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Cover: Collage of article photos
Greetings,

Fall is here and, as we seek ways to celebrate the upcoming holidays safely, I see so much for which we can be thankful and proud.

Firstly, and maybe most importantly, our community is beginning to return to work. Productions are coming back online and sound mixers everywhere are innovating, utilizing new technology and workflows that allow for creativity, productivity, and safety.

Many networks and production companies are producing standards and practices to ensure productive safety. Local 695 has completed a Return-to-Work agreement and published guidelines and protocols (https://www.local695.com/covid-19-info). Local 700 is advocating for box rental for those newly working from home while continuing to update their COVID-19 safety guidelines (https://www.editorsguild.com/Member-Menu/Coronavirus-Information).

However, we are not out of the woods. We must remain vigilant in our personal commitment to our safety and the safety of others by wearing masks, remaining socially distant, and washing our hands. We are finding a way, and I believe will be back stronger than ever.

CAS members continue to receive recognition for their exemplary work throughout the industry. The CAS congratulates all of this year’s Emmy nominees and award recipients. Among those who garnered Emmys this year, the following are also CAS members: Patrick Baltzell CAS, Ron Bochar CAS, Joe DeAngelis CAS, William Files CAS, Chris Fogel CAS, Craig Henighan CAS, Shawn Holden CAS, George A. Lara CAS, Mathew Price CAS, and Tommy Vicari CAS. Congratulations!

We just wrapped our continued participation as event partners for the Mix Presents “Sound for Film & TV” (SFF&TV) event where we had record numbers of attendees for our panel on remote post workflows, “Play It Don’t Spray It,” and our first-ever virtual CAS Parade of Carts. Our committee worked tirelessly to produce original pre-recorded content and assemble members for live Q&As from all over the globe to represent you and to offer the most diverse experience and workflow methods available.

Recently, we also concluded our CAS Summer Event Series with a special extension of our “Play It Don’t Spray It” SFF&TV panel discussing post audio workflows in the time of COVID-19. The virtual summer events allowed for the unique experience of participating live via chat with peers, and an expert in the field participating as a chat moderator. Attendees were also able to pose questions to the live panel and moderator, as well as access exclusive related bonus content via the event software. Learn more about the CAS Summer Event Series 2020 in this issue and visit our website where we have made recordings of the event’s panel discussions accessible to our members under the Events heading.

Finally, don’t forget to explore the incredible work of Peter Devlin CAS and Stephen Tibbo CAS, who continue to produce amazing content focused on the fascinating careers of accomplished mixers in our CAS podcast series, In Conversation, available here: https://cinemaaudiosociety.org/podcasts/

Thank you so much, CAS members! You continue to inspire and exemplify the professionalism and fellowship for which the CAS is known. I am honored to serve as your president.

Thank you.

Karol Urban CAS MPSE
When my son was in middle school, he attended a baseball camp put on by one of the universities here in Nashville. The head coach, who was no stranger to the College World Series, would give an insightful and encouraging speech at the start of each day. One morning, he came out in a thick ski jacket, winter gloves, and hat—as if he was ready to hit the slopes. Mind you, it was probably 99 degrees at eight in the morning. So, while the parents and kids in attendance were thinking maybe Coach should have detoured his walk toward the psych ward at the university’s hospital instead of the ballfield, his message of the day was clear; sometimes you have to adjust. On the ballfield, you don’t know what the weather will be like, so you may have to adjust. You may have a muscle or joint that hurts, so you have to adjust. A batter may be more prone to this type of hit, so you have to adjust to make the play.

In our world as sound mixers, we have all had to adjust over the past couple of months. For many, it has been a very challenging time. Yet, to keep things moving, we don’t throw in the towel when things change, we adjust—just as the coach said. Here at the CAS, we’ve adjusted our Summer Event Series approach and our CAS Awards timeline. Now, with our continuing need for adjustments, you’ll see some of your CAS Quarterly issues arrive in your mailbox at different times than in the past. Our hope is that we can provide informative and enjoyable content even as our awards season shifts.

On that note, we have some articles that focus on making adjustments. Whitney Worthen discusses how COVID has changed the way live sports broadcasts are mixed and Patrick Spain CAS talks about remote music and score mixing during COVID. Devendra Cleary CAS continues his discussion from the Summer issue on how COVID has changed production mixing—focusing on VOG systems and gear disinfecting. Our coverage of the Mix Sound for Film & TV event also includes recaps of panels on other COVID-related topics. On the non-COVID front, Daniel Vasquez Velez CAS writes about the value of production sound effects in the mix while Tod Maitland CAS shares 30 years of insight and techniques for production mixing musicals—a master class in its own right. Also, production mixer Griffin Richardson CAS is interviewed by Adam Howell CAS in this issue’s “Meet the Mixer” column. Finally, be sure to read about the happenings of your fellow members in the “Been There Done That” and “The Lighter Side” sections.

I’d like to thank all of our contributors for volunteering their time to share their insights with us. Also, know that our sponsors are professionals like you who understand the business and the needs of our industry—even during these really crazy times. We encourage your commitment to them. Thanks for taking the time to check out this issue. If an article makes you think of a friend or colleague, send a link to the online version of the Quarterly, available on the CAS website. Finally, feel free to reach out to us at CASQuarterly@CinemaAudioSociety.org.

Stay well,

Matt Foglia CAS
Adam Howell CAS
In 2002, Adam moved to LA after graduating from Full Sail with a recording engineer degree. Beginning at Hans Zimmer’s studio and working in the music industry, Adam ventured into post-production for television as a sound editor and took his skills into the field as a production mixer in 2004. For more than 15 years, Adam has enjoyed the privilege of mixing and supervising more than 100 shows for clients as diverse as MTV, FOX, and ABC. Delivering the best audio is Adam’s passion and he feels fortunate to work with so many talented and creative individuals. He also enjoys playing guitar, hiking, traveling, and hanging out with family.

Devendra Cleary CAS
is a Los Angeles-based production sound mixer who is currently mixing Season 2 of Schooled for ABC. He is an Executive Board member for IATSE Local 695 and a frequent contributor to the CAS Quarterly. He joined the CAS as an Associate member in 1999 and became a full member in 2008.

Stephen Fitzmaurice CAS
studied sound and music at USC, starting his career as an assistant for albums and film scores. He earned his first credit as a re-recording mixer in 2001 and has continued in that capacity in sound for television since. Stephen is currently working on productions for Netflix and ABC Television.

David Bondelevitch CAS MPSE
is a re-recording mixer and educator who has won two Emmy Awards and two MPSE Golden Reel Awards (and has been nominated 22 times). He is Past President and Board member of the Motion Picture Sound Editors. David was the Secretary of the Cinema Audio Society 2012-2019, Vice President 2007-2011, and has been on the Board of Directors since 2006. He has been writing for the CAS Quarterly magazine since 2006 and was co-editor in 2007.

G. John Garrett CAS
is a production sound mixer living in Boston, MA. He began mixing live music around 1970 and learned acoustics, signal flow, and recording technology along the way. He began in the industry booming for Boulder mixer Garrett Collenberger and moved into mixing documentaries, commercials, and feature films after moving to Boston in 1984. He then expanded his RF training by working with broadcast engineers and now also consults with a broadcast tech company in the area.

Stephen Fitzmaurice CAS
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Peter Kelsey CAS

started his career in sound at the illustrious independent recording studio Trident Studios, where all the early Elton John and David Bowie albums were recorded. Here, Peter learned from engineers and producers such as Rupert Hine, Ken Scott, Roy Thomas Baker, Robin Geoffrey Cable, and David Hentschel. He was a second engineer on the Carly Simon album No Secrets, and part of the mixing team for Elton John’s album Goodbye Yellow Brick Road.

After moving to the USA, he did a lot of work as a scoring mixer before moving into post-production sound. He has worked on many David Kelley shows, including Ally McBeal and Boston Legal, for both of which he won sound mixing Emmys. He worked for RH Factor for many years and for the last three years has worked for Smart Post Sound. He is currently working on Speechless, The Chi, Arrested Development, and Dead to Me.

Patrick has a degree in mathematics, a black belt in taekwondo, and loves public speaking.

Sam Casas

After graduating from UCSD’s Revelle College as a music technology major in 1999, Sam began his career in audio post-production in the tape vault at POP Sound in Santa Monica. In 2003, he helped open Lime Studios, a boutique audio facility specializing in sound design and mix for TV commercials, where he still works today. Sam has found a successful niche mixing commercials for huge brands such as Nike, Facebook, Old Spice, and Apple, counting several Super Bowl commercials as career highlights. In 2017, Sam joined the union and began actively pursuing more narrative work as a supervising sound editor and re-recording mixer on various independent features, shorts, and documentaries. Working on a major studio feature or limited series is Sam’s next career goal. Sam’s 5.1 home studio has enabled him to stay busy during the pandemic while allowing him to spend more time with his wife Elise and four-year-old son Sebastian.

Tod Maitland CAS

was born into the industry he loves. With over 100 feature film credits and four Academy Award nominations, Tod’s career spans four decades as films as recent as Joker and The Irishman to I Am Legend, Scarscutter, JFK, and as far back as booming on Tootsie. Always at the forefront of technology, Tod is continually searching for the best ways to record sound, with a focus on musicals and music-based films. His music films span the spectrum from The Doors to Across the Universe, The Greatest Showman, and Steven Spielberg’s West Side Story. Tod is currently working on his 10th musical, Tick, Tick...Boom!, directed by Lin Manuel Miranda.

Along with his three siblings, Tod grew up in the business training under their father, Dennis Maitland CAS, who received the 2009 CAS Lifetime Achievement Award. Tod also co-founded The Hollywood Edge Sound Effects Libraries and, over the years, has given seminars, written articles, trained a multitude of sound professionals, and taught sound. He is currently in his third year as an adjunct professor at NYU.

Patrick Spain CAS

began his career in the scoring world at Signet Sound in 2001 working on varied films like Cars and Eternal Sunshine of the Spotless Mind. In 2006, he was hired at the venerable Ocean Way Recording (now renamed United Recording), this time working on everything from Dr. Dre productions to John Mayer records to the score for Avatar. In 2011, Patrick was hired as a mix tech at the industry-leading Todd-AO Lantana stages in Santa Monica. His very first day there was an FX playback of a single reel of Avengers for director Joss Whedon on the same stage where Saving Private Ryan was mixed! It was in this incredible environment where Patrick learned the ropes of film and television audio post from some of the best re-recording mixers, editors, and sound supervisors in the world. He worked on shows as different as the run-and-gun feature Lone Survivor to HBO’s Girls to the music-centric hit Nashville. After the closing of Todd-AL, Patrick worked a quick stint at Technicolor Sound Services, and then made the jump to freelancing as a re-recording mixer full time. In that time, Patrick has mixed for clients such as Netflix, Disney, WB, ABC, and DreamWorks.

Daniel Vasquez Velez CAS

is a re-recording mixer, sound editor, and sound designer from Colombia. He studied recording arts and earned a master’s degree in audio post-production in London, United Kingdom, where he started his career in sound. He is the co-founder of Clap Studios, a sound post-production facility in Medellin, Colombia, and SoundNode in England.

Some titles he has worked on include Animal’s Wife, The Courier, Perdida, Days of the Whale, Guilty Men, Netflix’s The Great Heist, Green Frontier, Crime Diaries: Night Out, and has five nominations for Best Sound at the Colombian Film Academy Awards for The Nobodies, A Thing Called Love, The Dragon Defense, The Smiling Lombana, and The Silence of the River. Daniel also has one nomination at the Venezuelan Film Awards for Being Impossible. He has been a member of the Colombian Film Academy since 2015; Audio Engineering Society (as part of the section committee); Colombian Cinema Sound Association (ADSC); and is part of his Regional Film Council. Daniel has also worked as a teacher at universities and academic institutions in the United Kingdom and Colombia, and has been invited as a guest speaker at various events. Daniel shares his passion for sound with aviation, as he’s also a private pilot.

Whitney Worthen

A graduate of Grace College, Whitney studied communications with a focus in film, but unsure of her place in the film world, headed back home to rural Indiana where she jump-started her journalist career. She began professionally writing in 2016 as a sports journalist for the Pilot News, covering high schools across North Central Indiana. After two years, Whitney moved to LA to pursue a career as a boom operator in the film industry. Though new to the industry, she has jumped in feet first learning the ropes from a number of great mentors and getting to know the sound community better. She’s best known for wearing a Pepsi hat while out-and-about and for her deep love of Harry Potter.
Cinema Audio Society President Karol Urban CAS MPSE announced that the organization would honor multiple CAS Award- and Oscar®-nominated sound mixer William B. Kaplan CAS with the Cinema Audio Society’s highest accolade, the CAS Career Achievement Award. The award will be presented at the 57th CAS Awards on Saturday, April 17, 2021.

“The Cinema Audio Society is delighted to bestow the honor of Career Achievement to Mr. William B. Kaplan,” said Karol Urban. “His work consists of decades of exceptional filmmaking. Many of the fruits of his labor remain forever in our hearts and minds as exemplary works of art and staples of global popular culture. His professional journey is an inspiring tale of adventure, not unlike much of the films he has contributed to as a production sound mixer.”

Upon hearing the news that he was to receive the CAS’s highest honor, Bill said, “When I was informed that I had been selected, I was astonished. I realize how many amazing, world-class mixers the CAS could have chosen. I was immediately humbled, amazed, and thrilled. I thank the CAS for choosing me.”

Bill Kaplan grew up on the sets of MGM, where his father worked. He sat on the camera dolly watching Gene Kelly dance for *Singin’ in the Rain*, Bogart push *The African Queen* on stage, and Brando command the *Bounty* through a massive storm on Stage 30. His high school years were spent at an experimental boarding school founded by Jiddu Krishnamurti and Aldous Huxley. Rebellious at the beginning and student body president in the end, he remains an Executive Board member of this school that turned his life around. He then attended Cal Western University, University of Arizona, USC, and UCLA, majoring in psychology and pre-med. Eventually, he was wait-listed for film school. A Hong Kong film producer saw the list and offered Kaplan a job to DP on his 35mm, Mitchell rack-over, cinemascope feature. Having no familiarity with the equipment, he accepted the position but read the ASC manual for that camera all night.

Ultimately, Kaplan received a master’s degree in film from UCLA. The eager filmmaker’s hunger resulted in shooting and recording hundreds of training films, commercials, and instructionals. He made his way to Roger Corman and New World and was DP on many low-budget disco, race car, and Western films. He was eventually offered $600/week as a sound mixer,
including equipment, instead of the $250/week he was making as a DP. The die was cast, and a sound mixer was born.

In 1977, John Landis hired Kaplan as sound mixer for The Kentucky Fried Movie. He continued with Landis for eight more films, including Animal House, The Blues Brothers, and Coming to America. Over the next four decades, Kaplan was the primary sound mixer for directors Robert Zemeckis and Tony Scott on more than 20 projects. On the film Top Gun, Kaplan recorded live dialogue between actors in fighter jets traveling at speeds beyond the sound barrier. Later, given Bill’s extensive experience with stop motion, he was hired on Avatar.

Kaplan has garnered seven Oscar nominations, including Tony Scott’s Top Gun and Crimson Tide and Robert Zemeckis’ Back to the Future, Forrest Gump, Contact, Cast Away, and The Polar Express. He also has a CAS Award win for Forrest Gump, as well as three other CAS Award nominations.

Bill has contributed to 155 feature films and has recorded many well-known motion-capture video games. Currently, he is working on The Morning Show for Apple TV.

Kaplan is a proud father of his two adult children. His daughter Lindsey lives in Colorado and is studying to be a veterinarian. His son Jesse worked as a boom/utility on Avatar and other films and now travels the world installing private television broadcast studios. Bill lives in Agoura Hills and has no plans to retire anytime soon. While he enjoys his horses and goats on his small ranch, he still loves going to work every day!

Podcast

The Cinema Audio Society presents the next episode of our podcast series, *In Conversation*.

Moderated by Stephen A. Tibbo CAS, episode five features longtime CAS member, re-recording mixer Peter Reale CAS. This podcast was recorded in Los Angeles at Tibbo Sound in July 2020 during the COVID-19 pandemic.

http://cinemaaudiosociety.org/podcasts/

### CAS AWARDS COVID-19 TIMELINE ADJUSTMENTS

The Cinema Audio Society timetable for the 57th Annual CAS Awards is outlined below. As a result of the industry shifts resulting from the pandemic, the CAS Awards timeline will be adjusted for this year. We look forward to celebrating with the recipient of the CAS Career Achievement Award and the CAS Filmmaker Award honoree. The CAS Awards recognize Outstanding Sound Mixing in Film and Television, along with Outstanding Products in Production and Post-Production and the CAS Student Recognition Award recipient. We also look forward to welcoming the new 2021 CAS Board members.

#### 57th CAS AWARDS TIMELINE

**Entry Submission Form** available online on the CAS website at www.cinemaaudiosociety.org

**Entry Submissions due** online by 5 p.m. PT, Tuesday, January 19, 2021

**Nomination Ballot Voting Begins** online Thursday, February 11, 2021

**Nomination Ballot Voting Ends** online 5 p.m. PT, Wednesday, February 24, 2021

**Final Nominees** in each category announced Tuesday, March 2, 2021

**Final Voting Begins** online Thursday, March 25, 2021

**Final Voting Ends** online 5 p.m. PT, Tuesday, April 6, 2021

**57th Annual CAS Awards** Saturday, April 17, 2021, Los Angeles, California
Friday the 13th, March 2020. It started off as an unremarkable day on set, but the mood was tense. The spread of COVID-19 was all over the news, hand sanitizer was readily available, and everyone was told it would be a short day. But when it came time to wrap, what happened next would be tough to swallow: “No one is coming back tomorrow. Everyone gets two weeks’ paid. We don’t know what’s going to happen to the show, but leave all your gear where it is.” The crew then said goodbye, elbow bumped each other, and left. That was more than six months ago. No one has returned. What was supposed to be a long-term stable gig has ended up on the back burner.

Although strange, this story is not unfamiliar. As a sound mixer for television, I’ve quickly learned that the one thing you can rely on is that change is inevitable. The best mixers, however, not only roll with the punches, but find ways to adapt. Via Zoom, I recently chatted with Emmy Award winner Griffin Richardson CAS, a veteran sound mixer who has successfully thrived in an industry full of uncertainty and change. In addition to talking about how COVID has impacted his career (his Sound Devices 970 and Audio Developments AD149 are still under a BBQ tarp on a New York sound stage), he also talked about how going back to summer camp changed his life, about buying his first home just prior to the 2007-08 writers’ strike, and about the time he forgot to coordinate frequencies at Rockefeller Center.

UPBRINGING
Growing up, Griffin always had an ear for music. He vividly remembers listening to classical music on his Walkman and how it blew his mind. As a teenager, he played guitar and drums and then started recording bands. In college, he took an audio course at NYU and learned how to edit dialogue by cutting tape. Becoming a sound mixer was an obvious choice as a career. “It’s the only thing that made sense. It’s a joke because I’m not qualified to do anything else. These skills don’t translate well. I don’t even know how I would list them on a résumé. I guess I could work at a record store but I don’t think they have those anymore!”

BIG BREAK & 30 ROCK
Griffin’s passion for audio combined with his work ethic led to his first big break. He remembers taking a job as a boom operator for three days on a gig. He wasn’t getting paid, but the experience was priceless. “The sound mixer on that job ended up hiring me as a boom operator on this movie called Wet Hot American Summer. We shot at a summer camp for 3-4 weeks and lived in the cabins for the kids. We used the communal bathrooms, and it rained 26 out of 28 days!”

But Griffin worked hard and learned fast, and that opportunity helped him land gigs as a sound mixer and make connections. In fact, a producer from Wet Hot American Summer hired Griffin to work on his first network show for television: 30 Rock on NBC. It was a huge opportunity for him, one that he realized from the get-go. “I remember tech scouting and I was the only department head with hair. Everybody else was about 25 years older than I was.” The show was groundbreaking and would forever change Griffin’s career, cementing his reputation as a sought-out mixer.

ROLLING WITH THE PUNCHES
30 Rock led to many more projects, including the Unbreakable Kimmy Schmidt on Netflix, where Griffin further honed his skills at adapting to unique circumstances. He remembers
when actress Ellie Kemper was very pregnant and worried about wearing a mic pack because it might harm the baby. This was a delicate situation that required a creative solution. Without hesitation, Griffin decided to boom her except when camera angles made it absolutely impossible. And in exchange, she agreed to wear the lav for a couple of shots. “It turned out to be a win-win because the boom sounds better anyway!”

Working on critically acclaimed shows and collaborating with talented writers, directors, and actors has afforded Griffin another rare skill in the industry—being able to listen AND hear at the same time. It’s the job of a mixer to hear the dialogue in a scene and ensure the quality of the sound. But the best mixers also listen to the dialogue and understand what the scene is about. Griffin always makes it a point to read the late-night rewrites—so he can grasp the nuances or note subtle shifts in tone. He remembers approaching 30 Rock producer Robert Carlock after shooting a scene with an actor who had trouble with a line. Something was off, so Griffin suggested that the actor deliver one word in a different way. The joke landed perfectly. And afterward, both Carlock and the actor were very appreciative that Griffin not only heard the words, but listened to the dialogue. “It became a thing. If an actor stumbled over something, the writers would ask me if it played well. I realized I can have a role in the creative process beyond just capturing sound. For me, it makes a difference.”

“ACTORS WERE WIRED AND IT SOUNDED GREAT. AND THEN WHEN WE STARTED TO ROLL, EVERYTHING WENT HAYWIRE.”

—Griffin Richardson CAS on a particularly tough day on set.
ACCOLADES
Griffin’s skills have earned him five Emmy nominations with one win for production sound mixing. He’s also a CAS Award nominee. He remembers the first time he attended an Emmy Awards ceremony and said it was like going to a big wedding, with a hundred circular tables that each seat 10-12 people. He was the only person from 30 Rock to fly from New York to Los Angeles to attend the event and quickly realized he didn’t know anyone there! However, any feelings of awkwardness soon faded away as several of his co-nominees came up to say hello and congratulate him. “They were so incredibly nice, so sweet. They didn’t treat me like competition. The next year I went, it was like hanging out with old friends at one big party.”

STILL HUMBLE
Even though Griffin has received tons of accolades over the years, he remains humble. “I second-guessed myself a lot and suffered from impostor syndrome. I had this thing for a while where I thought people were going to turn around, point at me and say, ‘What are you doing? Get him out of here!’ like in Invasion of the Body Snatchers. Griffin comfortably talks about his mistakes, maybe because it keeps him grounded. With great detail, he remembers that fateful day on 30 Rock when he didn’t coordinate frequencies while shooting exteriors. “The crew set up outside for the rehearsal on our first scene of the day with Tina Fey. The Steadicam walk and talk across the plaza went off seamlessly. Actors were wired and it sounded great. And then when we started to roll, everything went haywire.” Griffin quickly scanned for RF, but it didn’t look good. Due to time constraints, the AD said they had to keep shooting, even if the audio was bad. Later that day, Griffin gave Fey a large diaphragm microphone with a laptop and the dailies so she could record ADR for that scene. “She’s actually great at ADR, but it crushed me. What I should’ve done was ask to talk to their frequency coordinator!”

Getting used to the “New Normal,” i.e., shooting a television show while following COVID protocols, has only made room for more interesting adaptations. Griffin recalls shooting the 30 Rock Reunion Special. They shot for two days with each principal actor, using a quarantine drop kit. In addition to a DSLR camera, MiFi, lights, computer, and iPhones, he included a Shure MV88 and a Sennheiser wire. The sanitized kit was delivered to each actor’s house, and Griffin had to instruct the cast how to mic themselves via Zoom. “We could monitor the camera levels but we couldn’t see the iPhones, so we just had to guess. Phones had to be running Wi-Fi and sometimes Bluetooth at the same time, as well as running a film app, which was eating up a ton of memory. It was unreliable and it took forever. It was incredibly stressful.”

THE NEW NORMAL
Even during tough times, Griffin is grateful for the one constant in his life—his family. He and his wife (a costume designer) live in Brooklyn with their 11-year-old son, and they have extended family not too far from them. His support network allows him to be picky and tackle new opportunities personally and professionally. Speaking of which, he needs to wrap up our interview so he can resume his latest role; stay-at-home dad and part-time teacher to his son—who is finishing up today’s distance learning lesson in seventh grade humanities. Up next professionally, he’ll tackle Fey’s upcoming comedy set in the ’90s about an all-girl pop group (think “Spice Girls”). Things continue to change in the industry, but Griffin takes it all in stride. “I’m very, very lucky.”

“I’M NOT QUALIFIED TO DO ANYTHING ELSE. THESE SKILLS DON’T TRANSLATE WELL.”
–Griffin Richardson CAS
For a number of years, the CAS has looked forward to providing social and educational opportunities to our members through our Summer Screening Series. These events offer a moment out of our busy schedules on warm summer days to go see a movie and come together. As a CAS member, it is one of my favorite times of the year. Without the formality and responsibility of our awards, which is a special event and precious in its own right, the Summer Screening Series offers members an opportunity to meet each other’s families, knit tighter friendships, and share sound knowledge.

When the World Health Organization declared a global pandemic on March 11, 2020, productions around the world were halted and we all faced unprecedented challenges both professionally and personally.

Immediately, your Board of Directors began to ask ourselves how we could continue to serve our membership and encourage community and professional connections in a time when physical isolation was necessary to ensure the safety of everyone.

Through the help of our publicist, Dorothea Sargent, and our organization manager, Carol Thomas, we found a software solution and educated ourselves on how to design and produce sophisticated digital programming aimed at sharing useful technical information, creative techniques, and most importantly, enabling communication amongst attending members. The CAS Summer Event Series 2020 was born. The resulting programming has included deep dives into highlighted technology and expert panels on immediately relevant topics.

Our Co-events Committee produced technical events featuring iZotope and Zaxcom, as well as discussions on remote post audio workflows. Technical advisors were provided by iZotope and Zaxcom to answer member-submitted questions, along with our CAS expert users who offered historical perspective and practical applications. The events were moderated by Board members, Bob Bronow CAS and Peter Devlin CAS, respectively. Following the event, members enjoyed exclusive offers from both iZotope and Zaxcom.

Later, after the Mix Presents “Sound for Film & TV” event (also covered in this edition of the CAS Quarterly), the Co-events Committee extended our “Play It Don’t Spray It” panel: to a second CAS virtual event, moderated by David Barber CAS. This event specifically addressed developing workflow solutions needed under our new “normal.”

A similar event was also produced, moderated by Ceri Thomas CAS, exploring the changing aspects of scoring mixing throughout the years. In this discussion, scoring mixers talked industry changes, workflow changes, and offered anecdotes on many of their famous scores.

Our Events Committee assembled the CAS Award-nominated sound team for Netflix’s feature film El Camino. Marti Humphrey CAS moderated the event and led a detailed discussion that included the reviewing of several select scenes, specifically analyzing how they were sonically constructed and mixed.

While recordings of these panels are now available online under the Events
tab on our webpage, attending these events live allows participants to chat with one another, as well as a chat moderator who forwarded pertinent questions to the panelists. The virtual event platform also provided the ability to explore related links to articles and videos that expanded upon the discussion.

Our industry has changed in many ways, but not with respect to the importance of people. We are an industry built on human connections; the personal relationships that bond us together. This is true not only as it relates to the connections we build that enable professional opportunities, but for what we learn from each other and explore together that ultimately allows us to use sound in masterful ways to connect our stories with audiences.

Possibly the most beautiful aspect of this new virtual offering from the CAS is that, now more than ever, we can encourage networking amongst our members from all over the world. We have seen an incredible amount of unprecedented national and international engagement and have enjoyed very high audience retention.

Our intention is to continue to produce virtual content to enrich your membership, even after the world returns to a more open state of physical interaction.

To view recordings of the CAS Summer Event Series 2020, go to https://cinemaaudiosociety.org/category/events/
I hope you enjoyed reading Part I of this series regarding potential changes to our production mixing workflows in a COVID-19 world (featured in the Summer 2020 issue of CAS Quarterly). The two-topic format continues here and I’d like to examine some additional changes we can make to help keep our teams safe and keep our clients happy in this brave new world. And while I may speak some about COVID-19, I’m definitely not a studied medical specialist. This article comes from the perspective of a sound practitioner who has yet to return to work, as I am waiting for a show to start. Many of my observations are either from reading about and talking to practitioners who have returned to work, along with some innovative brainstorming, which is something we often do in-between jobs.

For this article, I’ll cover two topics: how and why various communications (Coms) and Voice of God (VOG) systems could help the production run smoother; and how to proceed with appropriate equipment disinfecting.

Knowing what we know about the virus and how it spreads, I want to drill down into these topics and assess how we tackle these challenges. Sound mixers are innovative and creative. So, it is exciting to write about the possibilities we come up with.

OFFERING COM, MEGAPHONE, AND VOG OPTIONS

Even during the “before time,” it would be commonplace to offer a first assistant director a “Voice of God” microphone setup so they could address the cast as needed without yelling. For me, this would normally consist of a Shure SM58 with an on/off switch or a push-and-hold button, along with a Lectrosonics plug-on transmitter. Then, the wireless signal is either being received by my mixing workstation or a music playback operator’s workstation and routed out to a powered speaker. Alternatively, the wireless signal could also be transmitted directly to the powered speaker with a portable wireless receiver.

An over-abundance of Lectrosonics plug-on transmitters at the ready (on the right).
An Opinion Piece by Devendra Cleary CAS

is also commonplace is the loaning of a megaphone to the assistant directors. The same touch point/sharing issue could also be a problem. Depending on the scenario, we can make some adjustments that can serve this communications’ need in a more safe manner.

First, the megaphone loan-out issue. I decided recently to ditch an expensive bullhorn that I had in my kit and replace it with several inexpensive options. When we select professional components for our production sound kits, this is hopefully not the mentality. But honestly, expensive bullhorns get abused and neglected and break at the same vulnerable stress points where the batteries are loaded. Excessive L&D becomes a crux and more paperwork and attention gets paid to things that don’t involve the core of our job responsibilities. So, in purchasing a whole fleet of $30 bullhorns, I can issue one to each and every assistant director who needs one and they can keep them for the duration of the shoot. Better yet, provide a link for purchase to the production office so that they can take ownership of them. This use can be launched on Day One of production when the first assistant director is about to call their first safety meeting. Not to be too cynical, but throughout my career I’ve often noticed a “7 AM Safety Meeting” printed on the call sheet—but there is almost never one. However, I have a strong feeling we will be attending them every day from here on out.

Back to the SM58 VOG mic setup mentioned before. This can often be the favored configuration with a first assistant director when shooting in a large space for the day as communication is key and they don’t want to lug around their bullhorn. This is trickier to solve because there may not be the “$30 option” like there is with bullhorns when talking about dependable, robust, wireless microphone systems. Instead, I believe the traditional option could work with added frequency of sanitization of the microphone and plug-on transmitter. We could even rent or purchase several SM58-style microphones so they don’t need to be shared among various members of the AD staff either. Another loudspeaker with a native rechargeable battery pack is a great find as well. Anchor and Samson both make models suitable for this need. Charge it up, place it a safe distance away, and no need to bother the set lighting technicians for power if they aren’t on the clock yet.

Now, onto a potentially newly requested item that wasn’t too common pre-pandemic: intimate director-to-talent communication. Filming in cars, whether done “poor man’s process” or practical, is where I most commonly had this request. But I wouldn’t be surprised if it became an everyday item. This got my head spinning with possibilities.

Similar to the previous article’s description of a FOH rig, I wanted to put something together that consisted of components mostly already part of my kit. Though this one had me reaching more for the infrequently used Pelican cases that normally live on the truck. Now, as much as an SM58-style mic is suitable for a first assistant director as they can be responsible for keeping it

Shure SM58 with switch and Lectrosonics plug-on transmitter ready to hand off to the first AD. Bottom row: Battery-powered VOG speaker. Samson XP 106 and Lectrosonics 411a receiver front (left) and back (right).
HANDS-OFF APPROACH OR OPTIONS AS USUAL?
It would not be my preference to take the hands-off approach, and not (at least try to) think of some useful options and attempt to be a team player. We’re busy, sure, but discussions and some pre-planning can go a long way in allowing us to go above and beyond our call of duty—without making extra work for ourselves on shooting days.

Many things in the COVID-19 pandemic work environment are going to be assessed on a “show-by-show” basis. While some shows will not require anything above and beyond what was done pre-pandemic (communication-wise), some shows may require communication needs that will be fulfilled by an isolated intercom setup provided by personnel outside your direct purview (hopefully, union represented and not subcontracted services). Careful consideration should be paid either way, but it is indeed hard to say what will be needed in this temporarily “Wild West” time we find ourselves in.

Of course, we could prep for a number of communication scenarios to find that they’re used heavily at first and then, eventually, the need fades. Story of our lives, right? Though, I don’t think the effort would be in vain if they got some initial use. There’s no shame in building and preparing and not needing the full display of your efforts. We do it all the time in production sound. “Prepare for the worst and hope for the best,” and know your over-preparedness was meaningful, especially when you look in the rear-view mirror of a production that went smoothly.

CLEAN AND SANITIZED
Speaking of the desire for things to go smoothly, this is uncharted territory and is cause for some nervousness during my pre-production period of “soft prep.” I’m not nervous about cleaning the equipment that exchanges between our department and others, including cast, camera, script, ADs, and producers. We have always sanitized our equipment that goes out and comes back. Honestly, the main difference is we will be doing it more often and more carefully now. What makes me nervous is there are varying degrees of anxiety that come from different parts of the cast and crew. My goal is to make everyone comfortable and let them know that we are doing everything in our power to provide clean sound equipment as part of our package and that anything they are in proximity of is safe, functional, and sanitized thoroughly without any compromise.

TO UVC OR NOT TO UVC?
Not something Hamlet ever had to ponder, but something we now do. First, a general definition. Ultraviolet C (UVC) light can be referred to as “germicidal” radiation because it can kill bacteria and inactivate viruses. However, it can be a health hazard to eyes and skin if exposed directly. Another type that’s similar in killing germs and deemed safe for human tissue is “far-UVC.” So, with this, should UVC (or far-UVC) be used for our gear? This tricky question seems to have a different answer from everyone I ask. Some are fully on board with providing the most professional level, high-grade UVC devices; clipped to their belt while having every incentive to keep it handy and not lose it, I’m afraid I can’t always say the same for every director. This is not a dig on directors. I just feel like they understandably have their focus directed elsewhere, and it may be more common for them to misplace an issued, loose, handheld microphone.

The solution I’m working out involves a lectern-style “gooseneck” microphone plugged into a push-to-talk base or pass-through device that’s elegantly rigged to their personal video village within arm’s reach. This microphone would be plugged into an XLR-style plug-on transmitter that would link directly to a wireless receiver rigged to a tiny, battery-powered speaker that’s placed on set near the talent. This setup would alleviate the need for the signal to run through my rig. However, you’d need to make sure the wireless system does not create any hash on the receiver output when the batteries die in either the transmitter or receiver. I’m often asked why I never sell any of my plug-on transmitters and seem to have an overabundance of them in my kit, even if some are of an older variety. Well, they’ve proven to be handy little problem solvers again and again. subcontracts are a viable option to consider if you have a need for a larger number of microphones. The solution I’m working out involves a lectern-style “gooseneck” microphone plugged into a push-to-talk base or pass-through device that’s elegantly rigged to their personal video village within arm’s reach. This microphone would be plugged into an XLR-style plug-on transmitter that would link directly to a wireless receiver rigged to a tiny, battery-powered speaker that’s placed on set near the talent. This setup would alleviate the need for the signal to run through my rig. However, you’d need to make sure the wireless system does not create any hash on the receiver output when the batteries die in either the transmitter or receiver. I’m often asked why I never sell any of my plug-on transmitters and seem to have an overabundance of them in my kit, even if some are of an older variety. Well, they’ve proven to be handy little problem solvers again and again.
either custom made or routinely used in the medical field and nothing less. Others find a UVC device on Amazon with questionable efficacy. Others are opting to skip any use of UVC or being told NOT to use them. Some productions’ health & safety teams and studios are requesting efficacy paperwork if you do wish to use a UVC devices. I don’t know where I land on this yet but feel it will take standards and further establishing precedents to land on a path forward with regard to the use of UVC sanitation devices.

But what if you do decide to use one. Are the various models we find on the internet that are powered only by a 5V USB source sufficient to offer confidence to our clients that the equipment is being sanitized? Or is it just smoke and mirrors offered to create a false sense of calm? Or better yet, does the use of UVC even matter anymore as we are potentially not as concerned with surface touch points, as this virus seems to spread more efficiently through person-to-person air droplets while unmasked in close proximity in low airflow interiors?

My personal take is that baking every device with UVC may not be advantageous. The wireless transmitter packs which we affix to the actors are not so much a concern as a viral spread media. If the actors understand that, it’s reasonable to keep confidence that we’re keeping the equipment sanitized with 70 percent isopropyl alcohol, so it’s nice and clean regardless of a pandemic happening. I do think it’s important to assign the lav mic itself to a specific actor and keep that assignment as such. This may not always be possible in everyone’s inventory. Even more difficult to guarantee is the exclusive transmitter pack assignment. This is difficult because, on some shows, large cast counts require you to reuse transmitters for different actors who are not all in the same scenes together. Or, what if you have some transmitter assignments that work well on stage insulated from the crowded RF/DTV environment, but a shuffle is needed when working outdoors to UHF band havens with much less DTV or public safety frequencies to coordinate around? A lot of nuanced RF technical considerations there, but the gist of it is there may be several reasons why you could not guarantee an exclusive transmitter assignment structure, even if it’s a reasonable request from production.

So, on to what really should be looked after when thinking about sanitation and touch points: The IFB packs and headsets we distribute. These are another set of items that even pre-pandemic required special attention from us. The headphones themselves should all be individually assigned to a person and kept for a shoot. The IFB pack itself is dealer’s choice on long-term distribution. They are pricey and easy to misplace. If they are returned like normal as we did in the “before time,” they should be sanitized by your preferred method upon return. Even with the knowledge that the virus may not be as transmissible with an object, stacking the deck with frequent cleaning is still important.

Personally, I’m not sure where I stand with UVC baking versus slathering our devices with 70 percent isopropyl alcohol. On one hand, what the use of a UVC device could offer is both a display of diligence to your clients and colleagues, plus a way to prevent the over-soaking of our electronic equipment with chemicals. Perhaps moderation or a balance of one or the other or both could suffice? Perhaps we will know more in the coming months as we continue to assess, develop, and expand safety protocols. Either way, I think if we take any initiative, we are ahead of the game.

CONCLUSION
Working amidst a global viral pandemic is not something any of us have ever faced. Just looking at photos from the 1920’s, including ones where Hollywood productions were filming, does not do justice for what we’re experiencing today. However, we’re able to write our history on how we handle the situation in front of us. There are so many moving parts and there are so many different world views on how to properly handle the situation we are faced with. As we all return to work, I hope we make the wisest decisions based on available scientific information so that history remembers us kindly. If we can find a balance, take things slow, appreciate what we have, and be kind to one another—and ourselves—we can get through anything. We are problem solvers.
For this edition of CAS Quarterly, I was asked to write something that would address how the COVID-19 epidemic has changed workflows for those attempting to record and mix the scores that so uplift the projects they are married to. A difficult and sometimes high-stress endeavor during normal times can prove to be an impossible one now. Luckily, I’d spent the first decade-plus of my time in Los Angeles working on these very projects, so I knew where the bodies were buried and whom to reach out to. Doubling my luck, I had watched a recent CAS Summer Event Series webinar called “Scoring Through the Web” which featured scoring mixers, including Dennis Sands CAS and Tommy Vicari CAS and composer Simon Franglen. You can watch that very wide-ranging interview here: https://cinemaaudiosociety.org/cas-summer-event-series-2020-scoring-through-the-web/

So, for the purposes of time and, well, laziness, I decided I would poach some quotes from this resource. But first, where did this idea come from? Well, it leapt forth from the mind of music mixer Michael Stern CAS. He tells me he came up with it while working on what he believes to be the largest international cellphone compilation video ever made. And, it was big and complicated to be sure. There were 172 musicians and 20 featured singers from 11 nations! They were all participating to raise money for the United Nations’ World Health Organization’s COVID-19 relief fund. You can see this menagerie of talent performing songwriting legend Diane Warren’s “I’m Standing With You” here: https://imstandingwithyou.com

Michael shared his thoughts on this: “I’ve seen dozens of these ‘Zoom’ style videos now, and I thought that this new emergent art form should be recognized as a significant work of art in its own category. I’ve approached the CAS about [how this art is] growing and maturing in front of our eyes, courtesy of the pandemic. I myself learned, from the sheer size and scope of the [endeavor], the unique technological demands of combining over 170 un-synchronized musical performance videos [that are] not professionally recorded, with barking dogs, raging thunderstorms, mismatched ambiences … the list goes on and on. The challenge to make all of this sound like it was one performance, all in the same room, was formidable!”

This led me back to the webinar where CAS moderator and Dolby Atmos Music guru Ceri Thomas CAS engaged with the other panelists.

**Ceri Thomas: How much were you guys actually doing [remote session] in a pre-lockdown, pre-pandemic world?**

**Tommy Vicari:** I was doing it when we got locked down! I was mixing a Euro Disney show orchestra. I was only two cues in when they said, “OK, we’re locking down.” And so, I thought I [can’t] stop without knowing how long this is going to last! So,
there were only two of us in the studio, they were in Prague, the composer was, and they were already signing off on mixes I had sent them and making comments on the work. So, I decided to, you know, finish, and they were very happy with that situation. But, yeah, we’ve been doing that for a long time! That hasn’t changed in this period of time.

**Dennis Sands:** Yeah, the remote thing has been going on for some time. [In 2013-14], I worked on a TV miniseries called *Cosmos: A Spacetime Odyssey*. The interesting thing is the composer, Alan Silvestri, lives in Carmel and the orchestrator, Mark Graham, recorded it in England. They sent the files to me and I mixed it in my studio in Santa Barbara, and I sent the mixes to the music editor in Los Angeles where they dubbed it. And, none of us ever saw one another. Never. And, I thought, “You know, wow, this is actually kind of cool.”

Actually, for the last *Avengers* movie, we’d gone to England to record about the first 25 percent of the score. There was so much score, like two and half hours of score in that movie—which must have been about two hours and thirty-three minutes long! Anyway, after that [and because of the schedule], the rest of it was done remotely. So, we’d go to Disney, sit on their dub stage, and would … Source Connect. We literally heard this lovely 5.1 mix live. And you have some visual communication and audio communication, of course, with the stage back-and-forth all live and it was great! And, same deal, I got the files and mixed it in my studio.

Most recently, I did a score after the lockdown, and you know that’s a whole other conversation about how setups have changed with the distancing of musicians, and how to set rooms … and, we’re kind of committed now to striping because it’s the only way that you can do all of this.

**CT:** What’s striping? Could you describe that? It’s nothing to do with tape, right?

**DS:** Ha, no, it’s recording [the orchestra by] section separately. So, you know, strings, and maybe harp in one [music] pass, woodwinds separately, and brass, percussion, and so on. It’s essentially a collection of recorded channels, with each section separate.

[But back to *Avengers*], we did it with a system called Clear View. It allows you to see or to hear a really beautiful sounding stereo mix in sync with picture via a regular browser. It’s really efficient and it just worked beautifully. And, we had a Zoom meeting going and you communicate back-and-forth. It’s really cool, and it really worked well! So, you know, that’s kind of the world we’re in now. The nice thing is that the technology, as it evolves, makes this [distancing] requirement easier and easier.

**CT:** So, Simon, you’ve actually been doing some work during lockdown with an orchestra remotely. How’s that been going?

**Simon Franglen:** Well, I’ve got three scores that I’m currently [composing], all with different processes. I just finished one in Vienna, which was available. Vienna is now up to 75 players [per session] because Austria did lockdown properly [insert eye wink]. And, there they had the string players with a one meter fifty gap between them, about five feet, and everybody had individual stands instead of sharing. So, you get these longer lines of violins, violin 2’s, violas, and they are also separated farther out [from the conductor and the main microphones]. I had 50 strings for this thing and some
woodwinds. It was a big enough band that I could tell how things are stretched out. And what I was hearing back, I tended to hear more of front chairs (the more senior players) on the Decca Tree (those main room mics) because everybody is a little further out. So, the spot mics (mics close to the individual players) became more of a thing than you would normally expect. [With] the room mics (usually a widely spread LR pair), you started to feel like you needed to use those more than you would [pre-COVID].

My next project will be in London to score at AIR Studios in a few weeks. What I would normally do in a day and half is now going to take three or four days. So, we’re going to do 40 strings in the morning plus harp, and then the same thing in the afternoon, double track them. Because, it isn’t a big enough sound with just 40 strings. You want that sound you get with a proper score, but double tracking never sounds like 80 stings, it only enhances it a bit. So, I have to do the 25 minutes of [recording] music in the morning, and do it again in the afternoon.

Then, the next morning, you can do 20 brass players. I have a 19-piece brass section plus triple winds, 12 woodwinds. What we have to do is record the 19 brass in the morning, but then you have to have a two-hour gap between brass players and woodwind players to allow the air to get out of there [the air needs time to properly exchange]. So, there is a two-hour gap between anything and any woodwind section.

The following day, I’ll be doing percussion in the morning. There will be three or four percussionists and then there doesn’t need to be a gap—because their blood-alcohol level is such that they are already disinfected, so we’re fine! [Everyone laughs.] Then a choir comes in the afternoon, because if I did the choir in the morning, I would need to add a two-hour gap. This way it’s only four people, so no additional time is necessary. So, that’s how I’m getting through it.

**DS:** Simon touches on something that is another aspect of all this, and that’s the timeframe it takes to record a score now [that we need] to separate everything. I mentioned this recent score that was originally budgeted prior to this lockdown scenario for four days of scoring and it ended up being nine! And, that’s going to be pretty typical of what’s happening.

By the way, that’s true across the board for making this … product. That’s going to be the challenge. I have read estimates of 30 percent of cost additional to what would be the normal budget. And, honestly, I think that that is a tad conservative. So, if you imagine these huge projects, these big expensive movies and add 30 percent to a $300 million to $400 million project, that’s actually some real money! But, I think it makes it even more challenging, honestly, for the low budget movie, the smaller, the independent movie which, regrettably, may even disappear. [This] is challenging to all of us. Because, back in the day, the bread and butter of our entire industry really was the mid-level project, the romantic comedy. Those movies don’t really get made very much anymore. We could have a whole other conversation on budgets and the financial impact on everybody. That’s going to be an even bigger issue now as production costs increase substantially.
Some weeks after having viewed the webinar video, I was working on a project with scoring engineer Scott Smith. Scott is well known for his work on The Revenant, The Handmaid’s Tale, and David Fincher’s upcoming Netflix release Mank, featuring a Trent Reznor/Atticus Ross score. Needless to say, he is in good company. During our working lunch, I asked him what he had been up to during the lockdown. What he told me had my jaw on the floor.

How are things going scoring-wise?
The pandemic turned the scoring community on its head very fast. Our business is dependent on groups of people sitting side by side in windowless spaces for long periods of time. On top of that, wind and brass instruments require the player to blow air into their instrument and subsequently into the room. It’s got to be one of the least pandemic-friendly processes we have in entertainment.

But, necessity being the mother of invention, you found a way to deliver!

How did you change to meet the challenges?
The biggest change has been the switch to remote recording. Almost overnight, we worked to get musicians set up to record themselves in their homes! It’s a massive undertaking on the technical side. Suddenly, world-class orchestral musicians have been thrust into the position of being their own recording engineers!

We send out Pro Tools and Logic files, as well as raw audio and MIDI to give them the best chance of being able to record themselves somewhat easily. It’s not an easy thing we’re asking them to do; most of these players have only focused on perfecting their instrument for decades and now they have to tackle the technical end of things. Once they’ve recorded the score, they deliver their tracks to us. It then becomes a full-steam-ahead editing job to make it sound like a cohesive orchestral performance.

Once the editing is complete, it’s time to mix. This process has changed, too. If I record an orchestra at The Eastwood Stage on the WB lot, I don’t have to worry about the group sounding like they’re in one cohesive great sounding room, because they are. However, 70 different musicians in 70 different living rooms with 70 different microphones are a very different story. In short, reverb and room emulation are very much your friend.

I recently completed a project with the great Alan Meyerson CAS who processed the orchestra using a very interesting orchestral hall emulating software. He sent me his first mix and I was blown away. There was no audible trace of DIY home recording in those mixes; all I heard was a gorgeous sounding orchestra. It goes to show that in the hands of someone exceptionally capable like Alan, we can achieve something special even in the midst of all this.

And, we’ve been able to slowly restart here with in-person sessions using smaller groups of players and incorporating long breaks and cleanings—but we’re far from where we were pre-COVID. Europe, on the other hand, is way ahead of us. Orchestra sessions are underway in London and things are sounding great. I hope we can follow suit soon.

Wow, what an incredible heavy lift to get things in the bag! Bravo! What are you up to now?
Mixing, mixing, and more mixing! I’m fortunate to have had work through all of this craziness. Music mixing is a pretty solitary gig anyway, so not too much has changed on that end. I’m extremely lucky to work with a brilliant engineer named Jeff Gartenbaum who has quickly become an ace at making these remote recordings go smoothly and sound great. The amount of work this all takes is pretty daunting, but I know we’re all happy to be employed.

Hear! Hear! Any thoughts of what the near future might bring?
If only I knew! Realistically, I think remote recording is going to be around for a while. With so much uncertainty, it’s the only way we can absolutely ensure everyone’s safety during this pandemic. I do hope we see a quick return to “normalcy” on scoring stages soon, but that, of course, will [depend on] the virus and its continued impact in our country. If I had to make a completely unscientific guess, I think we’ll be bouncing back-and-forth between these two approaches for the next couple of years. Hopefully, I’m wrong and we can all be back together creating music soon.

From your lips to God’s ears!

I can’t wait to be on a stage with people in an easygoing way again. I think a lot of us do what we do because of the environment in which it is done. And, currently, it’s more than a bit lacking without the folks that should inhabit those spaces. Here’s to swift return!
The annual MIX PRESENTS SOUND FOR FILM & TV event usually held in person at Sony Pictures Studios in Culver City, CA, shifted to a virtual format this year due to the COVID-19 pandemic. As many of us have experienced over the past couple of months, with proper planning and solid execution, virtual events can hit the mark and provide excellent insight and interactivity. The Mix event, with the Cinema Audio Society, Motion Picture Sound Editors, and Entertainment Industry Professionals Mentoring Alliance as event partners, was no exception.

Taking place September 25th & 26th, events were virtually assigned to Sony’s Cary Grant Theatre and William Holden Theatre as in years past—an approach that added familiarity. For the more than 530 attendees, the agenda was packed with topics ranging from production to post to composition to technology, with a strong showing of discussions revolving around remote and socially distanced work.

The CAS was well-represented with many of our members participating as moderators, panelists, or showing off their gear (virtually) at the annual CAS Parade of Carts. The CAS sponsored panel “Play It Don’t Spray It” had nearly 150 attendees while Day One of the CAS Parade of Carts had nearly 200 attendees with Day Two having nearly 100. As has been the case in the past, CAS members in attendance were also provided a membership discount.
To add interactivity, the vFairs virtual events platform allowed for live visual chat with vendor booths, the ability to request call backs and set up meetings with sponsors, and Q&A for panels. Also, for those who wished to attend events taking place simultaneously, attendees were able to view panels and discussions for 30 days through the online platform.

If you were unable to attend, David Bondelevitch CAS MPSE, Sam Casas, Stephen Fitzmaurice CAS, G. John Garrett CAS, and Peter Kelsey CAS have taken time to report back on some of the events. Additionally, the videos from the CAS Parade of Carts have been made available on the CAS website at: https://cinemaudiosociety.org/mix-presents-sound-for-film-tv-2020/

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Tom Kenny of *Mix* magazine and Tom McCarthy of Sony Studios gave the opening remarks while sitting masked six feet apart on the Cary Grant Stage at Sony. They talked about how 2020 has been a strange year and how the pandemic has impacted everyone globally. Tom McCarthy said his main concern is the health and safety of his employees and filmmakers. Both production and post-production are coming back slowly, and Sony has put in place a system whereby editors and even mixers can work remotely. Everyone on the lot has to follow strict safety protocols, which is obviously a prerequisite for every facility that wants to start up work again.

Sony is unique in that it has a research & development department based in Tokyo, and Tom McCarthy said they have been working with them to develop a new technology called 360 VME—Virtual Mixing Environment. This is, of course, the perfect time for an innovation like this, as it is safer if mixers and editors and filmmakers can work from home.

Tom McCarthy said the value of this *Mix* event is the collaboration of sound artists globally with each other, interacting with technological vendors, and networking with others so that we can all explore innovations. He praised Tom Kenny for starting this event six years ago. Tom Kenny said that after talking to people in music and post, it is obvious that we are all just trying to figure this out and that there has been a lot of creative input around the world. He emphasized that this is a [sound] community affair.
This was advertised as a keynote speech, but it was in effect, an interview by Larry Blake exploring Walter Murch’s history and contributions to picture editing and to sound. Murch is credited with inventing the term “Sound Designer” and is the only person to have Academy Awards in Sound and Picture Editing for the same movie, The English Patient.

Larry opened by asking Walter about his early days at Zoetrope Studios with Francis Ford Coppola in 1969, working on the movie The Rain People. All editing at that time was done on a Moviola with a Steenbeck that was used, according to Walter, as a mini screening room. The editor handed Murch the movie saying, “Here it is,” and Walter was on his own.

He was in Los Angeles and not in any union and was afraid of getting sound effects from Warner Bros., so he went out and recorded all his own effects, including Foley on a Nagra machine. He was working in a house that belonged to George Lucas and set up an editing suite in an empty room there. He had an Omega transfer machine so he could do his own transfers from the Nagra.

The movie was mixed in San Francisco on a Kem mixing setup that had the capability of being able to punch in. Prior to that, every mix would have to start from the beginning again if you made a mistake. The Kem also had high-speed rewind, which had to be synced up again after rewinding. He would premix six tracks down to one on a 3-track and then do that twice more to have 18 tracks premixed. The Kem was 20 input, four output. The Godfather: Part II, THX 1138, and American Graffiti were also mixed on that Kem board.

WALTER MURCH
Sound Designer, Film Editor

Then Larry asked, if at that time Walter had had Pro Tools with 500 tracks, would he have done anything differently? Walter started his reply by stating that one of the founding principles of Zoetrope was that the person who cut the sound effects would also mix them. If one person cut and another mixed, the editor would “cover his ass” by adding track after track. One person cutting and mixing enabled the track count to be kept down. And all the mixing for the films mentioned above, along with The Conversation, were done by one person, Walter.

The motto was, “Be bold, have an approach, stick to it, do it, and that’s the mix.” Because of that, he doesn’t listen to those movies now and think “I wish I’d had...” He states, “If you go in with a concept behind what you are doing, it’s as straightforward as it can be.”

Larry asked, “With Apocalypse Now, how did you take that big leap from just a few inputs to many?” Walker replied, “It was terrifying because instead of 16 tracks, we had 256 tracks to premix.” He regrouped them all onto two 24-track machines synced up by Minimag. He had an automated board and was mixing to 5.1, which was breaking new ground at that time. He said he was “in a pretty terrified happy state all the time” because he had to invent ways of doing things as he went along. He did a lot of premixing. Apparently, one of the peculiar oddities of Apocalypse was that they were using dbx sound processing, which has 20 dB or 30 dB of clamping for everything except the final mix—which was done using Dolby A, which has 6 dB to 9 dB of clamping. Conversely,

WALTER MURCH
Sound Designer, Film Editor

Larry Blake
Supervising Sound Editor & Re-recording Mixer
with his latest movie, Coup 53, Walter edited the film and premixed the music in Adobe Premiere, working totally in the box.

Asked about the new things coming in like rewind and punch-in, Walter remembered that, before that, there would always be a Ping Pong table on the stage so that the mixers had something to do when someone said, “Back to heads.”

Of course, he made mistakes with some premixes, but would bring in the sound effect on a separate track and mute the one in the premix. On THX 1138, George Lucas was not happy with the sound of the “White Limbo” dialogue, as it was recorded on a sound stage and had too much reverb. He had a primitive gate that would supposedly reduce the reverb, but of course, it didn’t work. It obeyed Murch’s Second Law of Technology which is: “Works best when you need it least. It doesn’t solve the problem, it just makes it worse, smudges the paper in a sense.”

Recently, Walter was working on a project for William Kentridge about the creative process at his studio in South Africa, and he had too much reverb. He was editing in Premiere and found he had a ‘dereverber’ that worked incredibly well, thus breaking Murch’s Second Law. So, finally, after 51 years, what Walter had hoped for has finally come to pass.

All picture editing systems now are really picture editing and mixing systems. Ultimately, there will be one system for it all. Larry asked, “5.1 was new with Apocalypse Now. How do you feel about all the tracks and speakers you can now have with Dolby Atmos?” Walter responded, “The more tracks you have behind the viewer, the more it challenges the viewing experience.” Walter then pointed out that if we end up in VR, which has no cuts, then there is no problem. If you have a heavily articulated back channel, it gets weird with an ordinarily edited scene. He cited the bedroom scene in Roma where you are constantly hearing the person behind you who is not on the screen.

Personally, it gives Walter the shivers. He says there are some profound philosophical questions about this. There is the primacy of vision which is forward, and the ancillary sense of sound which is 360 degrees spherical. The theater plays some funny mind games on you when you try to bend that reality.

In the movie Cold Mountain, there is a party scene where someone is playing the violin and moving around and other people are moving all over. All the dialogue is coming from the center, but the funny thing is you believe it is coming from where that person is situated on the screen. There is something weird going on in our brains that makes us assign location to dialogue based on visual cues. But with music it doesn’t, so the violin was panned based on where the musician was in the shot. In something like Birdman where you have a continuous shot, then you can play with spherical sound.

The trauma of the arrival of sound. Silent movies were just moving into a novelistic style where unintentional meaning was creeping into the structure of the film in a good way. In the beginning, film was very presentational just like the theater. That matured and was getting into a really interesting place by the late 1920’s. And then sound came along and made it presentational again.

Sound is the vehicle par excellence of how you get unintentional harmonic meaning into a film. It can be a kind of Greek chorus. Sound exploits this and bypasses the gatekeepers of consciousness, and audiences are affected by that without really knowing that they are being affected. They will ascribe their feelings to something visual. A third of the brain is assigned to visual processing and a 30th to sound, which means sound has no chance to compete. Picture is preeminent. But sound has this incredibly powerful ability to modulate what is being presented frontally by the camera. The more we can find ways to exploit that the better.

When you are watching in a theater or over a home system, you are being hypnotized and jumping into the screen like Alice, Through the Looking Glass. You are in that world. Another way to look at it is that the movie is in your head and it is like a dream. Dreams and films suck us in so deeply that it’s hard to pull out. So, we have to be very responsible about what we are doing. “With great power comes great responsibility.”

What an incredibly creative, thoughtful, and courageous individual Walter Murch is. A very insightful and instructive interview this was.

“BE BOLD, HAVE AN APPROACH, STICK TO IT, DO IT, AND THAT’S THE MIX. IF YOU GO IN WITH A CONCEPT BEHIND WHAT YOU ARE DOING, IT’S AS STRAIGHTFORWARD AS IT CAN BE.”

–WALTER MURCH
Can’t Stop, Won’t Stop: POST SOUND EDITORIAL DURING THE SHUTDOWN Presented by the MPSE

MODERATOR
Frank Morrone CAS MPSE

PANELISTS:
Michael Babcock CAS
Sean Massey MPSE
Gary Megregian MPSE
Mandell Winter MPSE

This panel was moderated by Frank Morrone CAS MPSE, Past President of the MPSE, current Secretary of the CAS, Emmy winner (for Lost) and seven-time nominee, four-time CAS Award nominee with three wins, and five-time nominee for the MPSE Golden Reel. The four panelists were all supervisors. Michael Babcock CAS, who has 15 Golden Reel nominations with four wins, three Emmy nominations, and has worked on The Dark Knight, Inception, and Trial of the Chicago 7. Sean Massey MPSE, who was nominated for two Golden Reel Awards for Deadpool 2 and The Stand. Gary Megregian MPSE, a two-time Emmy winner with a total of 10 nominations, and nine nominations for the Golden Reel Award with one win. Credits include American Horror Story and The Politician. And Mandell Winter MPSE, nominated for two Emmys and seven Golden Reels, with credits including Southpaw, The Magnificent Seven, and True Detective.

Frank asked about the transition from editing on the lot to editing at home. Michael found out that he had to move home on a Friday afternoon. He grabbed a hard drive and named it “Lifeboat” to take home. His library is already on a server, so he was able to do most of the editing for his two shows on his laptop. Sean finished the show he was working on and had two weeks to pull together a home system. Gary had just wrapped Hollywood for Netflix and was getting ready for The Politician. They had a couple of weeks to decide whether or not to move, as well as which departments would move home. Editorial had a week to get gear together. They were lucky that four episodes were already cut and ready to mix. Mandell works at Sony, but with a show that had picture editors at Paramount. He had to pull speakers out of storage to set up a usable home system. Like a good supervisor, Mandell cares about his editors and supervised the transition home for all of them. “The most important part was that they were compensated for the change.”

Frank then asked about technical issues. Michael described painfully slow internet uploads, made worse by the fact that he had no assistant and had to schedule his day around uploads and downloads. Michael normally likes to edit (and mix) using a server, but file transfers had to go through the internet. “Using the internet is like taking a step back 15 years. You feel like you are editing underwater. It’s very stressful; just as stressful as dealing with COVID.”

Gary quickly upgraded his service from 300 Mbps to 1,000 Mbps for uploads. The mixers were frustrated with their upload speeds, as little as 15 Mbps-20 Mbps. Mandell switched to a business account with 500 Mbps-600 Mbps download, 35 upload.

Sean’s daughter is online learning in the next room and gets 300 Mbps download. Shows are turning over through the internet. “You have to allocate time for (downloads & uploads); you have to be your own assistant. It was a step backward.”

Recap by David Bondelevitch CAS MPSE
For ADR, Michael had to record in April using iPhone mics. He searched online for Shure mics, but the best mics were out of stock at many retailers. He eventually built a rig using a laptop, ClearView, a Focusrite preamp, a Zoom recorder, and people listening on Evercast. “Seventy percent of the time it worked well. But the other thirty percent dealt with bad room acoustics.”

Sean also started in April using iPhones to record wild, with no file names, etc. Eventually, Sean ran picture in Los Angeles while Matt Wood recorded on Pro Tools in San Francisco. He used Source-Connect with the Loop Group, using Focusrite Scarlett preamps through Source-Connect. The group gave him 12 actors on separate tracks. Parabolic NY sent rigs to 35 actors all around the world. “Two weeks ago, it was Anchorage. This morning, London.” He appreciated the choice of mics supplied by Parabolic.

Like most others, Mandell began with iPhone recordings, using Evercast with actors recording on iPhones wild.

Eventually, he used Source-Connect for locations as far away as India. He used the Deluxe One Dub system that was introduced in May. “Group is the hardest to do. I had one actor who spoke into the wrong end of the microphone.”

Gary pointed out that the studio would not allow video of program material to be sent over Zoom. Actors recording their own ADR were asked to use a naming convention with actors’ initials. “The whole process takes a lot longer now.” Sean agreed, saying that it takes at least two to three times as long just to prep the group tracks.

For playback on The Mandalorian, they used fiber and Source-Connect to send HD picture and 7.1.4 streaming audio from the Bay area to Jon Favreau in Los Angeles, where he would listen in his studio and give notes. An amazing system, but it requires fiber to get all that data in real time.

Recap by Sam Casas

During “The Sound of Greyhound” panel, Mix magazine’s editor Tom Kenny sat down with three-time Oscar-winning re-recording mixer and co-supervising sound editor Michael Minkler CAS to discuss various aspects of the film’s soundtrack. Kenny and Minkler agree that sound designing for a war film is much like being in a sound designer’s playground. Capturing these intense images is no small feat. Noisy on-set situations and computer-generated images often make the use of production audio for action scenes simply not an option. Everything from atmospheres to weaponry must be created to build excitement. “It’s almost like doing an animated movie,” explains Minkler.

Communication on the ship (where much action takes place) plays a large role in telling the story, and authenticity was a prime directive from the filmmakers. Dialogue over various devices such as loudspeakers, headphones, and even a man called “the talker” who shadows the captain and relays orders had to feel true to the scene. With such a large crew, production mixer David Wyman CAS chose to wire every actor who could possibly speak, resulting in up to 25 tracks of dialogue. This enabled the actors to respond and react in real time from different locations on the ship, helping the performances feel real.

Another amazing anecdote was Minkler’s unique opportunity to ride on a 440-foot clipper ship going 22 knots under pure sail—no engines! He was able to lay on the bowsprit netting with microphones for an hour while recording “bow wash, and the pounding, and the strain.” This was many years ago, but “a lot of that was used.”

When it comes to dynamic elements, Minkler stated, “I don’t like loud ... I have a limit ... I like big and fat ... I’m way more conservative than most mixers. I set my threshold 4 dB or 5 dB down from peak.” When describing his other mixing tricks and techniques, Minkler explained how he likes to keep everything moving. “Every sound effect, every piece of music, and every bit of dialogue, they’re just moving, moving, moving. Moving in level, moving in frequency, moving in position on the screen. Everything is moving, but you don’t notice it.”

Minkler naturally shared credit with his friend and co-supervising sound editor Warren Shaw. After working on seven films together, the choice to collaborate on this project was an easy decision to make right from the beginning.

MICHAEL MINKLER CAS
Re-recording Mixer
The “Comms for Socially Distanced and Zoned Media Production” discussion was sponsored by Clear-Com and moderated by Tom Kenny of Mix magazine. The panelists were Peter Schneider CAS, mixer and founder of Gotham Sound; mixer Brent Marchenski, Toronto, who was with one of the first productions back to work with MasterChef Canada; Gerry Formicola, President, Second City Sound in Chicago; and Richard Lightstone CAS, mixer, journalist, IATSE Board member, and former CAS President.

Tom Kenny began by laying out the situation. “The set is undergoing a huge transformation. Production is back and ramping up slowly across the country. (There are) new ways of working, some of them forced by compliance, some of them not.”

After introducing the panel, he went right to the contributors. Peter Schneider said that “When the pandemic first hit, there was a huge push by news organizations to keep the flow of information going and so we were able to help them. Now that production is starting, it cannot start in the same way. Comms on set used to consist of walkies and ad hoc huddles. Because of COVID work restrictions, that can’t happen now. So, that’s where we’ve been able to supply full duplex comms systems to productions.”

The panel all found that the idea of “zones” is being implemented to separate departments. The rollout looks to have a central zone surrounding the actors which is the most protected, with movement between zones being restricted. The challenge is to create a system where natural conversation can occur inside and between zones, and walkies don’t cut it. One solution is the Clear-Com FreeSpeak system of full duplex wireless intercom products.

Tom then asked Brent Marchenski about how a zoned production looks in action. He told us that, initially, it was difficult because we’re social people and want to be near each other. Before production began, they sat down with their Health and Safety Officers and mapped...
out the whole production area to define the zones. Within
the zones they defined “pods.” For example, the grip
department would be [divided into] pods, and they could
travel within certain zones.

At this point, the need for a next-level communications
system became obvious. On their multi-camera broadcast
production, they use FreeSpeak belt packs in a matrix full
duplex system. But adding zones to the equation
challenged them to make their existing system grow.

Next, Gerry Formicola talked about his experience where,
historically in broadcast, they had a big comms
infrastructure in the truck or studio. Additionally, some of
their large multi-camera episodic clients would bring the
comms. Radios are very common, everyone has one, but
“we don’t typically communicate in a simplex fashion.
We’re used to talking to somebody and having them
immediately talk back. That’s how we operate as human
beings.” Intercom operates that way, but it’s not
something that everyone on these kinds of productions is
used to. So, they spent time educating clients, explaining
that small groups could have their own private channel.
“Showing people how that works, and bringing that along,
has been an important part of teaching those clients how
they can function beyond the standard walkie-talkie
frame.”

Peter Schneider added that the push for communications
is coming from the camera department. “One DP I talked
to was told they don’t want him within six feet of anybody,
so that’s a huge change for them. You get AD’s wanting to
make announcements to the entire set, so that becomes
a Voice of God (VOG) system. And from there, you want
the director to be able to talk through a little speaker to
the actor so they can have a quick conversation without
having to meet face-to-face. Sometimes an earwig ... and
a wireless intercom system facilitates all this style of
communication.” He went on to say another interesting
aspect of developing these systems is that they are
putting them on carts and running with backups. In an

ideal world, you could roll it off the truck, power it, and be
running in a few minutes.

Richard Lightstone said that in his broad experience over
the years, he’s had experience using Clear-Com systems
but feels in the current environment, it’s going to come
down to cost. “It’s really a brave new world out there
where the guidelines are a starting point and it depends
on the ability of the producers to maintain control, and/or
the COVID supervisors. And all of that creates an
environment of a lot of questions on how each set is
going to be run.” He went on to explain that from his
experience and conversations with other mixers, each
show develops its own set of protocols, ranging from very
strict, where most of the crew leaves the stage or set, to
others where it’s more relaxed where people are wearing
masks or face shields, and nobody’s really enforcing
those. It depends on the show.

Tom noted that we live in an age where technology can
help fill some holes brought on by safety concerns. He
went on to say that the need for communication is greater
than ever in a time when we’re farther apart. From here,
the conversation turned toward operational setups.

Gerry explained that in his current production, the COVID
compliance people have separated them into a “location”
unit and a “stage” unit, they have consistent testing three
times a week and so on. One of the challenges is how to
make it possible for the people in different units to be
able to communicate directly with each other. He stated
that tools like the Clear-Com Agent IC app are great for
that. The app runs on a phone or tablet, and people who
don’t necessarily have to be on set can talk directly to
those who are.

Brent described the two systems they run; with three
productions going back-to-back. They are using Clear-Com
Medium and Delta, both of which are scalable. On
MasterChef, their biggest show, they had two carts running
38 FreeSpeak belt packs, 30 panels, and six walkie-talkies
interfaced into the system, and 40 walkies working off the
system. They don’t have anyone off set, so they are not
using Agent IC.

Tom asked Richard his views regarding on-set versus off-
set viewing. He noted that post has been remote viewing
for decades with T1 and video lines for producers to view
and listen to mixes and make comments. And mixers have
been social distancing farther and farther from set for
years. But the real issue is how would a boom operator,
third, and possibly fourth person be incorporated to
manage all the requirements on set.

Gerry mentioned that the app-based intercom is here and
being used actively. He was recently on a production
where he was in New York, part of the production was in
Los Angeles, and another part of the production was in a
different part of LA. They had multiple channels between tech, producers, and so on. He mentioned there is a little latency but overall, it works very well.

Program audio is available through the Clear-Com systems and Brent thinks it may be better than a Comtek feed. Gerry noted that you need a qualified person to at least set the system up and get things running. It seems that there may be a requirement for someone full time, especially to help sort out who needs to talk to whom, and be able to make those connections. Peter mentioned that the system is pretty easy to remote into for making changes as well. Richard then brought up the idea that the sound department needs a longer prep time so that the communication issues can be brought up and discussed and equipment properly configured.

Peter noted that we now have both interesting and challenging changes to deal with, such as it may be harder to get air handling turned off going forward. Gerry was encouraged by the ability to integrate systems like walkie-talkies into the new systems available and sees the current environment as both an opportunity and a challenge. Richard advises patience as new compliance regulations will be taxing while we learn to work quickly while observing safety guidelines.

How *Ghostbusters: Afterlife* and *Venom: Let There Be Carnage* sound was created in virtual Cary Grant Theatre, with NEW SONY TECHNOLOGY

Recap by Peter Kelsey CAS

This was a presentation of Sony’s new technology, the 360 VME. VME stands for “Virtual Mixing Environment.” The presentation started with the Sony trailer for this new technology. The way this works is you get onto the sound stage you would like to emulate. (For the two projects listed above, this was the Cary Grant Theatre on the Sony lot.) You insert microphones into your ears and then sounds are played and the software analyzes how your ears pick up the sounds in the room. You then put on a pair of headphones and the software again analyzes how your brain responds to sound output through the headphones. You can then load your profile into a plugin in Pro Tools and, voila, you hear the sounds coming through the headphones as though they are being played in the sound stage you sampled. You can have as many profiles as you like; only needing to take measurements in the sound stages you would like to hear. Anything from a stereo mix to a full Dolby Atmos mix. This seems like an astonishing, magical technology. The ability to listen on headphones in your own home and have it sound like you are on a big sound stage is truly amazing.

After this intro, an interview followed featuring Sony's Steven Ticknor asking Will Files CAS about his recent experience with the technology. Steven Ticknor has worked at Sony for 30 years. He is an editor, sound supervisor, sound designer, and mixer. His first credit was *Rudy* and recently worked on *Spider-Man: Far from Home* and *Bad Boys for Life*. Will Files started in post 20 years ago, worked at Skywalker Sound for a decade, and then

Re-recording Mixer WILL FILES CAS and Sony’s STEVEN TICKNOR
moved to Los Angeles and started at Sony. He is also a sound designer, sound supervisor, and re-recording mixer.

**STEVEN TICKNOR:** Will, what were you thinking when everything changed in March and the lockdown started and you still needed to work from home at a high level? Sony had this new technology, the 360 VME, that would allow you to listen in headphones at home and it would be as if you were listening on a big Sony stage.

**WILL FILES CAS:** When the lockdown happened, we were in the middle of working on *Ghostbusters: Afterlife* and realized we would have to work from home. The only variable was what the editors would listen on at home; headphones, speakers, 5.1 systems. The 360 VME came along at just the right time. It was in Beta at the time, but we realized that we could leverage it so that everyone would work at home, but it was as though we were in the same room together.

**ST:** What was your experience when you first had the headphones on and then took them off and were sitting in the Cary Grant Theatre?

**WF:** I took them off and said, “Please turn off the speakers so I can hear the headphones.” Of course, the speakers were off, and I had been listening to the simulation. That was a bit of a shock.

**ST:** Tell me about what you thought when you found out this was integrated software in Pro Tools?

**WF:** That’s what it needs to be at this point. No one wants to lug around a big piece of hardware. The idea that you could have headphones and a laptop and have in your ears whatever sound stage you like is pretty amazing.

**ST:** What did you do to make 360 VME work smoothly with Pro Tools?

**WF:** We spend a lot of time developing our mix templates and our sessions tend to be very complex. We wondered how this would work. But the Sony engineers had put a lot of thought into it, so it turned out to be very simple. We just put 360 VME across the master fader in our sessions. We didn’t have to change anything fundamentally in our sessions to make it work.

**ST:** The newest version allows you to see panning in the VME software. How does that help you having a visible feedback of what you are doing?

**WF:** Most of the time we mix with our ears, but sometimes it is very useful to have a visual representation of what is actually happening. We gave a lot of feedback to the development team during the Beta stage about sound quality and how it would affect our workflow, and they were very responsive in reacting to our communications. This makes it a much more usable product. Now there is a standalone app-based option, as well as the Pro Tools option.

**ST:** How is this changing your workflow? What are some of the new ideas coming up from you and your crew?

**WF:** We had to pivot quickly during *Ghostbusters* to working from home after working on the Cary Grant Stage. Everyone had a different environment at home to work in and what we noticed as we went back in for another temp dub on the big stage was how well everything translated. There were no big surprises as would have been the case if we had not all been listening to the same environment in headphones.

**ST:** What do you think the future of this product is and how do you see this changing the way we do our business?

**WF:** The quarantine pandemic has been very interesting, and we can still do our work from home at a high level. The only variable has been the acoustic environment. Even when things get back to “normal,” I think people will be working from home more and more on a regular basis. Final mixes will still be done on a big stage, but the majority of the work will be done at home.

**ST:** Can you see this developing into a client, a director sitting at home and judging your work and giving you notes from their safe environment?

**WF:** One of the first things we thought about was how can we leverage this to make a better playback environment for our clients, especially once the quarantine ends? We have to sample their ears in the stage environment. But once that is done, we can send them a mix with that profile baked in, so they don’t even have to have the app running on their laptop.

**ST:** What was the adjustment for you and your team once they had the software set up working on *Ghostbusters* and *Venom?*

“[IT’S] ALMOST SORT OF A MAGICAL THING, TAKING THIS BIG ROOM AND PUTTING IT IN THIS LITTLE BOX.”

—WILL FILES CAS
A GAME CHANGER IN POST-PRODUCTION WORKFLOWS

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WF: The one word I heard from many of my crew was “Amazing.” We thought it’s almost sort of a magical thing taking this big room and putting it in this little box.

ST: What is your impression of the new Sony headphones developed to work with 360 VME?

WF: I picked them up and they were super lightweight and super comfortable; both important if you are wearing them all day. They were also a lot more powerful than other headphones we had been using and can handle the low end without distortion.

ST: What would you tell people who are going to try this technology to expect the first time they put on the headphones?

WF: Be prepared to not believe your ears.

Q. How does the low end translate?

A. LFE is surprisingly good. The low end translates very well. The only thing you don’t get is any kind of body concussion feeling. So, one thing we asked for is to send the LFE out a separate output and to a subwoofer in whatever room we are in. It feels more like the stage if you feel the air moving.

Q. When will this be released to the public?

A. When we started, it was in Beta, but it has now reached a very mature stage and they must be getting close to making it available to more people. Now we have the plugin and a standalone app which can be used with the Dolby renderer. And in fact, you can send the output of Pro Tools directly to the app and you hear everything in your session in the same virtual room.

Q. How does this translate for directors and producers and how does it influence their workflow?

A. A question we’ve been asking a lot. Currently, the client would need to have their ears sampled on the stage. But once that is done, we could even stream over Evercast or ClearView a mix with their ears baked in. Of course, we would need to send out multiple streams to different people. The engineers are currently working out how to abstract the room from the ears so we could have multiple rooms sampled ahead of time and then sample someone’s ears with headphones so that they wouldn’t need to come into the stage.

Q. How do you feel this translates Atmos and how does this make you feel about the processes we use to get our soundtracks?

A. Anytime you have technology that reduces the friction in the creative process, it’s a good thing. When it started, they were thinking of immersive audio and now it’s really cool you can hear a 9.1.6 mix with just a pair of headphones.

Q. When we get back to a normal of being on stages, how is this technology going to play in the workflows given that it’s a new tool and not replacing, but adding in?

A. I think a lot of people will continue to use it. If I’m working in my home studio, I like to put on the headphones and check how it will sound on the Cary Grant. I think a lot of people will use it that way.

Q. Any final words?

A. I wish we were all there in person so everybody could hear this and see each other and hang out. But at least we get to do this virtually. It’s one of those amazing things in terms of the timing. Who could have predicted it?
Recap by Sam Casas

The Sound of Spike Lee’s DA 5 BLOODS

During the panel for the Netflix film Da 5 Bloods, Tom McAndrew from Dolby Laboratories sat down with re-recording mixer Paul Hsu to discuss his experiences working with director Spike Lee. Hsu provided great insight into his mixing philosophies and how he uses Dolby Atmos to deliver great results.

Hsu’s working relationship with Lee runs so smoothly because of their similar aesthetics. “The reason you work with certain people, I think, is actually more about the interpersonal stuff. With Spike, our styles are very similar in terms of what we like.” Hsu compares his mixing style to that of the R&B music style of “round, warm, present dialogue, but with sparkle and a lot of bass. What [Lee] wants is basically that … the ‘conceptual conversation’ almost doesn’t have to happen.”

Concerning Atmos, “[Lee] leaves all the technical stuff to us, but he’s very into surrounds in general.” With Atmos, Hsu prefers to minimize over-localization. “I only do stereo objects … and then all the reverbs and delays, any special fx, are on their own 7.1.2 bed. So I can go as wide as I want … to create a more traditional but open sound field.”

Hsu also praises Atmos for its flexibility. “When I start the Atmos mix, I’m thinking about the down mix. That’s what’s great about Atmos, there’s just more bandwidth. It gives me the flexibility to really put everything all over the place all the time.” Additionally, the ability to mix Atmos in the box is helpful to Hsu’s workflow. While pre-dubbing, his basic sound field can be “set up very early on,” and carried over from pre-dub to pre-dub. Hsu concludes: “The mixing happens over almost a year.”

(L-R) Dolby’s Tom McAndrew and Re-recording Mixer Paul Hsu

Shooting Da 5 Bloods on location. Photo by David Lee/Netflix ©2020
Recap by G. John Garrett CAS

Like everything else at this year’s Mix presents Sound for Film and TV event, the CAS Parade of Carts was done remotely. The event took place over two days, with pre-recorded presentations followed by live Q&A via Zoom with moderator Peter Devlin CAS. While nobody got to see the carts in person, people and carts from multiple continents got a chance to see—and be seen—via video. To see the pre-recorded cart presentation videos go to: https://cinemaaudiosociety.org/mix-presents-sound-for-film-tv-2020.

Being halfway between the UK and California, I definitely appreciated this.

**DAY ONE**

**First up was Dan Kelly CAS, coming to us from Los Angeles.**

Dan’s system is very compact and modular, running out of three small racks. He’s running a Midas M32R with Dante to a Pix 270/260 with boom recorder backup. There’s a Mac Mini for building and loading scenes into the mixer, Wireless Designer for his wireless rack, and Dante routing, of course. In this same rack, he has a patchbay for video, timecode, MADI, and Dante, along with the Mac display, where he can feed three cameras and his Mac Mini into a quad split with a decimator. There’s a Wi-Fi access point in this rack (which I have considered myself!) and a Chindha hook for headphones.

In the radio rack, there are two Venue 2’s and a Sennheiser four-channel system for PL and public comms. There’s a Midas DL 16 stage box with 16 mic pres and he can connect to the mixer and other sources via AES50 to get up to 64 mic pres. Most of the kit fits into three short racks, and it looks pretty modular, as well as compact. He’s keeping busy with Jim Henson Digital.
Next, Devendra Cleary CAS showed us his four carts from Southern California. Devendra’s main cart is based on a Backstage TR-1. There you’ll find a Cantar X3, Cantaress with 20 faders, Aaton Souriquette remote, and Rack Solutions sliding rack shelves with a “Brett” plate fabricated by Brett Grant-Grierson for his Cantar. He’s got the mixer on sliding shelves from Rack Solutions and 12 channels of Lectro Venue, along with eight Lectro D-Squared radios. There’s a Powermax system and a line voltage regulator, with a couple of drawers in the bottom. He’s using SmallHD monitors, Betso, Shure, and Comtek antennas for the various radio services, and a Chindha hook for headphones.

Devendra has a mini cart that he builds (and sells) which accommodates most of the gear off the big cart for a more compact presence. He fitted a PSC Euro power supply to the bottom shelf, and it’s ready to take gear from his main cart.

The follow cart is built on a Magliner Mini with a box of rack drawers from Brett Grant-Grierson and some cloth drawers built by Fernando Muga. He keeps lavs and wireless accessories in the top drawer, then transmitters in custom-fitted foam from MyCaseBuilder.com. Next, a battery drawer, then a Schoeps drawer. Below that, his Sennheiser drawer and, lastly, the IFB drawer. One of the cool features is his inverter/charger that keeps power to the battery chargers and work lights on the cart.

Lastly, he has a cleaning cart built from a Magliner Mini, painted red. As expected, gear gets cleaned here, and there are wipes, a glove dispenser, and a non-carpeted work surface.
Michael Wynne CAS is based out of Atlanta. Michael designed his cart in 2015 using 3D design software and had it fabricated by Metal Dozer Machineworks in Atlanta; machining, welding, and powder coating the custom aluminum frame. There’s an SKB Roto Shockmount rack bolted to the frame, a custom C-stand mount which supports the K-Tek antenna boom which carries Betso LPDA's, a Comtek antenna, and a Lectro SM600a for wireless, IFB, and crew comms, respectively.

“Inside the box” is a Meon Power LiFe, two Lectro Venue units for 12 channels of wireless, and Blackmagic Duo monitors. There’s a Cantar X3 and Sound Devices 522 for recorders, with his Cantaress directly below that. Chindha hooks, lights, and sides holders are nice add-ons. Dan has a custom-fitted keyboard mount that he built from an iPad Ram Mount. For wheels, dual backstage foam-filled wheels in front and 18-inch Cable Crawlers in the back.

In the rear, from top to bottom again, his BNC patchbay, then two 12-channel XLR patchbays, then a shelf with Lectro T4 IFB transmitter, Comtek base station TX, and a pair of Sony UWP-D11 wireless for crew-com receivers. Like most of us, I think, Michael appreciates the little things on his cart, like a handy rack for transporting his chair!
Ronan Hill CAS checking in from Belfast, Northern Ireland. Ronan works mainly in movies and episodic TV, having won multiple Emmys and CAS Awards for his work on Game of Thrones. He is about to resume on Line of Duty Season 6 for BBC, which was suspended over the summer.

His cart layout, from top to bottom is a Sennheiser 2050 four-channel transmitter for IEM or IFB, modified to run on 12V DC. The Sound Devices 788T was his main workhorse for years and now performs backup to his SD Scorpio. He uses baking racks to separate the machines for airflow. Below them are his Blackmagic Designs twin monitors.

Ronan is very happy with his venerable Cooper 208D and says he would find it “very difficult to change away from it.” Below the Cooper is an Audio Ltd A-10 rack with two receivers for four digital booms or plants. Next, an Audio Ltd RK6 rack with six plugin receivers. His power system consists of six lithium-ion golf trolley batteries. He powers everything separately for isolated DC grounds, and they run everything all day long without plugging in. He has a pair of Betso powered LPDA antennas on a short boom, which have adjustable amplifiers to compensate for long cable runs.

For mics outdoors, there are MKH60’s in Rycote or Cinela mounts as Ronan likes their reliability in any weather. He also adapted a bicycle phone case that clips onto handlebars for a quick-release boom-mounted transmitter pouch. Ronan has a couple of trolleys that are loaded with Pelican cases. They contain everything from a 788 bag kit to MKH50’s, 8050’s, and 8040’s and the rest of his location gear.
Simon Bysshe CAS, located in the UK, works mostly on TV dramas and has a very compact cart solution. He’s using passive Lectro Shark Fin antennas on a custom folding arm so they can fold up and stay connected at all times. Next, there’s a CMIT5 on the trolley available for recording atmospheres at all times.

The main center of operations is Orca bag-based, no doubt for fast changeovers to reduced space or to accommodate very remote locations. He has 12 channels of wireless, with two Audio Ltd A10 for wireless booms, in PSC and SD wireless racks. In the top pouch he keeps his Ambient Master Lockit and an Audioroot smart battery distro for everything in the bag.

Next, is his main recorder, the Sound Devices 688 with a CL12 and Wingman, which he really likes for keeping notes. There is a pair of the popular Blackmagic dual monitors for picture monitors. Simon uses a set of Sennheiser HD25 headphones with a built-in boom mic for talking to his team. Simon keeps an SD MixPre on his cart for a preamp and limiter when using a wired boom because he prefers the sound of the pre and limiter to the 688.

His rack drawer has the usual quick-grab stuff like tape and his RF Explorer. There’s also an assortment of markers for marking up his paper sides (mounted on a Noga arm and a wooden plate). He has a pair of Sennheiser transmitters for public and private comms, as well.

The battery arrangement consists of a pair of lightweight lithium-ion batteries from Tracer, giving him about 10 hours of continuous use on the cart. He can also pull one off for going into a car or other portable situation. Power is distributed on the cart with a Remote Audio Hot Box. The arrangement is rounded out and watched over by Nellie, his stuffed elephant sound mascot. An added bonus was a demo of his Sheer Speed Shelter 180 5ST weather shelter that went up in about one minute.
Chris Munro CAS showed his rig from the stage of Mission: Impossible 7 which was in prep at the time, so everything was deployed in work mode! The Q&A was done from his cabin in a cruise ship off the coast of Norway, where they are keeping the crew. Things could be worse!

His vertical cart has a Scorpio and CL16 panel, and he likes having the ability to get 32 ISO’s with it. He runs a Cedar DNS-8 and NoiseAssist on the Scorpio for processing individual tracks. A Blackmagic dual monitor sits at the top, with the ability to mount a second for heavier multi-camera days. IEM transmitter and receivers round out the active hardware on this high-efficiency rig. The kit is small as his Audio Ltd A10 radios are all remoted to the set with small antennas and fed back to the mix position via Dante.

All the inputs and outputs are available via patch panels on the rear of the cart; XLR, BNC, and RJ45. Above the patchbay are a pair of receivers from the private lines from the boom operators. His A-10 rack mounts on a pancake and lives on its own stand for easy placement near the set.

Chris’s follow cart is a pair of three-drawer racks mounted in a large cart with a top shelf that looks like a lot of camera carts you’ve seen. He keeps IEM’s and headphones in the top drawers, mics on the second level, then lots of magic arms and rigging for cars. On the top shelf, he has a detachable rack box with expendables.

He has a mini rig with a Zoom F8N with a Dante interface from Glenn Sound so he can bring his radios into the machine. He also has a Zoom fader panel. It’s on a small upright cart and he likes it because it’s small and, as they do a lot of helicopter work, he can get it in and out of a helicopter quickly.

As they are prepping, he has a van-load of gear in cases ready to go onto the truck or ship!

All around, it was great to see everyone’s setups; how things are the same and how each mixer has their unique arrangement of pieces—and adds personal touches. Hopefully, we’ll all get to meet in person at next year’s CAS Parade of Carts.
The keynote for the second day of Mix Presents Sound for Film & TV featured Larry Blake interviewing Ren Klyce. Ren spoke extensively about the intersection of music and sound. Before he earned Oscar nominations for Sound Design and Mixing for Star Wars Episode VIII - The Last Jedi, The Girl with the Dragon Tattoo, and numerous others, Ren studied music, in particular, musique concrète, which challenged long-held conventions on what, if anything, separates music from mere sound. Ren credits this part of his education as being formative in his approach to sound design: “From a very early age, I was taught that music is sound—that sound is musical. If you open your mind to it being that … they are one and the same.”

The point was illustrated as Ren recalled a job he did early in his career for Sesame Street in which a girl walks through New York City and hears a variety of sounds as she makes her way home. When she arrives, she conducts a piece of music atop her toy box composed of sounds she heard on her walk. Ren goes on to talk about how moments in the music can act in a manner typically reserved for sound. He articulates the point by talking about a moment when a growly musical element gave voice to a motorcycle in The Girl with the Dragon Tattoo. He also talked about how it’s normal to want to feature a sound that you’ve worked extensively to create.

He concluded by sharing that mixing music on the dub stage has been really helpful in keeping a broad perspective on what works best for the film.
On Day Two, the CAS brought together a panel of re-recording mixers to discuss their workflows during the pandemic. Re-recording mixer David Barber CAS moderated.

On March 19, California pulled the plug and shut down everything. Karol, what was going on when the shutdown happened?

**KAROL URBAN:** I was working on a fourth series and finishing up a fifth. The busiest time ever. I was working 12-15 hours a day, six days a week, and had heard no news. Everyone was wearing gloves and masks, so I started wearing gloves and masks. I was finishing up Lena Waithe’s *Boomerang* and the last playback was made remote, which seemed odd. We got through it, it sounded really great. We used ClearView Flex, which was lovely on Stage 3 at Westwind. We finished *Project Bluebook* in a regular way and *Boomerang* was after that.

Then *Grey’s Anatomy* called me and asked if I could mix the last few episodes at home. So, my sound supervisor husband [Steve Urban MPSE] and I ordered some stuff and built a stage in my second bedroom, which had been a sound design room. I mixed the last three episodes of *Grey’s* as a single mixer there. We used a QuickTime approval and a Google Doc to interact with the clients. We used Source-Connect for the notes. I did a similar process with *The Stand* later in the summer. I got a renderer in my room and mixed with Dolby Atmos objects, which was great. Now I am back on the dub stage with no clients, just me and my mixing partner streaming through ClearView Flex.

**David, and you?**

**DAVID FLUHR:** My experience was gratefully busy. What I really enjoyed was the innovation that had to happen suddenly with new workflows that could keep production going. We had finished a musical for Disney Plus at Roundabout just before the shutdown. Disney was creating workflows for 300 animators to work at home. I ended up setting up a 5.1 stage at home so I could mix all the animation Disney was sending me. I was fortunate in being able to continue working and deliver product. Then I did a Netflix musical series for Kenny Ortega. We mixed nine episodes at Formosa in Hollywood.

Now, we were going out in the world and it was very nerve wracking. We wore gloves and masks mixing on our own. I
still wear gloves to stop me from touching my face. Netflix sent all the clients the same headphones so that everyone could hear the same mix. No live playback but Pix videos were sent to all the clients. Then I did an HBOMAX feature in North Hollywood. We could have five people on stage. All editors were off stage and the picture editor was sent live stuff via Evercast. This was theatrical Dolby Atmos. Then I went up to Skywalker and did a temp dub of a movie for an online preview. Lots of problems with people not knowing how to use microphones. Used iZotope RX a lot and found other plugins that helped. Then I mixed a feature at Warner Bros. and we were allowed seven people on stage. We were amazed in all this that we got normal notes, nothing weird.

_So, HBO set up another apartment in her complex in which we set up a 5.1 playback. We would send her stereo mixes, but she liked to see a live Evercast stream and stop when she had a note. So that’s what we did. I’ve been very lucky to be working so much. Formosa was very proactive in setting up protocols for safe working._

_Gabriel, it seems you were on the other side of some of David’s work. What was your experience?_

**GABRIEL GUY:** Animation kept going, stopping for maybe a week in March, but then production ramped up. Disney wanted to do that. It’s been Zoom, it’s been Evercast, it’s been ClearView, it’s been Pix. Home recordings from actors, so it’s been shipping out microphones and helping them set up a recording process. I set up a screen share so I can watch the actors hit record. It’s been full speed ahead to keep it all going.

_DF: Talking about a 5.1 playback, we actually did a Dolby Atmos playback from Skywalker to Disney in a 9.1 render using ClearView. Given that, what we are missing is being in the same room and interacting._

Karol asked David if he used both Evercast and ClearView. He replied that he did but had some issues with Evercast. He added that he believes that it all depends on the quality of your connection. ClearView is moving to 5.1. Karol added that she had no problems with Evercast when working on The Dub Stage with Marti Humphrey CAS on a movie during the summer.

**Marc, where were you and how did you transition?**

**MARC FISHMAN:** We were in the middle of Zoey’s _Extraordinary Playlist_ and _Little Fires Everywhere_. Less people started showing up on the stage. We were mixing _Little Fires Everywhere_ up to the day before the shutdown. We had us and one producer on the stage who signed off on the mix and the next day, the shutdown happened. We still had two episodes of _Zoey_ to finish. Formosa was active with the city and was able to keep open with a skeleton crew.

We sent stereo QuickTimes to the picture editor and showrunner to give notes. We’d send them, get notes back, and then do it again several times. And then we moved right into _Old Guard_. It was always remote editorial in London. We mixed it at Formosa and again sent stereo QuickTimes to the picture editor and director. They wanted to hear the Dolby Atmos mix that we had done so we went up to Ross 424, which is a big room, and played it there for execs doing proper social distancing. Then we went right into _Lovecraft Country_ but our showrunner did not want to leave her apartment. So, HBO set up another apartment in her complex in which we set up a 5.1 playback. We would send her stereo mixes, but she liked to see a live Evercast stream and stop when she had a note. So that’s what we did. I’ve been very lucky to be working so much. Formosa was very proactive in setting up protocols for safe working.

**Marc said that he has yet to meet his showrunner on _Lovecraft Country_. To that point, everyone agreed that the social aspect of working alone has been really daunting. David did add that it’s been great to mix on your own and get the mix to a place you like and then present it to the execs._

**Will, what have you been up to since March 19?**

**WILL FILES:** It’s been surprisingly busy. When it happened, we were in the middle of a temp dub of _Ghostbusters_ for a preview. Of course, the preview never happened. I was lucky in that I could work in my home studio. We recently did a one-day temp on the Cary Grant Stage at Sony and were happy that all our work at home translated really well. I’ve been bouncing around doing lots of different projects. I recently did a three-day temp dub at home for a Netflix project and streaming with Evercast to the clients. I got to appreciate how hard the mix techs and engineers work on stages since at home you have to do everything yourself. I missed, not only the social interaction of being on the stage, but also the support of being on the stage. We did the final at Technicolor, streaming on Evercast to the director.

**There was a mention of headphones that Netflix sent out, what headphones were they?**

**WF:** The Beyerdynamics DT 770’s for my recent Netflix project.

David shared that there was a list of six sent out by Netflix and you had to pick from those. He mentioned the 1706’s. Gabriel had on a pair of AKG’s. David also mentioned Sony’s. Karol added that Westwind made sure everyone had the same headphones. She
stated that she did all her notes with the stereo folddown, but then listened again to the full Atmos mix to make sure nothing had been disrupted while doing the notes. David added that he made sure the stereo was LoRo not LtRt.

David, you mentioned ADR and that you use iZotope RX8 and Dialogue Match. You said you found a couple of other plugins that were useful, what are they?

DF: There’s one called Absentia DX by Todd-AO that is really good for hum removals. I also use an older program called DUY Magic Spectrum which helps match EQ. I use a combination of different things, including RX, Cedar, and Waves’ WNS. You have to be very careful not to overuse them.

Corporations tend to push back against people working at home for a variety of reasons, but the COVID world has shown that that’s not required. We’ve been pushed into this remote workflow. Do you see anything from this experience over the last seven months carrying forward, like having more time for your pass on the mix?

DF: It’s inevitable we are going to see some sort of hybrid version of this going forward. I used to think that working from home would give me all kind of distractions, but it actually turned out to be really great. Editors have been doing this for a long time.

WF: We will get a lot more work done in home studios, but I don’t see the dub stages going away. I think a lot of producers are going to want to continue to stream stuff even when this is all over.

MF: I don’t see the stages going away because very few people have the equipment necessary at home to do all the deliverables.

KU: I have a lot more privacy with me and my mix partner to finish our first pass, so our notes have gone down by 60 percent or 70 percent.

WF: There are less notes for the sake of giving a note now as people’s priorities have shifted.

Recap by David Bondelevitch CAS MPSE

Referencing Sound for TV AND FILM IN 2020

Moderator: TOM KENNY
(Mix magazine)

Panelist: LARRY BENJAMIN CAS
(Scoring Mixer)

Panelist: SCOTT KRAMER
(Netflix)

Panelist: PHIL McGOWAN CAS
(Scoring Mixer)

Panelist: DENNIS SANDS CAS
(Scoring Mixer)
This panel was moderated by Tom Kenny who is the editor of Mix magazine. The panel consisted of four experts: Scott Kramer, manager, Audio Technology at Netflix; music scoring mixer Dennis Sands CAS, a six-time CAS Award nominee with a win for Forrest Gump, in addition to the CAS Career Achievement Award, an Emmy, four Oscar nominations, and 370 feature film credits; music scoring mixer Phil McGowan CAS, Emmy and CAS Award nominated; and re-recording mixer Larry Benjamin CAS, eight-time Emmy nominee, eight-time CAS Award nominee.

The panel discussed the oddities of monitoring in a home studio, not only for the mixers, but for the clients in their homes. Scott explained that Netflix jumped in quickly to make sure that everyone was monitoring the same way at home, using headphones, laptop, and television. Larry Benjamin of the Formosa Group explained that he mixed in the studio with Kevin Valentine and played back to clients on headphones. The clients have a good relationship with the mixers and trusted their judgment, hearing it in the proper environment of a dub stage. As Phil McGowan pointed out, score mixers generally work at home already so they may have had a head start over dubbing mixers. Phil is currently upgrading to Atmos, and is used to mixing at home, knowing that it will translate well to dub stages. Adding confidence, Dolby aligned his home studio.

Dennis Sands works in a gorgeous home studio owned by director Andy Davis. He has been using the facility for 15 years. Dennis uses different speakers for different media: large speakers for film, with different monitors for 7.1, 5.1, and stereo. Regarding speakers, Dennis adds, “Buy the ones that sound the best to you. Monitors are personal technology. What sounds good to one person may not to another.”

Larry Benjamin adds, “You want the highest quality representation because certain speakers might mask problems in the mix.” Both Larry and Phil use PMC speakers as their main speakers. Larry added that he uses “bookshelf” speakers and a sound bar as additional playback options. All of the mixers have multiple sets of speakers for different formats. Larry also explained, “What our sound supervisor Nicholas Forshager hears in his room is what we hear on the stage; same with our music editor Stephen Lotwis.”

Dennis used the ClearView service for his latest score for Alan Silvestri, with people all over the world. It allows anyone to use a web browser to hear stereo sound in sync to picture with as many as 30 users. Dennis used 15 and said that it worked flawlessly.

Larry explained, “We have to be careful not to overuse the LFE channel; not a lot of people will hear the result of that.” Dennis added that “Low frequencies are the most difficult and challenging thing to control in any room. The LFE should be used judiciously for impact. If you hear it once in a while, it’s ‘way cool.’ If you hear it all the time, it’s ‘way annoying.’”

Scott Kramer summed it up nicely: “The sound crew is always the most important part. Fold-downs are their specialty, not the client’s, so they make the final judgments. The clients trust them.”
Accurate Listening: Maintaining a Reference Monitor STANDARD ACROSS MULTIPLE LOCATIONS

Recap by Stephen Fitzmaurice CAS

Accurate Listening: Maintaining a Reference Monitor STANDARD ACROSS MULTIPLE LOCATIONS

Tom Kenny of Mix magazine moderated a discussion about the challenges people are facing in monitoring while they try to work from home during the pandemic. He was joined by panelists: Will Eggleston from Genelec, Scott Gershin of The Sound Lab, a Keywords Studio, Michael Grace of Grace Design, and Miles Rogers from Meyer Sound.

Miles Rogers made a big point of talking about how sometimes we, as sound professionals, feel like we should know everything about sound, monitors, and acoustics. It can be overwhelming, but we need to know that there are tons of people who can help you figure out what you need to know. His fellow panelists agreed and went on to offer a reminder to everyone out there that immersive formats are relatively new to everyone. Miles and the rest of the panelists went on to dig into the details and things you’ll need to consider.

Will Eggleston emphasized the importance of coming up with a clear idea of what you’re attempting to do and in what space. Miles talked about the practical limitations people working at home may face. Maybe there will be times when you need to work on headphones. He posed, “Can the kids stay asleep while I’m working, or can I really dig in and do this? If you’re in a small room, you now know you’re gonna be in a near-field environment... What format are you looking to work in?”

Will described the process of calibrating and correcting room acoustics with loudspeakers; in particular, below 200 Hz, where he felt many rooms struggle. Will recommended bass management as a common approach but also warned of overworking a single sub by asking it to bass manage lots of speakers and act as a dedicated LFE channel. Scott Gershin talked about the importance of utilizing spectrum analyzers when working in a new space as a way to make sure you know what is happening in the mix that you might not be hearing.

Michael Grace talked about the importance of having a monitor controller like the Grace 908 as a way to monitor multiple formats and apply corrections. He recommended
acoustic analysis software like Room EQ Wizard or Studio Six Digital Audio Tools/LARSA for people who might have cobbled together a system.

Scott Gershin talked about the huge variety of systems that people can choose from and went on to emphasize the importance of the near-field and even headphone experience over some of the large formats we so often think of as a dub stage.

Ultimately, much of the content being produced at home will be monitored in a home. So, understanding how to trust that your system will translate to that environment is important.

**Passport to Prizes Giveaway and EVENT WRAP-UP**

Recap by Stephen Fitzmaurice CAS

**Tom Kenny**, editor of *Mix* magazine, reviewed the events of the day and recognized the challenge of holding a virtual event, thanking the sponsors, panelists, and attendees and organizers. He announced the prize winners and made sure to talk about how the process of working through this challenging time has been difficult for many and how so many of the vendors present made a big point of wanting to make themselves available to help people figure out how to keep creating.

Though held virtually, the turnout was excellent. While participants weren’t able to shake hands, interact with gear the vendors were displaying, or just grab a cup of coffee with an old friend, everyone was understanding of the circumstances and walked away with additional insight and some positive energy as the industry starts to slowly implement a touch of normalcy.
This is an open letter from the Cinema Audio Society, Motion Picture Sound Editors, and The Association of Motion Picture Sound, who represent audio professionals internationally.

Though film is often considered a visual medium, removing the sound component will demonstrate exactly how movies “tell” the story, thrill audiences, and become the “voice” of the Filmmaker. As George Lucas has famously been quoted, “Sound is 50 percent of the movie-going experience.”

Production Sound Mixing, Sound Editing, and Re-recording Mixing all contribute to the complete sound experience and are eligible for recognition of major awards. It is remarkable that these persons who receive nominations for numerous international awards, including those from AMPAS and BAFTA, are generally not afforded prominent screen credits that are representative of their creative contribution to the film. We seek your help in correcting this imbalance.

We believe that the complete sound design of the film is the responsibility and ownership of these key sound roles. The Production Sound Mixer, Supervising Sound Editor(s), Re-Recording Mixer(s), should share a single card and be appropriately positioned within the same proximity of the other key roles, such as Director of Photography, Film Editor, Production Designer, Costume Designer, Unit Production Manager, 1st Assistant Director.

Such a screen credit would assure that individuals who were principally responsible for the creative direction of the soundtrack would be clearly identified and acknowledged by the audience.

Example: ONCE UPON A TIME IN HOLLYWOOD as a single card following UPM(s), 1st and 2nd AD

Production Sound Mixer        Mark Ulano CAS AMPS
Supervising Sound Editor      Wylie Stateman MPSE
Re-Recording Mixers          Michael Minkler CAS
                            Christian P. Minkler CAS

Yours faithfully,

Karol Urban CAS MPSE
President
Cinema Audio Society

Mark Lanza MPSE
President
Motion Picture Sound Editors

Rob Walker AMPS
Chair
The Association of Motion Picture Sound
2020 brought a new level of heartbreak sports sound mixers had never known. In a matter of 48 hours, they watched the sports world come to a halt. From March Madness to the MLB season, every major sporting event canceled. No one knew when any of it would come back, but from the moment the NBA postponed its finals, the dominos began to fall like clockwork.

For LA Dodgers and Lakers sound mixer Antony Hurd, unemployment stared him in the face for the first time ever. “There’s always going to be sports—and then COVID happened. I’m out of work for the first time in my life,” explained Hurd. “Everything shut down. I’m like, ‘Oh my goodness!’ It was a reality check, if nothing else. I happen to be a workaholic so not being able to work was really difficult.”

Accustomed to hopping from sport to sport, Hurd averaged more than five-day workweeks—working nearly 304 days one year. Sports stopped for nothing, and even if a sport faced a strike or delay of its season, another one filled the gap in his schedule. “When baseball went on strike, that was just one season,” recounted Hurd. “They aren’t all going to strike at the same time. We’ve been through strikes before where a sport would shut down, but not the entire sporting world. Nobody could have ever anticipated this.”

Gamel’s story sang just the same. No fans cheered, no athletes trained, and no gymnasiums sung for seven long months. “As of March 14, I was down for—what it’s October, I’m just now having work trickle back in.”

But even with work trickling back in, Hurd and Gamel both knew it would look a bit different.
Gamel turned to other sports for work after the Dodgers ceased all away feeds for their games. He saw more remote work come his way and began working out of Fox Tech Center. He went from covering the Dodgers season to mixing anything from golf to football across the nation. But he believes it only sped up a process coming their way.

“I had a friend of mine say to me, ‘it only took a pandemic to drive us 10 years into the future.’ I thought that was a very observant comment because that’s what it’s done,” noted Gamel. “In some ways, I don’t think it’s a bad thing because I think we needed to streamline the process.”

The streamlined process came in hard and fast when work returned, however. Crews went from 60 or more people at the field for both away and home feeds to one team of three utilities and one mixer for a home feed—and that was just the beginning.

With mics hidden in bases, a pair of shotgun mics pointed at home plate, crowd mics, a mic at first and third, and outfield mics, baseball stadiums are wired to the fullest extent. If there’s a noise, the mixers capture it. The rest of the sports world, well, they’re as wired as baseball with microphones focusing on the key areas of play. With so many microphones and cables out, sound utilities used to spend a large amount of time checking equipment before the games, but it’s not that way anymore.

Social distancing guidelines and less contact protocols forced utilities to adjust in their jobs. They primarily focus on working pre- and post-game if need be. They no longer check headsets—leaving this to the announcers to avoid cross contamination—and simply check voltage every day. If a piece of gear goes down prior to when teams arrive, they address the problem. But if something breaks or gets misplaced during a game, they can no longer make the adjustments the A1 may need.

Hurd shares, “Once the players show up on the field, we’re no longer allowed to go to the field. So, if a piece of equipment breaks, you’re SOL! There’s nothing you can do. We don’t have access anymore. The major challenge at this point in time in the COVID world—regardless of all the health issues—is lack of access; we no longer have access to go fix something if something breaks.”

And in live sports, there’s no going back to get a better take when something goes wrong. “Excuse me, can you hit the ball over the fence one more time? I missed it,” joked Hurd. “That’s what is really different about music and sitcoms. You can always do another take in those atmospheres. Here you can’t.” Gamel concurs, “You get it right the first time and walk away, but you plan it that way. That goes back to God’s in the details. You have to look at the details and it’s all about that.”

Lack of access presented only one of the many challenges with COVID.

Hurd and Gamel both experienced a new concern with crowd noise. The absence of crowd noise filled the TV airwaves with nothing but dead air. With no prior need for manufactured fans, leagues left mixers to experiment with the dead air that was left behind because there weren’t any fans in the seats.

MLB mandated pumping sample noise into the stadium to help cover up the shuffling of the catcher’s feet. Boxing struggled to find a suitable solution as mixers ran into problems with a manufactured crowd and no bodies in the seats, but found solutions like a cheer app created more problems. Hurd eventually discovered a ballroom crowd noise added the right amount of atmosphere to boxing.

Some sports like soccer fell perfectly in line with a dull, constant crowd noise—which ended up sounding nearly the same as it did pre-COVID.

Hurd explained, “It’s like pink noise, like white noise. It was really bad and sounded horrible to me. The Dodgers did their own thing, spent their own money and did some really nice samples, and their crowd noise is really good.”

Jaime Sanchez, Antony Hurd, and Dave Wolcott help capture the Dodgers sound for games.
Even with crowd noise pumped through the console, the lack of 20,000 fans or more in the stands allowed language to find its way to air. “Oh, you have no idea [how much of a problem language is]? I got the biggest ‘F-U’ from the EKU coach two weeks ago,” recounted Gamel. “It was one of those unfortunate events where the parabolic [microphone] just happened to be turned and he unloaded on the ref. It all hit air, and we’re going, ‘Oh crap, good thing it’s on cable so we don’t get busted,’ and then ‘Wow. that was funny.’”

Luckily, the pressures presented to sound mixing for sports is not a new one to the field. Having gone from one or two microphones for a sport to 10 or more a game, Hurd and Gamel learned to keep their cool in tight situations. They prepare for the worst whether it is a microphone going out mid-game or just making quick decisions on what the game should sound like. They grew thick skin for when things go awry—which they will—and found a way to thrive off the challenge of getting it in one take.

According to Gamel, “A1 is not an easy chair. It’s probably the toughest chair in the production because if you screw up—I mean when you screw up, because you’re going to—everybody knows it. It’s just the nature of the beast. A1 is a hot seat. We like the pressure.”

And when the pressure is off, they find moments to enjoy. Whether it’s meeting someone as great as Willie Mays while laying out cabling or covering the biggest sport event of the year, sports sound mixing leaves moments behind not experienced anywhere else. “I got to sit and play Ping Pong with Kobe Bryant on Thanksgiving on the road. It was a really cool experience,” Hurd remembered. “And we did a college basketball game on the USS Carl Vinson aircraft carrier down in San Diego. I got a picture with the captain and I got pictures with the admiral and I was like a kid. I’m just fascinated by airplanes, and here I am on an aircraft carrier doing a basketball game!”

It’s not just the experiences that make the job so enjoyable. Both fans of sports, Lee Gamel and Antony Hurd looked back on their careers fondly. Gamel spoke barely above a whisper when talking about his love of mixing baseball. So enthralled with the game, he described mixing in the sound of cleats hitting the base and reliving moments of his childhood watching the games. Hurd held the same passion—even admitting it distracted him at work sometimes. “I will make more mistakes at my position

Antony Hurd in the Dodgers truck where he mixes the games.
because I’m concentrating on the game more than my job,” Hurd said with a chuckle. “But it’s a give and take. I have producers and directors that request me because I’m passionate and I enjoy it and I want it. That helps with the production if you’re enjoying what you are doing.”

But their passion is what bleeds into their sound mixing to make a great show. “To really put that viewer in the third row on the baseline, that to me is really—it’s that thing when you get it, you hit it, get it, and quit it. It’s about when you really nail [it] and you got one. You walk away right there ’cause you’re never going to get it,” boasted Gamel. “But,” Gamel’s grandmother went on to tell him at the age of 12, “the rewards are something you will never, ever see anywhere else.”

Her sentiments resound with his mixing as well. Sports mixing is about the moments in between everything. Whether evolving technology or the pressure of getting it right, it is about bringing the audience into the stands to cheer for their favorite team. It is about the underdog comebacks that make history. It is about that final call if the runner is safe or out captured on the microphone hanging above home plate.

It is about the sound captured in the moment that tells you how the game ended. “When you’re in the moment, you have to be in that moment,” whispered Gamel. “But when you’re in that moment and it hits, there’s nothing better. You know nothing of what’s about to happen.”

“It’s a really good job. I’m very, very fortunate,” chimed Hurd. “Enjoy the moment. It sounds so cliché, but you know, enjoy the opportunity if you get it because a lot of people would like to do what we do that don’t have that chance.”

“A FRIEND SAID], ’IT ONLY TOOK A PANDEMIC TO DRIVE US 10 YEARS INTO THE FUTURE.’ I THOUGHT THAT WAS A VERY OBSERVANT COMMENT BECAUSE THAT’S WHAT IT’S DONE.” —LEE GAMEL
MUSICALS, BY THE NUMBERS: From *The Doors* to *West Side Story*

For a production that hasn’t gone down the musical road before, the fear of the unknown can be daunting: Live vocals vs. playback, pre-records, vocal rehearsals, choreography, recording studios, actors singing, sets prepped for live singing, unheard of six-week pre-production schedules for sound, significantly more sound equipment, a Music department with job titles no one has ever heard of... In other words, “The Production Sound Mixer” has never been more important.

I felt that fear of the unknown on *The Doors*, my first music-based film (released in March 1991). Director Oliver Stone wanted to shoot the film using part live vocals and part playback (believe it or not, Val Kilmer sang live). *The Doors* was a journey into the ’60s with the technology of the late ’80s. I had never done anything like this before and there was no road map! The first day of shooting was probably the most harrowing of my career; I remember it like yesterday. Oliver starts every film off by shooting one of the hardest scenes first. He likes to “set the pace” and you either sink or swim. The scene was the band writing/singing “Light My Fire.” We shot the first half of the song with live vocals and live instruments, and the second half to playback. On Take 1, we filmed the entire song straight through!

The day before shooting started, we loaded our mass of equipment into the set, a house on Malibu Beach. I set up in a large bathroom and filled every inch of it with equipment. We had a 2-inch 24-track analog recorder, a 16-track analog playback machine, two 24-track mixing boards, IFB transmitters with different mixes, booms, wirelesses, Music department...
monitoring, and drum trigger recorders to record the on-camera drum hits to help sync in post. It was enough to make your head explode.

Once the fear subsided, I fell in love with the musical genre. Musicals and music-based films (I’ll call them all “musicals” for this article) have an on-set energy that dramas or comedies just can’t match. Music drives the set and it’s infectious; at the end of every musical I’ve worked on, the entire crew knows the soundtrack by heart. Musicals also represent a very different collaboration for the sound mixer with the actors, director, and even the above-the-line people we normally don’t connect with. Most of all, musicals are a place where Sound has equal importance to Camera. I like that.

Since The Doors, so much has changed with technology leading the way. Thanks to digital, a couple of (very well-equipped) sound carts can handle what eight really big sound carts did back then. An example of these extremes is West Side Story. For that film, we built two sound carts from the ground up capable of handling everything we had on The Doors and so, so much more. [See the CAS Quarterly Summer 2020 edition’s “Sound Carts for Musicals” article for Tod’s extensive production setup.]

It was on The Doors that I realized there had to be a better way to approach musicals. Thus, began a 30-year journey to make production sound better on musicals—better sounding, better efficiency, better technology.

There were a number of immediate issues that needed to be addressed. The transition in sound quality from an actor talking in a scene to when they begin singing. It’s as if the actor was sonically transported into sound heaven. Not only do they sound like they’re in a booth, but now they’re in front of a big fat diaphragm mic when the dialogue just preceding may have been recorded on a wireless lav. Another issue for me was the “dry” ambience on music playback scenes, particularly in dance scenes. If the goal is “real” sound, you need to hear the dancers’ feet, you need to hear the ambience. Other issues to deal with were lip-syncing (which is always a problem), learning to sing using earwigs, and convincing Production that booming (not wireless) for vocals is the best way to match the studio vocals.

How I Approach a Musical:

1. Get the Job:
Hire the right crew, with attention to the Pro Tools operator. On larger music days, I’ll hire an extra person to wrangle earwigs and speakers among the other things that come up like God mics, thumpers, and the Music department monitoring system. As far as crews, I’ve been very lucky to have pretty much the same crew for 20 years thanks to Mike Scott, Jerry Yuen, Terence McCormack Maitland, and Pro Tools operators Jason Stasium and Derek Pacuk. They’ve made this process not only doable but also fun.

2. Meetings:
Lots of meetings. These early
meetings are my opportunity to lay out the plan, which inevitably requires convincing Production to prepare for additional needs for Sound—not an easy convince. The early meetings with the director are especially important. A director is looking for assurance and I want quality; it’s one of the best moments to bond with a common goal. Next is the Music department. Here is where I have my best chance to lay out a road map that will benefit everyone in the long run. I always approach each meeting with the goal of getting everyone on board and everyone feeling good about it. I learned that from Robert Redford. No one’s better at that than Bob.

During the joint meetings with the director and Music department, we determine which songs or parts of songs will be live and which playback. Each needs to be dealt with entirely differently. Live singing requires the set to be as sound pristine as possible with specific miking and earwigs, whereas when filming playback scenes, background sound is not a concern but you may have to worry about sound loudness restrictions. When using playback, I work with the Location department to figure out each location’s sound limits.

Wardrobe is a very important department for Sound. We start by forewarning the Wardrobe department (in a really nice way) that we will be wiring the actors all the time. Then we find out what fabrics they’re using, which determines how we’ll be wiring them. Then I look at photos of the principals’ costumes, figure out wiring plans, and have pouches sewn in their costumes for wireless packs. Luckily, on a musical, we have more of a direct collaboration with Wardrobe than on non-musical films.

The Music department and Post Sound are your allies in all of this, so it’s very good to open up a dialogue early. Having an overall plan is very important at this stage; everyone needs to be on the same page. On Across the Universe, I had an amazing collaboration with the Music department. Director Julie Taymor wanted to shoot 60 percent of the film using live vocals—and we all jumped in. It was a dream to have everyone uniformly pushing for the common goal of live vocals. On musicals, the post team is usually hired early on, which is great. That’s not always the case with other projects.

And then there’s production! The bottom line is sound has special needs on a musical that requires more set time and it’s just going to be more expensive. Period.

3. Rehearsals:
Vocal and Choreography rehearsals generally begin about eight weeks out from shooting. For me, they are essential. In rehearsals, I can hear actors’ voices, their volume levels, watch their movements, and just as importantly, get to know them and win their trust. When rehearsals begin, the instrumentalists are already laid down, but most rehearsals begin with temp vocals sung by professional singers. I generally try to get the actors to lay down temp tracks as early as possible so they can begin singing to their own voices, but sometimes that’s impossible, and it’s OK. For the second half of rehearsals, I move my recording cart into the rehearsal hall and begin testing lavs for each actor. This is also when I work with the actors singing with earwigs and practicing lip sync. I use a camera for their and my reference. I also take advantage of having them in the rehearsal hall and throw a mic on each to begin setting EQ levels.

4. Prep for Pre-Record Vocals:
During rehearsals, I conduct a lav mic test with each actor. The concept is that every lav sounds different on different actors, similar to the idea that every recording artist has their favorite mic. My approach is simple. We set up six different lavs taped next to each other on a stand with a horizontal arm. This way we can easily raise and lower the arm to match the height of the actor’s breastplate where we would normally wire them. Then we place a Sennheiser 416 (my go-to workhorse mic) about 12-18 inches (depending on the acoustics of the room) above the actor on a locked-off boom.
We mark an X on the floor for the actor and have the piano player play a long vocal piece that the actor sings in the film—one with dynamic range. I record all seven tracks and go back later to listen to each lav and determine which one matches the 416 best. I repeat this with each actor reading lines in a talking voice. I’ve noticed a marked difference in how a particular lav sounds with dialogue as opposed to singing. Many times, I’ll use different lavs for the same actor depending on whether it’s a singing scene or dialogue scene. That lesson took a few musicals to learn and we do this lav test on all our films now, not just musicals.

5. Pre-Records:
Before the studio vocal pre-records begin, I meet with the studio engineers and bring them all our mics. In addition to their big fat studio mic, they record two additional tracks: one from the 416 and one from the lav chosen for that particular actor. They arrange them the same way as we did in the rehearsal studio. By doing this, post-production can now transition from whichever mic we recorded the dialogue with on set to that same mic in the recording studio. Then, they can easily fade to the big fat studio mic during the first vocal line without the audience realizing it. This eliminates that abrupt transition from set dialogue to pre-recorded vocals that everyone hates.

The other element that should be included here is breath. For instance, if the actors are dancing their hearts out visually, they should sound like that when they’re singing. This is one of the reasons I develop relationships with the actors and director early on, so I can talk them through these processes. I attend the pre-records—

“[IF] THE ACTORS ARE DANCING THEIR HEARTS OUT VISUALLY, THEY SHOULD SOUND LIKE THAT WHEN THEY’RE SINGING.”
especially the first ones for each principal actor—to make sure everything sounds good and also make sure the music studio engineers are matching lavs to actors and placing mics correctly.

I also request that when the Music department sends the music to our Pro Tools operator, they send vocals as dry as possible with very little effects on them. Having a lot of reverb or compression makes it very difficult to match on set.

6. Live Singing on Set:
First, the sets need to be extra quiet. The goal is to record the most pristine vocal tracks possible to allow Post to add reverb and compression to match the pre-records. Sometimes this requires the set to be acoustically treated to make it friendlier for sound. Live singing requires that all actors who need to hear the music wear earwigs; we don’t want music leaking into the vocal tracks. We wire everyone with lavs but strive to record all primary singing on well-positioned boom mics. Boom mics have a much richer sound, making the transition to a studio mic smoother. (This is, of course, what we strive to do, reality can be very different.) Using a subwoofer “thumper” at 40 Hz is also helpful at times and is necessary for any sync dancing during dialogue or live singing.

When an actor is using an on-screen mic, I’ll make sure it’s a fully functioning, high-quality mic and I’ll use it to record the scene. I love vintage mics for this. If it’s a handheld mic and the actor isn’t a singer, it may require teaching the actor how to hold the mic for optimum sound during loud and quiet singing as well as limiting hand noise. If the scene takes place in a theatre or any other location where amplification would be natural, we’ll place a speaker out in the theatre facing away from the stage. We’ll feed the speaker the live vocal track only and record it during the scenes with two ambient mics; one at about 10 feet and one at about 30 feet from the speaker. This creates that “real theatre” sound and gives Post options on how much room and delay they want to add. If it’s a scene with an audience, we usually shoot the singing clean and then record wild tracks of the audience using multiple mics at different perspectives. If the actor is using a handheld mic (singing directly into the mic where their volume is high with little background sound), you can get away with the crowd live.

7. Playback on Set:
Playback options vary depending on the situation: how large is the space, is it indoors or outdoors, is it an intimate scene or large dance number, how many singers/dancers, does the scene transition from dialogue to music, is there any dialogue during the music, is there any limitation in sound volume, etc.

For large locations, like exteriors, and big dance numbers where we are able to play it loud, we have our large playback system. Dancers and singers love it “loud.” For locations with sound level limitations, we use many smaller speakers surrounding the set, just off-camera. This allows us to play music at a lower overall level while maintaining a decently loud level inside the circle. We have a multitude of battery-powered mid-size speakers with IFB’s mounted on each so we can deploy and hide them in the set. Sometimes playback has to be supplemented with earwigs, and for dance supplemented with a thumper for timing. If there is dialogue during a part of the song, we drop the sound to the playback speaker but keep the thumper going during the dialogue to keep the dancers in time. Keeping the speakers close to the actors is also important; every 45 feet of distance adds one frame of time delay.

8. Lip Sync:
Lip sync is almost always done to speaker playback. For this, we still wire...
all primary singers and record them on ISO tracks. This allows the post music editor to hear the actor singing live and line that up with the pre-recorded vocal to determine if they need to slip the track to keep it in sync. On the set, I provide the Music department a dual monitoring system so they can hear playback vocals in one ear and the live actor singing in the other to check the actor’s sync. Before we had stereo IFB’s, we used two Comteks on different frequencies and split the headphone feed between the two. Video monitors are generally a few frames behind (slow). To deal with that, we delay the music feed a few frames to the Music department’s headsets to match the video.

Sometimes we will do a hybrid: live record and playback. This is used when dialogue is part of the song or dialogue breaks up a song or a song starts during dialogue. These situations require the actors to wear earwigs to lead them into the song. In their earwig, we add an audible count off so they know when to start singing on cue. For anything live, we drop the speaker playback to the set so we can record it clean. This method is used anytime music and dialogue are woven together.

9. Adding Ambience to Playback Scenes:
Since most playback scenes are done to speaker playback, recording ambience is impossible while shooting since the speaker sound is over everything. That’s why so many playback scenes in films sound “dry.” The way I deal with this is to record a wild track played over the speakers in the practical location as a wild track. We record worldizing tracks with mics in different perspectives placed around the room. There are certain scenes where worldizing works really well and others where it doesn’t. For instance, nightclubs, bars, theatres, and big dance scenes benefit from recording a worldized track, whereas intimate and exterior scenes rarely do because the sound from a speaker just doesn’t sound natural.

10. Worldizing:
What this means is recording the full playback track played over the speakers in the practical location as a wild track. We record worldizing tracks with mics in different perspectives placed around the room. There are certain scenes where worldizing works really well and others where it doesn’t. For instance, nightclubs, bars, theatres, and big dance scenes benefit from recording a worldized track, whereas intimate and exterior scenes rarely do because the sound from a speaker just doesn’t sound natural.

11. One More Trick:
(Of course, we had to go to 11!) For full playback songs, I like to record the first line of the song live (we did this a lot on Across the Universe). I prefer to record the line live on camera with an earwig before putting the sound into the speakers. But even if we have to record it as a wild track, it works. I’ll do this particularly with intimate songs. It’s all about selling the audience that our actors are really singing. So, if the audience believes it’s live in the first few seconds, they’re sold.

In Closing: A comforting lesson I learned early on was that everyone beginning a musical felt that same fear of the unknown that I did. Luckily, most of us get to work with great people whose hearts and expertise are in the same place. I’ve been very fortunate to develop relationships with and learn from some of these great professionals: beginning on The Doors with Wylie Stateman and The Doors’ original producer, Paul Rothchild. Then Across the Universe, which was a huge learning curve, and finally, West Side Story with Andy Nelson and Gary Rydstrom—two of the best. Ultimately, you never stop learning.

As I write this article, we are in the autumn lull of COVID in this crazy year, with elections still a month away. By the time you read this, who knows where we’ll be, but at least 2020 will almost be over! On a good note, we have finally resumed filming Tick, Tick… Boom, Lin Manuel Miranda’s directorial debut and my tenth music film. Lin is pretty amazing with music and has a great team.

My education continues.
We know dialogue is king, it is the main purpose when recording production sound, and it’s often the main story driver during mixing. But dialogue seldom comes alone. There are other sounds from production that are often overlooked or discarded. However, I look at them as highly valuable assets and have found that fellow sound mixers, re-recording mixers, and sound editors consider them equally important.

Part of the industry has adopted a sound stripped from everything and then recreated. We have a constant pressure put on us to create full soundtracks as a language or as a convention, and there’s a certain fear of letting things be as they are in real life - or even a fright of silence. These days, the huge and highly detailed images seem to demand a fuller, more detailed sound.

My work has mainly been on South American independent films that travel the world across film festivals and cinemas. These are almost always filmed on location, with a combination of professional and nonprofessional actors, and often attached to telling stories based on reality. Consequently, and due to budget, I find production sound to be a vital part in storytelling and achieving a director’s vision in a timely
fashion. There are different approaches to using production sound—especially production sound effects (PFX), which are not normally spoken about like production dialogue is. I will explore different perspectives, uses, issues, and some cases of how PFX can be a highly valuable element in the mix.

Production is all about the actors, the set, the location, and the action. It is about real or imaginary worlds, about real life and often imperfection. Clean dialogue is gold, but when isolated from its context, it can feel deedless or inert. Therefore, sound from location plays a huge part in the aesthetics and the process of telling the story. Real locations and genuine performances are captured on the spot, which is why it’s not uncommon to hear directors say, “That’s not what it sounded like on the set or in the editing room,” or “It doesn’t feel like the real thing.” I think we have all been there.

I have to clarify that I am not saying that PFX are enough for the technical, aesthetic, and narrative aspects of films, but I aim to highlight them as key role players in making a strong emotional connection between a carefully constructed soundtrack, the audience, and the story.

We know that, soundwise, reality is not necessarily what best suits many of the projects we are involved in. The real thing as it exists often lacks interest and appears to be dull, which is why we endeavour in creating fascinating soundscapes, detailed actions, and dynamic mixes.

Skip Lievsay CAS (re-recording mixer and supervising sound editor on *Gravity, No Country for Old Men, Roma, Big Fish*, and many others) mentioned that in *No Country for Old Men*, they tried to experiment by using all the existing production sound, including words. “There were a few lines that were looped for clarity, but otherwise it is almost entirely production recordings because the location and production scheme allowed for clean recordings. The majority of that movie has production sound infused in all the actions; the footsteps, the running around, all the hiding of the suitcase, and the duct sequences are all based on production sound. Of course, it was sweetened with other sounds, recordings, and Foley. The backgrounds like wind were mostly added, and some elements like the gas tank were fabricated by us. The bulk of the movie is really grounded on production sound, beautiful production sound,” recalls Skip, which is one of the reasons why it feels so organic.

When asked about *Roma*, Skip was surprised that I had chosen these two projects in particular for this topic, and added, “*Roma* is similar. There is a lot of production sound and some ADR for on-camera and off-camera action. There was a ton of Foley and other sounds too, but there is production sound.
sound throughout the movie. It is not the only thing playing, but it is definitely included and referenced. The movie was mostly filmed on location. Most of the scenes are in real places and houses and the sounds recorded during production are very realistic and convincing. It is so classy and elegant to use the real sounds. That is a very good example of very high-end production sound layered with Foley and other sounds effects with Atmos, all to try to make it feel realistic and not trying to make weird sound effects, apart from specifics.”

In every industry, people make choices based on their area of work, interests, background, or their business model. For example, someone might get rid of all the production FX because they might have a Foley stage. Sometimes it’s due to acquired habits or because the delivery requirements create the need for a fully covered soundtrack. Foley or full FX coverage is usually not overdone as it’s normally justified by the need of an M&E mix. Besides, budget plays an important role in decision making. Sometimes limitations leave us with only so many options that we have to try to solve and create with what we have. Sound editors often ask what is the budget for Foley before they start removing effects from production dialogue.

As with dialogue, sounds other than words also tend to sound more natural with the boom microphone (if at an appropriate distance with good microphone technique), but it obviously depends on each project. We usually don’t have a say on the production sound approach, and production mixers are more concerned with getting clean dialogue tracks. Good production mixers are very good at isolating the dialogue. They tend not to worry too much about props or making other sounds acceptable as their main concern is for the words. Most production schedules usually don’t allow for additional recordings. But, some SFX are very specific and might be worth capturing on set, if production schedules allow for it. This is best discussed prior to the actual shoot.

Mathew Waters CAS (re-recording mixer: Game of Thrones, The Butterfly Effect, Black Sails) mentions, “I always tell my filmmaker friends to record everything when the camera is rolling. For instance, I did a film where the director had a car that had a specific sound. They shot the car with the second unit without a sound guy, so then the director was trying to explain to me the sound of the car and we got close to it, but without hearing the sound as a reference, we never could have gotten it exactly. Production effects are also important as a reference even if not used in the final mix.”

The first thing I do when I have the editor hat on is to
select and edit the production sound, extracted or separated from the dialogue to understand its role in the narrative of the scene before making specific requests to the Foley team or to other editors. On many films and shows, I usually have an intern, an assistant, or even myself going through most of the production sound and start marking it in Pro Tools to know where specific sounds are. It’s like a sound inspection with FX in mind to compile useful assets for editing and then mixing, or just as a reference. I often review the original sound for sonic cues.

Paul Hammond (dialogue editor: Space Force, Queen of the South, Tyrant) recalls, “A good production effect I used was in a show called Tyrant (episode 1), in which the dad slaps his son. I don’t know what they did on the set, but the slap was so incredible that I had to leave it in. I actually used every single microphone and gave it to the dialogue mixer. When all the mics were combined, it sounded amazing. If you watch the show, the slap is very visceral, it has all the room echo and delay on it giving it a big sound. I was asked what sound was used for the slap, and my answer was that it was all production FX; they didn’t sweeten it at all. Every now and then, a great production sound comes along that FX cannot beat. I have also found that production effects help with fights by adding to the chaos. On another show called Queen of the South, there was a good vehicle acceleration from the inside of a car. The character stepped on the gas and the acceleration was picked up from the boom mic inside the car. I knew that the FX mixer tends to like them so I left it in. Also, I think it sounded cool and when I watched the episode air, I realized that they used just that sound. It added to the character’s aggression and frustration in the moment. They couldn’t have got it like that without removing the air. That allows me to add them freely to my mix without worrying about raising the noise floor or it becoming noticeable. I have found that properly edited production effects can handle a more aggressive noise-reduction process than words can. Obviously, there are limits to each situation because we don’t want noise from the effects channels suddenly coming up in the dialogue session.

It all comes down to EQ and processing, as it’s not necessarily the same approach for dialogue as it is for other sounds like production FX. From time to time, when you declick and decrackle digital clicks in the dialogue, you might lose some of the movement, transparency, and natural feel of the real sound. On the other hand, non-real PFX can be removed with tools like iZotope RX and can usually be tackled without affecting the voice. When separating dialogue from other sounds, I often keep PFX tightly edited but without removing the air. That allows me to add them freely to my mix without worrying about raising the noise floor or it becoming noticeable. I have found that properly edited production effects can handle a more aggressive noise-reduction process than words can. Obviously, there are limits to each situation because we don’t want noise from the effects channels suddenly coming up in the dialogue session.

Editors sometimes will leave out certain FX thinking they will interfere with the dialogues. But if they can think as mixers do, they would realize that working with digital tools allows the mixer to pick and choose what works best for the given situation. An example might be leaving in (but separating if possible) glass clinks, footsteps, etc., that occur in the natural production track. It’s a matter of checking how things sound with and without production, and then deciding what needs to be replaced or added with Foley, FX, and looped dialogue.

Although every gig is different, everything that can be separated from the dialogue is normally separated, at least in non-documentary films, so that the dialogue mixer can focus on words rather than on random sounds that are happening around the dialogue. For instance, doors almost always get removed, and some others are on a case-by-case basis in order to give mixers the choice.

I try to save production sound whenever possible, even with using the alternate takes. It tends to sound much more wedded to the talking, making it the clear choice. That’s important even with full Foley coverage, layered sound effects, and ambiances.

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“When dealing with unwanted production sounds/noises in my dialogue, the first step for me would be trying to find alternate takes without the unwanted sounds present. If not solved and if possible, we’ll ADR the specific lines or words and I’ll try to graft them into production before going with all ADR. As a dialogue mixer, I approach the production sound from a dialogue perspective, and my choices are made with that in mind. My favorite dialogue editors all think from a mixer’s perspective,” says Sherry Klein CAS, (re-recording mixer: New Amsterdam, Queen of the South, Burn Notice, Jericho).

Production elements tend to work better than artificial fills for gaps. Normally, the FX mixer or the person who will do the M&E mix has to go through all the dialogue to extract all these elements from production. A lot of good stuff for M&E is on the dialogue tracks. If we keep everything in the
session, that helps for creating foreign versions and allows us to decide in the mix what is best for each scene or sequence; it gives us flexibility.

With footsteps, for example, there might be particular production sounds like when a character is walking way up into a stairway, from which you get cool reverberation and EQ changes. One might use production for that because it’s hard to replicate with Foley, but we can mix and match. We could use PFX until a certain point and then switch to Foley.

Some shows are entirely made with ADR and Foley without using any of the production sound and are successful in accomplishing the task. But even then, we might need to go and record the Foley on location because it might be difficult to do on the Foley stage. PFX can make the difference for integrating ADR, Foley, and backgrounds. These little elements extracted from production sound can be the clue for working with hard-to-match lines of ADR or Foley.

“There’s another show I worked on where a guy gets shot. The gunshot overlapped his production scream so we ADR’d it. I remember when I was putting the edit together, I liked the production scream even though it had the gunshot overlapping. But because they were going to put another gunshot on top of it—and due to my inexperience at the time—I leaned on ADR. They ended up using the ADR and it did sound great but they probably would’ve found a way to make it work on the mixing stage and most likely with better results. Sometimes that’s where the magic is, in the struggle,” says Paul Hammond.

Production sound is often preferred in films and shows shot on location, and most directors, executive producers, and producers don’t want to hear ADR, footsteps, or Foley if they don’t have to. Obviously, you can use them and mix them so they don’t hear it and, of course, that’s always the goal. As long as the signal-to-noise on the dialogue is good, you are safe, as layered sounds can cover the discrepancies. Noise is not always your enemy; learn to use it to your advantage for reality. However, the sound must be in good and healthy condition. It doesn’t help when production effects are notably or distractively lower in quality compared with the rest of the elements, including dialogue.

Sound effects that come from production mixers can be very specific due to their nature or specific actions, such as a motorcycle captured as a byproduct of working toward clean dialogue recording. But some sound effects from production are not really usable or interesting. An example might be gunshots, which often sound thin and often don’t add anything to the final mix. Similarly, there’s an issue with
production sets that don’t sound like the real thing. Cardboard sets, as I call them, look amazing on camera and make you believe that it’s happening in the real location, but they sound fake, woody, and unrealistic. At the end of the day, they’re usually built for the visuals and not for sound. There are times when an actor might be much taller than another actor in a scene and they may be put on a wooden platform to adjust for height. In that case, footsteps would then sound as if they were on a wooden floor when they should have sounded like a completely different surface. Especially when recording on a sound stage, the production sound might not work as well. “In those cases, I do not use the production, or if the production is super noisy or super muddy sounding. That being said, there is nothing better than the real sound in the real environment,” adds Mathew Waters.

It might be my perception, but it seems that the industry is shifting back to a more natural-sounding approach. Originally, sound was production-oriented accompanied with other sounds. Then, exaggerated Foley and layered FX were common. And now with all the tools, the trend is to actually evaluate what is best. Most professionals might prefer the noisy version mixed with the Foley rather than just the Foley with the backgrounds.

I remember working on a film directed by Victor Gaviria, in which I was the supervising sound editor and re-recording mixer. It was shot entirely on location with mostly non-professional actors (as is the case with many films due to the process of character creation by some directors). This scene in particular had the antagonist shouting and swearing aggressively while holding a machete, moving it around, and scraping it into the floor and other surfaces. As much as we tried to clean the sound, it was in the middle of the words, but the performance was great and there was a huge doubt about successful ADR for this scene, so we ditched the idea. Then we tried to recreate the blade in Foley to add a few more off-screen sounds and for M&E coverage, but we didn’t get the flow and aggressive expression of the original sound from location. Consequently, we had to resort to looking for additional takes. We ended up extracting it from production, only enhancing the movements with Foley but not the actual blade. I had aimed to make the film sound as natural as possible, as if a microphone placed in the original location would have picked everything up. But in the end, it was carefully constructed with a combination of a lot of production sound, Foley, a few looped lines, and meticulous work with background FX.

There was also a recent film, Days of the Whale, containing a lot of graffiti and mural painting, and nothing could match the actual sounds of the spray paint cans from production. Together with the production mixer Alejandro Escobar, we had the idea to minimize the sound of the spray cans, aiming for a clean dialogue track. They ended up being unavoidably recorded because they used real cans. However, it encompassed the outstanding dynamics, micromovements, and naturality of the performance, so we decided to use only production sound for these. Most of it was from the sync of the take, as well as from alternate takes that had the texture that matched production dialogue and the performance of the characters. They mastered the use of the tins on the wall with great finesse, a crucial element for the storytelling, and sound had to convey the same idea with the corresponding delicacies, rhythms, and intensities.

Frequently, these sneaky sounds from production have been considered as intruders when a clean dialogue is desired for editing and mixing. While they are often used only as M&E fillers, they actually have more potential. Experienced mixers tend to try hard and retain the integrity of the production sound but, ultimately, it’s a question of deciding to use PFX where appropriate.

PFX are a great thing when they work. If used appropriately by sound editors, they diminish the time and effort in blending all elements together in the mix. Their use is more evident, but not exclusively, in some dramas or even documentaries that are shot on location due to the nature and context of the sounds and the inherent organic feel. They often don’t have the full sonic color, punch, or detail that we would expect and need for the mix, but they usually have a certain character that glues together the layers of sounds. They also provide the acoustic properties of the environment in which they were recorded when used in combination with other sounds like Foley, hard FX, and backgrounds. At the end of the day, it’s a matter of telling a plausible story that is believable, but most importantly, exciting.

“EVERY NOW AND THEN, A GREAT PRODUCTION SOUND COMES ALONG THAT FX CANNOT BEAT.”

—PAUL HAMMOND
Steve Weiss CAS has returned to All Rise Season 2 for CBS. Stacey Washer is on boom (but never gets to boom) and Dennis Carlin handles utility tasks. The challenges are endless with the COVID protocol, and as many as 16 cameras recording the action.

From Philip Perkins CAS: I’ve stayed remarkably busy and virus-free so far! I’m mixing the PBS series Tell Me More with Kelly Corrigan; Josh Peterson’s indie feature Like Reply Share; PBS feature docs Irmi and The Rogers; the Mondavi Summer Sundays music and interview series; and several album projects as well. Working in a mask is no fun but we gotta do it, people!

Tom Fleischman CAS started back to work in August after a loooooooonnnng layoff on Scorsese’s documentary series about Fran Lebowitz entitled Pretend It’s a City, and is now finishing up on Ramin Bahrani’s feature film, The White Tiger.

Joe Earle CAS and Doug Andham CAS finished off their year with Emmy nominations for American Horror Story and Hollywood. Upcoming shows Pose, Snowfall, and American Crime Story will take them into 2021.

Gavin Fernandes CAS was lucky enough to be busy with local Montreal productions during the summer. While waiting for CBS’ Blood & Treasure and zombie apocalypse Brain Freeze to arrive, he’s out doing photography, getting in shape, and volunteering anywhere he can. Stay safe. Dear iZotope, please invent “De-Mask!”

Stephen Fitzmaurice CAS and David Di Pietro CAS are finishing up Season 1 of Bridgerton for Netflix at Westwind Media, followed by Season 4 of Station 19.

Devin Golub CAS is in full COVID compliance on Season 5 of the ABC comedy American Housewife. Very proud to be working alongside such a great production team. Hats off to my great sound crew of Jay Golden on boom and utility Steve Blazewick.

Woody Woodhall CAS has fortunately been keeping busy supervising sound editing and re-recording mixing through this pandemic. The CBSN Originals feature doc Welcome to Pine Lake that Woody sound designed and mixed, is streaming on CBS All Access and airing on BET. He has also sound designed and mixed a feature doc on the electronic musician Moby titled Moby Doc. It’s a surrealistic take on his life, with interviews featuring David Lynch, performances with David Bowie, and recreations and animations. It offered wonderful opportunities for sound design and is filled with Moby’s amazing music. The film will be released in early 2021. Woody is also supervising sound editor and mixer for the new Discovery series Cal Fire, which follows firefighting heroes as they save properties and lives during this, the worst season of fires ever to affect California. Stay safe out there!

Daniel Vasquez Velez CAS recently worked on some episodes of Netflix’s The Great Heist as re-recording mixer and sound editor for Blond Indian Films with supervising sound editor and sound designer Carlos Garcia.

Karol Urban CAS MPSE is enjoying mixing Stephen King’s The Stand for CBS All Access with Warren Hendriks. She has also started back on Grey’s Anatomy Season 17, as well as David E. Kelley’s new ABC drama Big Sky with Kurt Kasulke CAS.

Jon Allletcher CAS is back into full production mode on Season 8 of Chicago P.D. Weather is starting to get cold and jackets have come out. Big change from the 100+ degree temps in L.A. Happy to have my amazing crew, Jason Johnston on boom, Mike Capulli handling wiring and booming, and with us this season, Carly Perkins as our full-time sound PA.

Checking in from NBCUniversal StudioPost Sound Operations…

In the Hitchcock Theater, Jon Taylor CAS and Frank Montano are final mixing Fast 9 with the one-and-only Peter Brown, supervising sound editor.

Over on Mix 6, supervising sound editor and re-recording mixer Onnalee Blank CAS and re-recording mixer Matt Waters CAS are mixing an Amazon series titled The Underground Railroad for director Barry Jenkins.

In television…

Mark Fleming CAS and Myron Nettinga CAS (Mix 1) are mixing Panic S1 for Amazon.

Keith Rogers CAS and Ben Cook (Mix 2) are mixing Connecting S1.

Peter Nusbaum CAS and Whitney Purple CAS (Mix 5) are mixing Black-ish S7, Mixed-ish S2, and Last Man Standing S9.

John Cook CAS (Mix A) is mixing Saved By the Bell S1 and Rutherford Falls S1.

Robert Edmondson CAS and Reuben Ripley (Mix B) will begin FBI S3 and FBI: Most Wanted S2 in November.

Todd Morrissey and Eddie Bydalek (Mix C) will begin Chicago Fire S9 and Chicago P.D. S8 in November.

Derek Marcil and Gregory Watkins (Mix G) will begin Chicago Med S6 and Law & Order: SVU S22.
We cross paths with many people over the course of a career. Some are quick acquaintances, some become regular colleagues, while still others we are fortunate to call friends.

The CAS wishes to recognize those who have worked in the industry and have recently passed on, leaving a great legacy behind them to our membership.

James L. Aicholtz CAS
Re-recording Mixer and sixth President of the CAS

James Aicholtz, the sixth President of the Cinema Audio Society, passed away in August. James’ résumé as a re-recording mixer features an exhaustive list of classic Saturday-morning cartoons, for which he received six Daytime Emmy nominations. James also mixed TV movies and miniseries, including Lonesome Dove, for which he received an Emmy, and TV series such as Murder, She Wrote, for which he received an Emmy nomination. The Cinema Audio Society was able to grow and advance our mission as a result of leaders and volunteers such as James Aicholtz.

Our condolences extend as well to our friends and colleagues in the sound community who are integral to the continued growth and success of our craft and passion.

Martin “Marty” Bolger
Production Sound Mixer and Past President of IATSE Local 695

Eric Toline
Sound Mixer

Richard “Dick” Topham
Audio Services Professional

For detailed biographies, please visit the CAS website at CinemaAudioSociety.org
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Devin Golub CAS, Jay Golden on boom, and utility Steve Blazewick are in full COVID compliance on the ABC comedy *American Housewife*.

Masked and unmasked! Frank Morrone CAS MPSE, Gary Bourgeois CAS, and Michael Keeley CAS at Sound Striker Post hanging out and enjoying mixer and music stories. Three Canadian drummers can’t be beat.

Onnalee Blank CAS and Matt Waters CAS safely mixing *The Underground Railroad* for Netflix in Mix 6 at NBCUniversal.

Turns out mixing with a mask on is still super fun! – Karol Urban CAS MPSE
CONGRATULATIONS
To All The Nominees Of
The 2020 HPA Awards

With Special Recognition to
Our Warner Bros. Sound Talent

OUTSTANDING SOUND – THEATRICAL FEATURE

“JOKER”
ALAN ROBERT MURRAY, TOM OZANICH, DEAN ZUPANCIC, JASON RUDER, TOD A. MAITLAND

“IT: CHAPTER TWO”
BILL R. DEAN, NANCY NUGENT TITLE, MICHAEL KELLER, TIM LEBLANC, ERICK OCAMPO, RANDY TORRES

“AMERICAN PICKLE”
MICHAEL BABCOCK, JEREMY PEHRSON, BRANDON SPENCER, JEFF SAWYER, DAN KENYON

OUTSTANDING SOUND – EPISODIC OR NON-THEATRICAL FEATURE

“STAR TREK: PICARD – ET IN ARCADIA EGO: PART 2”
MATTHEW E. TAYLOR, TODD GRACE, ED CARR, TIM FARRELL, SEAN HEISSINGER, PETER DEVLIN

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