IT'S A WONDERFUL BUSINESS: THE ART OF PRODUCTION SOUND

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*It's a Wonderful Business: The Art of Production Sound* is a documentary film that offers an inside look at what it takes to record the dialog of actors and diegetic sounds on a movie set. This is the job of the production sound crew, in charge of recording the voices of some of the most talented and prominent performers in the motion picture industry. The documentary features interviews with former and current production sound mixers and boom operators from some of the most acclaimed films in the history of cinema. The film also explores the personal demands, the working conditions, and the sacrifices sound crews have endured to succeed in the always challenging, but very exciting, world of filmmaking.
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PROSPECTUS AND PRE-PRODUCTION RESEARCH

Subject Matter

*It's a Wonderful Business: The Art of Production Sound* gives us an inside look at what it takes to record the dialog and sounds on a movie set. The film also explores the personal demands and sacrifices sound crews have endured to succeed in the always challenging, but very exciting, world of filmmaking. The thesis documentary was written, produced, and directed by Omar Milano, a Master of Fine Arts candidate in the Department of Radio, Television and Film at the University of North Texas. Omar has been involved in mixing and recording location sound ever since he began his undergraduate program at the University of North Texas back in 2003; therefore, making a film about this topic would not only be rewarding to achieve, but also very educational. Having worked as a sound mixer and boom operator in many types of productions, such as documentaries, reality shows, and low-budget short films, he set out to discover how to do this type of work at the more coveted level of high-budget, blockbuster feature films produced by the major Hollywood studios. In addition, he wanted to meet the men and women who are behind this specialized craft, and see what it takes to work in some of the most acclaimed movies ever produced, with some of the most recognized celebrities in show business. *It’s a Wonderful Business* is a documentation of that journey, produced as a feature documentary and as a culminating project for the terminal degree.
People and Location Research

When the filmmaker began crafting the idea of making a documentary about the art of production sound, he researched various textbooks, journals and publications related to sound-for-picture, in order to learn more about the process and approach to recording the dialog of actors, and also to compile a list of possible candidates that could be interviewed for the film. Much has been written about Hollywood’s transition to film sound during the 1920s and there are records even prior to that decade. In fact, Thomas Edison conducted many experiments with film sound when he developed the art of moviemaking late in the 19th century. Silent films established themselves during the first three decades of early cinema, with remarkable masterpieces like *The Great Train Robbery* (1903), *The Birth of a Nation* (1915), and *The General* (1926). But this was also a period when many studio executives were well aware, albeit skeptical, that the incorporation of sound to film was inevitable, and it would only be a matter of time before it became a new standard in motion picture production. In 1908, Carl Laemmle, from Universal Pictures, was firmly convinced that “talking pictures were the coming craze in all America” (Eyman 29). Twenty years later, the brothers Warner and their Vitaphone system turned the "talkies" into a major success with their acclaimed releases of *The Jazz Singer* (1927), a part-talkie part-musical, and *Lights of New York* (1928), a fully dialogued feature, closing the chapter of the silent film era and introducing a new standard in movie making.

Unfortunately, most of the information found pertained to how film sound evolved from the standpoint of picture and sound synchronization for exhibition, and not
necessarily about how location sound recording was actually accomplished. Ironically, the Internet proved to be the most valuable tool for the project. While conducting a search for location sound mixing and recording, the filmmaker discovered a very informative website called FilmSound.org, developed in 1996 by Swedish media teacher Sven E. Carlsson. FilmSound was built as an educational resource tool, primarily for those who specialize in the post-production areas of re-recording and sound designing of film soundtracks. Many of the articles, tips, and video presentations posted on the site are factual accounts from the most respectable re-recording mixers and sound designers in the motion picture industry, including Ben Burtt, Gary Rydstrom, and Walter Murch. In addition, the site provides a wealth of information about all aspects of sound for film. It was here that an excerpt from a book called *Mr. Bernds Goes to Hollywood: My Early Life and Career in Sound Recording at Columbia with Frank Capra and Others* (Bernds 1999), caught the attention of the filmmaker. Written as an autobiography by pioneer sound technician Edward Bernds, the book provides in meticulous detail how Edward Bernds witnessed and helped shape the birth of motion picture sound recording while working with some of Hollywood legends, such as D.W. Griffith, Douglas Fairbanks and Frank Capra. This book proved to be an invaluable resource in terms of how production sound began and developed in the late 1920s, but it only covered the two decades that Bernds stayed active as a sound technician before he decided to become a director in 1948.

Another interesting article posted on FilmSound had been written by production sound mixer Mark Ulano, C.A.S. The article, "Moving Pictures That Talk: the Early
History of Film Sound" (Ulano 2004), gives us a historical chronology of how experimentation with sound for film actually began before the invention of the motion picture, during the early days of the phonograph. Here we learn that, contrary to popular perception, *The Jazz Singer* was not the first film that experimented with recorded dialogue. Many other articles discuss the prompt and successful transition to film sound by the Hollywood studios, but lack specific information about what techniques and type of equipment sound mixers utilized to accomplish this new challenging task. Again, most of the information pertained to the early history of film sound.

Thus, the next step was to contact key industry professionals, to see if they would agree to be interviewed for the film and share their personal experiences on camera. As previously stated, FilmSound.org provided valuable information and reliable reference of printed material for initial research. Another resource consulted was an Internet discussion group called RAMPS (Recording Arts and Motion Picture Sound). A group of professional sound mixers created this on-line community to exchange information about everything related to location sound recording. It was here that the filmmaker first established contact with Jeffrey Wexler. Jeff, son of renowned cinematographer Haskell Wexler, has been working production sound for the past thirty-eight years. He has been nominated twice for an Academy Award for his sound mixing contribution to *Independence Day* (1996) and *The Last Samurai* (2003), and he has won a British Academy of Film and Television Arts Award for Best Sound in *Almost Famous* (2000). Some of his notable feature works include *An Officer and a Gentleman* (1982), *Ghost* (1990), *Fight Club* (1999), and *Mission: Impossible III* (2006). Jeff is an executive
member of IATSE 695, the sound mixers’ union for the Los Angeles chapter, and he is also an executive member of the Cinema Audio Society (C.A.S.). The director arranged a personal meeting with Mr. Wexler to discuss the project in detail, and to inquire if he would be kind enough to assist with further research. Not only did he accept to assist in the pre-production process, he also accepted to be an on-camera participant. He offered his full cooperation and he kindly provided a list of other working professionals who might be interested in collaborating with the project as well.

At the top of the list was his colleague Mark Ulano, incumbent president of IATSE 695, and also a working professional. Mark has been mixing films since 1978. He won an Academy Award for *Titanic* (1997), and he is on the executive committee of the Academy of Motion Pictures Arts and Sciences - Sound Branch. Ulano is also a columnist for *Pro Audio Review* magazine, the *Cinema Audio Society Journal*, and he conducts sound production and mixing workshops at Maine Media College in Rockport, Maine. Due to his demanding schedule, the only opportunity for the filmmaker to meet with Ulano took place in Berlin, Germany, on October 13, 2008. At that time, Mark was working on-location during the production of Quentin Tarantino’s *Inglourious Basterds* (2009). When Mark learned the objective of *It’s a Wonderful Business*, he immediately accepted to be a consultant and an on-camera participant. And just like Jeff, he also provided a potential list of other *technobes*, as he colorfully described them, who might be willing to participate in the film. The most important one was Jim Webb, his mentor and a good friend.
James E. Webb, has been credited for pioneering the technique of mixing and recording multiple isolated tracks while working with director Robert Altman during the late 1960’s. He received a British Academy of Film and Television Arts Award for Best Soundtrack in *Nashville* (1975), an Academy Award for Best Sound in *All the President’s Men* (1976), and he has been honorably mentioned for his mixing contribution in *Cat People* (1982), *Flashdance* (1983), and *Pretty Woman* (1990). Jim has given many presentations about his article "Twelve Benchmark Microphones and Why They Made History," originally published in the *Journal of Audio Engineering Society* (JAES 2001), and he owns the largest collection of microphones in the United States. Webb was contacted on November 2008 and he gladly accepted the invitation.

Another gentleman who volunteered to assist with the project is perhaps the most interesting character in the film. The Nagra, a professional self-contained, magnetic-tape recorder, entered the market in 1950. Primarily designed for gathering sound in radio broadcasting, the early units, like the Nagra I and II, were not suitable to withstand the demanding tasks of location sound production, and many sound mixers were skeptical about the fidelity of its recordings. Engineer Stefan Kudelski, inventor of the venerable machine, worked incessantly to improve the design and operation of the recorders to suit the needs of the motion picture industry. *Black Orpheus* (1959), a Franco-Brazilian co-production directed by Marcel Camus, was the first feature film to be recorded with a Nagra II. Shortly after, Mr. Kudelski designed the Nagra III, a fully transistorized, battery operated, high fidelity recorder. For the next thirty years, Nagra became the de-facto analog recorders of choice worldwide, until their demise from the advent of digital
Mr. Kudelski has received multiple Technical Awards from the Academy of Motion Picture Arts and Sciences, for the design, improvement, and continued development of the Nagra recorder. Mr. Kudelski resides in Lausanne, Switzerland, and it proved very difficult to find his contact information. Since he retired some years ago, a generic feedback e-mail was sent to his company, the Kudelski Group, stating the reason for trying to contact him. Much to the surprise of the producer/director, Mr. Kudelski called from his home in Lausanne to state that he had received the message, and that he would be delighted to take part in the film.

During the process of selecting qualified sound mixers for the interviews, a list of potential candidates were chosen for their impressive credentials, the number of films they produced, and the degree of recognition they have received throughout their career in the field. A production sound mixer is nominated for an Academy Award in the category of Best Sound for a Feature Film as part of a team, along with the re-recording mixer and the sound editor. One of the most acclaimed and accomplished sound mixers in the film industry today is New York native Christopher Newman, the last candidate to accept an invitation as an on-camera participant. Chris began his career recording sound for documentaries in 1961, and he made his mixing debut on a feature film called Medium Cool (1969), directed by Haskell Wexler. Since then, he has won three Academy Awards for The Exorcist (1973), Amadeus (1984), and The English Patient (1996), for which he also received a British Academy of Film and Television Arts and a Cinema Audio Society Award. He has been nominated multiple times on such blockbuster hits like The French Connection (1971), The Godfather (1972), Fame (1980), A Chorus Line
(1985), and *The Silence of the Lambs* (1991). He is also a faculty member at the School of Visual Arts in New York City, where he teaches production sound for film, video, and theater.

A few other candidates were contacted, but no confirmations were received. Additional research was conducted at the Margaret Herrick AMPAS Library, the Warner Brothers Photo Library, and Paramount Pictures Archives, all of these located in Los Angeles, California.

Funding

The project was self-funded by the filmmaker, but in-kind donations helped offset some of the expenses incurred during the production phase of the film. Six grant applications were submitted, two of which, the Texas Filmmakers’ Production Fund from Austin and the Texas Film & Video Grants from Denton, were denied. Two production grants from the College of Arts and Sciences and two traveling grants from the RTVF department at UNT were awarded. In addition, cash contributions for product placement were requested from the following companies and institutions, but none were received:

- Cinema Audio Society – 859 Hollywood Way #632 – Burbank, CA – 91505
- Fostex®, USA – 9 Mars Court – Boonton, NJ – 07005
- IATSE Local 695 – 5439 Cahuenga Blvd – North Hollywood, CA – 91601
- Sennheiser® Electronic Corporation – 1 Enterprise Dr. – Old Lyme, CT – 06371
- Sony® Corporation of America – 550 Madison Ave. – New York, NY – 10022
Distribution

A provision for direct sales has been implemented and at this time no distribution outlets have been contacted. Marketing strategies will focus on the following entities:

- High schools, community colleges, universities, and film schools worldwide.
- Historical film societies, museums, science centers, and film commissions worldwide.

See Appendix A: Distribution Outlets for distribution update.

Audience

According to filmmaker and writer Alan Rosenthal, many people believe that “documentaries are synonymous with everything that is tedious” (Rosenthal 69). Hence, he cautions emerging documentarists to avoid creating “baffling boredom, dull discourse, or esoteric essays” (Rosenthal 69). The producer/director concurs with Rosenthal, particularly if these documentaries contain technical information that may not be appealing to the average viewer. Those films often elicit the interest of a select group, or niche audience, and the subject matter of *It’s a Wonderful Business* falls in this category.

Consequently, the film is intended for enthusiasts of film sound and for audiences that enjoy learning about the process of movie making. The voices of industry professionals reveal the intricate process of recording dialog for movies, the demands of working in the film industry, and the personal sacrifices they have made on behalf of
show business. In addition, *It's a Wonderful Business* provides a basic foundation to those pursuing a career in film production. As sound mixer and incumbent president of IATSE 695, Mark Ulano has stated, “production sound is not an area of filmmaking that many, including those key players directly involved in the artistic and creative process of a movie, regard as significantly important. Even film schools do not teach production sound in a serious way, and there’s very little instruction on how to do the things that production sound crews do.” *It's a Wonderful Business* offers technical discourse and crucial information about the craft of production sound, making it an ideal tool for students, faculty members, and educational entities involved in video and film production worldwide.

**Goals of Production**

The audio portion of a movie is composed of various sound elements that are combined to produce one cohesive soundtrack. These elements, like the dialog, sound effects, and the music score, are carefully mixed to establish a mood and create an emotional feel expressed through the director’s intent with the picture. The objective of *It's a Wonderful Business* focused on providing the audience a better understanding of the filming process with respect to the recording of the dialog, known as production sound. Discriminate viewers often catch those candid moments when the overhead boom microphone makes an unwanted cameo appearance on top of the screen, but seldom realize the intricacies that are encountered during the filming of a scene. *It's a Wonderful Business* demonstrates how difficult those scenes can be, giving an inside look at the
challenges encountered by these sound professionals. In addition, the audience learned how dialogue and sound for film were implemented, and how it has been recorded from the advent of the talkies until today’s digital age. The characters revealed the personal sacrifices they have endured through their many decades in the film industry, like the long hours, being away on location, and family sacrifice. Yet, despite these challenges, the working conditions, and the demands of the craft, it’s a wonderful business to be in.
RECONCEPTUALIZATION BEFORE PRODUCTION

The idea and concept of the film evolved from the filmmaker’s love and enjoyment of location sound recording for the moving image. While researching material for the project, he discovered a compilation of thirteen films produced by Thames Television called *Hollywood: A Celebration of the American Silent Film*. The films celebrate the birth of the movie industry, the town, and the people that made it famous. One of those films, *End of an Era*, produced and directed by Kevin Brownlow, focuses on the demise of the silent film era and the birth of the talkies, which completely reshaped the process of movie making. *End of an Era* offers an excellent account of how production sound made its debut after the successful release of *The Jazz Singer* in 1927, but it only provides an introduction of the new craft and it does not address how production sound progressed after Hollywood transitioned to talking pictures. The initial approach was to continue where *End of an Era* concluded, structured as a historical documentary and focusing strictly on production sound. *Sound...Speed*, as the current production was initially titled, was going to present a chronological order of events, beginning in 1928 with the newly adopted policy of recording dialog and sounds on movie sets, the challenges encountered by the sound technicians in charge of accomplishing these tasks, and culminating with today’s state of the industry in the digital age. However, after presenting the proposal to the thesis committee and assessing their suggestions, a decision was made to revise the structure and content of the film to
include not only the historical side, but also the human aspect and personal demands of the craft.

Treatment

The following treatment describes how It's a Wonderful Business was structured. The film opens with a montage of scenes taken from a group of selected films. The scenes are intercut with some of the individuals interviewed in the film, who briefly give us an introduction to production sound and create a hook for the audience. The montage is followed by a self-introduction of the participants, a group of production sound experts that were appropriately selected based on their professional experience and accomplishments in sound mixing and recording for the motion picture industry. Through these formal interviews we learn about the creative and artistic facets of the craft, and what it takes to record the sounds and voices of some of the most notable cinematic performers in show business.

For a moment, we transition back in time to the moment where it all began, when Al Jolson sings Dirty Hands, Dirty Face, and very candidly claims that we “ain’t heard nothing yet!” Successfully released by Warner Brothers in 1927, The Jazz Singer was the first commercial film with recorded dialog and sounds. Using voice-over narration, archival footage and still photography, this historical segment shows us how production sound developed from the early days of the talkies through today’s digital age.

Due to the contemporary nature of the interviews, references and comparisons are made between digital and analog equipment, particularly with audio recording. Thus, a
short sequence is dedicated to the venerable analog Nagra magnetic-tape recorder, which revolutionized the recording of film sound worldwide. Its professional sound quality, outstanding reliability, and practical portability made it the recorder of choice for over thirty years, until digital recording made its debut in the early 1990’s. We learn how the Nagra earned its reputation and why it enjoyed such a unique longevity, not only from those who used it in the field, but also from its inventor and engineer, Stefan Kudelski, whom the producer personally interviewed.

The documentary continues with a sequence where the sound mixers and boom operators discuss some of the most challenging scenes they have encountered during their career. Using basic computer generated imagery over actual film clips to point out the intricacies of the shooting, such us concealing microphones and boom shadows out of view, we witness the complexity of gathering sound and the end results for each scene.

Finally, the film wraps with some personal observations, as participants discuss what it takes to be part of the film industry, the mythical glamour of working in Hollywood, and the personal sacrifices they have endured in the name of show business. *It's a Wonderful Business* does not seek an answer or a resolution to a problem. Instead, it focuses on the human element behind this specialized craft and it offers a unique perspective of what it takes to work and succeed in the motion picture industry. It also pays tribute to the men and women who contributed to the success of the *talkies*, and to those who continue to collaborate in the art of storytelling.
Challenges in Production

The decision to update the style of the film prompted a compulsory revision of the interview questions. This was accomplished in a timely manner and it did not incur any delays to the production schedule. Since the film was not going to focus just on the historical side, but on the business of production sound as a whole, new participants and locations were added to accommodate the requirements of the revised proposal. In addition, a new budget was compiled to include airfare, lodging, and expenses in Philadelphia, Pennsylvania, Gold Hill, Oregon, and London, England. The size and bulk of the equipment selected for the production also incurred additional costs in excess weight. See Appendix C: Production Budget for the final budget.
INTEGRATION OF THEORY AND PRODUCTION

Theories and Rationales of Use

The style of *It's a Wonderful Business* cannot be placed in a single category. The film is a hybrid between what theorist Bill Nichols calls the participatory, expository, and observational mode of documentary filmmaking. Therefore, let us examine the three individual types and how they are represented in the film.

Formal interviews provide the primary structure and voice of the film, an approach that Nichols labeled the participatory mode. He contends that the filmmaker acts as a participant in the film, and the interviews create an encounter between the filmmaker and his subjects. In the case of *It’s a Wonderful Business*, the director never makes an appearance nor is heard, but his presence is evident from the staged and oblique position of the subjects seen on the screen. They are not direct-addressing the camera and speaking freely, they are answering questions that the unseen director is eliciting from them. Nichols states that “we are witnesses to a form of dialogue between filmmaker and subjects that stresses situated engagement, negotiated interaction, and emotion-laden encounter. These qualities give the participatory mode of documentary filmmaking considerable appeal, as it roams through a wide variety of subjects.” (Nichols 121) He adds that “the voice of the filmmaker emerges from the weave of contributing voices and the material brought in to support what they say.” (Nichols 121). A total of thirty hours were recorded during the interviews, of which approximately fifty minutes were used in
the documentary. Therefore, the film relies heavily on the didactic discourse of its sixteen subjects, and this proved to be an effective method of presenting the information to the audience.

The expository mode decreed by Bill Nichols is exemplified, albeit briefly, in the historical sequence, introduced half way into the film. We learn that Warner Brothers and *The Jazz Singer* (1927) were the catalysts in the transition to film sound. The development and progression of production sound, from its birth until a more contemporary period, could only be explained by compiling a collage of images with a voice-over track and music beds. The sequence reveals the challenges brought on by the mandatory implementation of dialog recording and the limited technology, or lack of thereof, encountered by the first sound technicians. The trials and tribulations of working with fragile microphones, complicated recording apparatus, and a studio system that had absolute control of all productions, are catalogued and presented as what authors Ilisa Barbash and Lucien Taylor call “illustrated lectures” (Barbash & Taylor 19). However, scholar Donald Watt argues that historical compilations are plagued with unique problems. “They skate hurriedly over large quantities of time or events, simply because no archive footage exists. This in turn, force specific images to become backdrops for generalizations” (Watt 369). In the case of *It’s a Wonderful Business*, the filmmaker conducted extensive and meticulous pre-production research, by reviewing a number of textbooks and journals dating back to the genesis of production sound until the introduction of magnetic recording in the late 1940’s. The goal was to ascertain not only the accuracy of the images, but also to write a cogent narrative voice track.
The third style used in the film is the observational mode. As the term implies, the camera and filmmaker simply observe, unobtrusive, recording the events that unfold in front of the lens. In fact, the intention of the director was to video record a substantial amount of observational footage, in order to show more of the participants at work, complement the interviews, and not rely exclusively on their spoken word. According to Nichols, observation imparts credibility; thus, the director explained his intentions to those sound mixers who were on a film assignment, and they gladly requested permission for the filmmaker to visit their sets. Unfortunately, approval to shoot during filming was denied by the respective studios. The Electronic Press Kit crew, in charge of recording behind-the-scenes footage during the making of a movie, is often the only unit authorized to record and document the process. When sound mixer Mark Ulano invited the director to visit the set and witness the filming of a scene from Quentin Tarantino’s *Inglourious Basterds* (2009), permission was granted based on the strict stipulation that the filmmaker would not conceal, enter, and use visual or audio recording equipment of any kind, or such devices would be confiscated and destroyed. The only opportunity occurred when Carol McConnaughey, unit publicist for Universal Studios, allowed the filmmaker to video record sound mixer Willie Burton working on the film *Little Fockers* (2010). McConnaughey authorized the director to enter Stage 12 on the studio premises with one camera and a tripod, for the sole purpose of documenting Burton and his sound crew perform their duties for a period of two hours. *It’s a Wonderful Business* begins with some of the footage obtained from that shooting session.
The best way to describe the style of *It’s a Wonderful Business* is what documentary filmmaker Michael Rabiger refers to as *catalogue films*. According to Rabiger, these films are made by enthusiasts who try to examine something comprehensively rather than critically. The focus is on a personal theme and do not evoke social objectives (Rabiger 89). Yet, writer Erik Barnouw has stated that “documentarists have a passion for what they find in images and sounds,” and by selecting and arranging their findings, “they present their version of the world” (Barnouw 348). The director has *catalogued* a dynamic film, and he created the images and sounds of his feature documentary *It’s a Wonderful Business*, to present his version of a world practically unknown to the viewing public.

Texts, Documentary Films and Literature Reviewed for Research

The idea of making *It’s a Wonderful Business* developed from the filmmaker’s passion for location sound mixing and recording, and the initial step was to find films previously released about this area of film sound. The writer/director reviewed several documentaries with similar motifs to assess their content and style, and to avoid emulating the work of another filmmaker. A number of these films were produced as promotional shorts, to endorse a particular Hollywood studio, and to demonstrate their innovative ways of making talking pictures. For instance, *The Voice from the Screen* (1926) is a Warner Bros. instructional film that explains Vitaphone technology and the making of a Vitaphone recording. *Finding His Voice* (1929) is an animated short demonstrating the recording of voice and sounds with Western Electric equipment. *A*
New Romance of Celluloid: The Miracle of Sound (1940), produced by Metro-Goldwyn-Mayer, reveals the intricate process of recording dialog during the filming of Comrade X (1940). Okay for Sound (1946) celebrates the 20th anniversary of Vitaphone. The Soundman (1959), produced by the members of the Motion Picture Industry in cooperation with the Academy of Motion Picture Arts and Sciences, focused on the mixing, recording, and editing of soundtrack for feature films. Another film screened for research was End of an Era (1980), written and directed by Kevin Brownlow, a respected silent film era historian. Brownlow did an excellent job at documenting the experiments and transition to sound during the 1920s. A more contemporary film reviewed for research is called The Dawn of Sound: How Movies Learned to Talk (2007), produced by Warner Bros. to promote the eightieth-anniversary of The Jazz Singer. These films were not used to structure the style of It’s a Wonderful Business, but they proved to be great resources for their rich, historical information. The films helped the director to accurately compile a narrative script for the historical sequence, and also provided some of the remnant images available from those pioneering decades of film sound.

The aesthetics of the interviews were influenced by the documentary Enron: The Smartest Guys in the Room (2005), photographed by cinematographer Maryse Alberti. Enron uses multiple interviews to weave the fabric of the film, and all of these interviews were set in casual locations, such as business offices and residential rooms. The lighting was simple, yet softly stylized and very appealing to the eye. The framing varied from full, to medium, to close-up shots, depending on the importance of the statements. This type of lighting and framing was also emulated in It’s a Wonderful Business, resulting in
a pleasant and intimate look. Another inspiring documentary was Cinematographer Style (2006), a visual essay featuring 110 of the world’s best motion picture cinematographers discussing how they make their films look the way they do. This film was reviewed for its unique talking-head only structure, eluding the use of cut-aways and supporting material to stylize the film. Since this is an all-talking feature documentary, the words are the only subjective element conveying meaning to the film. The director focused on the delivery of interview questions presented to the participants, and also the style of the interviews themselves. Most were shot with key and fill lights over dark backgrounds; but some were more mundane, shot indoors and outdoors in a variety of settings.

The interview questions were tailored to each participant. All the sound mixers have been in the film industry for over thirty years, and they have a plethora of blockbuster movies attached to their names. The core questions were the same for all of them: self-introductions, when and how they became involved with production sound, and more. Other questions were specific to each subject, and a book called Sound-on-Film: Interviews with Creators of Film Sound (1994) proved to be a valuable tool. Written by School of Visual Arts professor Vincent LoBrutto, the book is a collection of interviews with film sound legends, like the late production sound mixer Jack Solomon, and retired sound mixers James Webb and Les Lazarowitz. LoBrutto takes us on a journey into the world of production sound recording with the different characters, who speak about their careers in film sound and reveal some of the challenges encountered during specific films. The technical questions for It's a Wonderful Business are similar to
those posed by LoBrutto, but the more personal questions were uniquely formulated for each participant interviewed in the film.
PRODUCTION

Overview

The filming of It’s a Wonderful Business took place in Los Angeles, California, Gold Hill, Oregon, New York City, Philadelphia, Pennsylvania, London, England, and Lausanne, Switzerland. With the exception of sound mixer Christopher Newman, all interviews were conducted on-location at the home of each participant. They authorized the filmmaker to use their facilities as deemed necessary and the interviews were successfully executed. However, working out the logistics to coordinate the dates and times was the most difficult part of the entire production. The number of participants increased from five to sixteen within two months prior to commencing principal photography, and the schedule had to be adjusted accordingly. This imposed a very challenging feat, but the results were rewarding and to the filmmaker’s satisfaction.

All interviews were video recorded with two cameras, and, for the purpose of this thesis, we will call them camera A and camera B. Camera A was the main camera, which focused on the frontal view of the subject. Camera B was used to capture the profile of the person for cut-aways, and to enhance the production value of the project. Static talking heads can induce boredom; thus, the decision to use a second camera for alternate angles produced positive results and allowed an element of flexibility for the editing process. Eight interviews, conducted in Los Angeles, Philadelphia and New York, were filmed by an assisting cameraperson, with the filmmaker directing and recording sound.
The remaining eight, including all European interviews, were completed by the filmmaker himself due to the limited resources. The shooting schedule was completed in January 2010, when the director made one last trip to Los Angeles with one camera and a tripod to film sound mixer Willie Burton on-location at Universal Studios.

Schedule

The production of It’s a Wonderful Business was accomplished on a fragmented schedule, due to the different locations and availability of the participants. Principal photography began on June 28, 2009, in Philadelphia, Pennsylvania, with production sound mixer Chris Munro. Chris was on his last week of working on-location in the film The Last Airbender (2010), directed by M. Night Shyamalan. This was the only opportunity to meet with Chris, since he was flying to Italy the following week, to start working on Anton Corbijn’s The American. The next location was Los Angeles, California, where the crew arrived on July 1, 2009. The first interview with production sound mixer and former president of the Cinema Audio Society, Richard Lightstone C.A.S., took place in Santa Monica that morning. Lightstone was working on-location on Lincoln Heights, a now cancelled television show produced for ABC, and the only opportunity was to shoot the interview during his lunch break. The following day was dedicated to interview retired boom operator Marvin Lewis at his place of residence in Sherman Oaks. The call-sheet called for a mid-afternoon shoot and a decision was made to conduct the interview in his back yard, due to its appealing look. The background noise was minimal, but on occasion a few airplanes departing from near-by Van Nuys
and Burbank airports interfered with the filming process. Surprisingly, the sound from one of these planes was captured unintentionally while Lewis was explaining that his job involved recording not only dialog but sound effects, such as the airplane flying overhead while gesturing toward the sky. The engine from the departing aircraft fades in right on cue as he completes his sentence about recording such effects, inadvertently creating a perfect example of his statement. The interview with production sound mixer Mark Ulano took place on the evening of July 3, 2009, at his home in Washington Heights. The next morning, the crew arrived early in Santa Monica to interview production sound mixer Jeff Wexler. This was the last interview of the trip and the crew returned home to Dallas, Texas, on the evening of July 4, 2009, in time for the holiday festivities.

Production sound mixer James Webb retired after mixing The Limey (1999), directed by Steven Soderbergh. He then moved away from Los Angeles, settled in Gold Hill, a small town in southern Oregon, and on July 24, 2009, this is where his interview took place. Lack of funding for the trip restricted the use of a full crew, thus, the director performed all tasks of production, including driving the 1,400 miles round-trip from Los Angeles. The plan was to fly to Medford, which is 15 miles from Gold Hill, via Los Angeles, but American Airlines failed to deliver the checked-in tripods and the filmmaker missed his one-daily flight to Medford. On September 19, 2009, the director returned to Los Angeles by himself to conduct the interviews with boom operators Randy Johnson and Thomas Hartig.

Production sound mixer and college instructor Chris Newman lives in southern New Jersey, approximately 100 miles from New York City. When he was contacted for
this project, he stated that he did not feel comfortable allowing an unknown film crew into his home. Therefore, plans were made to record his interview at the School of Visual Arts, where Chris teaches sound production for film, video and theatre. The crew arrived on September 24, 2009, for a 2:00 pm shoot and returned to Dallas the same day. On Saturday, September 26, 2009, Sennheiser® USA and Gotham Sound, a sound equipment rental house located in New York City, honored Newman for his prosperous career and enormous contribution to production sound. An Evening with Chris Newman: A Retrospective was held at the School of Visual Arts Theatre in lower Manhattan, and the director was there to film the event. He then flew to Los Angeles and joined his crew in California. September 27, 2009, was scheduled for sound mixer Willie Burton and boom operator Linda Murphy.

The last round of interviews took place in Europe. Again, due to the high cost and lack of funding for this trip, it was determined that only the director would travel with the gear, and film everything without any assistance. This proved to be extremely difficult, but very rewarding nonetheless. The first interview occurred on November 12, 2009, in Lausanne, Switzerland, at the home of Nagra inventor Stefan Kudelski. Monsieur Kudelski was born in Warsaw, but he has lived in Switzerland since 1941, after he and his family escaped from Poland during World War II. Upon arriving at his home, Kudelski stated that he had not spoken English, his third language after Polish and French, in over twenty years, and he was concerned that the questions for the interview may be difficult to answer. He struggled slightly through the first questions, but his heavy accent and diction did not deter him from being very insightful, spontaneous, and quite
humorous. The interview was a complete success. The next destination was London, England, and the filmmaker arrived at Heathrow Airport on Sunday, November 15, 2009. The following day was dedicated to meet and interview sound mixer Peter Glosssop at his house in Wimbledon. On November 17, 2009, two more interviews were conducted with boom operator Barry O’Sullivan and his partner, sound mixer Ivan Sharrock. Principal photography ended on November 18, 2009, after the final interview with sound mixer David Stephenson. Additional pick-up footage with sound mixer Willie Burton was scheduled and completed on January 21, 2010, at Universal Studios in Los Angeles, California. Evaluation of the material and transcriptions were completed in March 2010, and the editing process began in April 2010.

Crew

During the pre-production phase of the project, the producer/director planned to hire a cameraperson for the project. His skills as a cinematographer are average and this production demanded a qualified professional for the job. He contacted a colleague and documentary production professor Tania Khalaf to participate in the project, and she video recorded eight interviews in Los Angeles, Philadelphia and New York. The remaining interviews were accomplished by the director. During the interviews of boom operators Randy Johnson and Thomas Hartig, camera B were controlled by assistant camerapersons Jace Ford and Regina Hartig, respectively. The filmmaker was the sole party responsible for directing and recording sound.
Equipment

There were several camera models available for the production of *It’s a Wonderful Business*. Two of these machines, the HPX500 and the HVX200, both manufactured by Panasonic®, were selected for their high-definition capabilities and flexibility of recording media. Both cameras record, or capture, digital video files to reusable P2 solid-stated acquisition cards. This eliminated the need of using mini-DV cameras that use digital video tapes. DV tapes are susceptible to random dropouts in the image and they are also cumbersome to transport. During pre-production, several tests were performed with both the HPX-500 and the HVX-200, setting up mock-up interviews in different lighting scenarios. The end results proved that, while the 500 was a better camera, the 200 offered favorable options, such as size, portability, and convenience of use. Since production involved traveling to many different locations, the HVX-200 became a much better option. The quality of the image was not compromised by the use of the 200, particularly when the entire film was recorded at the maximum resolution of 1080i – 24p.

The lighting equipment selected to illuminate the participants of *It’s a Wonderful Business* was a Chimera® Video PRO Lightbank with a 1000W halogen lamp. The Chimera is the perfect tool to create soft lighting and avoid hard shadows. The light wraps nicely around a person’s face and it is evenly distributed, which eliminates the use of additional fill lights. The Chimera is also lightweight and easily assembled on location, making it the ideal choice when traveling is imminent. Two additional LTM® Pepper 200W Fresnel Lights were included in the lighting kit, and they were used as fill lights to
illuminate and balance the contrast of certain backgrounds. In addition, these lights are small, robust, and easily transportable.

Regarding sound aesthetics, the interviews were all recorded with a Schoeps® CMC5-41 microphone. This is a highly directional microphone with extremely low self-noise. It is a microphone mostly used for indoor recordings, but it was also used during the outdoor interviews with sound mixer Willie Burton and boom operator Marvin Lewis. The low-wind conditions and minimal background noise encountered at the time of the shooting permitted the use of the great sounding Schoeps instead of a more directional, shotgun-type of microphone. Commonly, sit-down interviews are recorded with lavalier microphones placed on the person’s chest. Lavalier microphones have greater background noise rejection and are ideal when shooting in noisy locations, but the quality of the sound is compromised. Since the interviews were conducted in controlled environments, the use of an over-head microphone provided much better results. The signal of the Schoeps CMC5-41 was routed through a Sound Devices® 442 4-channel mixer, connected to a Sound Devices 702 compact-flash digital recorder and to camera A. The use of the SD-442 mixer offered greater control of the incoming signal. Once reference tone was set, the need to constantly monitor and adjust the camera input levels was completely eliminated. During pre-production, a decision was made to record all audio tracks for the project on the SD-702. These tracks would be the primary audio tracks used in the film, while the audio recorded on the cameras would only be used for editing reference and for back up. The pre-amplifiers in the cameras are not optimal for recording professional audio; therefore, a double-system of recording was implemented.
All sound nuisances encountered on location were assessed, eliminated, or suppressed. Some locations contained noises that were beyond the filmmaker’s control and are present in the audio recordings. The interview with sound mixer Chris Newman was conducted in a classroom at the School of Visual Arts. The beginning of the interview is very quiet and Newman’s voice is clear, but the air conditioning blower started within ten minutes of shooting and could not be turned off.

Releases, Copyright, and License Agreements

All personal releases were completed, verified, and collected at the end of each interview. There were no issues encountered, and none are expected, from the use of still images of all participants. All photographs collected from the subjects were from their personal collection.

A number of film clips from some of the movies made by the participants were used to build the introduction sequence, and also to demonstrate how some of the most intricate scenes discussed by those interviewed were actually accomplished. These clips are critical to the content of It’s a Wonderful Business, since the challenges of recording the dialog in these scenes can only be conveyed by actually showing the clips themselves. It is of utmost importance to understand that the intention of the filmmaker is not to exploit the respective copyright holders of this material. The clips were used as visual representations of processes that could not be expressed or demonstrated in any other form. Furthermore, all clips were edited to a minimum and proportionate length, and they serve as critical illustrative elements in the film. The use of these film clips does not
constitute exploitative or abusive applications of fair use.

Budget

The initial budget compiled for It’s a Wonderful Business was amended prior to the beginning of the production phase, to reflect the changes that ensued during the pre-production process. Eleven potential participants responded to the filmmaker’s request and new locations were added to the itinerary; therefore, a large portion of the expenses were generated by air travel, lodging, and local transportation. In-kind contributions from the University of North Texas Department of Radio, Television, and Film covered the rental charges for some of the equipment, comprised of two camera packages, lights, and video recording media. The sound gear utilized in the project was the filmmaker’s personal kit, which included the recorder, mixer, all microphones, and wireless systems. See Appendix C: Production Budget for a detailed breakdown of the budget.
POST-PRODUCTION

Schedule

Due to a scheduling conflict with the participants, the film did not enter the post-production phase until April 2010. All shooting wrapped in January 2010, evaluation and transcription of the material was completed in March 2010, and the editing process began in April 2010. The video files were recorded on Panasonic P2 solid-state acquisition cards, and these were saved and backed-up on four Seagate® 1.5TB external hard-drives after every shoot. Logging and transferring of the footage was accomplished between January and February of 2010. All audio files recorded on the SD-702 were saved and backed-up on two Seagate portable drives. Editing began in April 2010, after all thirty-hours of footage were transcribed. The first step was to create a sequence of each interview, place the video on the timeline, and synchronize the audio files recorded on the SD-702. The first rough cut was submitted and screened with Dr. Samuel Sauls, thesis chair, on November 19, 2010. DVD copies were mailed to professor Ben Levin and Dr. Mark Kerins on November 22, 2010, for personal evaluation and feedback. The final cut will be completed before February of 2011. See Appendix D: Post-Production Schedule for an accurate timetable.
Equipment

*It’s a Wonderful Life* was edited with Apple Final Cut Studio II Suite®, Adobe Photoshop®, and Adobe Soundbooth®, using a 24” Apple iMac® and a 17” Apple MacBook Pro® computers. The footage was logged and transferred to two Seagate® 1.5TB external drives and these were the scratch discs for the entire project. Two additional Seagate drives were used as back-ups. The documentary was edited by producer/director Omar Milano, who is proficient with Final Cut Studio, including Motion, Compressor, and DVD Studio Pro. Adobe Photoshop was used to edit, layer, and compose still photographs, while Adobe Soundbooth was used to edit voice-over tracks and music beds. An Epson RX-680 Printer and Media Disc Labeler will be used to prepare the project for distribution.

Reconceptualization During Post-Production

There are a total of sixteen interviews and over thirty hours of footage. The intention of the director was to hire an editor to cut the film for two very important reasons. A considerable amount of personal funds was invested to produce the documentary; therefore, it would be of the best interest of the filmmaker to hire a professional editor. A skillful editor can not only assist with technical tasks, but also with the overall rhythm and aesthetics of the film as well. The goal was to create a product worth of distribution in order to recover some of the expenses incurred in the making of the film.
The second reason pertained to the personal involvement of the filmmaker in all facets of the production itself. As writer, producer and director of the film, the filmmaker had a very intimate connection with the material, and the editing process could have been affected by this intimacy. Compiling sequences that may have seemed appropriate and made sense to him may not have been so effective or understood when viewed by others. Therefore, an outside source could introduce different perspectives and fresh ideas to the process.

Regrettably, this option could not be pursued due to the lack of additional funding and the film was completely edited by the filmmaker. He requested appropriate feedback and the expert opinion of faculty members and other industry professionals to help create a great film.

Another change that stemmed during the post-production phase was the obligatory use of a voice-over track during the historical sequence in the film. As it was initially stated, the filmmaker dislikes using narration, or *voice of God*, to explain, or spoon feed, material to the audience, since he feels that this can induce a loss of authenticity or credibility to the project. However, the filmmaker accepted that this is a valuable tool in a filmmaker’s toolkit, and narration was deemed necessary to move the film along. The historical sequence had to be voiced-over due to a lack of sufficient, or accurate, answers obtained during the interviews. Only one person, production sound mixer James Webb, provided some of the answers to questions about early sound film equipment, processes, and changes that occurred through the first four decades.
Unfortunately, it was not enough to prevent the use of voice-over narration; thus, the voice of the filmmaker appears in the film.
EVALUATION OF COMPLETED WORK

Pre-Production

If we try to seek answers for any fallacies that occurred during the production and post-production phases of *It’s a Wonderful Business*, they can all be attributed to failures or miscalculations inadvertently neglected during the pre-production stage. As a student filmmaker, the director embarked on a project of great magnitude and he faced most of the complexities during production. However, two crucial steps were accomplished during pre-production that secured the successful execution and completion of *It’s a Wonderful Business*. Compiling a list of qualified candidates for the interviews was the initial step. Locating them and establishing a working relationship with each of them proved exhaustingly difficult, but very rewarding. With the exception of sound mixer Arthur Rochester, who was experiencing serious health issues during the time of shooting, all the individuals contacted accepted to take part in the film. The film could not have been achieved without the valuable assistance and cooperation of these sound professionals.

The second step involved the appropriate selection of the gear. All of the shooting took place away from the filmmaker’s home in Dallas, Texas; therefore, equipment checklists were compiled and reassessed prior to every trip, particularly before departing for Europe. The voltage and frequency in England and Switzerland are 220 volts and 50 hertz, respectively. To light the subjects, the filmmaker had to purchase special lamps and
high-grade wall plug adapters for both countries to meet those requirements. Anticipating potential caveats is the best approach to plan and obtain positive results.

Production

In recapitulating the events of the production stage, there were many lessons learned during this important phase of the project. For instance, shooting outdoors for a long period of time can lead to disastrous results. During the interview of retired boom operator Marvin Lewis, shooting began approximately at 4:00 pm and it took two hours to record. The image looked fantastic in the beginning, but the sun began to set and the background lighting was lost. The last fifteen minutes of the interview are completely unusable due to this unfortunate miscalculation. Another problem occurred during the video recording of sound mixer Willie Burton. Burton did not wish to be interviewed inside his home; therefore, the only area available was his front patio. The interview began at 10:00 am and Burton was seated under the shade provided by the roof of his home. As the interview progressed, the increasing angle of the sun began to reflect on his head and it is visible in some of the footage used in the film.

Shooting interviews in uncontrolled situations can also have negative consequences and seriously impact the end results. Sound mixer Richard Lightstone was only available for one hour during his lunch break while working on-location on a television show. The crew set up the equipment next to Lightstone’s sound cart and the interview began promptly at 1:00 pm. The noisy environment, the rushed answers, and the priorities of a live set were some of the issues encountered during this interview, and
they were beyond the director’s control. Observational documentarians are often faced with these predicaments and the style justifies the conditions. In the case of *It’s a Wonderful Business*, the filmmaker agrees that this situation could have been prevented by a change of venue. Unfortunately, the schedule of both parties did not permit an alternate course of action and Lightstone’s interview was conducted in this poor environment.

One final burden of great financial magnitude surfaced each time the director flew to a location on his own. Air travel required checking in luggage and all the equipment. The excessive weight of the gear, plus the limit placed on the number of checked-in bags, imposed steep fees collected by the air carriers. The highest of these charges occurred when the director flew from Frankfurt to London on November 15, 2009, and Lufthansa levied 500 € euros for oversized luggage and excess weight.

**Post-Production**

The structure of the film followed the form and style proposed in the prospectus, and the filmmaker was very pleased with the results of the rough cut. This first cut had a running time of 1:39:18 and it was more than just a rough composition of images. The film included transitions, lower-third titles, a voice-over track, and motion was added to still photographs. The rough cut contained an excessive amount of material, intentionally edited in such manner, to obtain valuable feedback from the thesis committee, students, and other faculty members. It served as an evaluating piece to determine what elements were appropriate and which ones should be edited out.
After the screening of this first cut, many viewers indicated that the historical sequence was excessively long, out of place, and it felt as two separate films. The filmmaker agreed with this important observation and appropriate revisions were undertaken in regard to this sequence. It was also suggested that the vintage footage and still images obtained for this sequence could be utilized to create a secondary short film that could be included as a bonus on a DVD.

Another remark made by the audience was the lack of a strong introduction, or hook. The film lacked this important element and the editor rearranged the beginning sequence to create a more dynamic introduction. The length of the film was additionally reduced by removing redundancies, and by decreasing the length of the film clips. The total running time of the final cut is approximately 60 minutes.
APPENDIX A

DISTRIBUTION OUTLETS
During one of his many trips to Los Angeles, California, the director had the pleasure of meeting retired production sound mixer John Coffey. John is the owner and operator of Coffey Sound, a sales and rental facility that specializes in location sound equipment for the motion picture industry. He has expressed an interest in marketing and distributing *It’s a Wonderful Business* through his business. The business agreement between Coffey Sound and the filmmaker is currently under discussion and has not been finalized.

In addition, the filmmaker is pursuing other options for marketing and distribution of *It’s a Wonderful Business*. A provision for direct sales has been implemented and, at this time, marketing strategies are focused on the following entities:

- Community colleges, universities, and film schools worldwide.
- Historical film societies, museums, science centers, and film commissions worldwide.
APPENDIX B

PRODUCTION SCHEDULE
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<th>Date</th>
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<th>Production</th>
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<td>Interview with sound mixer Chris Munro</td>
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<td>July 1-4, 2009</td>
<td>Los Angeles, CA</td>
<td>Interviews with sound mixers Richard Lightstone, Jeffrey Wexler, Mark Ulano, and retired boom operator Marvin Lewis</td>
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<td>July 23-26, 2009</td>
<td>Gold Hill, OR</td>
<td>Interview with retired sound mixer James Webb</td>
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<td>September 19-20, 2009</td>
<td>Los Angeles, CA</td>
<td>Interviews with boom operators Randy Johnson and Thomas Hartig</td>
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<td>September 24, 2009</td>
<td>New York, NY</td>
<td>Interview with sound mixer Chris Newman</td>
</tr>
<tr>
<td>September 26, 2009</td>
<td>New York, NY</td>
<td>Shoot cut-aways and fills during the presentation of <em>Chris Newman: A Retrospective</em></td>
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<tr>
<td>September 27, 2009</td>
<td>Los Angeles, CA</td>
<td>Interviews with sound mixer Willie Burton and boom operator Linda Murphy</td>
</tr>
<tr>
<td>November 11-14, 2009</td>
<td>Lausanne, Switzerland</td>
<td>Interview with engineer Stefan Kudelski, shoot tour of Nagra Headquarters in Cheseaux, and shoot exterior of first Nagra factory in Paudex</td>
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<tr>
<td>January 21, 2010</td>
<td>Los Angeles, CA</td>
<td>Shoot behind-the-scenes footage of Willie Burton working on <em>Little Fockers</em> at Universal Studios</td>
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APPENDIX C

PRODUCTION BUDGET
### Budget Summary for *It’s a Wonderful Business*

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<td>34-16 Final Mix</td>
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<td>38-05 Telephone/FAX</td>
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<td>Months</td>
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<tr>
<td>38-18 Marketing/Festival Fees/Distribution</td>
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<td>TOTAL</td>
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APPENDIX D

POST-PRODUCTION SCHEDULE
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<th>Date</th>
<th>Beginning Date</th>
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<tbody>
<tr>
<td>February 2010</td>
<td>All video files logged and transferred to hard-drives</td>
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<tr>
<td>March 2010</td>
<td>Transcriptions completed</td>
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<tr>
<td>April – November 2010</td>
<td>Editing of first cut, completed with transitions, texts, motion of still photos, and voice-over track</td>
</tr>
<tr>
<td>December 2010</td>
<td>Revisions of thesis committee accomplished</td>
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<tr>
<td>January 2011</td>
<td>Final changes and fine tuning of the final cut</td>
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<tr>
<td>February 2011</td>
<td>Official screening</td>
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BIBLIOGRAPHY

Productions


Publications


Texts


Websites

Academy of Motion Picture Arts and Sciences – [http://www.oscars.org/](http://www.oscars.org/)
AMPAS Margaret Herrick Library – http://www.oscars.org/mhl/index.html

Association of Motion Picture Sound – http://www.amps.net/

Cinema Audio Society – http://www.cinemaaudiosociety.org/

Film Sound – http://www.filmsound.org/film-sound-history/


Internet Archive – http://www.archive.org/