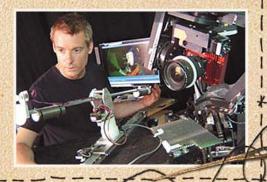




eratine is the first-ever stop-motion animated feature to be conceived and shot entirely in Stereoscopic 3-D.









MERA OPERATOR

Cover



ensemble cast of Glee by Matthias Clamer/FOX.



The Glee Club sings your way Wednesday nights on Fox. Glee photo by Matthias Clamer/FOX

Features

Shooting Civil-ly by Dan Kneece SOC

Making a film with University of South Carolina film school students.



Life on Glee

by Jack Messitt SOC

The show is a visually spectacular achievement for its two Camera Operators, DP and camera crew.



Greening Your World by Aiken Weiss SOC

Ways to reduce your carbon footprint, both on and off



Departments

- 2 President's Letter by Dan Kneece SOC
- 5 Editor's Message by Jack Messitt SOC
- 6 News & Notes SOC events and workshops.
- 40 Hi-Def with Jeff by Jeff Cree SOC

44 Book Review

by Georgia Packard SOC A look at "The Camera Assistant's Manual, 5th Edition," by David E Elkins SOC

- 46 Advertisers' Index
- 47 Last Take
- 48 Roster of the SOC as of 10/30/09

Letter from the President

As President of this great organization, I am blessed with the task of doing all I can to expand the skills and minds of SOC members and nonmembers alike with regard to the art and craft of the Camera Operator. It is a task I do not take lightly. I truly love the job of Camera Operator and know



that anyone else drawn to this occupation must love it just as much or they wouldn't go through what we have to go through to make it in this business. It takes hard work, dedication and a true love of what we do. There are really no other reasons to do it.

In reality, we could make just as much money as plumbers and we'd have a lot more customers. Still, there's something about peering through the viewfinder as a great performance unfolds before you that just can't be put into words. It's an amazing experience and we're lucky enough to capture these moments for the rest of the world to see.

If we're really lucky something happens between us and the rest of the movie, allowing us to capture that elusive magic that makes a film truly special. Somehow we're in the right place at the right time when the actor throws us that look. It's the look that defines the film for us and in turn for our audience. It only happens on one take, but we're lucky enough to be in just the right spot to capture that look in all its glory and we know it the moment it happens. The performance is right. The focus is sharp and our framing is just where it needs to be.

A good Camera Operator can make these shots look easy. A great Camera Operator can do this while never letting the audience know he was there. On occasion, we take our time and energy to organize and recognize the work of the many amazing Camera Operators of the past year and pick one as "Camera Operator Of The Year" at the SOC Lifetime Achievement Awards. We also recognize the life's work of Camera Operators, Camera Technicians, Mobile Camera Platform Operators and many others in our industry. We truly love to have the Lifetime Achievement Awards as those that participate are our friends, co-workers, and the other amazing artists in this industry we call the movies.

The past SOC Lifetime Achievement Awards presentations were truly amazing, but as much as we'd like to have another right away, unfortunately we can't. For the past two years this economy has taken a toll on many Americans. The SOC is no different. The Awards are an expensive undertaking and we as a non-profit are feeling the crunch.

As SOC President, it is my job to protect this organization and guide it in a responsible manner so we will be around for many years to come. That said, I have to inform you, with great regret, that we must postpone our awards for a while. Not for a long while mind you, but long enough for us to

prepare and fund the show you have come to love and expect. Fear not! We will be stronger and better for it.

We will support The Vision Center at Childrens Hospital Los Angeles, our members, and our many friends as we always have in the past. We will continue to provide training for those who want to learn, and guidance for those who need advice. The SOC is here for you as we've always been. Our wonderful magazine, *Camera Operator*, will still come to your door and our website is still there for your pleasure. As always we appreciate your support.

Sincerely,

Dan Kneece, SOC President

SOCIETY OF CAMERA OPERATORS

OFFICERS

President	Dan Kneece
1st Vice President	Jack Messitt
2nd Vice President	David Mahlmann
3rd Vice President	Bonnie Blake
Treasurer	Warren Yeager
Recording Secretary.	Dan Gold
Sergeant-at-Arms	Warren Yeager

BOARD MEMBER COMMITTEE CHAIRS

DUARD MEMBER COMMITTEE CH	AIKS
Awards David A	//ahlmann
Charities Bor	nie Blake
Communications	
Corporate Liaison David N	
COY Awards	Dan Gold
East Coast SOC Rep Ale	x Jarnagin
Events	
Education Ste	
Membership Michael (Chambliss
Merchandising & Promotions Ail	ken Weiss
Publications Ja	ck Messitt
Publicity	
Technical Standards Erw	
President Emeritus David J	

BOARD MEMBERS AT LARGE

Aldo Antonelli Douglas Knapp
Susan A Campbell George B Stephenson
Dan Coplan Christopher Tufty
Samuel "Buddy" Fries Ron Vidor

STAFF AND CONSULTANTS

Office Administrator	Diana Penilla
Webmaster	Gregory White
Publications Manager	Douglas Knapp
Publications Layout	
PublishersIr	ngleDodd Publishing
Calligrapher	Carrie Imai
Legal Reps David Adels	tein, Geffner & Bush

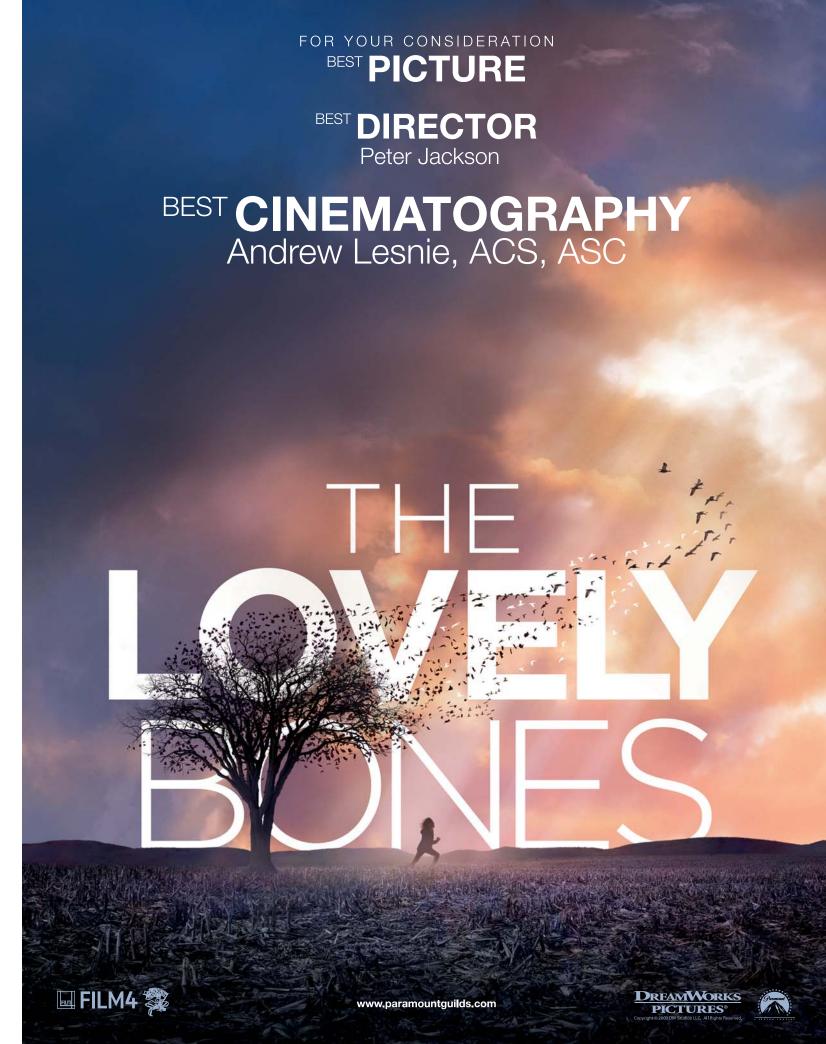


Camera Operator is published three times a year by the Society of Camera Operators.

Subscription Rates USA \$20/year

Outside USA \$28/year (U.S. Funds Only)

Visit the SOC web site www.soc.org



"Gorgeous. An Achievement. Shot in the Most Pristine Black and White with a Camera Whose Stillness Casts an Ominous Air of Judgment, the Movie Looks a Series of Gelatin-Tin Photographs from the Start of the 19th Century."

- Wesley Morris, THE BOSTON GLOBE

"Photographed in Brilliant, Silvery Monochrome, 'The White Ribbon' is the Work of Someone Whose Sense of Craft and Sense of Filmmaking Self are Bone-Deep."

- Michael Phillips, CHICAGO TRIBUNE

CINEMATOGRAPHER OF THE YEAR
Hamilton Behind the Camera Award

- EUROPEAN FILM AWARD -BEST CINEMATOGRAPHY Nominee



THE WHITE RIBBON

BEST CINEMATOGRAPHY Christian Berger, AAC

SONY PICTURES CLASSICS™
© 2009 SONY PICTURES ENTERTAINMENT INC.

Editor's Message

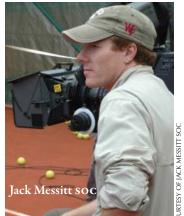
One day at a time...

During my visit to the set of Glee, I had a great time talking to B-Camera Operator Duane Mieliwocki about his recent move from camera assistant to camera operator. This is a difficult time for any operator because there are so many lessons to learn.

Being a good operator is much more than just being proficient on

the wheels. Because 90% of our jobs happen when the camera is not rolling, how you react to the ups and downs of life on the set will set you apart in a much more drastic way than your ability to pull off a tricky shot.

No shot happens in a vacuum. It takes every department working together in order to be successful. As an operator, you become an ambassador for the camera department. You are a liaison, interacting with every department on the set in order to pull off what you have been asked to do. Therefore, knowing how to ask for what you need in order to successfully complete a shot is an art that is just as important as



being instinctive with a fluid head.

Working so closely with the Director and the Director of Photography, you need to understand how to add to a shot while staying within their original vision. And more than knowing what to add, you need to know how to offer your idea in a way that works for those around you.

An operator needs to know how to adapt. Flexibility is the key, especially as a day player (an unsung hero of any project). A good operator can move within different visual styles with ease and, more importantly, can navigate through the maze of the various working atmospheres of each new set.

Unfortunately, these lessons cannot be put into a book. They need to be learned through first hand

experience. Some of them come easily, but most are learned the hard way. As your career progresses, you will reach into your past experience to tackle each new challenge in a way that you couldn't have when you were a younger operator.

Mieliwocki said that his perception of the operator's job changes with each day. It does for us all. There is no substitute for the lessons learned through on-the-job experience—because these invaluable lessons are exactly what will make Mieliwocki stand out as he continues through this exciting career.

Jack Messitt soc

CAMERA OPERATOR FALL/WINTER 2009

CONTRIBUTORS

Mark August
Dan Coplan SOC
Jeffrey Cree SOC
David Mahlmann SOC
Douglas Knapp SOC
Dan Kneece SOC
Jack Messitt SOC
Georgia Packard SOC
Aiken Weiss SOC

PHOTOGRAPHY

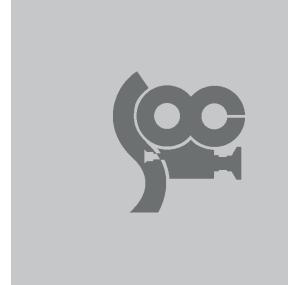
Carin Baer
Matthias Clamer
Alyssa DeMilio
Patrick Ecclesine
Amanda Etheridge
Bob Feller
Robert Finkelstein
David Frederick SOC
Brian Harmon
Dan Kneece SOC
Carmen McKee
Cynthia Pusheck
Aiken Weiss SOC
Jana Williams
Michael Yarish

For display advertising information, contact:
Dan Dodd
(310) 207-4410 x236
fax: (310) 207-1055
Dan@IngleDodd.com

For article submissions, please contact:

SOC Attn Magazine PO Box 2006 Toluca Lake, CA 91610 Phone (818) 382-7070

© 2009 by the Society of Camera Operators



Fall/Winter 2009 CAMERA OPERATOR: EDITOR'S MESSAGE

News & Notes



What's going on with members and in the industry

News & Notes in this issue:

SOC Turns 306
Cineped Workshop8
3 Power Strategies Workshop8
SOC delivers check to Vision Center,
plans new documentary10
New SOC Membership Directory
in the works10
Operator Workshop 101



VISION IS A GIFT

THE SOC PROUDLY SUPPORTS





Presenter Ross Matthews and SOC President Dan Kneece.

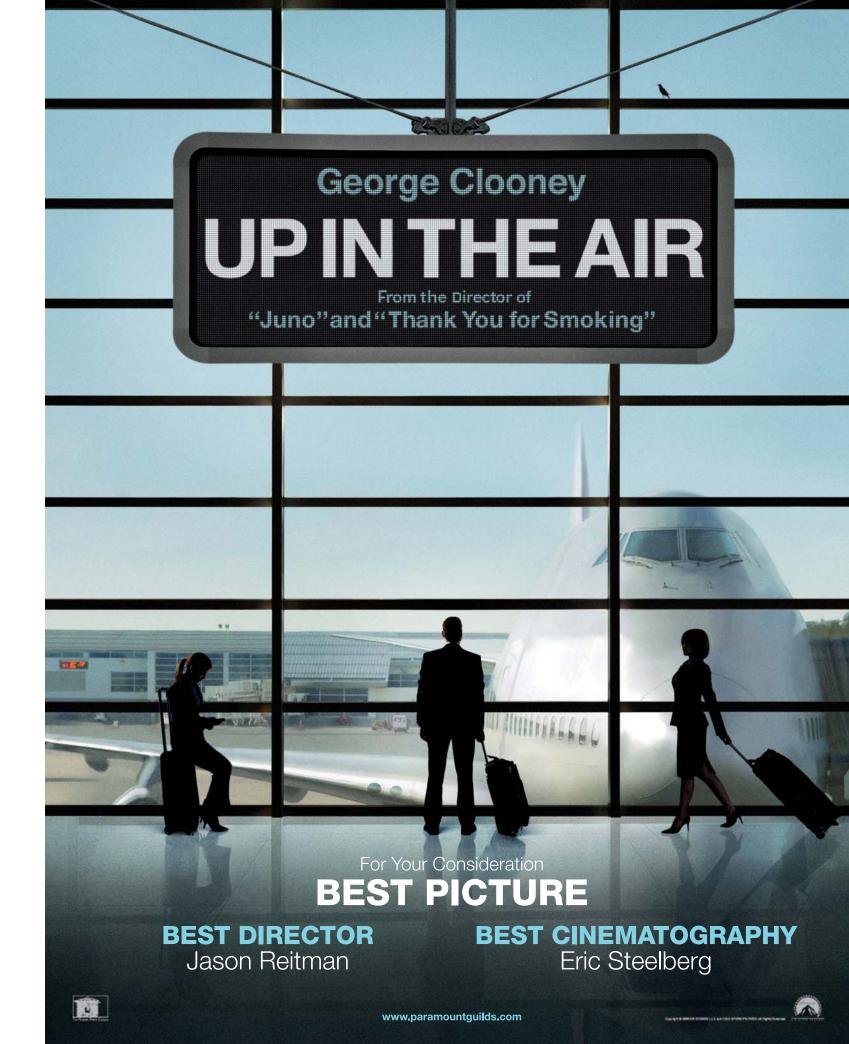


Fuji presented this cake honoring the SOC's 30th anniversary.

Fuji chose Cine Gear Expo after the SOC panel as the venue for celebrating the SOC's 30th anniversary with a cake and an award. On behalf of Fuji, Ross Mathews (aka Ross the Intern from the Jay Leno Show), presented the award to SOC President Dan Kneece and invited the SOC to enjoy their special cake.



SOC President Dan Kneece accepts the award from Fuji, while Karen Beck and Mark August look on. Warren Yeager SOC is behind Dan.





SOC President Dan Kneece supervises the assembly of a Cineped. Manolo Rojas, David Goldenberg (black hat), former SOC President Mike Frediani (center, arms crossed) and other attendees observe. Mike was another of the instructors at the workshop.

Cineped Workshop

A ssociate Member Chol Kim held an exclusive Cineped workshop in Downtown Los Angeles. SOC members learned unique solutions to impossible shots.

The Cineped's versatile camera support system allows fast,

easy camera placement in tight spots, without restricting camera movement.

Members learned new set-ups in 60 seconds and how to convert the Cineped from standard mode, to low mode, to tabletop mode in seconds.



3 Power Strategies for Getting the Jobs YOU Want

Jessica Sitomer had a full house workshop unlike any past SOC event! Members and guest were given more hands on proactive strategies to network and understand how to find a new way to networking within the film industry.

Jessica Sitomer advising a gathering of SOC members.



CAMERA OPERATOR: NEWS & NOTES Fall/Winter 2009

SOC delivers check to Vision Center, plans new documentary



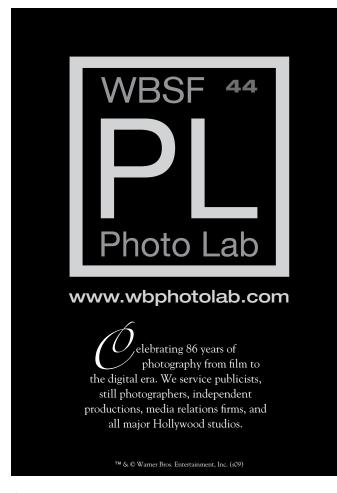
Presenting an SOC check to the Vision Center at Childrens Hospital LA: SOC members George Leon SOC, Dan Kneece and David Mahlmann flank Dr Natalia Uribe OD and Dr Mark Borchert.

Not only did the SOC present a check to the Vision Center at Childrens Hospital Los Angeles recently, but it also unveiled George Leon SOC's new plan: as a donation from the SOC, he will create a complete media package for the Vision Center, including a documentary, PSAs, and a presentation for the SOC Lifetime Achievement Awards.

This announcement was very well received by the Vision Center, and provides the SOC with another way to support the great work being done there.



Fall/Winter 2009



New SOC Membership Directory in the works

You will soon receive an email to confirm or update your contact information. Please respond quickly—we need your input to assure accuracy.

You will be able to correct outdated information as well as refer us to people you want to receive a copy of the new SOC Directory.

Available in early 2010, the book will be a valuable resource for industry professionals looking to hire SOC members: Operators, Assistants, and Directors of Photography.

If you do not receive an SOC Membership Directory email by December 15th, 2009, please contact us at:

SOCDirectory@gmail.com

10

818 382-7070

Along with our website (**SOC.ORG**), the SOC is working hard to give its members the very best in networking tools.



10 Camera Operator: News & Notes



Lance Fisher (straw hat, one of the instructors), Javier Costa (orange shirt), and other workshop attendees watch as Terry Schroth operates the Technocrane.

Operator Workshop 101

The most recent Operator Workshop 101 gave an opportunity to practice hands on skills with the Technocrane, the new Louma2 Crane and standard geared heads.

Representatives and techs from Panavision Remotes and the new



An attendee works the wheels on the Panahead with Millenium Camera.

Louma2 were on hand to answer questions, and of course, SOC operators were given hands on advice from DP's Michael Goi ASC and Roy Wagner ASC, who helped participants hone their skills on the Panavision sound stage from behind the camera.



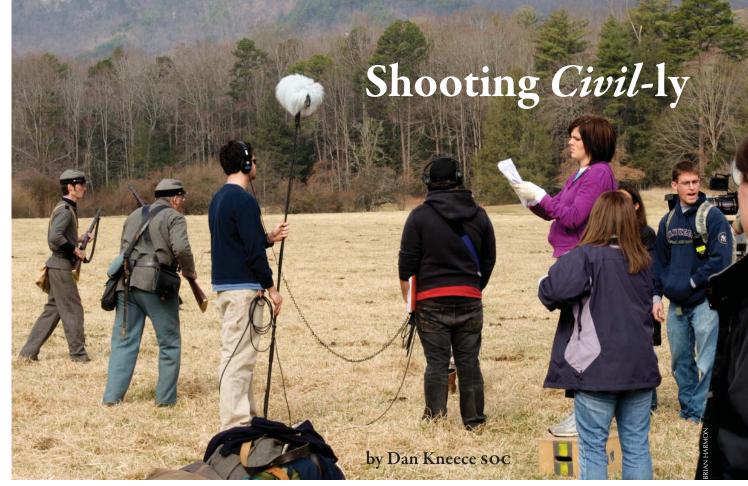
Roy Wagner ASC, as a workshop instructor, stands tall on a ladder to adjust a light and address the attendees.





12 CAMERA OPERATOR: NEWS & NOTES Fall/Winter 2009







Rick Kelly, Austin Behan and Jeff Moore soc execute a dramatic dolly shot.

Joel Homovich, David Smith, Daniel Jaocb, Alex Gilson, Amanda Etheridge, Monica D'Onofrio, Ben Kilmer prepare for the big opening battle.

As you know, the SOC is dedicated to many things. We support the Art and Craft of the Camera Operator. We support the Vision Center at Childrens Hospital Los Angeles. We also support education of our members.

It is through this policy of education that we reach out to institutions of higher learning to share our knowledge with students as well.

The following story came out of this desire to share our educational desires with those that seek this knowledge.

aving received three degrees from the University of South Carolina (two in Media Arts), I try to give back whenever possible. This usually means lectures, advice or meeting with students, but this time was different.

On August 1st 2008 I received an email from Karla Berry, head of the University of South Carolina's Media Arts Department. She talked to me about the next project for the South Carolina

Fall/Winter 2009 CAMERA OPERATOR: CIVIL 15



Dan Kneece soc (center) answers questions for Dan Turek and Amanda Etheridge.

Production Fund (SCPF). Overseen by the South Carolina Film Commission in cooperation with the University of South Carolina, the SCPF was established to help develop South Carolina's filmmaking potential. Managed by Tom Clark and overseen by Jeff Monks, the fund allows local writers to submit scripts for evaluation and possible production.

Civil, written by Erik Adolphson, was the selected script for the year and was being produced by Dane Lillegard.

When Dane first called, it started out as an advice situation. As we talked and later met, I could tell he was interested

in having me join *Civil* as Director of Photography. This was very interesting for me for several reasons.

First was the subject matter. I grew up in rural South Carolina surrounded by Civil and Revolutionary War battlegrounds. I had been fascinated with this history since my beginning, so it was a subject I could sink my teeth into.

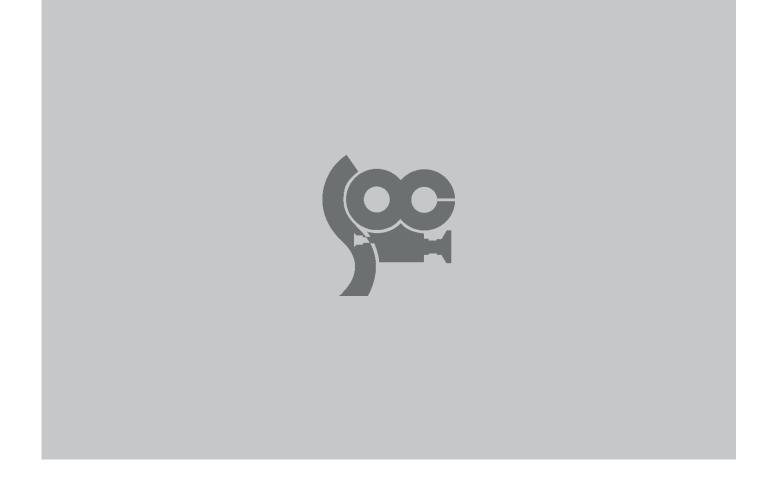
Second, it was a unique way to give back to my state and university, sharing skills and knowledge that were not common there. More than that, I could quench the thirst for knowledge of students that filled the chairs I once sat in. I remember what it meant to me when someone who was actually out there doing the work came and spoke, sharing their experiences. It let me know that my dreams weren't impossible... that it could actually be

done... that there was a chance that I could do it too.

Lastly, it gave me a chance to show how things are done on a real movie to people who had never been on a set before. I was able to show the proper camera department staffing, including the proper use of a Camera Operator and how much of an asset a Camera Operator is to any production.

Making Choices

Jeff Moore SOC was my first and only choice as camera operator on *Civil*. We originally worked together on *Blue*





Director Weston Middleton.

Velvet and Jeff was my 1st assistant for many years before moving up to operator. Knowing him so well, I knew that Jeff had artistic tastes that are very similar to my own, so I knew there would be no surprises photographically. When I asked Jeff if he would consider the position, he was very excited to work together again and thankfully said yes.

The next question was how to photograph the movie. I talked it over with Dane, Karla, and Weston Middleton, the film's director. Since the budget was very small, we considered many options. For cost reasons, the university-owned HVX200 was initially suggested as the best camera option. But after looking over several production photos, I suggested 35mm film. The reaction was positive, provided we could pull it off within the budget. So I started doing my research.

Years ago on *Blue Velvet*, I made friends with Joe Dunton BSC—Panavision Vice President. As the former owner of Joe Dunton Cameras, he had made several beautiful sets of anamorphic lenses based on the Cooke and Zeiss glass we had used on *Blue Velvet* and *Raw Deal*. With these being my first choice, I called him up to ask about his anamorphics.

The phone rang and Joe answered. Turns out he was in France and it was well past midnight. I immediately apologized and offered to call back at a decent hour. But Joe, a wonderful English gentleman, told me his anamorphics were at Panavision Dallas and to call James Finn there.

I got on the horn to James Finn and told him about *Civil*. He was very interested in our project, so I sent him a script and we started crunching numbers to try and make the package work.

I wanted a Panavision Millennium XL II as my main camera body. It is small, light, would run 50fps and could ramp from one speed to another while taking the exposure on the shutter. Also, we had decided to shoot the first part of the film at a 45 degree shutter to set it apart from later. The Millennium would handle that with

ease. To augment this package, an Arri III would be brought in for high-speed work up to 120fps.

After a lot of discussion, we came to a budgetary compromise. Instead of anamorphic, we would shoot Super 35 (2.40) to save costs. In my mind this was not a huge compromise because a few years back, I had worked in Super 35mm on *The Patriot* with Caleb Deschanel ASC (first unit DP) and Ueli Steiger ASC (second unit DP). Since Caleb was nominated for the Oscar on that film, I knew the format was solid.

I knew that the Kodak film stocks were good enough to handle the enlarged images, so we worked with Janet Tiller at Kodak to find out what film stocks might be available for *Civil*.

Things were looking good so far.

Meanwhile, back at Panavision Dallas, I talked more with James Finn and we came up with the idea of picking up the package at Panavision Florida instead of Dallas. With our small budget, the option of driving down to get the cameras instead of shipping them would save us many valuable dollars. James put in a call to Mindy Bee at Panavision Florida.

I can't stress enough what an asset James and Mindy were to us. Time and time again, they went the extra mile to make sure our production went smoothly. The same is true with all the folks at Kodak and Walt Rose at FotoKem. They made sure we had film and a way to process, print and transfer it in a way that allowed us to finish in the way we hoped for.



Writer/Editor Erik Adolphson doubles as a performer.

Fall/Winter 2009 CAMERA OPERATOR: CIVIL 17





The Civil crew lines up a critical closeup.

Now all we had to do was make the movie.

Getting ready to shoot

Originally slated for six shooting days in October, we decided to push until February 24th to allow more preproduction time. The October time did not go to waste however. We used that time to go to South Carolina, scout locations, lock in local crew and finalize talent. We looked at the university as a large production company with the various departments as places we could draw talent from. This enabled *Civil* to run like a large Hollywood feature film.



Daniel Jacob and Alex Gilson recording sound.

Back in Los Angeles, Director Wes Middleton and I met several times to go over script and storyboards. Knowing our locations, we used this time to finalize where we thought the camera should be at various points in the script. By the time this process ended, we had a pretty good handle on our photographic approach for this film.

Around the first of the year, Karla Berry became Dean of Media and Communication at National University in San Diego, CA. Though she still remained involved, Jodi Salter of the University of South Carolina Department of Art became our Executive Producer.

I was fortunate enough to book a feature from mid January through mid February. While this was good news for me, it would keep me extremely busy. I worked right up to the SOC Lifetime Achievement Awards on Feb 21st. There was a Panavision camera seminar planned on February 23rd—the day before principal photography was to start. That meant I had to fly to South Carolina on the 22nd (the morning after the SOC Awards) and hit the road running on February 23rd.

After losing Steve Mann, my 20+ year AC, due to a sudden illness, Jeff and I picked Wilmington native Dan Turek as our 1st AC. Charleston native Parker Meyer Madel was our 2nd AC and Eliza Wemberly was our loader.

We used the Panavision seminar as a bit of double duty. Though Dan, Parker, and Eliza had already prepped the cameras in Florida, we took this opportunity to prep them again as a way to double check our gear as well as to show the attendees how a prep should be done.

Fall/Winter 2009 CAMERA OPERATOR: CIVIL 19



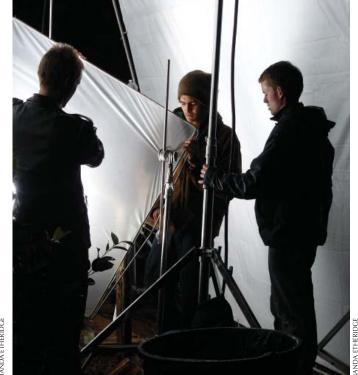
Lighting the church: Austin Behan and Michael McClendon...

All went well and we were ready for our shoot bright and early the next day.

On location no matter what

We had three scenes to shoot at the Congaree National Swamp in Hopkins, SC. Our crew was made up of a few professionals as well as students from USC and Trident Tech in Charleston. It was very cold that morning and dark upon our arrival for our 7AM call time. Luckily there were several elevated walkways throughout the swamp making our work there much easier. Things on wheels could roll nicely near the spots we planned to film.

Other than a bit of a first day slow start, things went really well. We knocked out our work before lunch, ate, loaded up and then drove several hours to a lovely old grist mill near



...and Austin Behan, David Osborne, Michael McClendon.

Traveler's Rest, SC to shoot one more scene before dark.

Day two, we went to Walker Farm in Marietta, SC. This beautiful open field location is where our movie opens and the first half of the film takes place. We had three scenes to shoot, as well as numerous establishing and beauty shots. This is also where our battle begins with several Civil War re-enactors, weapons and make up effects. The day went off without a hitch and we left with more beautiful footage in our possession.

Day three, things changed a bit. Again we had three scenes and luck was with us for the beginning of the day. But weather moved in and suddenly we were engulfed in heavy rain. Due to our budget, our plan was to keep shooting no matter what weather came our way. It was tough, but we kept shooting.

Our saving grace was that the rain was consistent and

looked beautiful through the lens. And coincidently, the rain came at a perfect time in the story.

Day four, the pouring rain continued. We had finished the work in the field at this point and were shooting on the bank of a small river. The rain gave the trees a beautiful wet down, making the earth tones pop to the eye and the camera. We shot five scenes that day and were very happy with the look—even though we lost the light at the very end.

Day five was a bit more demanding. It was still raining heavily. While we were supposed to be at a new location, we decided to do a few pick-ups at the river with a reduced unit, sending the main unit ahead to the next location.

We quickly knocked out the river shots and met up with the main unit at a church. It was a beautiful location, built in the late 1700s and in the National Register. It's amazing they let us shoot there. By the time we arrived, my crew had already placed the generator and had started laying cable. With our careful planning, the generator and trucks were just out of sight, allowing us to finish all our establishing exteriors before moving inside.

Once inside, we had a few things to think about.

At some point, we would lose the light outside and have to duplicate daylight with two 1200 and 2 4k HMI's. Not a lot of horsepower. Also the only

practical sources in the building were a few candle lit wall sconces, four candles on the pulpit and a kerosene lamp or two.

In the exterior shots, we decided to play the shutters closed. Inside, we let daylight stream in through the cracks. I bounced a blonde around for a bit of ambient light and we shot it wide open on the Ultra Speeds. It turned out beautifully.

To take advantage of the soft daylight, we decided to grab a few shots against a split log fence in back of the church. As we shot this scene, Grip/Electric rigged the front door of the church for the entrance of our main character. We would eventually shoot this after dark to match an overcast rainy exterior, so they broke out the HMI's and big rags (12x12 Grifflons) to imitate a bright day as we shoot by the fence.

Then we were back inside to shoot our hero's entrance into the sanctuary of the church. All went well and we popped off a bonus shot of several extras by the piano. That ended our

longest, coldest, wettest day so far. Seventeen hours. Most everyone was soaked and miserable, but we made the day just the same.

Weathering on

We entered the sixth day with much anticipation. Our location was a Revolutionary War-era bridge. With an amazing Gothic style arch underneath, the bridge sat high on a mountain, perched over a small river. It was beautiful and breathtaking, but so was the weather. It was freezing



 $\label{eq:condition} \mbox{Jeff Moore soc, Dan Turek and Dane Lillegard take a break from the heat of battle.}$

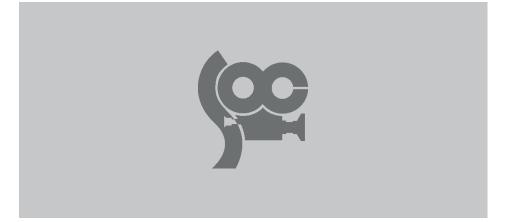
and we were outside all day. Soon after we arrived, the rain started. Knowing we had no choice, we shot anyway.

Our very dedicated actors Keir O'Donnell and Bill Oberst were in and out of the mud and water with only their costume uniforms to protect them. Keir even lost his boots as part of the scene, so he was barefoot for the last half of the day.

Several shots into the day, a combination of sleet and rain was coming down. An hour or so later, snowflakes the size of quarters began to fall for a while before turning back to rain. It was miserable, but we pushed through.

Just as we finished our essential shots, our producer Dane came up to tell us that a blizzard was heading our way, ready to blanket the entire East Coast with snow. We had to leave immediately. If we didn't, we would have been snowed in on the mountain for the night. Wes, our director, decided that we had what we needed so we wrapped production, headed down the mountain, and made it to the hotel in Greenville,







SC just before the blizzard hit.

It was a big snowstorm. Everything came to a standstill. Even getting next door to the Waffle House for a bite was a chore. Still, we survived and after the snowplows cleared the Interstate by late morning, we made the drive from Greenville to the USC campus in Columbia. We downloaded the trucks and went on our way.

It was worth it

Civil was a great experience for all involved. It was for the professional crew, of course. But for the students, it was an epiphany. For the first time, they got to see what it was like to be on a real film and what it meant to be a professional.



Mark Phillips takes a bullet.

When we started, I told them that we were going to make this movie come hell or high water. And when we were under that bridge after four days of heavy rain, the water started to

Lisa Gray and Frank Ponce

filming extras Justin King,

Joel Homovich, Jason

Shideler, Mark Phillips,

Fred Vaillant, David Smith,

Adrian Westendorff, Andre

Brandon Carter, Scott Elkins,

Grundy, Adam Mefford,

and Kenneth Robison.

during those last few hours in the river, many thought they'd been through hell as well.

get pretty high. From the looks on their faces, especially

Still, they kept on going.

Even though I told them to bring rain gear, warm clothes and waterproof shoes, some didn't. But they kept on going. Even though many were miserable at times and taken to their physical and emotional limits, they kept on going.

I think they are all much better for it and if you ask them, they'll likely tell you the same.

They loved every miserable minute of it and as a result we all have a film we can be proud of. We have a film called *Civil*.



22 CAMERA OPERATOR: CIVIL Fall/Winter 2009







"I like to have something bright behind the person talking if I can," says Baffa. "Over time it became known as 'cowbell."

"Having worked with Ryan Murphy for as long as I have (Popular, Running With Scissors, Nip/Tuck), I knew that he was someone who liked to explore larger than life storylines and characters," explains Baffa. "But in the exploration of this kind of material, he has always liked to remain grounded in a visual style that was naturalistic and uncomplicated in a way that provides an accessibility to the audience. The visual style of Glee is an extension of that. It is not overly stylized so the heightened characters and situations have a grounded place to live.

"We have wonderful writers and great actors and so my mission is to not let the camerawork or the lighting get in the

an Angel, Everwood) whom he had collaborated with on the Warner Bros film Unaccompanied Minors in 2006, to the A camera/Steadicam position. He also bumped up longtime AC Duane Mieliwocki (24, Nip/Tuck) to operate the B camera.

"The operator's role is hugely important to the Director of Photography," says Baffa. "The collaboration is vast and vital. They are able to add nuances and details that I didn't think of. I rely on my operators to maintain momentum. For example, when we turn around into a new lighting set-up, they know what to do and don't wait for me to tell them. The minute we are checking the gate, they are already setting up

The [operators] respect [the DP's] concerns, but feel free to initiate and respond in a way that really keeps things moving.

way," Baffa continues. "When you have great material, your job as a cinematographer is to reinforce that and not to hinder it in any way.

"Everyone involved with the show is so proud of the work we are doing. It is different. It is special. So we don't want to do anything visually that would take that away for our audience. We are trying to make the photography reinforce the emotional content, but it is a balancing act because you also want to maintain interesting visuals as well."

Operators are extra eyes for DPs

To help with this careful visual balance, Baffa brought veteran camera operator Andrew Mitchell SOC (Touched by

the next shot. We will speak about what I want regarding backgrounds, light, etc, but then they rope it in from there. That kind of time savings is critical in episodic, and we have created an environment in which they respect my concerns, but also feel free to initiate and respond in a way that really keeps things moving."

"Chris is always open for suggestions, ideas and questions," says Mitchell. "He's collaborative and likes attention to detail. If there is ever something you can add to the details of the background—what we see, rimming somebody against a different color, or even the feel of a shot, the speed of a move, that sort of thing—he wants the input."

"I'm what I consider to be a pretty hands on DP," adds



The girls pour themselves into a number.

Baffa. "There are times when I know exactly what framing I want—what I want to see. I'll maybe want to place a light in a specific place, or there is a background I need. But barring that, I try to stay very open to the things that Andrew and Duane bring to the table. I try to encourage their creativity, and to nurture that because we all reap the rewards of their talent. The contribution of the operator is more than just someone turning wheels. Their contribution is a key element of aesthetics.

"Andrew has been on since the pilot," Baffa continues, "and Duane as well—as the AC before bumping up to operator. But he was there during the inception of this whole thing. So the things they bring are not coming from left field. They know this world and their interpretations of *Glee* are not overlooked. They are the ones looking through the lens so their aesthetic view of the show is maybe even more important than mine at times, especially when we talk about specific framing.

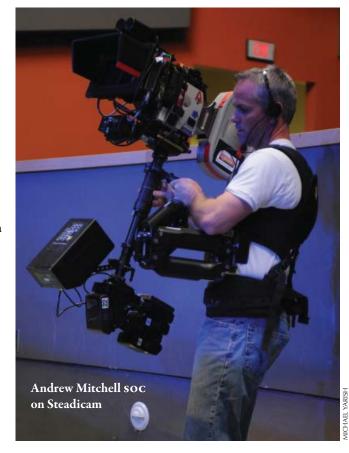
"And I know I can let them do their jobs. I can be off lighting something while Andrew or Duane are finessing something with the director and bringing their own touch to something. There are times that one of them will come to the monitor and say, 'hey, take a look at this,' which is a great asset because their contribution is truly immense.

"They work with the dolly grips to get the most out of every setup—working as a team to make sure both cameras are adjusting at the right points to get the shots we need. The coordinated ballet of the moving dollies in any given setup is phenomenal. Just last night, Duane worked out a move that saved another set-up by getting a piece of coverage we hadn't thought of."

"I worked with Chris on *Nip/Tuck* for five seasons," Mieliwocki explains. "That really helps because I know how

he thinks. It makes it easier to anticipate what he wants. Chris likes to set up a shot, but it is up to Andrew and me to sweeten them and make them better. We look for the little things that he likes to have."

"I like to have something bright behind the person



talking if I can—the opposite side of their eyeline," says Baffa. "So if the actor is looking camera right, I put something hot over their camera left shoulder. Over time it became known as 'cowbell.' So when they are framing up a shot they'll turn to me and say, 'if I come over four feet, there is a window and there's our cowbell.' Because they know what I like, they are invaluable, not only to me but to the show."

"Chris's lighting is fantastic," says Mitchell, "and the camera work is really varied because it's a comedy, a drama and a musical. So we have the opportunity to explore the look of



Rachel (Lea Michele)'s feelings about Finn (Cory Monteith) are clear, and so are those of his girlfriend, cheerleader Quinn (Dianna Argon).

the show within these genres. We just shot a cabaret show with a little bit of a fantasy sequence mixed in. So we were able to change the look to almost a stage play style."

"Chris does a great job of giving this show a theatrical look," says Mieliwocki. "He's very painterly with his lighting. Naturally pretty, not in that always backlit kind of way, but what you would see in the world if the world were invented by photographers."

"We have all kinds of different camera motion," adds Mitchell. "Whether it be static wide shots to smooth moving dolly shots to snap zooms on specific lines or looks—those are fun, especially when they add that cute music to the snap. Then there is the Steadicam, swinging around, dancing with people. And handheld. So the look? It's all kinds of looks."

"We have a very fluid camera on our show," says Baffa.
"But we try very hard to make sure that we are in sync with what is going on in that moment of the show. The pilot was a bit of a testing ground for us. It was a mix of handheld, Steadicam, dolly shots and cranes."

"When they have me put on the Steadicam, it is for a reason," says Mitchell. "It's there to look different than a dolly or to accomplish a shot that can't be done any other way—simply being able to adjust quickly and to

accomplish a shot when there are changes that we don't know about or can't control."

Dance with the camera

Since *Glee* is about a high school song and dance club, the show is filled with musical numbers. Mitchell's Steadicam is commonly used in shooting these scenes.

"When Andrew straps on the Steadicam," says Baffa, "he becomes this factor of the show. He does things onstage during our performances that we didn't design. Sometimes

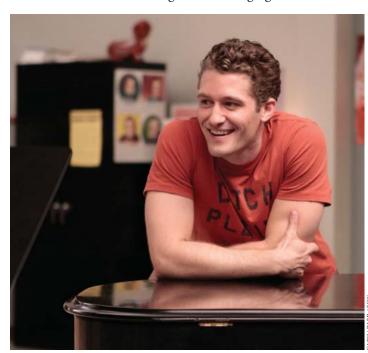
we just start the music and he makes the magic."

"Doing the musical numbers is one of the challenges of the show," adds Mitchell. "Learning the choreography and music, and then being able to follow it and do everything they ask. But the producers have been great in getting us the music and lyrics before we shoot it. They even have the lines color coded with who is singing what, so we can use them like sides and know where to focus.

"Getting the music is great because we can learn the rhythms before we get to set. Then when we go to shoot it, we are one step ahead. Even stepping into a dance rehearsal is helpful because you can get a rough feel for where people are going and their timing. It's so much easier than showing up cold and having them say 'follow this dancer'—who is zipping around amazingly fast.

"This is especially hard on the focus pullers," Mitchell continues. "We're dancing with the dancers, chasing things and everything changes. Our camera assistants, Penny Sprague and Ken Little totally stand up to the challenges and are exceptional. They nail stuff that is incredible.

"But even though it is challenging, I love the music



Matthew Morrison as Will Schuester, the teacher trying to revive Glee Club as an award winning show choir.



A mortifying moment for a diva — things don't always go as smoothly as the Glee Club would like.

part of this show. It is the most fun. We have some super talented performers, so being able to be there to capture the musical moments is one of my favorite parts of this job. There is just more excitement to those scenes. In dialogue scenes, background music is added later. But with the musical numbers, we get to see it all right there. It adds extra pizzazz to the set. All of a sudden there is a rhythm and beat. And your camerawork can follow that too. That's why I love it so much."

Spectacle vs emotion

"One of the challenges inherent to this show in particular is that many of the production numbers involve our main characters," Baffa explains. "So at the same time we want to present really spectacular production numbers, there has to be audience identification with those performing. This can be difficult. In the pilot, the glee club visits their rival school's show, Vocal Adrenaline. The story point was that they were in a completely different league than our heroes. Shooting that performance was easy because they were professional dancers and we did not have to identify with anyone on that squad. We could set up cameras that just showcased the choreography.

"In the final scene of the pilot, our club pulls together a great performance, but more than just the choreography, we needed to portray our kids coming together. It represents the birth of a successful glee club. But it was not just about the moves—it was about the characters, about how they have grown.

"So we not only had to shoot the number, but we had to make sure that we could feel all of that. The primary difference really came down to proximity. In the rival's number, we attacked the scene more as an observer. We had a lot of crane shots from the audience and set up dollies on tracks from the outside. We planned shots that really captured the energy and choreography, but were more visual than emotional.

"In our heroes' number, we used a lot more Steadicam on stage so we could be with them. We became one of the characters. We made sure the camera became less subjective and more interactive. We set out more to capture the emotional interaction between our characters. We are all really proud of the glee club's 'Don't Stop Believing' number because it is a wonderful blend of both the visual and emotional."

Letting character show

"The characters are really interesting," says Mitchell. "Ryan Murphy is a genius at that—where they're going, what is happening. The comedy is great and the actors and their characters are really fantastic in terms of how they play off of each other."

"Our actors are all friendly and young, so they and I are



Front: Duane Mieliwocki (B-camera operator), Andrew Mitchell soc (A-camera/Steadicam operator), Penny Sprague (A-camera 1st AC), Chris Baffa ASC (DP), Andrae Crawford (A-camera 2nd AC), Joey Pacella (Loader). Back: Baird Steptoe (C-camera 1st AC), Yusef Edmonds (B-camera 2nd AC), Kenneth Little (B-camera 1st AC), Eric Guerin (B-camera 2nd AC), Marvin Rush (C-camera operator).

learning together," says Mieliwocki. "But operating is like hitting a golf ball or a baseball. You know right away when you've done something right."

A new perspective

Having been an assistant for so long before moving up as a full time operator on *Glee*, Mieliwocki has gone through a bit of a learning curve in these first few episodes.

has been doing this for years. Every day, I'm learning new things. I'm just starting to really realize that the operator does not just operate the camera. They operate everything around them.

"As an assistant, when things happen, you just deal with it as it comes," Mieliwocki continues. "As an operator, you're setting things up to make sure what happens. You're moving the crew, you're moving the background, you're talking to the

The operator takes everyone on the set and tries to make them a cohesive whole. The camerawork is...the icing on the cake.

"It's a challenge," says Mieliwocki. "It's a whole different way of thinking. As an AC, you stand next to the camera, trying to be quiet and not be seen. As an operator, I suddenly have to start making noise. I have to be a leader, thinking ahead. I have to anticipate what is going to happen so there are no surprises. And if you *are* surprised, that it is a nice surprise as opposed to an ugly surprise.

"As an assistant," Mieliwocki explains, "I used to say that the long lens shots were actually the easy ones because everyone knows they are hard. It's the wider shots where people say, 'you're on a 35mm, you're fine.' In the same way, I think that it's hard to be an operator. People know that assisting is hard, but everyone thinks that they can operate. As a new operator, I'm sure that my perception of the job is very different than that of an SOC operator, someone that

dolly grip. You're busy making things happen so the shot can happen. The operator takes everyone on the set and tries to make them a cohesive whole. The camerawork is more like the final touch. It's the icing on the cake. If you haven't done your job up until that point, then moving the camera doesn't really matter much.

"I have to keep reminding myself that now it is okay to speak up and okay to change things, to object if I need to. That's my job," says Mieliwocki. "It was not my job as an assistant. When operating, you start off trying to get your dolly grip to do what you want and at the same time letting your assistant know what to do. Soon, you are working with the greensman and the grips and the art department... In the vast far reaching world of camera operating, when you are at the peak of your profession, you are working with every

department on set and they don't mind. You're not getting in their rice bowl, you're doing your job. You're being collaborative in a way that makes everyone look good.

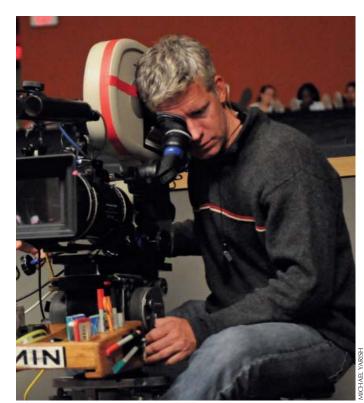
"It took me a little while to realize that," Mieliwocki continues, "to know I was allowed to look for things and change them to make them better. I guess it goes back to the assistant thing. As an assistant, you stand there and take the beating that comes your way. That's how I looked at it. Now as an operator, I help set up the beatings," he says with a smile. "It's funny to look back even with just that small amount of experience and see how much I've changed... Not in any obvious way, but more subtly. I told Chris the other day that in the beginning my whole focus was on keeping things out of the shot (flags, crew, etc). But by the end of the season (now the middle since they've bought the back nine) my whole approach had changed and I was looking around to see how much more I could get into the shot. Like I said... subtle... but important."

It takes a team

"As a cinematographer," explains Baffa, "you obviously want people that are highly talented and very technically proficient because what we do on a daily basis is very demanding. What I get with Andrew and Duane is just that, on top of them being some of the finest people I've ever known. And that's why I'm probably one of the luckiest



Chris Baffa ASC takes a meter reading.



Duane Mieliwocki, B-camera operator

cameramen in the world. My crew are my friends. We have a real family bond. I like to think of myself more as a dad than the boss, although you have to be a little of both at times. But there is such respect through our crew that it really does operate from a more familial kind of level.

"Nothing is done by any one person," Baffa continues, "myself included. It is absolutely a collaborative effort. We have such a great respect for one another, there is never an ego thing. It is a symbiotic relationship and that says nothing of the moral support I get from all of them. When it comes to my crew, I like to use the analogy of a tripod. The three legs are grip, electric and camera. If any one of those legs goes away, the tripod collapses.

"The lighting is being done by Andrew [Chief Lighting Technician Andrew Glover], things are being rigged by Jerry [Key Grip Jerry Day] and if the camera is moving, it's Cory [Corona] and Adrian [Dominguez]. And without my camera crew—the operators and [ACs] Penny and Ken—I literally could not do what I do.

"Nothing is done by any one person, myself included. It is absolutely a collaborative effort. We have such a great respect for one another, there is never an ego thing. It is a symbiotic relationship and that says nothing of the moral support I get from all of them."

That team effort sentiment is echoed in Mitchell's feelings about the DP/Operator relationship.

"Having an operator on set allows the DP to set a shot in motion and then work with the lighting crew or work on concepts with the director," he explains. "It frees him up from the mechanics of operating. When you're operating, you're concentrating on a lot of technical things. But when the DP can sit back and look at the frame with an outside







Cheerleader Quinn (Dianna Argon, far left) and her coach Sue (Jane Lynch, center) are trying to kill off Glee Club. Counselor Emma (Jayma Mays, above) is in love with the very married Will Schuester.

perspective, not thinking about what's going on with the dolly, panning, tilting and that flag that is almost in frame, they can see things that you would never think about when you are in the action of operating. That is a major advantage for the DP."

"Chris is not really a believer in A camera/B camera," says Mieliwocki, "so for me as a new operator, I end up on the wider lens more often than most B cameras. I am not just stepping into a scene getting the tight coverage. I am allowed a lot more creativity. He looks for that input from us—to help find the surprises he wasn't thinking of."

Gotta have dolly

The team attitude does not stop with the DP. Both operators had a lot to say about their dolly grips.

"The dolly grip is the second operator on the camera," Mitchell explains. "We had a shot earlier where essentially we were blocked and Cory brought us back to a workable frame. It is a really, really close relationship and it can make or break your experience on set. Being able to work together, to boom together, to feel a shot rather than just hitting marks... It's all about timing and working together. We have great dolly grips and it makes a world of difference."

"Ace is great," Mieliwocki says of B camera dolly grip Adrian Dominguez. "He's very good at helping me find the shot. I look at that as if we are going to war and I am a new lieutenant. I can try to force my will on the experienced sergeant under me who knows what the drill is supposed to be, or I can use all of his experience and learn from it. Letting go of my ego that little bit gives me the opportunity to get better faster. There's a lot to see in that eyepiece. If I get too

focused on one detail, he's there to help me out. He shows me what he's seen before and has saved me some missteps. That makes the shot better, the show benefits, and it makes our relationship better. We build trust... and we begin to work as a single unit.

"What you are trying to do on the dolly is the same as handheld—only you have to get another guy involved. You want the camera to move and you think it. You know where it wants to go, but if you have to tell the other guy, you're losing all that time, you're losing the shot. If you have a guy that can make that move when you want it, you're in much better shape. Ace is a dolly grip that is looking to make the shot as good as it can be without waiting to be told what to do. For a new operator, that is so helpful."

Direct(or's) effect

"I have found that the biggest challenge of television is that every eight days you have a different relationship coming to the set," notes Baffa. "The director/DP relationship is a very powerful one.

"Like any other relationship—a friendship or a marriage—to have a change every eight days can be very stressful and is very demanding. One of my jobs is to maintain a consistency for the show. And sometimes, that may mean getting, not confrontational, but protective. This is our child. I was involved in the pilot, I had a hand in the building phase and I have been in Ryan's camp for a while. So I have a lot of emotional investment in this show. Not that this has happened, but if someone were to come in and try to change the show, they would really have to convince us. And I say us, because it wouldn't just be me. It would be Andrew and



The "Acafellas" — Coach Galllagher (Ken Tanaka), Puck (Mark Salling), Finn (Cory Monteith), and Will Schuester (Matthew Morrison)—ready to perform.



Kurt (Chris Colfer) makes the switch from Glee Club to the football team — a blend that lifts both to victory.

Duane as well. Having said that, you never want to squelch the freshness that comes with somebody new. You have to be open to ideas that you didn't think of while at the same time protecting what you have already established. That's very, very challenging but we have been



Kevin McHale as Artie, playing guitar.

"Some directors are very visual and others are more concept oriented," adds Mitchell. "We have some, like former camera

operator John Scott, who are very visual. So when we work with him, I step back a little bit because he really knows what he wants. That doesn't mean that I don't have input, but there is such a thing as too many chefs in the kitchen.

"And with the concept or actor oriented directors, I give more input. Working with Chris, we talk about story points. 'For this little moment, do you want a push in to get that little twinkle in the eye?' That sort of thing.

"Camera operators adapt. If a director focuses on camera, great—I'll follow their lead. If they focus on something else, then jump in and fill in with your ideas. It all depends on what the situation calls for."

"When I talk with directors about particular shots," says Baffa, "I like to pose the question: 'Why are we moving the camera? What are we trying to communicate?' And if we can't answer that... then we have a problem. If it is just about a cool shot then I am not interested. It has to reinforce what is going on with that character at that particular time.

"We constantly ask ourselves 'is this the right shot for this moment, now that we know what this moment really is?'

"There have been more than a few times where we set up a shot and watch the rehearsal. Then the director and I see the performances and say, 'let's not do it.' And we've had the restraint not to... But every now and then, it is the opposite and we'll say 'we need to amp this up a little bit.'

"So I guess that we are a combination of on-the-fly camera decisions with a lot of preplanning. There is the overall approach plan for the visuals and then there is the 'does the shot work' moment that comes on almost every shot."

"Being a new show," Mitchell notes, "I think that the look of the show is still establishing itself. We have set certain things, like the size of a close up and how we move the camera in

Quick Guide to Glee

McKinley High School's Glee Club used to be at the top of the show choir world, but years later, a series of scandals have turned it into a haven for misfits and social outcasts. Will Schuester (Matthew Morrison, Broadway's Hairspray), a young optimistic teacher, has offered to take on the Herculean task of restoring McKinley's Glee Club to its former glory with the help of fellow teacher Emma Pillsbury (Jayma Mays, Ugly Betty).

It's a tall order when the brightest stars of the pitchimperfect club include Kurt (Chris Colfer), a nerdy soprano with a flair for the dramatic; Mercedes (Amber Riley), a dynamic diva-in-training who refuses to sing back-up; Arty (Kevin McHale, Zoey 101), a geeky guitarist who spends more time avoiding bullies than chasing girls; and Tina (Jenna Ushkowitz, Spring Awakening), an awkward girl who needs to suppress her stutter before she can take center stage.

Will's only hope lies with two true talents: Rachel Berry (Lea Michele, Spring Awakening), a perfectionist firecracker who is convinced that show choir is her ticket to stardom; and Finn Hudson (Cory Monteith, Kyle XY), the popular high school quarterback with movie star looks and a Motown

voice who must protect his reputation with his holier-than-thou girlfriend, Quinn (Dianna Agron), and his arrogant teammate, Puck (Mark Salling).

Driven by his secret past, Will is determined to do whatever it takes to make Glee great again, even though everyone around him thinks he's nuts. He's out to prove them all wrong—from his tough-asnails wife Terri Schuester (Jessalyn Gilsig, Nip/Tuck) to McKinley's cheerleading coach Sue Sylvester (Jane Lynch, Best in Show, Role Models) to an über-hip world that thinks jazz hands and sequined tuxedos litter the road to infamy rather than pave

particular scenes. A lot was established in the pilot by Director/ Producer Ryan Murphy.

"If there is a scene with tension, he'll have us go handheld to add a bit of an edge. That doesn't mean that we're all over the place, but just that little bit of energy.

"During the dance sequences, we've kind of fallen into what works there, with certain dolly, Steadicam and crane shots that tell the story. If there are specific moments we need to specialize, then we'll do what we need to get that moment."

A little bit tech-y

"Chris shoots the show on Kodak Vision2 5219(500ASA). We have two Panavision XL packages because we are often going to handheld mode," explains Mieliwocki. "We carry two 11:1 zooms and one standard set of primes from 17mm to 100mm.

"We don't have a big camera package day to day. If we need something, we order it. When I started assisting for Chris, I would make a list of all the things we need and he'd say 'We don't need any of this stuff. We only need this.' If we have it, it's because we use it. He gets a lot done with a small package. If we don't need it every day, we don't carry it—that saves the company money and the show speed and time."

Schedule and location challenges

"In the first four episodes," says Baffa, "we shot an eight day schedule. It has been pretty brutal because these episodes have been really big. They were written this way for good reason. We have been doing our best to bring some scope to the show in its first few episodes, but it has been tough to get it all in that time.

"Every day presents a new challenge. For example, one of our leads is the football quarterback so we shot a night football game. And it was not only the game itself, but there were a lot of character moments throughout the game. The logistics of being out there at night and having the field lit was one challenge, but needing to capture the moral dilemma this character is going through is really the point of it all. So again, it was a blend of capturing the spectacle of the game along with the nuances of character.

"We have shot roughly six days on stage for each episode and two on location," explains Baffa. "The great thing about being on set is the control you have. We shot the pilot in a real high school, but when we started building sets, we did not have to live with the constraints of the actual rooms. When we built the sets, we generally patterned them after our pilot locations, but we made some changes to help us shoot.

"We paid special attention to the glee club meeting room. The main difference between the set and the location is the size. We took some liberties and, while keeping the basic production design the same, we made it about four times as large. This allows us to stay here to shoot a production number rather than go to our location auditorium in Long Beach, CA.

"But while we like the control of the stage, we do try to replicate what we find on location. When we go on location, we try to bring as much control as we can. And when we're here on stage, we actually try to resist being too perfect so we can replicate our look when we are out on location. For example, we bounce a lot of lights into ceilings on location, so when we set the lighting on stage, we project light through the ceilings which are covered in bleached muslin. This replicates that toppy kind of feel, while adding the



control we like—again, trying to keep the set and locations as similar as possible.

"It is similar with the camera angles we choose here on set. We built a lot of camera ports and flyaway walls into these sets. But sometimes you set up a shot and look at it and say, 'this is not something that you'd see in the real world.' So we are very conscious of the fourth wall and we do break it, but it is a conscious thing when we do. Again, it all comes down to what serves the story best."

How many marbles?

"Even though we have an eight day episode," says Mitchell, "we do a lot of work every day. There are a lot of shows out there that might say that's a day or two longer than we have, but ours are filled with huge dance numbers and scenes with 20 kids and twelve of them speak. So there's a lot to cover.

"This is one of those shows that has so much production value stacked into eight days. The phrase that keeps coming up is 'how many marbles can you fit into the bag?' We're shoving a lot of marbles in there.

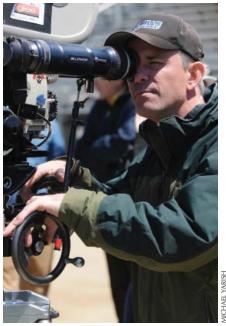
"I think that we are setting a good pace because we are getting a really quality show. And we're getting it done in eight days and not every day is a twelve hour day. I think that we are doing really good work, excellent work with the time we're given."

Preparation and interaction

"We usually have the initial rehearsal with the operators present," Baffa explains, "unless the director wants it closed due to performance issues or heavy emotional scenes. But most directors know that the operators and I are the ones visually translating the scene for them, so we need to be there. It is important for us to hear the discussions about the emotional content of the scene so we can best help translate that to the visuals. Rehearsals are integral to us knowing what

really makes up the scene.

"The rehearsal is the first look into this process. It is the time to first see if our planned coverage is going to work. Sometimes the scene is written really emotionally, but the actors might not play it that way, so we tend to help push those moments with the camera and the lighting. Other times, the actors' emotions allow us to pull back from the camerawork so



Andrew Mitchell soc on the wheels.

the scene feels more natural."

"I think that it's really important as an operator to interact with the actors and stay connected to them," notes Mitchell. "Basically, you're both going for the same goal. To make them look good and to get the shot that you want. To do that, you often have to ask them to hit a mark or get up or sit down a certain way. This takes a certain rapport, a friendly rapport. And I think that goes beyond being friendly just so you can get what you need. I try to be an honest guy, a human being to everyone on the set. Again, you're all working together on the same thing, toward the same goals.

"We've had day players come in and say 'Man, you guys really get along well.' It's a sweet little show because everyone

is cool with each other. I've had this kind of experience on a few other shows, but I think that it is rare and special. And I think that Chris has a lot to do with that because he hires people who work that way. They're not screamers and everyone works together. We realize that we all have lives outside of this show that we care about just as much."

"We have a lot of fun and work really well together," adds Baffa. "Our personal relationships really reflect in our work. I can't say enough about my crew. I am surrounded by such qualified and great people that I always feel like I can do my





Chris Baffa ASC looks on as Andrew Mitchell SOC operates.







Carpooling is one way to go green. So is recycling plastic water bottles.

Greening Your World

By Aiken Weiss soc

PHOTOS BY AIKEN WEISS SOC

"Nobody's fault, everybody's responsibility" —Audrey Hepburn

It is a little bit of a drag these days. Wherever you look, you read or hear about green, greener, greenest. Environmental this and tree-hugging that. Save, reduce and re-use. Global warming and Deforestation.

What happened to the good old days? Double or triple-bag everything. Paper & Plastic. One-time use. Dump it and buy another one. Wasting energy and resources and producing waste with seemingly no consequences. Wasn't that great?

Well, not really. It was never great and still isn't. There were always consequences whether we see and acknowledge them, or not.

Is it is that we are too lazy or under-educated or simply don't care? Why do people behave the way they do? And why is it so hard to change?

I don't believe in fault—I believe in responsibility.

In this case it is our responsibility to rethink and adjust our behavior to a more productive and mindful life at home and at work.



Skip paper and plastic; use real plates and silverware.

No matter if you are fed up with the environmental talk or if you are open to ideas to make a difference on a daily base on stage or on location, take a few minutes to read this article and hopefully be inspired.

The film and TV industry is a tough one. A lot of money is spent. It is crucial to work fast and effectively and waste as little time as possible. Unfortunately this is often used as an excuse to disregard environmental concerns and do what is quick and convenient. But are there things we can do with very little loss but a much bigger gain? I think so.

"Reduce, Re-use, Recycle"

In my opinion reducing trash and reducing the use of certain tools and machines are the place to start. Let's look at a day on set:

Reduce / Re-use

1. On your way to work

- Warm up your car while diving. Drive slower during the first few minutes of your journey.
- Car pool.
- If possible, choose a car with better gas mileage over the gas guzzler.
- Avoid rush hour—maybe all it takes is leaving 15 minutes earlier.
- Don't keep the AC turned up all the way.
- Go 70 mph instead of 80. Or even 65, 60, 55.
- Remove the roof rack unless you're actually using it.
- Check tire pressure regularly; keep tires properly inflated.

2. Breakfast

- Use a coffee mug from your ride home.
- Use a real plate and silverware, not plastic and paper.
- If you must use paper cups, use a single cup.
- Stay away from single portion coffee/creamer/sugar etc. See if an alternative is available.
- Take only as many napkins as you need.
- Share a spoon to stir your coffee.
- Take aluminum foil only if absolutely needed.
- Livestock causes a humungous amount of pollution and water usage. Eat a little less meat and do yourself, the people around you (including your kids) and this planet a favor.
- Don't waste food.

3. On se

- Mark your water bottles and finish them before opening a new one.
- Bring your own bottle. Refill it with filtered water at home and don't use those little bottles on set at all.
- Let production know if you get more paperwork (script updates etc) than needed.
- Turn equipment (portable LCD monitors, comtecs, lights etc) off if not in use.
- Use the same coffee cup twice if possible.

4. Second Meal/Wrap

- Take food home in Tupperware or one of the containers the food came in. Consider this if you have a family, a freezer, the weekend coming up, hungry friends/neighbors, if the food is going to be thrown away.
- Run errands in the area you were shooting if that helps avoid rush hour.

Recycle / Re-use

• Recycle water bottles and cans. Maybe production makes it happen or craft service or even the crew.



Bring your own water bottle and refill it.



The author with his re-usable coffee mug.

- Inspire people to recycle paper in the office or at least in your department
- Recycle batteries. Most sound guys do it anyway. Talk to them; they might take your batteries too.
- them; they might take your batteries too.

 Talking batteries, you can check with those departments who use a lot (like sound) and take some home. Even if they are too low for mic, they will most likely work

great in your TV remote, wireless keyboard and mouse,

the kids' toys etc.
Keep old scripts. You can print stuff on the back, especially if it is something that is only temporary or ends up in a folder for years to come. Also, it is great paper

for kids to draw on or it can be cut up for note sheets. There is so much more we can do. But we have to start somewhere and maybe the list above can help.

Bottom line is: We can all do our part and it doesn't have to be hard or complicated. I think it comes down to inspiring yourself and those around you, something a creative business should be all about in the first place. Let's be the best we can be with:

"Nobody's fault—everybody's responsibility."



38 CAMERA OPERATOR: GREENING YOUR WORLD Fall/Winter 2009 Fall/Winter 2009 CAMERA OPERATOR: GREENING YOUR WORLD 39

Hi Def with Jeff



Preparing for the worst usually solves the problem

By Jeffrey Cree soc

HDVS Market Development Manager Band Pro Film & Digital Inc.

The substantial rise in electronically produced primetime episodic programming this season has greatly increased the demand for qualified Video Engineers or DITs. The problem is that the available pool of those who are qualified is much smaller than the list of shows needing personnel. As stated in my article in the Fall/Winter 2008 issue of Camera Operator, my criteria for this position is more detailed and demanding than most. My criteria include the proper preparation of the camera, video, audio and time code systemization, and basic troubleshooting skills. A key element of the last criterion is having established connections and contacts to call in the event of a problem that goes beyond the scope of your basic expertise. This season has seen a huge increase in camera issues and interestingly enough, the problems are centered in geographic areas that until this season had very little electronic production using the new series of "cine" type cameras from Arri and Sony. The more established markets are seeing a very small percentage of on set problems. The only conclusion we can reach from this is

A protocol of whom to call—and in what order—should be in place with your rental house or camera supplier.

that the crews working in these areas have not had the experience to develop protocols and procedures for proper preparation and maintenance of the camera systems.

When taking on the responsibility of managing and maintaining the camera systems of an episodic show, or even the short-term responsibilities of a commercial production, a proper "Prep" is imperative. Seventy-five percent of on-set issues could be solved before they become a problem by properly reviewing the camera's performance and features during "Prep".

Some of the most common issues discovered as part of a proper "Prep" are pixel-related. Turning the camera on and running it with the fans off or at minimum will allow the internal temperature to rise above the normal working level and expose any unbalanced pixels or RPN (Residual Pixel Noise) that might make a pixel stand out. Once these are visible, you can use the "black balance" to activate the APR (Automatic Pixel Restoration) function of the camera to conceal the affected pixel. If this does not prove successful, most cameras have a manual pixel concealment feature in the service level of the camera that should be utilized. If you are unfamiliar with this function please seek help from the rental staff or camera manufacturer's service staff before attempting this process. A proper monitor and viewing environment are required to perform this function properly. If done improperly you can accidentally label the wrong pixel and make it so the offending pixel cannot be concealed. That is why it is



Jeff Cree leading a DIT workshop.

imperative to include this as part of the "Prep" rather than waiting until the camera gets to the location.

Most of the other issues that can be caught during this "Prep" are system based. Do you have the right Genlock

signal for the operating format? Does your monitor handle the proper clean feed signal as well as the monitoring output of the camera? Are you prepared to insert properly timed audio into the recording system? Most of the new cameras have Ethernet interfaces for camera control. This requires all networked elements to be on the same network and in the proper mode to utilize the network interface. It is only when you build the complete system and check it out before going to location, that you can confirm that all the pieces operate as a system and that none of the elements have old incompatible software that does not interface with the other units.

If using a fiber interface between the camera and recorder, you must have the proper tool and know how to use it to remove the ferules that protect the fiber ends to properly clean the fiber. Dirty fiber ends are the main issue when having problems with these systems. If using dual link between the camera and recorder, you must confirm that the recorder and camera are on the same format. This may seem simple but it has left many productions with unusable recordings at the end of the day.

Now that you have a working system on-set, what do you do if a problem develops? A protocol of whom to call and in what order, should be in place with your rental house or camera supplier. This high-end group of cameras is in short supply, so in most cases fixing the existing camera is the faster way to get it back on line. This means your first contact with the camera supplier is likely to be a service support person rather than your rental agent. This person should take the responsibility to coordinate any contact

with their supplier or manufacturer. After the initial contact you are likely to be contacted by a service support person to get a first-person account of the situation. You may be asked to help troubleshoot the issue so be prepared to follow



CAMERA OPERATOR: HI DEF WITH JEFF Fall/Winter 2009 Fall/Winter 2009 CAMERA OPERATOR: HI DEF WITH JEFF 41

instructions. If asked to go beyond the normal menus, such as the service menus, this action should be notated and reported to the rental facility because this is the only way that the rental facility will learn what to do in the future. If the issue cannot be resolved, the service person should arrange with the rental facility for a replacement unit. If not coordinated in a fashion similar to this, you are likely to waste time and resources. I have seen situations were a rental facility had the supplier and the manufacturer trying to get access to the

overcoming on-set failures a less stressful experience. Many of these issues are addressed in the first place by a proper "Prep," but you still must be prepared to handle these issues if they come up.

Some of the best DITs I know are fairly non-technical. They are successful because they perform their due diligence in "Prep" and have a working plan for when they have a problem. They also know their limits and if they need to go beyond their comfort zone they call for help from their

Some of the best DITs I know are fairly nontechnical. They are successful because they perform their due diligence in "Prep" and have a working plan for when they have a problem.

same parts and resources without knowing that the other was working on the same problem. Due to limited camera availability, this process gets even more complicated if the cameras are being sub-rented from an additional rental facility.

The key to successful on-set support is the predetermined protocol of who to call on what issues. In addition, having a network of support personnel and other DITs can make

network of experts to guide them through the process. They never perform beyond their ability without support.

By following these simple rules, you will easily develop a good reputation for knowing how to make a production successful and that is the ultimate goal of the job.







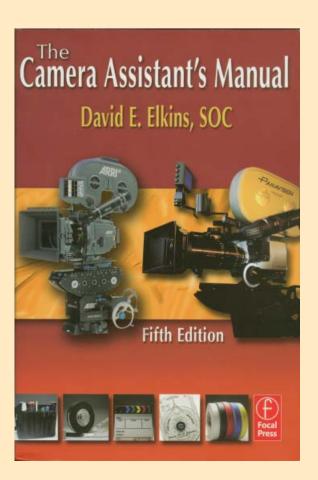
A SERIOUS MAN

"★★★★! ONE OF THE COEN BROTHERS' BEST AND MOST PERSONAL FILMS.
BEAUTIFULLY PHOTOGRAPHED BY ROGER DEAKINS. IT'S A MOVIE MITZVAH."
-LOU LUMENICK, NEW YORK POST

BEST FEATURE
BEST ENSEMBLE







The Camera Assistant's Manual, 5th Edition

written by David E Elkins soc published by Focal Press

Review by Georgia Packard soc

This expanded fifth edition of *The Camera Assistant's Manual* is based on the experiences of author David E Elkins SOC and other trained camera assistants who bring a wealth of information, both technically and "on-the-set." Job classifications for Loaders, 2nd Assistants and 1st Assistants are well delineated in complete detail covering all necessary duties and procedures. The "Tips" section is very helpful for experienced assistants as well as those starting out. The more knowledge a technician acquires problem solving, troubleshooting and working under production pressures, the more valuable they are to the camera crew and the project.

The book outlines important checklists and procedures so you can confidently go into Camera Houses for tests, to prep equipment, and to ensure a successful shoot no matter what equipment is being used. This is the type of information I needed when I took the camera union test to qualify as an experienced assistant. Equipment modification and updates constantly demand that we reacquaint ourselves with the gear through detailed hands on training.

Although the book is intended for the "film" assistant cameraman, there is expanded information on the job responsibilities when working in SD or HD video. All the chapters have been updated to include the most current techniques, procedures and equipment.

Even with these changes, I would recommend keeping older editions of Elkins' book because they include "older cameras" that may have not made this publication. Often these cameras are found on smaller films or whenever modified personal equipment is used.

The "Formulas" section is invaluable, and certainly should be copied onto index cards for easier carrying in your assistant's kit.

Cinematographers, Production Managers and Line Producers will benefit from reading and understanding the bigger picture of the camera department classifications so that film crews are properly staffed for the most efficient and effective production demands.

The Camera Assistant's Manual is well written and easy to comprehend—an essential read for all interested in doing a camera job well done.

David E Elkins soc is currently a working Operator, moving up through the camera ranks as an assistant for more than 25 years and 100 credits of professional camera experience on feature films, television, commercials, music videos, educational and industrial films. In addition to his production experience, Elkins has taught numerous film production classes and workshops throughout the United States. He is an active member of the International Cinematographers Guild Local 600 and the Society of Camera Operators. He is also the author of *Camera Terms and Concepts* published by Focal Press.



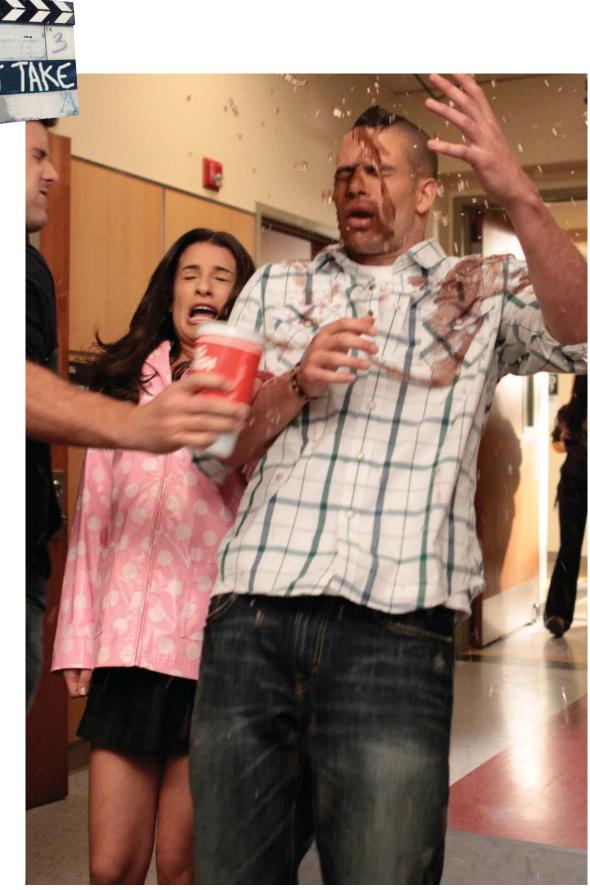


ADVERTISERS' INDEX

8 Ball Camera Support 5 www.8ballcamerasupport.com Band Pro 9 www.bandpro.com Cinematography Electronics . 16 www.cinematographyelectronics.com Clairmont Camera 23 www.clairmont.com Deluxe Laboratories 14 www.bydeluxe.com Eastman Kodak Co 37 www.Kodak.com Filmtools 21 www.filmtools.com Focus Features 43, IFC www.focusfeatures.com Fuji Motion Picture Film....BC www.fujifilmusa.com Fujinon..... IBC www.fujinon.com Litepanels, Inc 42 www.litepanels.com Musicians Interguild 41 www.musicianscu.org Otto Nemenz International. . 13 www.ottonemenz.com Panavision 18 www.panavision.com SOC Wear 46 www.soc.org Sony Pictures Classics. 4 www.sonypicturesclassics.com

Warner Bros Photo Lab. 10 www.wbphotolab.com





It's a slushy in the face for Puck (Mark Salling) of *Glee*. Rachel (Lea Michele) gets sprayed as well. Photo by Carin Baer, courtesy of Fox Studios.

46 CAMERA OPERATOR: AD INDEX Fall/Winter 2009 Fall/Winter 2009

Roster of the Society of **CAMERA OPERATORS**

Keith Dunkerley

Brian James Dzyak Jonathan Edwards Keith "Iceberg" Eisberg Christopher Ekstein Shane English

Steven Duval

David Eubank

Robert C Fisher

Archie Eletche

Peter F Frintrup

James P Garvey Hank Gifford

Michael Goi, ASC David Goldenberg

Frederic Goodich, ASC John M Goodner

Dave Gregory
Phil Gries
Eric Gunner Mortensen

Kevin M Haggerty

Anthony P Hettinge

lames W Hart

Robert Haves

Scott Hoffman

Melissa Holt Chris Hood

John C Hora

im Hunter

Carrie Imai Toshiyuki Ima

Gregory Irwin Blake B Jackson

Kurt Jones Kevin N Kemp Mark H Killian

Douglas Kirkland Michael Klimchak

Robert G Pittman

Craig Kohlhoff Michael Kowalczyk

Frank E Johnson, ASC

Ken Hilmer

Bob Hall

Wavne Goldwyn

Al Gonzalez

Afton M Grant

Fred M Frintr

John C Flinn III, ASC Mark Forman

CHARTER Michael Benso Jerry G Callawa Joseph Callowa Joe Epperson William Iav Gahre Peter Hanke Norm Langley Lee Nakahara Jay Nefcy Leigh Nicholson Dan Norris David B Nowell, ASC Wavne Orr Ernie Reed

Michael Scott Michael St Hilaire Ray Stella Joseph F Valentine Ron Vidor ACTIVE Jonathan S Abrams Bernie Abramson Art Adams Steven A Adelson Michael R Alba Derek M Allen Lee Allison Robert Reed Altmar Colin Anderson lack Anderson Aldo Antonell Janice Arthur Ted Ashton Jr John H Atkinson Dan Auerbach Mark August Daniel Ayers Randall B Bae Christopher Baffa Lonn Bailey James Baldanza Vincent Baldin Jerry Banales Jeff Barklage Ricardo Barredo Tom Barron Gary H Baum Timothy D Beave Jaswinder S Bedi Tim Beller Richard Benda Jeb Bergh Marc Andre Berth George M Bianchini Lance Billitzer Bonnie S Blake Iason Blount Bob C Boccaccio Harry C Box Katié Boyun

Kevin D Braband Denise Brassard Michael Brennen

Gerard Brigante

Garrett Brown

Robin Buerki

Lou Chanatry Joe Chess Jr

Julian Chojnack

Joseph V Cicio Jeff L Clark Jeffrey R Clark

Anthony Cobbs

Michael Condon

Richard I Cottrel

Andrei Cranach Jeff Cree

Caleb Crosby

Dan Coplan Javier A Costa

Steven Coher Gregory Paul Collier Andrew Glenn Conde

Stephen S Campanell Susan A Campbell Capt Jose A Cardenas

Michael W Chamblis

Gary Bush

Joachim Hoffman

Jerry Holway Casey Hotchkiss

Gary Huddlesto

Colin Hudson Jeffrey G Hunt

Philip Hurn

Dave Isern

Christopher Ivins

Alec Iarnagin

Michael Jarocki

Michael A Johnson

David C Kanehani

Steven Jones Jacques Jouffret John H Joyce David Judy

Abe Holtz

Richard A Cullis Michael L Culp Grant Culwell Joseph C D'Alessandro Markus Davids Bruce F Davis Richard W Davi Ray de la Motte Michael S Dean Kris Andrew Denton loel Deutsch David F Diano Troy Dick Jason Dittmer Ian Dodd odd A Dos Reis Rick Drapkin Mitch Dubin Jerry Dugan Simon Duggan, ACS Louis R Duskin Lou Dustin Barry P Dycu David E Elkins Jason Ellson David Emmerichs Kevin J Emmons Brant S Fagan Dianne Teresa Farrington Michael Ferris Lance Fisher Craig Fiske Aaron Fitzgerald Eric Fletcher Houman Foroug Steven G Fracol Nick Franco Candide Franklyr David I Frederick Michael Frediani Mike A Freeman Buddy Fries David Gasperik Rusty Geller Michael Genne Vito Giambalvo Bill Gierhart Laurie K Gilbert Daniel Gold David Allen Grove Lee Grover Robert Guernsey John C Guntzelma Chris C Haarhoff Anette Haellmig Daniel Hagoue John Hankamme Anthony Hardwick Steven F Heuer Kevin Hewitt

Michael Karp Wayne L Kelley Vernon Kifer Douglas H Knapp Dan Kneece Rory Robert Knepp Frwin Landau George F Lang Per Larsson Eric Leach Sergio Leandro da Silva Joshua Lesser Ken Libby Jimmy W Lindsey Hugh C Litfin Michael E Little Lynn Lockwood George Loomis David Luckenbach Allan Lum Li Greg Lundsgaard Vincent C Mack Heather MacKenzie Paul S Magee David Mahlmann James Mann Kim Marks Jim McConkey Tom McDonnell BLMcDonnell Christopher TI McGuir Maurice K McGuire Christopher TJ McGuir Aaron Medick Robert L Mehnert lack Messitt Anastas N Michos Marc Miller William E Mills Andrew Mitchell William Molina David Monroe leff Moore Robert "Bob" Moore Denis Moran Joshh Morton Manolo Rojas Moscopulos Don Muirhead Marty F Mullin Scott T Mumford Sean Murray Jon Myers Leo J Napolitano Julvé Newlin William R Nielsen, Ir Tamas P Nverges William O'Drobinal Russell Ofria Mark O'Kane James Olcovich Andrew William Oliver Mark Richard Olsen Georgia Tornai Packaro George Paddock Nick Paige Charles Papert Andrew Parke David I Parrish Patrick J Pask Philip Pastuhov William Stephen Howell II Christopher T Pau

Terry Pfrang

Jens Piotrowski Joseph Piscitelli Robert Presley

Brooks Robinsor

Rick Robinson David Robman

Andy Romanof

Peter Rosenfeld

Dave Rutherford

P Scott Sakamoto

Randall Robinson

John Radzik

Mike Pierce

Martin Schaer Ron Schlaeger Gregory J Schmidt Thomas J Schnaidt Chuck Schuman Philip D Schwartz Bob Scott Alicia Craft Sehrin Benjamin Semanoff Khallid J Shabazz Geoffrey C Shotz Osvaldo Silvera lamie Silverstein Andy Sparaco Sandy Spooner Edward B Springer Lisa L Stacilauskas Robert Starling Scott E Steele George B Stephensor Daniel Stilling Sandra Stojanovic Michael Stumpf David L Svenson Brian E Sweeney James H Sweeney Bill Swinghamer Paul Taylor David James Thompso John Toll, ASC David Tolsky John Trapman Michael Tsimperopoulos Chris Tufty
Dan Turrett
Brian Tweedt
Joseph Urbanczyk
Matt Valentine Paul D Varrieu Stefan von Bjorn Bill Waldman Michael I Walker Mark Warshaw Gretchen Warther William Webb Aiken Weiss Thomas Weston Tom Weston Mande Whitaker Kit Whitmore, CSC Brian Keith Wilcox effrey Wilkins Bill Williams Joe "Jody" Williams Chad Wilson Dana D Winseman RI Wise David Wolff Peter C Xiques ASSOCIATE

Robert La Bonge George La Fountaine, ASC Lee David Laska-Abbott Greg Le Duc Ian D Woolston-Smith Noel Adrian Wyatt Taggart A Lee Mark R Leins Alan I Levi Warren Yeager Elizabeth Ziegler Carolina Zorrilla de San Martin Mark Levin Adrian Licciardi Ilya Jo Lie-Nielser Stephen Lighthill, ASC John Addocks David S Adelsteir lefferson K Loftfield Jessica Lopez Jasmine Lord Roland J Luna Leonard Lance Allen III David Alonzo Jon L Anderson Karen Beck Tony Magaletta Bruce Bender Kominik Main Jeffrey Bollman Jorge A Marcial Richard Marks Peter Bonilla James Mathers Jim Matlosz Maia Broz Dr Ellen Matsumoto Carmen Cabana Tisha Matthews Anthony Q Caldwe David S Campbell John Matysiak Krystal A Maughan Bruce Cardozo Joseph T McDonnell III Paolo Cascio Richard T Cascio Stephen Mark Ciappetta Charles Minsky, ASC K Adriana Modlin Matthew C Mosher Chad Courtney Richard Mosier Shah Mundell John Newby Nicholas Davidoff Derek Nickell Christopher Dawson Crescenzo GP Notarile James A Dennett Ronald Deveaux John O'Shaughnessy Steven D Parker Jorge Devotto Florencia Perez Cardena David Dibble Mark Petersen George Spiro Dibie, ASC Joseph Digennaro Kevin Downey Astrid Phillips

Ted Polmansk Serge T Poupis Don Presley Boris Price Robert Primes, ASC Liz Radley Richard Rawlings Jr, ASC Marcia Reed Bill Reiter Sandy Rentmeeste Brian D Reynolds David Richert Alicia Robbins Ken Robings Peter J Rooney David Rosner Douglas Roth David Roy Tondeu Marvin Rush, ASC Colin Sabala Shereen L Saived Mehran Salamati Germano Saracco, AIC Carl Martin Schumacher, S. Christian Sebaldt ASC Matthew Skala Michael Skor Jan Sluchak Robert F Smith Don Spiro Owen Stephens Dawn Sturgill Tara Summers Andy Sydney loe Tawil David Tondeur Remi Tournois Sandra Valde Lieven Van Hulle Craig W Walsh Brian Watkins Gregory L White ennifer Woldrich Rex Allan Worthy Vilmos Zsigmond, ASC

John Bailey, ASC James Burrows Tilman Büttne Trevor Coop Roger Cormar Dean Cundey, ASC Bruce Doering William A Fraker, ASC lack Green, ASC Tom Hatten Ron Howard Ron Kelley Kathleen Kennedy-Marshall Jerry Lewis Larry McConkey Rick Mitchell A Linn Murnhree MD Robert Reiner Jay Roth Robert A Torres George Toscas Roy Wagner, ASC Haskell Wexler, ASC

HONORARY

RETIRED Gary Olyn Armstrong Eugene Áshbrook wart Barbee Lou Barlia Rupert Benson Jr Al Bettcher Joe Blaisdell ames Blanford Vee Bodrero Donald R Burch Iim Connell Ivan Craig Robert Feller Gerald P Finnerman, ASC Jerry Fuller Gil Haimson Wynn Hammer Lutz Hapke Terence "Terry" A Harkin Gary Holt

Bob Keys Steve Lydecker Owen Marsh Bob Marta Stan McClair Michael McClary Ron McManus Emmanuel Metaxas Ed Morey Sol Negrin, ASC King Nicholson Nicholas Nizich John G Nogle Aaron Pazanti Robert H Peebles Arnold Rich Sam Rosen Frank Ruttencutte Richard Salvatore Hal Shiffman

Gene Talvin Pernell Tvus Sven Walnum Ben Wolf CORPORATE Bill Russell BARTECH ENGINEERING lim Bartell BEXEL CORPORATION John Keesee BIRNS & SAWYER, INC Rill Meue CHAPMAN/LEONARD **STUDIOS** Leonard T Chapmar CLAIRMONT CAMERA DELUXÉ LABS. INC Steve Van Anda DIGIHOLLYWOOD Chol Kim DOGGICAM Gary Thieltges EASTMAN KODAK COMPANY Lorette Bayle FILMTOOLS Stan McClain FOTOKEM Bill Broderser FUJI PHOTO FILM USA Sandra Kurotobi **FUIINON.INC** Chuck Lee GEO FILM GROUP, INC George Nolan HYDROFLEX, INC Pete Romano Scott Greene ISAIA & CO JL FISHER COMPANY LEE FILTERS (A DIVISION OF PANAVISION, INC)
Sean Hise
OCONNOR ENGINEERING LABORATORIES INTERNATIONAL, INC Fritz Heinzl Otto Nemenz PACE TECHNOLOGIES Vincenzo M Pace PANAVISION Phil Radon PHOTO-SONICS, INC Conrad Kiel SCHNEIDER OPTICS/ CENTURY DIVISION Bill Turner SONY FLECTRONICS, INC Adam Chuck Robert Dennis VINTEN, INC Peter Harman Peter Vinten WILLIAM F WHITE LTD / COM WEB GROUP

Roster Current as of 10/30/09

William F White

CAMERA OPERATOR: SOC ROSTER Fall/Winter 2009

Paul A Duclos

