Kim Reed

Walter Murch and The Art of Editing

When describing his art, Walter Murch's mind leaps from physics metaphors to psychology similes to the world of painting. When editing, he is arduously dedicated to the footage in front of him, his inspiration unspooled by those rolls of celluloid and streams of pixels. Within the softest sound or the faintest blink of an eye, Murch finds worlds.

Murch's list of accomplishments is long. He won an Academy Award for sound design for his work on *Apocalypse Now* and was awarded Oscars for both editing and sound for *The English Patient*, an unprecedented and unmatched feat.

Murch has also been extensively recognized by the British Academy, with Awards for best editing for *Apocalypse Now* and *The English Patient* and a double award for film editing and sound mixing for *The Conversation*.

In 1998, he re-edited Orson Welles's 1958 film *Touch of Evil* according to a 58-page memo Welles wrote to the studio to express his outrage at the way they had fired him and recut his film. Murch also re-edited and remixed sound for *Apocalypse Now Redux*.

Murch most recently served as film editor and sound designer for *Cold Mountain*, a Miramax film about the American Civil War adapted for the screen and directed by Anthony Minghella and starring Jude Law, Nicole Kidman, and Renee Zellweger. It opens Christmas Day 2003.

On this huge project, Murch decided to push Final Cut Pro into service. It's the first time Apple's nonlinear editor has been used to cut a feature film of this magnitude.

Murch's ability to translate the abstruse world of film editing and sound design-and the coupling of the two-into spoken and written words lets him provide special insight on the practice of the craft. DV's technical editor Kimberly Reed spoke with Murch about his art as he finished cutting *Cold Mountain*.

DV: Did you run into any particularly challenging scenes when editing *Cold Mountain*?

WM: There's a big battle scene in the opening reel where we sometimes had 13 cameras shooting simultaneously. In addition to the first and second units, we had what we called an Eyemo unit. The Eyemo is a 35 mm combat camera that was developed by Bell and Howell during the Second World War. It holds 400 feet of 35 mm film. Virtually all the documentary footage you ever see from World War II was shot on Eyemo cameras.

We bought five of them on eBay for around $2000 and ground them out so that they could shoot Super 35 mm. Then we fitted modern Nikon lenses, gave them to Romanian film students who were studying cinematography, dressed them up in uniforms, and shoved them into the battle. They got some remarkable stuff, which is in the film.

Cold Mountain had over 550,000 feet of work print.

The battle is typical of big battle scenes, in that there's a tremendous amount of coverage of all different kinds and descriptions. You try to work dynamically with the material that you've got and tell the story in an economical way, and yet keep it impressive and also have a through-line to the story.

DV: And your challenge as an editor was probably to cut that as a documentary.…

WM: Yes, it's more like being a documentary film editor. Some of the material was storyboarded, but a lot of it was simply what they could get under the circumstances. And some of the serendipitous material, is wonderful stuff. There was lots of planning, but it's frequently the fortuitous event that makes it significant.

This is also where my reverse storyboard system of the film images helped, because I can stand back and see an entire wall of images and edit just looking at the striking images that I've taken. I start to put together a scene out of those images, without having to scroll through everything all the time.

DV: It sounds a bit like the challenges you probably had cutting the scene in *Unbearable Lightness of Being* where the Russians invade Prague.

WM: Yes, very similar. Another challenge in *Cold Mountain* was a section of the film where there's a transition being made between forwards and backwards time, and then contemporary time in different locations. It's a point at which the fabric of the film warps, and we're making a shift from one kind of dislocation to another dislocation. Hopefully we've achieved that in an interesting way that doesn't call attention to itself, but what's actually going on is quite complex.

We took advantage of an element in the story, a letter Ada [played by Nicole Kidman] wrote to Inman [played by Jude Law]. In the script, it was actually quite simple; just two images and three or four phrases. Inman receives this letter in the hospital, and it was what inspires him to get up go on this odyssey.

But it seemed that if we used this structure of the letter, we could actually metabolize some of the scenes that otherwise were in danger of being cut out of the film. We could take fragments of these scenes and wrap them up within the structure of this letter and bring both Inman and the audience up to date with what's been happening to Ada in the intervening period of time.

We go into the letter with dislocated time, but when we come out the other side both characters exist in the same time frame. To come up with that structure in the editorial process and to actually make it work-and have it all be internally balanced within itself and entertaining at the same time-was an interesting challenge of the editing of the film.

DV: So the letter serves as a container for various flashbacks?

WM: Yes, exactly. And the length of time between him and her gets shorter and shorter as the letter goes on until, at the end of the letter, both of them are existing within the same time. Whereas when it began, the events she was talking about were probably a year and a half ago in the past, compared to where he was in the present.

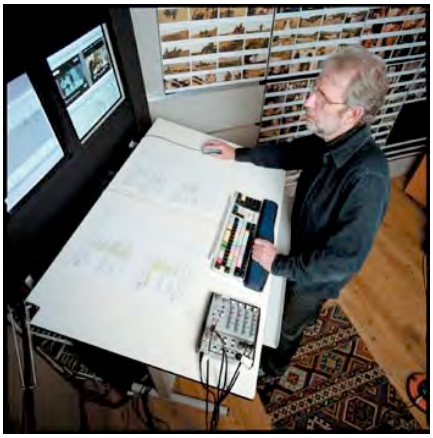
Editorial issues

DV: What were the postproduction challenges you were expecting for your edit and sound design of *Cold Mountain*?

WM: One series of issues was pretty clear from reading the script, which is that it's a parallel structure. During most of the film, it follows the story of Inman trying to get back to Ada. There are sections of what's happening to Ada, and then it cuts back to how Inman is doing getting back to her.

Any time you have a parallel intercutting structure for most of the film, it immediately raises the issue of how exactly you make the transitions from one story to the other. What looks right and good on the page may not necessarily be right when you actually get the film together, because-I don't know, I think it's almost that the specific gravity of text is different than the specific gravity of film.

Sometimes the image is much heavier than the text. And sometimes it's just the opposite; the image has much more lightness to it. So the ramifications are that sometimes you have to stay within a scene longer in a film than it seems like you need to in text, and vice versa. But you don't really know any of this until you actually get the footage and see what it's like.



Murch works standing at a drafting table, "dancing with the image" as he edits. His notes for the scene lie on the table in front of him.

In addition to that, there's a whole structure at the beginning that is going backwards and forwards in time. Initially we're in the so-called present of the film, which is right near the end of the Civil War, but there are a series of flashbacks that go back to tell about how Inman and Ada met in the months during the run-up to the war. When you have time shifting, and then you make a transition to location shifting, it presents all kinds of almost musical problems in how you construct it.

But that's part of the challenge. One of the things that really attracted me to the project-aside from the obvious delights of working with Anthony [Minghella, director of *The English Patient*, *The Talented Mr. Ripley*, and *Cold Mountain*], working with such a good story, and working with the actors-is that there was this added and interesting complexity to the editing. And one of our goals was to make that as transparent as possible, so that you feel the effects but it doesn't feel like work getting there.

Once we started shooting it was clear that there was going to be a lot of footage and that the assembly was going to be long. That becomes pretty obvious usually about the second or third week of shooting, where you see the patterns and how much film is being generated. So within, I'd say, three weeks, I was forecasting around 550 or 600 thousand feet of work print, which is what it turned out to be. This meant the first assembly would probably be over five hours long, which it was. Simply wrangling that amount of film at the daily stage is challenging. Then, once you've got an assembly that long, it's clear you can't have a film that long, so what's the best way to cut it down?

So there were editorial issues that were obvious from the script, and then there were editorial issues that arose during shooting. And that's in addition to all of the usual practical problems that come up during a film.

DV: You said some of the challenges were "almost musical" in nature. What do you mean by that?

WM: Think of the different characters as different instruments or different sections of an orchestra. When you orchestrate a symphony or any piece of music you try to have the instruments talk to each other in a balanced way. Not so that the audience is overtly aware of this, but in a way that you set up a musical dialogue between the

various sections of the orchestra.

In that sense, Ada and the characters who surround her and the geography that surrounds her is one set of instruments; then Inman and the characters that surround him on his journey are another set of instruments.

You try to make those transitions happen at just the right time, when the themes that have been developing are ripe and ready, where the audience understands enough and they're ready to go somewhere else, and you just have to pick that right moment. If you go too soon things feel like they've been short-circuited; if you go too late the film begins to bog down.

So hopefully, we've found the right places. You never know. You have to step back from the film. For me it takes a couple of years before I can really look at it with what amounts to an objective eye.

Visualizing the edit

DV: I love how you can talk about film through the lenses of other disciplines.

WM: Well thank you. It certainly lends itself to that, I think. And it helps me even in my own grappling with the issues, that's how I think of it, and it helps me to grapple with it. I have a board where all of the scenes are laid out in cards and the cards are all combinations of different colors and different sizes that mean things to me. So I'm trying to work out in color and shape those kind of musical relationships I was talking about.

Before I start I make a card for each scene in the film. Those cards contain just text; I just write on the card what the scene is, but I also use a certain combination of colors.

For instance, Nicole was a certain shade of red in the film. And if I see too much red in a block, I'm suspicious. I look at that and say, "Hmm, maybe we'd better have Inman come in here, he's blue, maybe we should find a way to bring this section of Ada's story to a close earlier and go to Inman." I don't necessarily do that, but it calls attention to certain things if you have these different colors working.

DV: I've heard you talk about photo boards....

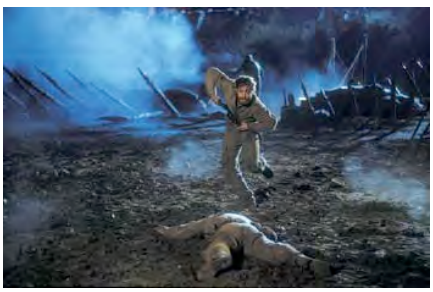
WM: The photo boards are different; they are actually photographs of the shots themselves. So in those cases, I'm looking at actual photographs of Ada and Inman.

DV: Those photos are shots of each camera set-up?

WM: Yes I select several representative frames from each camera set-up.

DV: You become deeply immersed in the films that you work on, especially since a lot of the time you're working both on picture and audio. But at the same time, in your book In the Blink of the Eye, you talk about cutting out little paper figurines to represent the relative size of a film viewer, and putting them on the side of your monitor so you can maintain a sense of perspective, a sense of objectivity about how other people are going to view your work. How do you become incredibly immersed in a project while still being able to step back out and work, in your words, as "ombudsman for the audience"?

WM: It's the balancing act of working on a film-I think, for everybody. It's not just particular to an editor, but it's perhaps more acute in the editor's case, because the editor's job is to keep an eye on the structure of the entire film, and on the balance of all the different elements-on the photography, and the acting, and the sense of place, and the music, and the sound effects. All of that the editor can control and modulate to help structure the film.



Murch edited film shot simultaneously by 13 different cameras, including footage from Romanian film students equipped with WWII Eyemo cameras.

In the end, I think real objectivity is almost impossible. That's why it's helpful to

have test screenings-of any size. We had, of course, a number of big audience screenings, and they told us certain things about the film. But we also would have screenings for ten or fifteen people and have discussions over a cup of coffee afterwards. We would learn sometimes slightly different things, out of that kind of a screening because the level of intimacy of that discussion is different than the more generic information you get from people filling out cards, and what they tell you in focus groups.

So I generally don't struggle against subjectivity. I think sometimes you get into trouble if you say, "I've got to get objective, I have to get away from it." It's almost impossible. In fact I think it is impossible. What I wind up doing is relaxing and going with it and in a sense swimming with the current, and trying to swim even a little faster than the current. If you try to plunge deeper in to your subjectivity, you wind up popping out the other side and being able to achieve objective results by being super-subjective. That doesn't quite make sense but if you get the gist of what I'm saying.…

DV: Does it have to do with the fact that by appealing to what is subjective within yourself you're probably finding common ground with the rest of the audience?

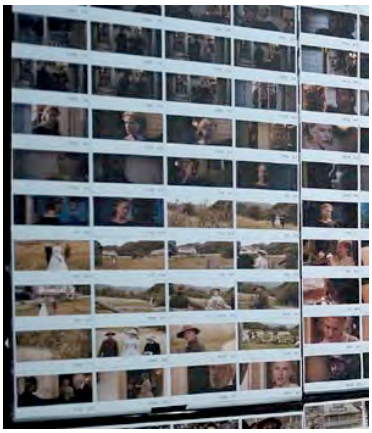
WM: Yes, exactly. And it's listening to that little voice in you. One of the difficult things in the middle of the noise of making a film is that little voice that says, "What if you did this?" or, "What if you did that?" This, I guess, is listening to that subjective "if" voice that's sometimes hard to hear when the studio is saying one thing, and the audience is saying something else, and the schedule is saying a third thing. But if you keep that ear open to those little tiny things that are coming from somewhere inside you, they frequently achieve-in an interesting, sometimes innovative way-the results that people are after without knowing it.

Choosing Final Cut Pro

DV: What were some of the features you wanted to see before you were convinced that Final Cut Pro was ready to edit *Cold Mountain*?

WM: Well, I talked to a number of friends who used it, so I got a general lay of the land of it. The most important thing for me, in terms of my own technique of editing, is that I be able to "edit on the fly." I look at the film at 24 fps, and hit the Cut key at the point that I want to cut. I need to have readout on the screen that shows how accurately I've made that mark each time.

For instance, I might mark the out point the first time, and it tells me that it's, let's say, 17 frames past a certain point. So then I'll roll the film back again, and if I can hit that same frame twice in a row at sound speed, I know that I'm probably on to a good edit point. And if I don't hit that point, the timecode readout will tell me, "Nope, the second time you didn't hit 17, you hit 14, which means that you're three frames earlier than you were before."



Detailed photo boards.

And I'll go, "Hmm, okay, that's what three frames feels like, let me try again." And if I can't then it means that for some reason I've chosen to edit in an area that's not a productive area. It's not musically right to edit there. So then I'll reconsider my out point or reconsider the shot I'm using.

Once I knew that Final Cut Pro would let me edit on the fly, and that we knew that all of the other main aspects were good and in place, I felt happy about taking the plunge. I mean, to go to Romania with a big film like *Cold Mountain* is a challenge no matter what.

The two previous films I'd worked on with Anthony, *The English Patient* and *The*

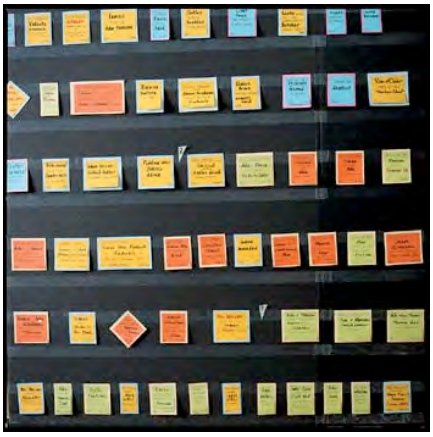
Talented Mr. Ripley, were both shot in Rome and edited on an Avid. I had the usual number of problems there, and Rome is slightly a remote location for Avid, so we had to fly people in from London to fix it when it crashed. So I was thinking, "If I was having those problems with an Avid in Rome, what will it be like in Bucharest, which is a thousand miles to the east, with Final Cut Pro?" But in fact Final Cut Pro turned out to be very solid. We had very few crashes at all, and certainly we had no crashes where we had to lift up the hood of the car, so to speak, and get into the mechanism.

The other advantage of Final Cut is that it uses a non-proprietary system for rendering the image. It uses QuickTime, so there are very few translation problems going into and out of Final Cut Pro.

DV: Did you use the Aurora Igniter video capture boards?

WM: Yes. That was how I was able to look at the image on a large monitor at television speed [i.e., 29.97 fps], and then go back to the image at 24 fps back in Final Cut Pro. Both in digitizing the image in, and then replaying it out again, the Aurora board was a crucial element.

In the early stages, we worked very closely with DigitalFilm Tree in Los Angeles. By talking to them and working with them and developing a workflow that I could look at on paper and they could demonstrate on their own machinery, I could see how it was going to work.



Scene cards.

I think it was March or April of 2002, my assistant editor Sean Cullen and I contacted them. We were still working on *K-19* at the time, and said, "We're thinking about this, what do you think?" They got really excited because they were anxious that something like this happen. So we got together and in a series of conversations over the next couple of months developed this series of programs to take advantage of Final Cut's strengths and to overcome some of the weaknesses of Final Cut 3, which is what we were using. A lot of the issues that we were dealing with are not issues anymore because of the emergence of Final Cut 4.

DV: And was that mostly regarding film and negative cut-list support?

WM: Yes. Final Cut Pro 3 was very happy when you imported the sound and the picture at the same time. For instance, from a digital video camera. But if you import them at separate times and tell Final Cut that they're supposed to be linked, Final Cut 3 was not rock solid in maintaining that relationship. That was a problem that we had to overcome. We did so by importing the picture, then importing the sound and syncing it with the picture. Then we created clips and exported them, then re-imported them.

And Final Cut Pro 3 thought, "Oh, this is a single item coming back." As a result the sound and the picture were inextricably welded together.

DV: Good workaround.

WM: Yes. There was a series of workarounds, which don't need to be done anymore, but at that time were helpful to us.

DV: I've heard you stand up when you edit….

WM: Yes, always.

DV: Were you able to continue this in the digital realm?

WM: It's very easy, when editing digital nonlinear, to work standing up. I would urge everybody to do it. The health benefits are great. And I think it's also better to be standing when I edit, certainly for the way my mind works, because you're really

dancing with the image when you edit. If you're standing, the rhythms of those images can resonate throughout your whole body. Whereas when you're sitting down, it's like trying to dance sitting down. It's awkward.

When I'm getting ready to hit the cut point, I sort of go in to a gunslinger's mode and try to pull the gun out at just the right moment, which is to say, mark the out point at just the right moment to make the most effective cut. Editing is a little like brain surgery, but it's also a little bit like being a short-order cook.

There's some combination of those things going on, and both surgeons and cooks stand to do what they do. As do orchestra conductors. There's no reason that any of those people couldn't sit down to do what they do, but most of them stand. And I stand to edit for something like the same reason.

Continuity and discontinuity

DV: In *In the Blink of an Eye*, you write about "fruitful tension," using sound contrapuntally, against the images. Many editors try to maintain continuity and a smooth flow, but you get great results out of a sort of discontinuity. What's the best way to graduate from one to the other?

WM: Hmm, you know, I don't know, really. I mean I don't know what to suggest. In my case, I'm always looking for what I call dense clarity, or clear density-choose which way you want to spin it. If I'm looking at a scene and I think, "This is very dense but it doesn't have any clarity to it," I try to achieve the clarity by some sort of reorganization of the images.

But then at a certain point my mind will jump the track and say, "Okay, leave the images the way they are, leave them a little ambiguous, and add a certain kind of sound here. Make the clarity come through sound." Then the opposite will happen. I'll look at a scene and say, "Well it's very clear what's happening, but it somehow isn't dense enough, it isn't rich enough. How can we complicate it in a way that doesn't compromise its clarity?"

Murch uses several shots from each camera set up to build detailed photo boards that he refers to while editing. Scene cards that hold text describing different shots and color coding for different characters and story elements help Murch establish the "musical relationships" necessary for good sequences in the overall architecture of the film.

Frequently, a certain kind of use of sound will come out of that. It happens to be the way my mind particularly works, and I'm blessed with being able to do both the sound mixing and the film editing.

I think I'd just say never underestimate what sound can do and how far you can push sound. If you can't do it yourself, as an editor, then it's really good to link up early on with a sound designer or a sound editor who can work with you on these things. The earlier that happens the better.

The worst kind of situation is not having that ally, and not even knowing who will be doing the final work. When you get in those binds, then the tendency is, "Let's make the editing do everything and we'll fit the sound in where we can."

If you can, figure out a way to collaborate, to have a collaboration between the image and the sound, so that one of them is carrying the load, and then shifts it over on to the other, the load being the story or the emotion or the rhythm of the scene. That's the best way to do it.

Building and Supporting Murch's System

Many months ago, Murch's long-time first assistant editor, Sean Cullen, called DigitalFilm Tree, a postproduction services company in West Hollywood, to discreetly ask if Final Cut Pro was up to handling a major feature film. That first call led to more calls, then Murch and Cullen met with Ramy Katrib and Zed Saeed of DigitalFilm Tree and hashed out the details. Satisfied that a Final Cut Pro system could meet their needs, Murch and Cullen took the plunge.

The workflow that DigitalFilm Tree designed for editing *Cold Mountain* consisted of four 1 GHz dual-processor Power Mac G4 computers running Final Cut Pro 3, Cinema Tools, and DVD Studio Pro. Each system had an Aurora Video Systems IgniterRT 311 capture card with 24 fps support, and each was connected to a Rorke Data Galaxy 60 Fibre Channel SAN with 1.2 terabytes of storage.

DigitalFilm Tree chose the Igniter card because of its 24 fps and sync clock support, and its ability to deliver a clear image at low 2 MBps data rates, an important feature when working with the huge amounts of footage digitized for *Cold Mountain*.

DigitalFilm Tree installed everything outside Bucharest, Romania, during production, and then again in London during post.

Assistant editor Sean Cullen shouldered much of the work required to run *Cold Mountain's* editing system.

Murch and Cullen each used one station, with another dedicated to digitizing and synching dailies, and the fourth to burning DVDs for the director. PowerBooks and iBooks were occasionally added to the system for the director, other assistants, and interns.

While all involved say things ran mostly smoothly, Murch and Cullen kept in constant contact with DigitalFilm Tree, and Aurora was called in a couple of times to update software drivers overnight to work around a few bugs in the system.

The bottom line, says Katrib, is, "The system that Walter and Sean used is the same system that anyone else can use."

Walter Murch's Films and Books

Selected Filmography:

Editor and Sound
Cold Mountain (2003)
The Talented Mr. Ripley (1999)
Touch of Evil (1998)
The English Patient (1996)
The Godfather: Part III (1990)
Apocalypse Now (1979)
The Conversation (1974)
The Godfather: Part II (1974)

Editor

The Godfather Trilogy: 1901-1980 (1992)
The Unbearable Lightness of Being (1988)

Sound
Crumb (1994)
American Graffiti (1973)

THX 1138 (1971)
The Rain People (1969)

Bibliography:

In the Blink of An Eye: A Perspective on Film Editing, 2nd Edition by Walter Murch (Silman-James Press, 2001).
Murch's essay on why cuts work, what makes a good edit, and digital editing, among other things.

The Conversations: Walter Murch and the Art of Editing Film by Michael Ondaatje (Alfred A. Knopf, 2002).
Ondaatje, author of novel The English Patient, and Murch sit down over the course of a year for four long talks about film, writing, and editing.

Behind the Seen: Walter Murch on Editing Cold Mountain, Final Cut Pro, and the Future of Cinema by Charles Koppelman (Peachpit Press, 2004).
Scheduled for release this summer, Koppelman documents the editing of Cold Mountain through interviews with Murch and others, quotes from Murch's journal and emails, photos, and more.

For more information, visit:

Apple Final Cut Pro, Cinema Tools
www.apple.com/finalcutpro

Apple DVD Studio Pro
www.apple.com/dvdstudiopro

Aurora IgniterRT 311
www.auroravideosys.com

Cold Mountain
www.coldmountainmovie.com

DigitalFilm Tree
www.digitalfilmtree.com

Rorke Galaxy 60 SAN
www.rorke.com

Kim Reed is DV magazine's technical editor.