium III, 500mhz processor, 128MB of ram, and 20 gigabytes of free hard drive space be used to provide optimal results in a timely manner. Similar projects are possible with the Armada E300 that was used, but the time saved with an investment in a slightly more modern laptop will be well worth the extra few dollars. Dell, Toshiba, Fujitsu, and countless other laptop manufacturers have a wide range of laptops that should fit any budget.

Constructing a solid field kit for research and data collection is not an exact science. Careful thought and consideration regarding the needs of the project, budget limitations, and the current state of technology all need to be considered. Hopefully the above research will provide some guidelines which an organization can utilize to efficiently and cost-effectively perform high-quality field research.

Methodology

The purpose of this project was to research and create a standardized method for quickly digitizing and assimilating various media, crediting the original authors/artists as well as the contributors wherever possible, for inclusion into the NEJA History Database. To test the feasibility and effectiveness of such a system, four contributors had agreed to subject their personal collections to the digitization process for the project. The intent was to preserve as much as possible from these private libraries, crediting the original artists and authors wherever possible in order to test various digitization methods and to prove the merit of such a system. In addition to detecting errors and inefficiencies in the current NEJA submission process through experimentation, the procedures outlined here can also provide a framework for future researchers and contributors who wish to administer their own online database of rich media.

In order to further these experiments, there are four distinct roles that must be assigned, each working in conjunction with the others, but also with their own specific purpose. The **Contributor** is the individual who owns the media to be digitized, be it personal knowledge, photographs, newspaper clippings, recordings, etc.

The **Field Researcher** is the person who physically goes into the field to conduct interviews, digitize the media, and basically glean as much raw information from the Contributor as possible. He then takes his raw, unprocessed data to the **Research Team**, who are located back at the parent Institution. They then process the raw data into easily viewable, Internet-ready formats, passing this post processed data to the **Lead Researcher**, who makes a decision to either A. write a full-fledged Authored

Article on the artist in question, utilizing all the data from the field to create an informative, media-rich presentation of the artist and their life and time, or B. simply upload parts of the processed media to the General Library of the NEJA site for archival purposes.

For the sake of this experiment I assumed the role of the Field Researcher, but in addition to the “regular” Field Researcher's duties I also had the added challenge of conducting this IQP, keeping the lines of communication open between **all** relevant parties oftentimes with myself as the sole conduit. It was up to me to troubleshoot every aspect of this project, identify any problems or issues that arose, and bring my own substantial expertise and technical knowledge to bear in rectifying them. I personally oversaw each aspect of the following four experiments, and was involved in countless meetings with the NEJA Board of Directors, the NEJA technical staff, my own IQP adviser, and the Research Team themselves. During the course of this project I was able to identify many problems before the NEJA History Website went public, and assisted in solving most of them.

It needs to be understood that mine was a special case. The person who assumes the role of the Field Researcher in the future will generally only have to interact with two people, the Contributor and the Lead Researcher, and not have to delve as deeply into the inner workings as I did. It should also be noted that I was not without assistance in this. During the course of these experiments the roles of each team member, from the Lead and Field Researchers to the Research Team and Webmaster, blurred quite a bit. It was not uncommon for me to seek the expert advice of Mike Drnek and Octavio

Cassavantes – the Research Team during these experiments – when comparing certain intricate details of various graphic and audio file formats or low-level HTML code. It was not uncommon for Professor Richard Falco - the Lead Researcher during these experiments – to be found in his office late at night assisting in digitizing the gigabytes of images that I collected in the field. It also was not uncommon for me to be analyzing the NEJA website from two different angles, the more common one from the “outside user” perspective to gauge the overall usability and user-friendliness of the site, and the other from the “webmaster” perspective, pondering over various methods for tweaking server features and “back end” code and format configurations.

To more completely deduce the best method for transferring the data from analog media (pictures, cassette tapes, print articles, etc) to digital format, converting the data into convenient, industry-standard formats, and finally uploading to the website, each of the four contributors' collections have been handled differently. In effect, each contributor and their collection became discrete “experiments” in efficient data processing. The four experiments were:

Leo Curran

Leo Curran was the road manager for the internationally acclaimed Stan Kenton Orchestra for many years. This prestigious post has put him in a position where he has cemented numerous friendships with dozens of respected jazz musicians old and new alike. An enthusiastic promoter of jazz even today, his cage-like mind holds an astonishing number of memories and amusing anecdotes from the jazz world, and is rivaled only by his collection of jazz memorabilia in its completeness and complexity.

Brent Banulis, the President of the New England Jazz Alliance (NEJA), personally requested that Leo Curran be the first on our interview list. After an initial meeting with Professor Falco three days beforehand, I set out on November 11th, 2003 with my Field Interview Kit in hand and assumed the role of Field Researcher. Upon my arrival in Milford, MA, the digitization of photographs and text was quite simple and straightforward due to my preparedness through the Field Interview Kit. Mr. Curran had already retrieved a selection of material for the Field Researcher beforehand, and despite an hour's setback due to faulty scanner drivers, the work was expediated because of his preparation. Luckily, almost all of the material to be scanned was within the scanner bed dimensions of 9"x20", with a few notable exceptions. Those exceptions were set aside pending inquiries about a larger scanner. An item to be scanned, a photograph for example, would be sent to the system at 150%-200% of the original size. Then, with no adjustment needed to various advanced settings such as Hue, Color Balance, etc., the raw images were saved as high-quality TIFF files. TIFF was chosen for this initial format because of its low tendency to leave compression artifacts in the image, thus making it suitable for high-level image manipulation. Unfortunately, the high resolution (approaching 1600x1200 and more in some cases) and large filesize made this format unsuitable for web publishing.

Using the Open-Source GNU Image Manipulation Program, affectionately called The GIMP, I hand-edited each TIFF file in turn. Most of the operations performed were basic image manipulation such as adjusting the brightness and contrast for greater visibility, reducing any non-color photograph to greyscale for smaller filesize, and in

the case of one photograph that was originally printed in a dot-matrix style similar to a newspaper image, applied a slight blur to eliminate a stippling pattern that detracted from the photograph subject. With the above changes confirmed, only then was the image resized down to within 640x480 pixels, a much more manageable picture size. Finally these newer, more streamlined images were saved in the JPEG format, a standard file type that almost every website on the Internet uses for their high quality photos, which kept the filesize around 50 kilobytes (kb) for each image.

The interview with Mr. Curran was as entertaining as it was informative. With minimal prompting from myself, Mr. Curran was more than happy to regale me with tales from jazz “gigs” long gone, of weary nights helping Stan Kenton and crew pack up the tour bus, and of all the funny little quirks people notice when you've been on the road together for six years. Mr. Curran spoke at length about many facets of his jazz experience, and the whole recorded interview seemed to have gone fantastically.

On Friday, November 14th 2003, I met with Professor Falco to discuss Mr. Curran's recorded interview and present the other media data. While he praised my willingness to let Mr. Curran speak at length and commented on his tendency to stay on topic, he also cautioned me that future contributors might not be so disciplined, and to have ready a phrase or two that would necessitate a redirection of the conversation back on track. Professor Falco also brought to my attention the lack of certain biographical details in my interview which, in hindsight, seem quite obvious. Errata such as Date of Birth, Parents' names, musical influences, and the like now seem obvious, but at those

early stages there were very few guidelines for the field and as such, sometimes certain aspects would be overlooked only to be corrected later.

A brief phone call meeting between myself, Professor Falco, and Mr. Curran cemented a second interview date in which the shortcomings of the initial conversation would be rectified, and further data collected.

A little less than a month later, Friday December 5th 2003, I had my second meeting with Mr. Curran. Again, like last time, he had further material ready for me to scan. Using the exact same process as before, I proceeded to scan all of the material into the Compaq Armada laptop at high resolution for later post processing. For the interview, Mr. Curran and I had a similar informative conversation, but this time I utilized some of Professor Falco's suggestions: interjecting commentary in an attempt to pull the conversation back on course as well as asking pertinent, open-ended questions designed to coerce the subject to expound greatly on the subject at hand. I also had a specific list of facts that I wanted to address, such as Mr. Curran's date of birth, his parent's names, etc. The improvements were immediate, as I secured all the information that Professor Falco needed to write an Authored Article, and Mr. Curran provided quite a few facts and background information through answering the open-ended questions. The following Monday I met with Professor Falco and his Research Team (Mike Drnek and Octavio Cassavantes) to confer over the data and the interview. It was generally agreed that this second interview was much better than the first, due mostly to the guided recorded conversation that Mr. Curran and I had. While he still had the freedom to

“speak his piece”, I was able to subtly guide the interview back on track if it seemed like it was going too far off subject.

On Monday, November 17th 2003, a meeting was called between myself, Professor Falco, and the NEJA webmaster Jeremy Hitchcock. Various improvements to the NEJA site were discussed, such as having the MySQL search query return a list of server-side generated and cached thumbnails courtesy of the Open Source ImageMagick program and a modified command in the MySQL database server. Mr. Hitchcock agreed that the slight server overhead that such a feature would induce was far outweighed by the increased usability and overall visual sophistication that the thumbnails would provide. The possibility of adding an “HTML Toolbar” of sorts to the article submission form was also discussed. Such a Toolbar would allow authors to include links directly to the NEJA photo gallery or other non-native websites, as well as provide full HTML formatting. Unfortunately, Mr. Hitchcock believed that coding such a feature would take far too long and go beyond the duration of this project, so the idea was summarily discarded.

At this point, I had considered the Leo Curran experiment to be closed. I had interviewed him twice, digitized an astonishing amount of material, and seen to it that it all was uploaded to the NEJA History website promptly and in an easy-to-digest format. Almost six months since the previous Mr. Curran interview, Professor Falco contacted me asking that I make one final trip to Mr. Curran’s place and demonstrate the NEJA History website to him so that he could check for factual errors. This proved to be yet another boon for NEJA’s decision to make their entire History site web-based: being

able to correct printed errors! With printed media any errors in the text, be they factual or syntactical, generally must be lived with or apologized for in future publications. Due to the dynamic nature of webpages, errors can be corrected immediately upon discovery, and the “updated” publication will be indistinguishable from the original. This feature is what Professor Falco and Mr. Curran wanted to take advantage of when I again assumed the role of Field Researcher and traveled back to Milford.

This latest “interview” with Mr. Curran, despite not being recorded and lasting little more than an hour, was still very significant in the development of the NEJA History website. It demonstrated very early on the ability of an interview subject to review their Authored Articles and request that corrections be made. In the case of Mr. Curran the typo was merely a case of mistaken identity for one of his cohorts when he was a young man, but the fact that I, and by extension NEJA, took the time to personally make sure that everything about *his* biography was as he described it, spoke highly of the caliber of journalistic integrity NEJA expects.

Miriam Estrella/Mamie Moffett

Professor Falco, Mike Drnek, and I drove to the town of Mashpee, Massachusetts on Tuesday, November 18th 2003 to meet Mr. and Mrs. Estrella. Mrs. Estrella is the granddaughter of Mamie Moffett, the leader of the first Worcester Jazz band called “Mamie Moffett and her 5 Jazz Hounds”, founded in 1919. Previously, very little was known about the Jazz Hounds, and Mamie Moffett in particular. Only one picture of

her was thought to be in existence, and the rest of her past was shrouded in mystery. Upon arrival the crew was greeted by Mrs. Estrella and a literal mound of photographs, articles, and legal documents concerning Mamie Moffett. Mike Drnek and I spent the afternoon following the same procedure for scanning documents as outlined above, and it was generally agreed that in the beginning the process was quite thorough and streamlined. We brought two HP Scanjet scanners, models 5550C and 5400C, which we used to scan more than 26 pieces, all of which were documented and dated to the best of Mrs. Estrella's memory.

Professor Falco, in the role of Lead Researcher, took the opportunity to interview Mrs. Estrella, which helped greatly in her identification of older pieces. His conversational style and personal tone put Mrs. Estrella at ease and lent the affair a less academic “question-and-response” interrogation and more of a “friends coming over for coffee” conversation. Future researchers would do well to note that by taking the time to strike up a rapport with their subject, they may inadvertently get a much richer and vivid recounting of historical events and people that would aid and enliven their research. However, it should be noted that as the pieces to be scanned were being handed back with more frequency, two people manning two scanners quickly became a problem. Some pieces ended up being accidentally scanned twice while others were temporarily discarded as “already scanned”. This confusion might have been averted if only one person was manning the scanner, as the amount to be digitized was certainly not overwhelming.

Another glitch that we came upon was the usage of Apple Powerbooks in the field. While I was using the PC-based Compaq Armada with the Scanjet 5400C scanner, Mike Drnek was using an Apple Powerbook with the Scanjet 5550C scanner. We found that, for whatever reason, scanning material into the Powerbook was painfully slow, almost to the detriment of the experiment. We resolved later to only use PC-based hardware in the field, relegating Apple products to intensive graphics processing perhaps as a Research Team workstation in the future.

The following Monday, November 21st, 2003, Professor Falco and I met to discuss the Estrella/Moffett digitization. Going over Professor Falco's interview, he pointed out a few more talking points that he felt would enhance my own interview style, such as phrasing questions in an open-ended way, “What about playing with so-and-so during that time period did you like so much? Tell me some more about that theater gig you did with Joe Schmo back in the seventies.” to encourage free-wheeling, event-oriented conversation that would enhance a researcher's overall understanding of a subject's motives and mindset during a particular period. Professor Falco also emphasized again the importance of letting a subject speak uninterrupted, even if it meant letting them get off subject for a few minutes. “The trick,” he says, “Is knowing when to reign them back on topic and when to let them go on, because you never know when a conversation fork can lead to some juicy information that ends up making your entire interview.”

We also discussed the feasibility of having me perform any of the media conversion, i.e. resizing the TIFF files to JPEG, converting the WAV files to MP3, and after

speaking with Mike Drnek and Octavio Cassavantes, came to the conclusion that my time would be better spent focusing entirely on the interview and digitization process, and passing off the media conversion to Mike and Octavio, the Research Team. Even this early in the project, the roles of Field Researcher, Lead Researcher, and Research Team were becoming more defined and concrete. It was a great help not having to perform the approximately 4 hours worth of conversion as it allowed me to concentrate more fully on troubleshooting the NEJA History website and perform other duties not necessarily covered under the “Field Researcher” label.

Mae Arnette

Mae Arnette is a famous Boston jazz vocalist. Named “Boston's First Lady of Song” by the *Post Gazette*, Mrs. Arnette has enjoyed a long and fruitful tenure in both the Boston and New York jazz scenes. Once more assuming the role of Field Researcher, I set out for Boston on Tuesday, December 2nd to interview Ms. Arnette and to digitize a portion of her vast jazz collection. Upon my arrival, I conducted the interview while using the scanner to digitize material. I did not discover what a mistake this was until my follow-up meeting with Professor Falco. It turned out that the voice recorder, when placed upon the same surface as the scanner, picked up a significant amount of background noise during the scanning process. This oversight made later deciphering of the interview a slow and painful process. However, at the time I thought the recorded interview went quite well. The beginning of the interview seemed a bit stiff and forced, but once Ms. Arnette and I grew more comfortable, conversation seemed to flow much more easily. I heeded Professor Falco's advice from past interviews and was able to glean quite a bit of information in the two hours I had.

While scanning Ms. Arnette's material into the Compaq Armada laptop, I took care to leave the images in their native high resolution format for the Research Team to touch up and resize. Quite a bit of Ms. Arnette's material consisted of amateur photographs taken of several people, so I also had to take care to keep careful notes of who was whom in these pictures so that proper identification could be made.

On the following Monday, December 8th 2003, Professor Falco, the Research Team, and the NEJA Webmaster Jeremy Hitchcock met to review the recorded interview and digitized data, as well as to discuss further improvements to the NEJA website. It was here that the discovery about the garbled audio was made, and in the ensuing discussion we drafted a few guidelines regarding microphone placement. It was decided that extra care should be taken when placing the recorder on a surface shared with another device that makes noise or vibrates (this includes the laptop as well as the scanner). We also agreed that placing the recorder equidistant between the Field Researcher and the Contributor was a necessity if we wanted equalized speaking volume to come across while playing the recording back.

Mr. Hitchcock and I then discussed further improvements to the NEJA website. The most striking change we agreed upon was the implementation of "framing" web pages. Previously, when a visitor to the website followed a link to a photograph or some other digitized media, only the photograph would display, with no other information to put the image in context. My suggestion was to have the server return, instead of a direct link to the graphic, an automatically generated web page that not only contained the

graphic, but also a text area for the submitter to type in a short description of the piece to assist viewer's understanding of the image's context. In other words, if the visitor clicked on a thumbnail of a photograph, a web page would display the full sized image but would also contain a line or two of text that, for example, had the photograph subject's names as well as a definitive listing of the location. Mr. Hitchcock enthusiastically agreed, and implemented my suggestion in a matter of days.

Professor Falco, Mike Drnek, and I, when reviewing Ms. Arnette's digitized media, came to the conclusion that it was an unnecessary waste of disk space to scan in the images at extremely high resolutions. It was summarily agreed upon that any further data scanned could be scanned in at the much more conservative resolution of 640x480, preserving several hundred megabytes of disk space in the process. This decision helped eliminate the possibility that the Compaq laptop currently in use would become too full to accept any more scanned images. We also discussed the feasibility of a second trip to Ms. Arnette's to gather more data. After some discussion, we came to the agreement that the benefits to the database would mitigate the extra effort needed to make the trip to Boston. Professor Falco agreed to touch base with Ms. Arnette and set up a second appointment with her.

Almost two full months later, on February 3rd, 2004, I went back to Ms. Arnette's house to digitize more photographs and to clear up some hard-to-understand clips from the previous interview. Utilizing the procedure formalized since our last meeting, the recorded interview was much clearer and easier to understand because the recorder was placed on a couch cushion equidistant between me and Ms. Arnette. The scanner and

the laptop were on the floor several feet away to eliminate any chance of vibration interfering with the recorder, and the resulting recorded audio was of a very high quality. Scanning the remaining documents in was slightly faster than anticipated. With the lowered resolution, the scanner's speed was increased slightly, taking perhaps 10 seconds to complete a scan, as opposed to the 15-20 seconds the scanner needed before. Another gain from the lower scanning resolution, this one expected, was the significantly lower filesize a scan produced now. Instead of being 20-plus megabytes in size, the JPEG-compressed pictures were a mere 300-400 kilobytes, a reduction of a few degrees in magnitude. At these settings, I could afford to leave the graphics on the laptop for an extended period of time, as opposed to immediately offloading to the Research Team's workstation and deleting them.

Upon my return to campus, the graphics were very quickly assimilated by the Research Team, and were web-ready within hours. Professor Falco and I reviewed the recorded interview, and he was very pleased with the results. At this point in the project, the entire team had settled comfortably into their assigned roles, and the efficiency in which we were able to gather, convert, and upload material to the NEJA History website was improving greatly.

Ms. Arnette requested a follow-up visit at about the same time as Mr. Curran, for many of the same reasons. She had reviewed her Authored Article, in which there were just a couple of typos and date discrepancies. The resulting conversation was brief compared to the earlier two interviews, barely an hour long, and the corrections made all the difference in the world to Ms. Arnette. She was very pleased that I, and by

extension NEJA, had taken the time to make sure that she was satisfied with the material.

Rockie Blunt

On Wednesday, February 24th 2004, we conducted a very unorthodox interview. Rockie Blunt Jr. of the Rockie Blunt All-Stars, an original founder of the Worcester Saxtrum club from the 1940's, and all-around superb drummer, had previously contacted Professor Falco to set up an interview date. Since Mr. Blunt lives in Worcester and often travels to the WPI campus, there was no need for me to pay a visit to his home in order to conduct an interview and collect the data. Strangely enough, my personal involvement with Mr. Blunt's interview was minimal at best, since Professor Falco, acting as the Field Researcher this time, conducted the interview while the Research Team performed the digitization of Mr. Blunt's memorabilia at the WPI Research Workstation. I was permitted to sit in on the interview with Mr. Blunt and Professor Falco, however, and by observing Professor Falco's interviewing techniques in person, was able to get a clearer grasp of his personal style and some of the "tricks" he uses to coax stories and anecdotes from the interview subjects. I was able "step back" and observe how the methodology I had crafted over the past several months worked when people other than myself were following it. Professor Falco's interview, predictably, was informative and entertaining. The Research Team used my tried-and-true method for scanning all of Mr. Blunt's media, which was so efficient that by the time Professor Falco finished the interview, Mr. Blunt could even see how most of his pictures and papers looked inside the NEJA History database. Needless to say, Mr. Blunt was quite impressed. He was invited back a few days later when

Professor Falco had completed his Authored Article, to preview the layout and content before it went public. While reading his biography written by Professor Falco, going over the pictures of his own long and illustrious lifetime on the NEJA Photo Gallery, Mr. Blunt was so deeply moved by the implications of NEJA's History website, the fact that such a far-reaching jazz repository not only exists, but has worldwide distribution thanks to the Internet, that he shed tears of happiness.

Conclusions

By far, one of the most rewarding aspects of this project was being able to observe how all the different roles matured and developed as time went by. The jocular commotion of the first interviews lie in stark contrast to the raw precision of the latest. Not to imply that the later interviews were not fun; indeed, all of the contributors were a joy to interview, and I feel like I've become more than just "another reporter" to them. I'm working with them to help preserve the heritage that they themselves have wrought throughout the years, and in the process have cemented more than a few good friendships. Comparing the first Leo Curran interview to the first Mae Arnette interview reveals a leap in sophistication and proficiency that makes me proud to have been involved in this project. We've set a precedent for the rest of the world to follow, hopefully the seed that we planted will take root and grow.

Such was the success of this project, several prominent institutions have expressed interest in contributing to the NEJA History website and in using the Field Research

Manual for their work. It is expected that students and faculty will work together in a way similar to how it was here at WPI, with the roles of Field Researcher, Lead Researcher, Research Team, etc. remaining intact. The institutions to whom we have spoken to so far include: Harvard University, African-American Studies Dept.; Northeastern University Music Dept.; Berkeley College Of Music (who has already devoted Work Study time to the site); and Rutgers University. In particular, Rutgers is a very exciting addition to the team in that the Rutgers Institute Of Jazz Studies is *the* most highly respected jazz institution in the world. Dr. Louis Porter founded the only Masters Degree program in “Jazz Research” in the world. He is looking forward to having students contribute to this. It is good to know that this project will have a life beyond the contributions of this IQP.

Nunc scripsi totum pro Falco, da mihi potum

Acknowledgements

This project would have never reached fruition if it were not for the help and encouragement of several individuals. I can't thank them enough for everything that they've done for me:

- **Mike Drnek** – For providing me with tons of information about various graphics formats that I never would have been able to find myself, and for helping out with all the resizing, sharpening, dithering down, flipping, scaling, etc etc ad nauseam that this project required.
- **Octavio Cassavantes** – For helping Mike Drnek help me with all of the above.
- **Leo Curran, Mae Arnette**, and all the other NEJA contributors – For graciously welcoming me into their homes, and for bravely participating in this grand experiment.
- **Professor Richard Falco** – For advising this project, and for slugging it out in the trenches right along with me when the going got rough.
- **My good friends** – For helping me survive this and other tough terms.
Marisa, Kevin, Mikes B and P, and everyone mentioned above.
- **WPI Academic Technology Center** – For the use of the laptop and the digital scanner

Appendix A: Field Research Manual (How To Collect Data for the NEJA Database) *Before Entering the Field*

Basic artist research:

- Web searches: discography, bio, homepage
- Books, periodicals, etc
- Recorded telephone interviews
- Artist's gear used (instruments, accessories: reeds, amps, mutes, etc

While in the Field

- Verify researched information with interviewee if possible

Scanning Photographic Media

Using a mid-range flatbed scanner, try to scan material that consists of the following:

- Pictures of the artist
- Family photos
- Promotional material
- Family scrapbooks/memoirs
- Gig date books/Travel Itinerary
- Personal or professional letters

Generally, NEJA can accept any material of this type that is original, unpublished, or uncopyrighted

For historical purposes, it is *imperative* that you, as the interviewer, try to get as much background information about the photograph as possible. Things to ask the interviewee:

- Who was behind the camera (Who took the picture?)
- Where was the picture taken?
- What was the date, approximate or otherwise?

And, last but certainly not least,

- WHO is in the photo?

Taking Your Own Digital Photos

For quality control, NEJA recommends that you try to use a digital camera with a

resolution of 2 MegaPixels or above, and set the camera to it's highest resolution. If a digital camera is unavailable, a disposable camera will suffice. Just be sure to scan in the photographs with your flatbed scanner.

Please try to collect the same type of WHO, WHAT, WHERE, WHEN, and WHY information that you gleaned from the interviewee's collection.

Other things to remember when you are taking your own photographs:

- Get a picture of the interviewee as they are today; if applicable, be sure to note their relationship to the artist (family member/fan/professional relationship, etc)
- If allowed, post the direct contact info (phone #, email address, mailing address) of the interviewee
- Take a picture of the home or club venue, if allowed
- Take a picture of the research team (that's YOU!) for posterity
- Anything too large to be scanned (paintings, manuscripts, sculpture) is fair game for photography

Recorded Interviews

NEJA recommends either a digital voice recorder, or a cassette recorder, with a minimum 2 hours of space available. At the beginning of the taped interview, ASK the interviewee for their permission to use either text transcriptions or full audio clips of the interview.

Recorded Interviews (Cont'd)

We strongly recommend keeping the tape rolling at all times. You never know where a seemingly-unrelated conversational thread might take you.

We have found that keeping the interview light and conversational generally tends to be better received by the interview subjects, and results in a much more informative and enjoyable session for all. Some topics for discussion are:

- What was the artist's Date of Birth/Death?
- How did the artist get their start in music?
- Who were their musical influences?
- What are the artist's parent's names, and what were their respective dates of Birth/Death?
- Who did the artist first study with?
- What/Where was their first professional engagement?
- Is a chronology of their musical career available?
- Are there any family stories/gig anecdotes that the interviewee recalls?
- Where was the artist born?
- In which geographical location did the artist primarily perform in?

Collecting Pre-recorded audio/music

Due to legal ramifications, it is very difficult for NEJA to accept any material that has been previously copywritten or published. We ask that you follow the same criteria for audio submission that you do for photo submission, i.e. Who, What, Where, Why, etc. Also, be sure to scan the album covers and liner notes along with any submitted audio, where applicable.

Rules for Digitization of Audio:

- If the audio is in CD format, rip straight to MP3 (192kb)
- If the audio is in cassette format, run a cable to the line-in on a laptop, and rip straight to MP3 (128k)
- If the audio is on vinyl or reel-to-reel, see if the owner has a suitable player handy that has a line-out jack. If so, follow the steps for cassette above. If no player can be found, remind the owner of the limited shelf-life of their media, and inform them that their institution will have to get the media professionally recorded.

Appendix B: CD-ROM Contents

CD-ROM #1: Leo Curran

Interview w/ Leo Curran (WAV Format)

High-Resolution TIFFs

Authored Article (written by Professor Richard Falco)

CD-ROM #2: Mamie Moffitt/Miriam Estrella

Interview w/ Miriam Estrella (WAV Format)

High-Resolution TIFFS

Authored Article (written by Professor Richard Falco)

CD-ROM #3: Mae Arnette

Interview w/ Mae Arnette (WAV Format)

High Resolution TIFFs/Low-Resolution JPEGs

Authored Article (written by Professor Richard Falco)

CD-ROM #4: Rockie Blunt Jr.

Interview with Rockie Blunt Jr. (WAV Format)

High-Resolution TIFFs/Low-Resolution JPEGs

Authored Article (written by Professor Richard Falco)