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Cover: Local 695 members on the job

From the Editors

Film and television production demands a high level of cooperation among its participants. The full potential of the medium is realized only when each contributor can fully exercise their skills. Some of the most successful sound work comes from teams that have worked together for years and operate in a climate of mutual trust and minimal duplication of effort. It's appropriate that this new publication is itself the product of extensive collaboration. With not one or two but three editors, the work and responsibilities are broadly divided.

With your help, we'll make the accomplishments of our members more widely known. We'll tell you about their work on the set and also product inventions or particular workflow enhancements they develop. This not only brings them well-deserved recognition, it also enhances the reputation of all sound, video recordists, video engineers, projectionists and broadcast engineers in our industry. There is an amazing diversity of specialties in Local 695. As editors, we look forward to highlighting the accomplishments of all.

We hope you'll look with favor on our new endeavor. Help us out by suggesting people whose good work deserves recognition or by writing and contributing articles. It also helps just to pass it around and share.

Fraternally, Richard Lightstone, Eric Pierce and David Waelder





Help us out by suggesting people whose good work deserves recognition or by writing and contributing articles.

From the

Business Agent



The ingenuity and skill of the artisans who built the great cathedrals are evident in stone and glass. The identities of the individual craftspeo-

ple are lost to us; only the product of their work remains to testify to their lives.

This magazine is dedicated to recognizing the contributions of the many skilled individuals who collectively ensure the success of our motion picture and television industry. Their work in audio, video and projection, today and in the past, shall not fade to black.

Good content and good reading.

lames A. Osburn



I.A.T.S.E. Local 695 **Production Sound Technicians, Television Engineers**, Video Assist Technicians and Studio Projectionists Certified & Chartered September 15, 1930 A California Nonprofit Labor Corporation Incorporated July 31, 1951, State of California Affiliated with the A.F.L.-C.I.O., California State Federation of Labor. and L.A. Central Labor Council

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QUARTERLY From the President

Well, here we are at a new beginning. This publication has been brought to fruition by the concerted efforts of the Local 695 Board of Directors and the excellent Quarterly Committee/Editorial Staff of David Waelder, Richard Lightstone and Eric Pierce. These guys have really put their considerable experience and effort into getting this off the ground and, as any of you who have ever worked on a periodical know, this means a ton of work. David has long made contributions as editor of our newsletter. Richard, past president of the Cinema Audio Society, has contributed long years behind the scenes on the CAS Journal. Eric, also Chairman of the Directory Committee and its editor, rounds out the team. Hats off and thanks to these three generous friends of the Local.



It will also be a platform to highlight the progress and achievements of our members in their work, as well as a place for us to share our new knowledge with each other. This means that rather than just another blaring sales pitch vying for your attention, you are invited and encouraged to make a contribution, so please don't be shy. We want your input, articles, suggestions and participation.

So, welcome to your new publication. We hope, like the Local itself, that you will view this effort with a sense of ownership as a shareholder in this professional peer forum. Read and enjoy!

Fraternally. Mark Ulano President I.A.T.S.E. Local 695

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Our goal for this new publication has been to create a working vehicle for keeping our members informed about history, issues, events and information essential to our survival in the workplace of these complex times. This work that we do requires a perpetual stream of information and education and we intend the 695 Quarterly to become a prominent tool in the Local's efforts to provide this stream as a service to our members.



Mark Ulano with his kids, Molly 13 and Max 10

NEWS & ANNOUNCEMENTS



············ The Actors Fund

The Actors Fund is a nonprofit, nationwide human services organization providing programs that support the unique, essential needs of all who work in entertainment and the performing arts—on stage or camera and behind the scenes.

The fund has provided more than \$500,000 in financial assistance to those affected by the WGA/AMPTP strike, with more than 60% going to help craft, technical and administrative professionals.

To get information about programs and services or to make a donation to the fund, go to www.actorsfund.org.

LAW UPDATE

New OSHA Guidelines for Booms on Green Beds

OSHA requires guard rails to be mounted at a height of 45 inches unless "barriers *such as* vertical supports" are used. OSHA has accepted the AMPTP's proposal that the 24-inch track that the sound booms travel on are an acceptable barrier allowing the guard rail to be installed above the standard 45 inches.

[Local 695 will be investigating this OSHA decision to determine the effect this will have on our members to do their jobs safely. If you are working on a set with these additional barriers installed, please call the Local so we can analyze and get your input on how these barriers are affecting how you are able to do your job effectively and safely.]

To view the document, go to www.695.com /CALOSHA-1-27-2009.pdf



Shirt and Hat

Every member of Local 695 is eligible for a free shirt and hat.

If you haven't picked yours up yet, come by the office to get yours today!

Axium Bankruptcy

A letter was sent by the Axium Bankruptcy Trustee Howard M. Ehrenberg to I.A.T.S.E. members who received checks from Axium or any of its affiliated companies in bankruptcy during the 90-day period prior to filing the bankruptcy petition. The Trustee has done this as part of collecting assets of the estate. The letter requests that the individual return money to the Trustee. The one letter the IA has seen thus far is accompanied with a printout showing the check(s) in guestion and the amount. It also threatens a collection proceeding if the money is not repaid. "We believe that this is totally improper on the part of the Trustee and this matter is being dealt with through the I.A.T.S.E. counsel in an expeditious manner to resolve this error," says I.A.T.S.E. Vice President Michael F. Miller, Jr.

If you receive a letter from the Axium Bankruptcy Trustee Howard M. Ehrenberg, please send a copy to Local 695, attention of Scott Bernard.



You can now upload a photograph to your section on the members' searchable database! Go to www.695.com and click on "Membership Directory."





EDUCATION & TRAINING

by LAURENCE B. ABRAMS



Fisher Boom One-on-One Training Continues

Local 695 is continuing to offer its "Fisher Boom: One-on-One Intensive" training sessions. Geared toward both beginners and intermediates, this hands-on training session is for sound mixers and boom operators and utility sound technicians who wish to develop their skills with a Fisher Boom. Members will work with the small and (relatively) portable Model 2/3 16-foot boom, appropriate for use on features and episodic both on stage and on location, as well as the bigger Model 6/7 20-foot to 29-foot booms, more commonly used on stage for sitcoms and audience shows. You'll learn how to build, balance and troubleshoot the boom, you'll learn about critical safety issues and you'll practice with all



the operational controls of the Fisher Boom.

The Fisher Boom is a versatile tool capable of performing work unthinkable with a traditional fishpole. Its advantages are all the more relevant now, as film cameras are being replaced by video cameras capable of shooting extremely long takes.

This training is conducted with one student and one Local 695 instructor. You'll work at your own pace while moving through a series of progressively more challenging exercises, spending as much time as you need to become proficient with this piece of equipment. If you are not currently comfortable using a Fisher Boom, you should definitely plan to attend this class. To make an appointment, contact edu@695.com.

2009-2010 Training Grant Awarded to Local 695 by the CSATTF

The Contract Services Administration Training Trust Fund (CSATTF) has again awarded a training grant to support Local 695's ongoing education & training programs. CSATTF training grants have been used to help us provide training sessions for Data Capture, Digital Audio Recording, Pro Tools, Fisher Boom, Video Assist Troubleshooting and more. In 2009, we will continue to provide this type of training. In addition to the training seminars offered directly by Local 695, the CSATTF grant will also offer reimbursement to 695 members who obtain approved third-party training for: • Pro Tools

• Final Cut Pro

For complete details on this third-party training and instructions for how to obtain a 66% reimbursement of the total training cost, please visit www.695.com or contact us at edu@695.com.

Laurence Abrams, Local 695 Education Director, has been a boom operator since joining Local 695 in 1980. Laurence has also been on the Board of Directors for 17 years and the Webmaster for www.695.com since its initial launch.

Sound Devices Visits Los Angeles to Talk About I 2 Tracks



From left: Paul Isaacs and Jon Tatooles L.A. Film School's wellequipped Hollywood screening theater provided the venue for about 85 members in attendance at Local 695's February 28, 2009, training event "Multi-Track Recording Workflow Using Sound Devices' Recorders." Sound Devices managing director lon Tatooles and principal applications engineer Paul Isaacs were on hand to explore the feature set of the new Sound Devices 788T eight input, 12-track digital audio recorder, followed by a detailed discussion of workflow issues and best practices related to digital audio acquisition. This event was sponsored by Sound Devices with additional assistance provided by Location Sound Services and Location Sound sales manager Steve Joachim. Streaming video of this event is now available at www.695.com.

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PRODUCTION SOUND ON State of Play

by Mark Ulano, CAS

We were winding down production on *Iron Man*, when I received a phone call from the producers to come and work on Kevin Macdonald's (*The Last King of Scotland*) next picture, called *State of Play*. It was based on the successful BBC miniseries from a couple of years before, where it had been set in London and was a story of political intrigue, murder and betrayal, rewritten to be set in fictionalized contemporary Washington, D.C. Among other luminaries, the cast was to include Brad Pitt, Ed Norton and others. This would evolve.

I had seen Kevin's film the previous year and had liked it very much, plus the folks calling us had always treated us well and been very supportive of the sound department's contribution. The first portion of the film would shoot in Los Angeles both in practical locations and on one of the largest newspaper/ newsroom sets ever built. The massive set was reminiscent of the set from 1976's *All the President's Men*, but it was a twostory glass-and-steel affair spanning wall-to-wall two whole stages at the Culver Studios. The rest of the work would take place in Washington, D.C., promising to be a fascinating experience as this was a presidential election year in the highly politicized capital.

A time was set for me to meet the director and discuss the project. I dug into my usual semi-obsessive prep and watched every film the director had done since the beginning of his career. I attempted to read every book and article by or about him I could get my hands on, ditto the director of photography, Rodrigo Prieto (a wonderfully talented guy). I knew it was a good situation when Kevin had set aside time for an uninterrupted discussion about his and my ideas regarding the approach for sound.

Kevin's background was nontraditional, anything but a



Mark Ulano in Washington, D.C.



Tom Hartig busy with Mark's cart, in Washington, D.C. Hollywood story. He made his mark first as an author/biographer of his grandfather, the great writer/director, Emmeric Pressberger (Michael Powell's longtime partner and codirector for the British Archer Films, e.g., *The Red Shoes, Black Narcissus* and *The Life and Death of Colonel Blimp*). Then Kevin worked as a documentarian for a long time, culminating in an Oscar win for his superb feature documentary about the tragedy of the 1972 Munich Olympics: *One Day in September*.

The meeting went very well. It was clear that he really cared about this project and that he was a committed pragmatist, determined to capture the original performances of his stel-



lar cast. He also was very clear about his intention to not glamorize D.C. but to play up its gritty underbelly, unless the "set dressing" of Washington's pomp and circumstances was on official display. This meant nights, alleyways, bureaucratic settings in public buildings, the Metro and so on. This implied a lot of potential for "run and gun," and minimal control of practical locations, ultimately resulting in an "almost documentary" feel. This also meant a mixed media approach, shooting film for most of the story but shooting Sony/Genesis HD for the official events, such as congressional hearings, news events, etc. Furthermore, there were many telephone conversations written into the script, and he wasn't yet clear about how he wanted to approach them.



We made the deal. I then contacted my friend and boom Operator of many years, Tom Hartig, to make sure he was interested and available and also Adam Blantz, our longtime utility sound technician/best boy of the sound department. Both gentlemen were available and into it. This was a triplethreat team and we would need every bit of skill. In addition, Johnny Medeiros and Peter Thorens would take on the video assist engineering tasks. These guys also made a very strong team for what would prove to be a fast-and-furious shoot.

Around this time the casting went through some changes, finalizing with Russell Crowe as the male lead, Rachel McAdams, female lead and supporting players including Ben Affleck, Helen Mirren, Robin Wright Penn, Jeff Daniels, Jason Bateman and others.

I began a more in-depth prep, beginning with the sound breakdown of the script. I always go through a script three times: first for the journey of the film, taking the ride, next a



am using a custom-built Chinhda cart. The equipment stack includes: Aviom's 16x16 digital snake, two Apple MacMinis for music playback/media management/internet, etc., Marshall rack mount double video monitor, Mux-Lab video Baluns, 7" touch screen monitors for the computers (switchable to NTSC for additional camera feeds), Fireface 400 for Master clock @48.048 sample rate, Samson C-Control matrix, roll logic for machine control, two Devas, Yamaha 01v96 VCM mixer with AES/EBU I/O to both Devas, rack-mounted Glyph Key hot swappable hard drives for music and media archiving. Power is supplied to the whole mess by a ProSine 1000W inverter with auto switching (automatically switches over to AGM **IOOAMPH** battery if external AC is disconnected, switching is undetectable and doesn't interrupt a take), sending clean, pure sine wave 110/120 AC to the cart. The ProSine is fed its AC from a Furman AR-15 II VOLTAGE REGULATOR, (95v to 145v in/120v out with soft landing for out of voltage range conditions). Also plugged into the inverter is a PSC Cart Power 12 volt isolated distribution for the native 12-volt devices in the system.

All this is connected by a single piece of blue Siamese CAT5e cable to the FOH or Front of House cart as we call the set cart. We can go up to 500 feet before we need to put a repeater into the system for another 500 feet. The FOH is a stock Backstage Ir 36" cart and on it is an SKB 10 space rack on the lower shelf, antenna mast on the upper. In the rack: Aviom modules for the other side of the snake, two Lectrosonic Venues-one upper wide band and the other lower wide band. There are two ComTek BST50b base stations, one for public monitoring and the other for private monitoring by the sound department/boom operators. These use PhaseRight antennas. An Aphex audio DA for Video assist/EPK, etc. The FOH cart is also powered by another ProSine auto switching inverter; this one is smaller and supplies 400 watts from ext. AC or the 60 AmpH AGM (glass matt) battery. There is anoth-

er MacMini on the FOH for networking with the main cart. This is useful for running Lectrosonics LecNet2 application over Apple Remote Desktop for remote monitor and control of the Venue receivers from the main cart. It also works as local terminal for the boom people to do the same from their end, if they want. If I have Internet at my end, it goes to them over this network and visa versa if the source is at their end. A single strand of CAT5e goes to the video assist engineer from the FOH cart via Mux-Lab Balun, sending program audio to his recorders and taking up to three lines of video back from him. This can be two lines of video if the client wants to hear playback in his Comteks. Then we take the video assist playback audio feed back up his Cat5e and retransmit it from the BST50b at the FOH cart.



Mark on the Metro

detailed identification of any soundrelated issues detectible on the page. From this, I generate a Q&A list. I pursue the answers to this list from all the usual suspects and then return for another reading to comb out anything I might have missed and reintegrate any new information that emerged from my research.



The telephone issues had some definition as the art department had already committed to and installed a large, digital PBX phone system into the newsroom set, requiring consultation and technical interface with the "house system." Their phone man, Stephen Castellano of CasCom, came in and programmed the system to accept our control of the specific lines for active, two-way phone scenes, a la All the President's Men. That film was famous for its groundbreaking use of live phone scenes and ultimately won Sound Oscars for the brilliant Jim Webb, Arthur Piantadosi, Les Fresholtz and Dick Alexander (all 695ers). Of course, those were the old analog phone days, so we had significant new wrinkles to work out. We ended up using the JK Audio ComPac phone interface with keypad and cellular capability.

Nonlinear, file-based multitrack recording (in my case, Zaxcom Deva) really helps with these situations. I can record multiple components at the same time, e.g., my production mix of the scene, the on-camera miking, live miking of the off-camera, as well as the telephone track, (the occasional conference call scene becomes a multiplier of this approach).

In addition to the PBX, we needed live interface with cell phones for on camera dialogue. As anyone who has done this knows, there are inherent digital delay problems, affecting both timing of the performers as well as audible overlapping sound from the cell phones, especially when the off camera side of the conversations were not from the real actors. Thankfully, Russell Crowe and the director were pros and when they ran into problems with cellular phone reception for the off-camera actor (also off-sight at her hotel), we just had the script supervisor read the off camera lines. Whatever works!



The shear physical scale and nature of construction of the newsroom set also required serious due diligence regarding RF propagation/antenna networking. We experimented with several methods, including the big PSC RF MultiMax Multi-Coupler, ultimately deciding on a primitive but effective old-school method of booming directional Batwing-style antennas with the dynamic movement of the talent. We used simple antenna splitters to cover the size of the real estate with multiple drops. Since this project, I have come to use the new A5000 CP Sennheiser helical antenna with great results and now mix it up with one A5000 CP and one Batwing. (You can read a mini-review here at *Mix Magazine* http://mixonline .com/news/headline/sennheiser-a5000cp-nab2006-042406/)

All the prep paid off as the newsroom set almost became a character unto itself. We were shooting through many layers of glass, Steadicam shots through multiple environments, up and down, in and out again. Everything went off without a hitch until, around the third week in, we suddenly experi-

enced sudden level shifts from my mixer on one of the pots. After some anxious moments, we took a global look at the system on the studio manager control application bundled with the Yamaha that revealed intermittent level changes happening on that gang of four faders. We switched out mixers to a back up unit and sent the Yamaha off to the shop. Later we learned that we had just worn out that fader and it



Adam Blantz

needed to be replaced—no big deal, although it would take a little A/B-ing in post to rematch the levels from that scene's work. Such is life in the real world.

The shooting crew was a great bunch, very collaborative, filmmakers all. The Genesis work went smoothly, as we were able to spend prep time at Panavision with the camera department listening to the bodies and transport mechanisms and maximizing whatever we could for quiet operation, quite a challenge on these primitive HD machines. Cooperative pros all, the camera crew never complained when we asked to shut off "hummy stuff." Props also worked closely with us both on the telephone stuff and also when building practical mikes into all the congressional hearing work.

The L.A. portion of the shoot came to a close and we loaded up and traveled all the gear to D.C. by caravan. It was much more efficient to just have the sound/video trailer roll to the East Coast and it certainly helped out at the end. By sheer coincidence, our next project was *Terminator Salvation* in Albuquerque, NM, and the *State of Play* transportation department was able to just drop off our trailer in New Mexico as they were passing through there on their way back home to Los Angeles. It just worked out well.

Getting to Washington, D.C., also went smoothly. We had a few days of prep time there, scouting locations and checking in the gear. We were in excellent corporate housing, luxury apartments literally a block and a half from the White House. I would end up walking there frequently, often to Ebbets Old Grill for the Maryland crab cakes and oysters.

I am originally from the East Coast and most of my family is still in the New York/New Jersey area so I was blessed with some important time with my sister, Susan, who was able to come with some of her family to visit. A rare treat in the oftenlonely world of location production. Washington, D.C.'s premier location manager. She has been operating in Washington for decades and is as connected in a town based on connections as anyone could possibly be. This was our second show working with her and her team, *(Wedding Crashers* was the first), and they achieved miracles for access and location control for us in many sensitive locations. In this Homeland Security Era, it was great having such competent colleagues securing permission for lock up, ITC, ventilation and lighting control and all the other things we sound folks want to have happen. These guys were the sound department's partners in the process and invariably got it done. Hats off.

Filming in Washington became an intensive, high-paced logistical exercise with daily challenges for all concerned. We worked in the Metro and, in fact, commandeered our own train for a night. We filmed a major press-conference scene in the open mezzanine at the Library of Congress (including cameos of quite a few denizens of the real media/political world) and had music playback for a choreographed miniballet of *Peter and the Wolf*, at the Kennedy Center. At rush hour, we had car tow dialogue with music playback on the streets surrounding the Capitol building at rush hour. An old habit of mine is to play music to the actors in car scenes as we wait or reset for the next take. Russell had asked for a particular song while we were doing this, and I happened to have it in the hard drive. Next thing we know, he decided to incorporate it into the scene and voila. Russell was singing to it live! We also had a fast-moving Steadicam dialogue scene walking through a live high school marching band playing on the steps of a famous Masonic Lodge. The director tended to prefer tiny, practical locations all over this old town so it was a lot like shooting in New York City, always filled with creative opportunities to prove that nothing is impossible for a 695 sound crew, if they love what they do! The film, State of *Play*, opened April 17. I hope you get a chance to see it. It was a great ride for all of us.

> Left: Johnny Medeiros and Peter Thorens, video assist. Below: Tom Hartig and marching band



If you should ever be hired to work on a show in D.C., hope that your film has hired the one-and-only Carol Flaisher,

Two-Camera





THE USE OF TWO CAMERAS IN DRAMATIC PRODUCTION

by Jay Patterson, CAS

In the ongoing evolution of production techniques in film and television, one of the most profound changes in episodic TV production over the last several years has been the addition of a second camera as a permanent part of the first unit. In the previous millennia, a second camera used in the first unit was a special case reserved for stunts, crowd scenes, special effects, etc. and often used in such a way that the shots achieved by the second camera did not require a synchronous soundtrack. The actual camera body used as the second camera was not required to be blimped or crystal synchronous for sound purposes, and the largest challenge for the Production Sound Department was to keep the sound of the second camera out of the appropriate soundtrack for the "Dialogue" camera Ah, nostalgia...

In the late '90s, a few extremely savvy directors in episodic television were able to successfully argue to their producers that on a few of their eight days of production, the *intelligent* use of two sync cameras would enable significantly more usable coverage of particular scenes within the time allotted, and that the expense of a fully crewed second camera would be offset by the time saved in production. The directors would carefully choose which production days would be best served by a second camera and be prepared to back up their choices with rationale, or at least rhetoric. These directors proved a point: the *intelligent* use of two cameras in what was previously a "single camera" production can be used to increase the amount of coverage within the production day. This realization, along with the increased demand for steadicam use, has brought us to today's standard operating procedure of a production carrying a "B Camera/Steadicam" unit all the time, and actually carrying three blimped, sync cameras (A and B in studio mode, with C in steadicam mode). Though this procedure was born in the world of episodic television drama, it has spread into the world of the feature film.

The impact upon the Production Sound Department, of two cameras permanently available on the set, far surpasses any technological changes that have occurred in the last 10 years, and in my opinion, has created far greater challenges to production sound than the industry-wide migration to file-based digital recording.

The essence of the issue is that with a permanent second camera, a director is no longer required to justify their use of two cameras—they are now asked to justify when they do not. The ramifications for the Production Sound Department are enormous, and new demands have been placed upon the individuals within the department. Today, a production sound mixer needs to be able to immediately address a problematic two-camera setup and persuade the director and

director of photography that there may be a solution to the situation that allows all departments to be satisfied, in the same number of setups, without being confrontational or patronizing.

The goal of dramatic filmmaking is to create a succession of pieces that when cut together create the illusion of a continuous reality. Within this context, the role of good production sound is to sell the picture, and reinforce the illusion. When cutting from a medium shot to a close-up, the sound should also change-voices should be closer, more intimate, with much less sense of the room and ambience. If the picture gets significantly closer and the sound does not, the viewer is thrown out of the illusion. The argument that this corre-16

sponding shift in perspective doesn't really matter in television, as the sound was only coming a through a three-inch speaker at best, no longer holds water. The television viewer today is listening to 5.1 surround in their home theaters, or at least decent stereo, and good production sound for television drama must approach feature quality in order to remain believable.

A significant portion of making two cameras work well in dramatic production should take place before production starts. As soon as a job is obtained, the production mixer should identify and get in touch with as much of the post-chain that has been set up. Often, the post mixers have not yet been hired, but a post supervisor is on board. They will have arranged for the telecine house, set up picture edit bays for the picture editors, and selected a post house for dialogue editing, Foley, ADR, effects, music and a dub stage. Additionally, there will be a supervisor at the post house, often extremely knowledgeable, who will completely oversee your project from the moment it leaves your hands. This person is key. Begin a dialogue with them immediately. Think of it this way: One week before the beginning of photography, the post house supervisor says to your company's post sup. that they are all together with the production mixer on technical specs, delivery format, the dailies mix and track assignments, metadata standards, etc.; your post sup. turns around and says to your producers that they are glad you are on board. Establish credibility. The next step is to converse with the editors and establish how they feel about radio mics, multi-tracking, metadata structures, etc. Let all of the people in post know that you are more than willing to try and deliver production sound in the manner that makes their life as easy as possible. Now, you are not alone. Now, when addressing any issue or individual in regards to production sound you are accurately and truthfully representing all of post sound, and are speaking on their behalf. At this stage, it is time to talk with the director of photography, and get a feel for what you can expect in the way of second-camera usage.

A Word About Radio Mics or "Just Wire Them"

Radio mics are splendid tools to provide dialogue in big, wide master shots that are impossible to boom, and provide a guide in dailies, and they can be scene savers when there is just no way to get a boom out there. But it must be pointed out over and over again that: the average lav mic is a \$400 mic, hidden under clothing, in the wrong perspective relative to camera, and conveys very little of the ambience of the scene. A boom mic costs \$2,000, is in the proper perspective, and accurately conveys the ambience. ADs dislike them—it takes minutes out of their schedule to wire the actors. Actors dislike them—the last thing they want is yet another person digging around in their wardrobe, and they know that there is a good chance they will have to loop the lines anyway because of clothing noise. Dialogue editors dislike them—not only because of the clothing noise, but also because they are so dry relative to the boom mic sound that they require the addition of ambience, culled from somewhere, in order to cut against the boom mic tracks. If clothing noise can't be dealt with, it's off to ADR. This is a lot of extra work, and the dominant paradigm, "Time = Money" is just as true in post as it is in production.

Discuss "rounds of coverage," common headroom, protecting the close-ups (remember, most of dramatic television is played in medium and close shots), and be able to converse with the DP intelligently about their concerns. Thus prepared, you have a good shot at minimizing the heartburn of having to actively talk down a setup. Develop a good working relationship with the director of

photography, based on mutual understanding and respect. Usually, this is not too difficult, as both are up against many Another piece of amazing rational is, "I want to shoot this W&T for the 'action match.' When first heard, the concept similar challenges. Both are required to deliver quality goods, in a timely manner, day after day after day. Both have to earn almost makes sense—yes, there will be a perfect action the respect of the actors-the photography, in addition to match the one and only time one cuts from the wide to the telling the story, must be flattering to the talent; the sound tighter, simultaneously photographed shot—yet the odds of ever cutting back to the wide from the tight are infinitesimal. should capture the performance well enough to prevent the actors from having to repeat the performance two weeks later A good response for this situation is to ask how long the on an ADR stage. Most DPs can light well for two cameras director intends to stay on the wide shot, and then ask if they simultaneously, yet they all will readily admit they can always would rather set up two medium shots after the master that do a better job with one. will allow a perfect *performance* match within each take.

On the set, the moment a second-camera situation looks dicey, So when do two cameras work? In general, when two cameras the boom operator should inquire whether or not the cameras can achieve two necessary eye lines on the same actor, or are actually set or not. The usual response will be, "Why? Is this pair of actors (assuming the camera is seeing four eyes), two setup bad for sound?" If the setup is untenable for sound, somecameras can work very well—as long as the focal lengths and thing must be said immediately. Ask about the entire coverage headroom are similar. If two cameras both go from medium plan and be able to suggest alternatives. If an alternate plan shots to collar points, collar points to "Sergio Leone," producworks for the director and DP, so be it. The last resort is for the tion sound gets to be tighter with each successive setup, and mixer to actually come to the set and request that the cameras all is well. One of the finest examples of this strategy used as roll separately, one after the other. The mixer's appearance on a template for production is the scheme formulated by the the set usually signifies to all concerned that there is a serious brilliant director/DP David Boyd for the TV show Friday Night sound issue at hand. For example, a master shot of 17mm is Lights for all of the football scenes. After shooting a wide set up showing all of the geography of the set design, and the master with one or two cameras, each successive setup used dynamics of the scene, and the second camera frames up a two cameras with similar focal lengths, allowing the sound head-to-toe shot of the group at the same time. This second team to work their boom mics closer with each setup, and shot could sound very well, boomed from just overhead, yet picture and sound cut like butter. "Overs" shot with singles the 17mm shot forces the boom into the ionosphere. Ask for simultaneously, usually work if the headroom is consistent separate rolls, and if granted, you've got it made. Settle for one between cameras. pass of the second camera without rolling the 17mm. Often, a bonus for the DP is that after completing the 17mm shot, they Don't be afraid to ask the director, "What's after this?" or will have a moment to slightly tweak the second camera shot "How many sizes in coverage?" When a director is reminded to improve it. that you have a solid understanding of what they are trying to accomplish, they tend to be more responsive to the occasional request from the sound department. The bane of the current-day Production Sound Department

is the "Wide and Tight" setup, where a close-up is being shot at the same time as a master shot. There are so many reasons Lastly, it is important to accept compromise. Everyone why this is not a good idea, besides for the obvious sound involved in a production regularly has to accept compromise. issue. First off, most actors save their best performance for Let a head-to-toe and a loose cowboy go down at the same time when you know the coverage will be good. The dramatic the shots that feature them prominently and many actors bridle a bit when their first run at the scene is also their closeimpact of closer sound when in a closer shot will be preserved, up. It is almost impossible to light a woman's face as well in a and camera gets an extra setup. wide shot as in a master. Unless the actor is standing perfectly still, the first camera assistant is taxed to the max keeping In summation, when there is cooperation between the direcfocus. (In my humble opinion, first camera assistants are the tor, the director of photography and the production mixer, unsung heroes of dramatic filmmaking.) Inevitably, the shot two cameras can be used effectively to save time without diminishing the quality of production sound. Work toward a will go through several takes to improve performance or focus on the tight shot, resulting in several passes of the master harmonious set. (which only needed to be shot twice), and will only be used to get into the coverage.

When Sound **Reel**



A BRIEF BACKWARD LOOK ON GLORY DAYS OF ANALOG PRODUCTION SOUND

by Scott D. Smith, CAS

"Cut! Cut! Cut!" the director yells. "Bill (the camera operator), you've got to be fully in on that move when Rachel hits her end mark. We've almost got this—let's go again, please."

Sixteen hours have elapsed since call, and the crew is now into another ½-hour meal penalty. You've drank about 12 cups of coffee, you hands are shaking, you've got a severe case of Parkinson's. The unit manager is completely apoplectic, sitting at the corner of the stage with his head in his hands. It's five takes in to a long, difficult, compound dolly move and crane shot with the two principal cast members (one of whom has to be on a plane in about seven hours). The camera operator has missed a critical mark for the second time. It's a difficult scene, and both the cast and crew are tired and cranky. The 1st calls out, "Back to one, right away please!! Come on guys, let's not fall apart. We're going again right away!"

You look at the supply reel of the Nagra. You know you should reload, but you will earn the wrath of both the director and the 1st if there is one more delay. You ask the script supervisor over the headphones how long the only complete take ran. "Two minutes and 45 seconds," she replies. You look at the machine again—there's no counter, but you think you can make it. You hit the comm button on the mixer and say to your boom op, "tell Neal (the 1st AC) quick sticks on this one!"

"On a bell, please ... and ... we're rolling!" Your fingers crossed, you roll, rattling off the slate like a late-night announcer ripping through a commercial tag line. The take goes flawlessly, until *right* at end, when the actress goes up on her line. You think they're going to call cut, but instead the director says, "that's OK; pick it up again right there." You look at the supply reel on the Nagra, which is now nearly empty, and spinning at an alarming rate of speed. Your heart is now into your throat. "Christ, why the hell

didn't I reload?" you think. The actress picks up her last line, not once, but *twice*! You look at the supply reel again. There's about 1/16" of tape left on the pack. Perspiration is dripping into your headphones. You know you're going to have your head handed to you...

"That's a cut. Great job guys, thanks for hanging in there," the director says, just as the end of the tape rolls across the heads, the end whipping around the inside cover.

You breathe a sigh of relief and wait for your heart to return to its normal spot in your chest. Grateful to have been spared a major meltdown on the part of both the 1st AD and director (who you are already on bad terms with since the day you informed him a critical take was no good due to a singing lamp), you say to your boom op, "Well, guess that's it—a little closer than I

would have liked...."

You remove the take-up reel and put in the box, labeling it "Save Tail!" in big letters, hoping the transfer operator pays attention. Just another day in the life of the production mixer in the days of tape....

It's hard to believe, but 20 years have now elapsed since the first serious challenge to tape-based analog sound recording came along, in the form of the DAT recorder in 1987. While other digital technologies such as the Sony PCM-F1, as well as studio recorders by Soundstream, Sony, Mitsubishi and



JVC were in existence prior to this date, there were no serious contenders for portable synchronous recording until the introduction of the Sony PCM-2000 in 1988.

There were problems, however: As originally conceived by Sony, the DAT format was intended for the consumer market. As such, there was no option to embed time code along with the digital data. The easy way to deal with this was to simply add an additional longitudinal time code option. Unfortunately, it was found out that the tape moved much too slowly to reproduce reliable time code. Back to the drawing board...

While Sony was trying to sort out what to do next, manufacturers such as Fostex and Stellavox quickly stepped in to fill the void. This resulted in the release of the Fostex PD-1 and the Stelladat, both or which were designed from the ground up for portable use, and included time code as part of the digital bit stream.

This now left Sony behind the pack when it came to profes-

Stellavox two-track, circa 1959

sional DAT. Seeing that they would be hard pressed to regain any market share in the niche application of DAT for production use, they instead focused their efforts on studio DAT machines and a revised semi-pro, non-time portable recorder (the TCD-D10 Pro). At the same time, other manufacturers such as Panasonic, Aiwa and Sharp would release their own versions. The race was on....

While DAT was eagerly adopted by many, it was not a foolproof medium. Early machines had no confidence monitoring, and compatibility issues arose between various machines (even those from the same manufacturer). Many production mixers were rightfully wary of the medium, despite its promise. As such, ¼" tape would continue to be used as a backup to DAT, well into the late 1990s.



How it got done at Glen-Glenn, circa 1965

The writing was on the wall, however, with the introduction of the Zaxcom Deva hard-drive recorder at NAB in the spring of 1996. While still fraught with some early bugs, it was obvious to nearly everyone that this was a complete game changer. Within 10 years, use of tape for film production would become an anachronism.

To those who have entered the production field within the past decade, tape is, for the most part, regarded in the same fashion that my daughter considers my record collection (what are those shiny black things with holes in them, Dad?). Although occasionally cumbersome and unreliable, the use of ¼" magnetic tape for production sound recording moved from being a curiosity on the set to a fully realized medium with the introduction of the Nagra III-NP (NeoPilot) recorder by Stefan Kudelski in early 1962.

Despite the advantages of ¹/₄" tape in both cost and portability, some issues still remained: Among these were the fact that most professional 35mm film cameras of the period (primarily the Mitchell BNCR) were designed to run on AC sync motors or "multi-duty" 96-volt motors (which had their own set of problems).

This meant that the pilot source required to maintain sync had to come either from the AC source or from a small sync generator on the camera, which in turn required the sound mixer to be tethered to the camera with a sync cable. This would prove to be a constant source of friction between the camera and sound department, especially when dolly shots or cranes were involved. Sound mixers during this period would keep at least two or more spare sync cables on hand, as they were sure to get mangled by either the camera dolly, or sheared off by a crew member rolling a cart over it.

While a crystal generator for the Nagra III would become

available in 1963 (followed by similar units made by Ryder Sound), crystal sync didn't become widespread until Panavision introduced a crystal controlled motor for the PSR studio camera in the late 1960s (which itself was based on a modified Mitchell BNCR design).

This also brought about a change in the makeup of the sound crew. Prior to the introduction of ¼" sync recorders, the sound crew required a recordist to operate the film recorder. In the early days of sound recording, this position required someone with the skills and knowledge to operate an optical recorder (usually 35mm). While the introduction of magnetic film in the early 1950s had less onerous requirements (magnetic recorders were generally more reliable), recorders still needed to be located

off the set. This meant they were either in a truck, or in an area which was sufficiently separated from the shooting set so that the noise generated by the recorder wouldn't be picked up. In addition, the recordist would keep the sound log (with footage counts) and monitor the film for dropouts.

With the advent of a lightweight recorder which could be operated directly by the production mixer, it didn't take long for the producers to see the opportunity to eliminate the recordist's position. By the end of 1967, it was gone.

Unlike today, production mixers during the '50s and '60s had few options when it came to recorders. While machines made Fairchild, Ampex, 3M and Rangertone were in limited use for stage work (as they all required AC power), it remained for Nagra and Stellavox to bring synchronous, battery-operated versions of their machines to market before the wholesale switch to ¼" would be complete.

The Nagra III, a tribute to Swiss engineering and the genius of Stefan Kudelski, would become the standard for production sound recording until the introduction of the Nagra 4L in 1969.

So, what have we gained in the process of change from the days of the Nagra until now?

For one, we no longer have to sweat the dreaded rollout scenario (assuming you don't run out of drive space!). Gone also are sync cables, head misalignment issues, and problems related to print-through (which could be a serious issue in scenes where dialogue would go from a whisper to a shout).

We have also gained a multitude of channels, which mixers working from the '30s through the '60s could only dream of (unless you were recording on three-track magnetic, which was a rarity usually reserved for a Fox Cinemascope picture, or doing the score for Disney's *Fantasia* on multiple optical recorders).

When one considers that stereo production recorders would not begin to see common use until the mid-1980s, we have really come a long way in a rather short time. (As Jeff Wexler



Nagra III brochure

notes, while shooting the picture *Bound for Glory* in 1975, he would have to call the transfer room at Todd-AO on the days that intended to shoot using a stereo Nagra, so that they could rent a machine for dailies transfer of the day's material).

However, with the rapid rise of multi-channel recording for music in the 1970s, it wouldn't be long before the multi-track would begin to creep into use for film production. Robert Altman would make full use of this technique for the production of *Nashville*, which employed 2" 16-track recording for the music, and eight-track 1" for the dialogue. Dailies were then sub-mixed to three-track 35mm. In 1977, a similar approach was used for the music recording on Andrew Davis' first feature *Stony Island*, which had numerous scenes where live music was employed.

Regrettably, though, with the ability to isolate virtually every input on the mixing board to an individual track, the production mixer has now given over a portion of their creative control to the editors and re-recording mixers. As Jim Webb noted recently, the intention of the multi-channel technique used on *Nashville* was to allow the blending and layering of largely improvisational dialogue, which could be manipulated to match the camera movement, as opposed to completely isolating every actor for remixing later on, as is the current practice.

While this approach certainly provides for more options further down the road (especially where multi-camera setups rule the day), it removes the mixer's contribution to the aesthetics of the production track. As a result, we have now largely become recordists instead of mixers (although one always hold out hope that the sound editor will at least listen to the main mix before resorting to individual tracks).



The ultimate in multi-track production sound. Jim Webb's eight-track setup, circa 1975

So, while we have certainly made progress technically since the days of tape, one can argue that an element of creativity has gone by the wayside.

Mr. Smith has worked in film sound recording and music for the past 35 years, and was instrumental in the design and construction of the 16-track sound truck used on the movie Nashville.

INVENTIONS & INNOVATIONS

ASSIMILATED INTO THE COLLECTIVE

My First Days as a Cyborg





by Jeff Erdmann

From top: The Eyetop DVD box seen on eBay, with clear glasses-false advertising! GBA and tuner separate. The Nintendo Game Boy Advance with tuner attached.

Believe it or not, my sleuthing led me to the Nintendo Game Boy Advance, with a third-party TV tuner. Again, all of this I found on eBay, and the whole system cost about \$50.

The tuner is capable of tuning automatically or manually, using channels or frequencies, and has an A/V input which, upon powering up, can be switched to an A/V OUTPUT! Unfortunately, this must be done every time the unit is switched off and back on. Programming channels is a bit unwieldy, but once they are set, the tuner goes straight to them nicely.

Trial Run

About a week later, the FedEx guy showed up with everything. I plugged it all in, donned the glasses (which were MUCH DARKER than the image on the box): and boomed a small scene with two actors. As I feared, the glasses were too dark to use indoors, and my peripheral vision was zero. The actors were intrigued by the new toy, but I think the whole "Terminator" image was a bit distracting.

The clarity of the video was better than I expected. The Eyetop is 320x240, but the Game Boy only spits out 240x160. I could clearly see the frame, and all I needed to do was glance down slightly. Great!

But the sunglasses had to go.

Evolution

That night I went home, expecting to break out the RotoZip to extract the video unit from the sunglasses. Then I thought...

POP! They came right off, and all I was left with was the arm and the cords hanging out of it. I unplugged the earbuds, and had to tape the remaining arm together, as it began to fall apart like a Rubik's Cube missing a corner.

I considered attaching the monitor to a hat but finally decided on going directly to the headphones. This seemed the best way to bolt the thing to my head. So I carefully drilled a hole in a brand-new set of Sony MDR-7506 headphones, which would retain the same angle as the sunglasses. (I had some older headphones, but they were too stretched out to stay secure on my skull.)



Video control unit (brightness, contrast, etc.)



The wingnut holding the whole thing together. Very high-tech!



Battery with charger

I then took two small metal clamps from an old "solderer's helper" kit (you know, with the alligator clips?) They were too long, so I RotoZipped the bottoms off, which accidentally made them latch together when tightened down ... a happy accident! Perfect.

I took it to the set the next day, and it worked GREAT! ... for an hour. Then the batteries in the receiver died. This thing is a battery hog. It has an external 4.5v input, so I went to Home Depot and bought a 6v cordless nail gun battery.



Dramatic re-creation

Fully charged, the battery puts out close to seven volts. I was concerned the slightly higher voltage would be a problem. When I use a freshly charged battery, the tuner takes about 30 seconds to remember what channel it's on, but it hasn't blown up yet! I rigged three of them, and rotate them in every three hours, with the whole system running almost constantly.

Final Analysis

Now I have full access to either camera's image, and the ability to adjust to changes in the frame without the assistance of the mixer. It's especially helpful for steadicam shots or extreme dolly push ins/pull outs.

One thing I would do differently on the next version is to make some sort of "flip up" version. (*"Luke, you've switched off your targeting computer!"*) As it is, I push the right pad off my ear and the monitor parks on my right cheek. Not perfect, but functional.

The cable going from the monitor to the power unit is only two feet long, requiring the use of the supplied backpack. It's small and light but not ideal for tight quarters.

The UHF Game Boy receiver is the weakest element in my little prototype. It is bulky, finicky, and can lose its memory if you accidentally hit the wrong button combo. If anyone reading this article knows of alternative video receivers, I'd love to hear your input. You can contact me at jeffsoundman@yahoo.com.

Still, all in all, I consider this prototype to be a success. I just boomed a TV pilot which didn't use any transmitters. Everything went fine, but I did miss my new toy. I'm looking forward to my next show having some form of video transmission, and if it doesn't, I may just have to go shopping again.

Some of Jeff Erdmann's credits include The Pretender, 7th Heaven and Monk.



Another angle of the VCU

A 'look' through the CyberEye



What Every Video Engineer Should Know and How to Survive the New Age of Digital Media

When I began working as a video engineer in the film industry, our jobs were all about 24-frame video. We used modified 3/4" decks, modified video cameras and proprietary film camera sync boxes. Every monitor had to be opened up, often modified, and adjusted to be fed by our proprietary equipment in order to be photographed during production. All of the playback material was sent to one of just a few shops in town that had the specially modified standards converters, and the ability and knowledge to convert and color correct the video elements so that they could be used with all of the 24-frame video equipment. There was always the fear, especially from production, that one of these complicated devices wouldn't function correctly and the TV would flicker, have a shutter artifact (bar) or make the camera run off speed, etc. A "burn-in" to fix the problem after the fact was not an option, due to CGI's high cost and noticeably poor quality at the time.



There was an air of mystery around every aspect of our job, which established the 24-frame video engineers as specialists in a very small niche of the film industry.

In the years following, society grew more comfortable with technology. In the '90s, within the run of one television series, we went from the most sophisticated electronics being a pager in your pocket and VCR in the living room to everyone

on-set using digital cell phones and having high-speed wireless Internet at home.

How often does someone come to you on set and ask what computer/TV/camera to buy? There is still the notion that the video engineer may have the answers and we need to maintain that perception. The only way to do that is to possess a reasonably solid knowledge of current technology.

Hopefully, you're in this business because you enjoy the creative process and find the technology interesting. It seems that most Local 695 members, particularly the engineers, are especially intrigued with equipment. It might be the computer they built for graphics, their audiophile rig at home, or the meticulously crafted package they use at work, but there's usually a spark in their eye when a conversation leans toward gear they're passionate about. Bringing these interests out can also help portray a knowledgeable resource and valuable contributor to the modern production crew.

We are fortunate that Local 695 offers a variety of instructional materials that every member should attempt to benefit from. There are also numerous online websites like "wikipedia" that are an incredible resource for our continued educations. Rekindle your childhood curiosities and fill in any gaps in your engineering knowledge without hesitation.

Things every video engineer should know:

- •• Basic video theories, signal types and connections (sync bi/ tri-level, impedance termination, interlacing, Y/C, component, VGA, DVI, HDMI, SDI, HD-SDI, etc.)
- •• Video standards, frame rates and common aspect ratio practices (NTSC, PAL, SECAM, 23.98, 24, 24.02, 25, 29.97, 4:3, 1.85, 16:9, anamorphic, etc.)
- •• Color temperature, white balance, Gamma and those pesky image controls
- •• HDTV standards (480p, 720p, 1080i, 1080p, etc.)
- •• Common encoding/compression schemes (CCIR601, MPEG-2/4, H.264, etc.)
- •• How to properly wrap and tie cables (you'd be surprised)
- •• How to check for DC vs. AC
- •• Proper electrical shielding, grounding, ground loops/ potential, etc.
- •• Common media formats (DVD+/-/RAM, DV/HDV, Beta/DigiBeta, XDCAM/HD, P2, CompactFlash, etc.

- •• Basic Mac/Windows use and operation
- •• Production "set-iquette" (hierarchy, jurisdictions, standard studio practices, etc.)

Other things that you should eventually become competent with, if not already: •• Digital video camera workflows

- •• Apple Final Cut Pro
- •• Apple Quicktime Pro (worth the \$30)
- •• Adobe Photoshop
- •• Adobe Director
- •• How to crimp BNC connectors
- •• How to punch-down Cat5/6 cables/connectors
- •• How to wire a U-Ground electrical connector
- •• General knowledge of how film cameras work in regards to shutter angles, exposure, filters and stops. Specifically, camera synchronization, necessary accessory boxes, cables and connectors and potential different setups for different kinds of cameras (Arri, Panavision, MovieCam, etc.)
- •• Basic electrical theory (Ohm's Law, Watt's Law, etc.)
- •• How to set up and operate most professional video decks, production switchers, matrix routers and video cameras
- •• Basic understanding of Ethernet networking
- •• High-end video cards, RAIDs, Fibre Channel, SANs, etc.

Technology is advancing at an exponential rate. Even as the general population becomes more aware of emerging technologies, equipment is getting even more varied and sophisticated. This offers opportunity for us to maintain our standing and respect as experts in new media.

The transition from film and tape into the digital solid-state world presents new workflow patterns. Producers and crews are still struggling to understand the implications. We need to know these technologies and continue to provide not only the logical, but the most skilled workers for the jobs related to sound and video engineering. As our industry evolves, we must maintain a membership that is knowledgeable, passionate and capable of not only maintaining the long-established positions, but enthusiastically tackling these new jobs in our arena as they develop.

In the next few installments, I will attempt to cover a few of the new tools and technologies that modern video-for-film engineers employ during production.

Ben has always had a passion for integrating audio, video and computer technology. He holds a bachelor of science degree in telecommunications management, is active in I.A.T.S.E. Local 695, a licensed C10 Electrical Contractor and THX-Certified Engineer. Among his work experience, he built one of the first microcumputer CGI-rendering farms for Amblin Imaging, logged more than 12 years as supervising engineer on Paramount's various Star Trek TV series and feature films, recently acted as video technical director for Studio 60 on the Sunset Strip, and currently is the key video engineer on NBC's Chuck at Warner Bros.



There really are no textbooks for operating a fishpole; the knowledge base, so to speak, is an oral tradition. Local 695 has conducted Fisher Boom seminars, (now streaming at 695.com) but fishpole training is practically nonexistent. Many boom operators instruct their utilities to do as they do for the most part. Outside of that, most novices copy what they see others doing, or improvise situationaly.

A result of this has been the development of a variety of techniques, styles and opinions on the art. Some of these are vestiges of older days, when poles and mikes were considerably heavier, like the EV DL-242, a dynamic shotgun that sported a 5-lb magnet surrounding the barrel, which made a Fisher necessary. When the new condenser mikes came in, the studio sound departments tried a variety of solutions for placing the newly necessary power supplies. Universal supplied some bulky outboard boxes for their new three-pot mixers. When I asked once why the powering hadn't been built inboard, I was told, "The guy was sick that day." The always idiosyncratic Burbank Studios Sound Department thoughtfully mounted the new power supplies directly on the shock mounts.

As location work increased and the mikes became lighter,

Fisher Booms were often regarded as inconvenient. Fishpoles, usually jerry-rigged from painting poles, came into more common use. Many older boom operators liked to work principally off of ladders; it simulated the geometry of a Fisher Boom, and facilitated reaching over the hard, flat light more common in those days. Also, as with a Fisher, you could mark your turf for the crew.

by Andy Rovins

One boom operator I cabled for strongly urged I adopt this technique. I never felt comfortable on ladders. I always preferred the flexibility of being on my feet. In fact, I think that the discovery of that flexibility was as much a contribution to the decline of the Fisher as the popularization of practical sets. Younger boomers, unused to Fishers, didn't think they were worth the trouble, a view with which the grip and electric crew usually concurred. Now that use of hi-def camera has introduced extended takes (keep rolling, reset, action!), there is new interest in the Fishers as a remedy for fatigue.

Carbon fiber poles, slimmer shock mounts and the Schoeps GVC also afforded advantages that were lost on the Fishers. A likewise innovation was the wireless boom. Originally it was a jerry-rigged accommodation to steadicam shots; a clumsy rig, but it worked. Then the first Lectrosonics VHF buttplugs (excuse me, plug-on transmitters), with integrated T-powering,



In ^{&3} Memoriam

JEAN L. CLARK Boom Operator Oct. 18, 1945 – Jan. 11, 2009

GEORGE GEREN Utility Sound Technician Sept. 7, 1942 – Dec. 10, 2008

DAVID J. CAZARES Boom Operator Aug. 3, 1950 – Nov. 28, 2008

DOUGLAS L. ADAM Videotape July 13, 1939 – Nov. 8, 2008

DONALD W. JOHNSON Projectionist July 7, 1927 – Nov. 6, 2008

DAVID ALLEN SMITH Boom Operator June 11, 1958 – Oct. 21, 2008



My beloved friend and boom operator, David Allen Smith, died unexpectedly on the eve of October 21 in his Los Angeles apartment of medical causes. He had had several serious medical challenges over the past year. David collapsed on the set in June with pancreatitis and developed a staff infection in his brain while being hospitalized and became severely disabled. After being confined to a walker, he had done an extraordinary job of rehabilitating himself. Two weeks before his death, he was riding his bicycle, lifting weights and preparing for his first movie since June. David mentioned not feeling well over the past week.

He was, simply put, an amazing person. He was a very talented painter and cartoonist. He taught art to kids in the neighborhood where he lived. Many people on and off the set enjoyed his work. On set he would draw at lunchtime or get inspiration by something in between setups, do a cartoon and pass it around. The humor in his art made people laugh. He often gave cartoons to actors in appreciation.

He was also an amazing guitarist and singer. For those lucky enough to jam with him or be the audience in the crew hotel restaurant after work, it truly was an experience. His songs were emotional, and I will never forget the night he sang Cat Stevens at the El Canto Hotel in Las Cruces and he sounded exactly like Cat Stevens.

It moved us to tears.

David was philosophical and highly intellectual. His mother impressed upon him the need for philosophy in his life. It helped shape his charm and gentleness on and off the set.

He was a career boom operator of 25 years. With his keen ear and quiet set manner he worked with some of the best. His career started with Coppola's *Rumblefish* and included Ace Ventura, The Locusts, Vertical Limit, Hidalgo, The Missing, Hostage, Meet Dave, Street Kings, The Burning Plain, to name a few. He also earned an Oscar nomination as part of the sound team on The Mask of Zorro.

David and I were introduced by boom operator Dave Roberts. Our first movie together was a collaboration that worked well from the beginning. We became fast friends and family. We expected to be working together as a team until we both retired. I will miss him more than I can say.

David had just turned 50 and is survived by his wife Tatiana, his brothers, his father and his dog Pasha of 18 years who he always joked would outlive him.

– Lori Dovi, CAS



Golf Tournament in Dave's Honor

Some of Dave's good friends are organizing a golf tournament to be held on June 27, 2009, in Solana Beach, Calif.

We are holding this event to raise money to provide art supplies to young artists who are underprivileged and in need of assistance in Dave's hometown of Oceanside.

Visit www.dasmemorialgolftournament.com for more information.

All golfers, regardless of degree of skill are welcome, and we are also accepting donations.

I'd like to thank you, Dave's peers, for your attention and I hope to see you on the golf course.

Steve Smith, Dave's brother, proudly