
" A wealth of animation golden nuggets"
ANIMATION TIPS & TRICKS VOL 2
BY: ANIMATION MENTOR FOUNDERS & MENTORS
Get insider knowledge and insights from Animation Mentor animators and mentors:
Shawn Kelly, Carlos Baena, Keith Sintay, Aaron Gilman, and Wayne Gilbert.
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Animation Tips & Tricks

VOLUME II - 2009 EDITION

BY: *AnimationMentor.com Founders and Mentors*

AnimationMentor.com Cofounders
SHAWN KELLY
CARLOS BAENA

with features by AnimationMentor.com Mentors
KEITH SINTAY
AARON GILMAN

and special guest
WAYNE GILBERT

FOREWORD

What's your favorite hobby? Your favorite past-time? What's your favorite thing to sit around with your friends and talk about?

For me, it's animation. I love doing it, I love seeing it, I love learning more about it, and I love talking about it. Seeing something brought to life is always a magical experience for me, regardless of whether or not I happened to be involved in the process. So, the idea that someone out there might be interested in my thoughts on this stuff is absolutely surreal, because I'm just doing what I love, and talking about my favorite subject, and against all odds, you keep coming back for more! No matter how much time I spend (waste?) talking about fried chicken, Bacardi Anejo, or whatever other random thing pops into my mind, you still haven't abandoned me, and for that I owe you a great big thank you!!

This year was such a fun year for Animation Mentor's newsletter and our Tips & Tricks blog and Carlos Baena's blog. All of the content in this book originated in one of those spots, and the most exciting difference in this book over last year's book is that we have a bunch of amazing guest writers! Our awesome contributors include Aaron Gilman, Keith Sintay, Wayne Gilbert, and Carlos Baena. Aaron and Keith are animators and Animation Mentor mentors extraordinaire. Wayne is my mentor and the reason why I am an animator at ILM. And Carlos and is not only one of the most talented animators I know, but cofounder of Animation Mentor and one of my closest friends. So fun to get to collaborate with these guys!

It's been such a cool experience for me (and you, I'm sure!) to get to hear the thoughts and tips of such an impressive cast of animators who have been contributing throughout the year. It's been really humbling and fun to be a part of such a knowledgeable group, and all of us at Animation Mentor are so thankful to these animators who have been so generous in sharing their golden nuggets of animation wisdom with us!

The other big change between this year's book and last year's book is that the blog really created more of a dialogue, and allowed us to more directly answer reader-submitted questions and thoughts. For me, this elevated the whole idea to a new level, and I just wanted to give a quick thank you to all the people out there who have been writing comments on the blog and sending in their questions to the newsletter! You guys rock!! This ebook literally wouldn't exist without you guys.

And last but not least, I just want to give a big thank you to the greatest school staff the planet has ever seen, and especially Eunice Park and Michael Dauz for keeping the blog and newsletter not only up and running, but better every day!

So, what follows is our second official collection of animation articles written by a bunch of people who are probably a little too passionate about this stuff for our own good. Hope you have as much fun reading it as we had writing it! Be sure to swing by the blog and say hello!

Shawn :)

AUTHOR BIOS

SHAWN KELLY

Cofounder of AnimationMentor.com
Animator at Industrial Light & Magic
http://www.animationtipsandtricks.com

Shawn Kelly realized his dream to animate films with the help of three mentors who took a personal interest in his career. Convinced that animation lovers everywhere should have the same opportunity, he cofounded AnimationMentor.com, an online animation school with student/mentor relationships at its core.

Kelly works with Bobby Beck, AnimationMentor.com's CEO and President, and cofounder Carlos Baena to help define and shape the school's overall direction. Kelly balances his Animation Mentor role with his work as a senior animator at Industrial Light & Magic (ILM) in San Rafael, Calif.

Born in Santa Rosa, Calif., and raised in Petaluma, Kelly set his sights on working at ILM at age five when the movie ***Star Wars*** hit the big screen. Under the tutelage of animators Bill Hennes and John Root, he studied drawing and computer software throughout high school, attended community college, and Academy of Art University in San Francisco.

A summer internship at ILM introduced Kelly to another influential mentor, animation director Wayne Gilbert. It was through Gilbert that Kelly realized that he wasn't learning what he needed at school. Kelly left the academy in 1996 for a job as a character animator at former video game and educational company Presage Software, but continued his studies with Gilbert twice a week.

In 1998, Kelly fulfilled his lifelong dream and landed a job at ILM. Since that time, he has worked on numerous films including ***Day After Tomorrow***, where he was on the team that animated the wolves; ***War of the Worlds***, for which he animated tripods and probes; and ***Star Wars: Episode III – Revenge of the Sith***, where he helped develop and animate the vulture droids and animated Yoda in a pivotal sword fight. Kelly worked as a Lead Animator on ***Transformers***, and his additional credits include ***The Incredible Hulk***, ***Star Wars: Episode 2 – Attack of the Clones***, and ***AI: Artificial Intelligence***.

He just completed work on ***Indiana Jones 4***, and is currently a Lead Animator on ***Transformers 2: Revenge of the Fallen***.

Kelly received the 2007 award for the 'Best Single Visual Effect of the Year' by the Visual Effects Society (VES), an organization dedicated to advancing the arts, sciences and the application of visual effects. Kelly's winning effect was for the desert highway sequence of ***Transformers***, in which Bonecrusher skates through traffic, destroys a bus, and fights Optimus Prime.

Kelly has developed curriculum and taught at the Academy of Art University and was on the team that earned the 2000 CLIO award for Best Computer Animation for a Pepsi/Star Wars Alien campaign. Kelly currently lives in San Anselmo, Calif., where he reads a lot -- especially comics – and writes short films.

CARLOS BAENA

Cofounder of AnimationMentor.com
Animator at Pixar Animation Studios
http://www.carlosbaena.com

Carlos Baena knew he wanted to be an animator after watching two films: ***Toy Story*** and ***The Nightmare Before Christmas***. He was moved by the storytelling, the characters, and the animation. After Baena began studying animation, he experienced a deeper level of storytelling that he wanted to share with others. As a cofounder of the online school AnimationMentor.com, Baena is helping to bring animation education to students around the world, inspiring them to make films.

Baena works with fellow cofounders, Bobby Beck, AnimationMentor.com's CEO and President, and Shawn Kelly to define and shape the school's overall direction. Baena balances his cofounder responsibilities with his full-time animator job at Pixar Animation Studios in Emeryville, Calif.

Born on the Canary Islands and raised in Madrid, Baena came to the United States to attend the University of San Francisco and the Academy of Art University. Upon graduation in June 1998, he landed a job animating commercials at Will Vinton Studios in Portland, Oregon. Four months later, he returned to San Francisco to work on spots and short films at Click 3X and WildBrain, Inc.

Baena continued to hone his craft, doing character animation tests and wearing out his VCR's slowmo toggle. The imagery he created helped him secure a position at Industrial Light & Magic (ILM) in March 2001. At ILM, Baena worked as an animator on ***Jurassic Park 3***, ***Men in Black 2***, and ***Star Wars: Episode 2-Attack of the Clones***. Captivated by fantasy and comedy, Baena left ILM for Pixar in 2002 where he has worked on the films ***Finding Nemo***, ***The Incredibles***, ***Cars***, and ***Ratatouille***, the short film ***Boundin'***, and Andrew Stanton's ***WALL-E***. In ***Cars***, Baena animated several scenes with the two Italian cars Guido and Luigi (two of the characters that were the most fun for him to animate) and received a 2007 Annie Award nomination for Best Character Animation for his work. Baena's current projects at Pixar include ***Toy Story 3***, which is scheduled for release in 2010.

Baena currently lives in San Francisco, Calif., where he spends his leisure time studying and making short films, composing music, skateboarding, and perfecting his animation craft.

WAYNE GILBERT

Animation Director
Writer
http://www.anamie.com

Wayne Gilbert graduated from Sheridan College in the mid-1970s. He started work at a small studio on a television special titled ***Witch's Night Out***, then on to Nelvana where he animated and/or illustrated backgrounds on five more TV specials, a pile of commercials and was the background department head on the feature film ***Rock and Rule***.

After leaving the studio life to freelance he taught and coordinated the Classical Animation Program at Sheridan College. While teaching he made two short films – ***Bottoms Up*** and ***Traffic Jam***, which screened at Annecy Animation Festival in France. In1996 he was recruited to help set up the Walt Disney Canada studio in Toronto then headed to Industrial Light & Magic (ILM) where he worked for seven years and transitioned to CG animation and completed two more short films – ***CPU*** and the award winning ***Let GO***.

Gilbert returned to Canada in 2005 to work as senior animation director at Electronic Arts Black Box on the award-winning new IP 'Skate.' While at ILM, Disney and EA his responsibilities included designing and delivering professional development classes for animators. Wayne has worked on diverse productions from illustration to commercials with two Clio awards for ***Care Bears*** to ***Star Wars*** and video games, and has completed five short films of his own. His book, ***Simplified Drawing for Planning Animation***, has helped to support the craft of animating since 1999. Wayne has a long list of international venues where he has lectured on animation and filmmaking. He has written a children's novel and screenplay and is now working to bring them into production.

AARON GILMAN

Mentor at AnimationMentor.com
Animator at Weta Digital
http://www.aarongilman.com

Aaron Gilman is currently an animator at Weta Digital and mentor at Animation Mentor. He spent most of his childhood traveling, but Montreal was always home base. After graduating from the University of British Columbia with a degree in philosophy, he spent many years trying to figure out how his passion for visual arts could turn into more than a hobby.

At age 26, Aaron didn't even know what 3D animation was. He loved making short films, exhibiting his photography, and studying film theory. It was only while sitting on the bus one day in Vancouver, with about $15 in his account, that he saw an advertisement for a 3D animation program and enrolled. In the first three months of the program Aaron knew animation was what he had been seeking. By the end of the program he had multiple job offers, and moved back to Montreal where he took a position as a junior animator with a new studio called Meteor. He stayed there for a number of years working on dinosaurs and prehistoric animal shows for Discovery Channel. After Meteor, Aaron was hired at Tippett Studio to work on ***Matrix: Revolutions***, and also worked on ***Hellboy*** and ***Constantine***. Aaron began working as the Animation Director on Ubisoft's ***Tom Clancy's Rainbow Six: Vegas***. After a couple of years, he returned to Meteor and supervised animation on the feature ***Journey to the Center of the Earth 3D***. Over the past eight years, he has had some incredible opportunities working at all levels of feature films, games, and television. Aaron recently relocated to New Zealand where he is working as a character animator at Weta Digital on James Cameron's ***Avatar*** and Fox's ***The Day the Earth Stood Still***.

Some of Aaron's interests include public speaking on animation. He's had a blast speaking at conferences, universities and trade schools. He also loves computer gaming with ***World of Warcraft*** as his biggest time sink. Aaron is having a lot of fun with his wife and son in New Zealand where they spend the weekends walking on the beach and hanging out with other Weta friends and their kids.

KEITH SINTAY

Mentor at AnimationMentor.com
Senior Animator at Digital Domain
http://www.keithsintay.com

Keith Sintay is a senior animator at Digital Domain and a mentor at Animation Mentor. Keith dreamed of becoming an animator since he could draw his first stick figure. He was inspired to pursue his dream after seeing ***The Rescuers*** in 1977; the sketchy pencil lines left on the characters in that movie allowed a peek into the art behind the scenes. To him it was inspiring.

Keith grew up in Michigan, and after being distracted by girls and parties, remembered that he had once wanted to make an animated film. He pursued the Disney Feature Animation internship by finishing art school and drawing and drawing and DRAWING (there was no CG back then kids). Well, to get to the point, he was accepted into the Disney internship program and was hired shortly after to work on ***Pocahontas***.

Keith has worked on ***Hunchback***, ***Mulan***, and ***Tarzan*** at Disney Feature, and ***Spirit***, ***Sinbad*** and ***Shark Tale*** at DreamWorks. He has recently finished work as a senior animator on ***Open Season***, ***Surf's Up***, ***Monster House***, ***Beowulf*** *and* ***I Am Legend*** at Sony Pictures Imageworks. Having just finished work on ***G.I. Joe***: ***Rise of the Cobra***, he is currently working on ***Transformers: Revenge of the Fallen***.

MEET THE AUTHORS!

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FEATURING AUTHORS AND PRESENTERS:

WAYNE GILBERT

Wayne Gilbert, an animation director and writer, has animated for films, television, and commercials and is the winner of two Clio Awards. In addition to working as an animator at major studios, he has also designed and taught classes for other animators at Disney, Industrial Light & Magic, and Electronic Arts. And his book, ***Simplified Drawing for Planning Animation***, has been a leading resource for animators since 1999.

KEITH SINTAY

Keith Sintay is a senior animator at Digital Domain and a mentor at Animation Mentor. He has worked on the films ***Pocahontas***, ***The Hunchback of Notre Dame***, ***Mulan*** and ***Tarzan*** at Disney, and ***Spirit***, ***Sinbad***, and ***Shark Tale*** at DreamWorks Animation. Most recently he worked as a senior animator on ***Open Season***, ***Surf's Up***, ***Monster House***, ***Beowulf*** and ***I Am Legend*** at Sony Pictures Imageworks. Having just finished work on ***G.I. Joe: The Rise of the Cobra***, he is currently working on ***Transformers: Revenge of the Fallen***.

WEBINAR

ANIMATIONMENTOR.COM
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LETTER from AnimationMentor.com Founders

Welcome Back!

If you're reading this ebook, that means you've probably read our first Animation Tips & Tricks ebook and are serious about learning to become an animator, the coolest job in the world!

We've been animators for a while now, working at Pixar and Industrial Light & Magic. (ILM). We've fulfilled our dreams of becoming animators and want you to fulfill your dreams too. This is why we created Animation Mentor. We wanted to share what we know about character animation with you so you can reach your dreams. Our total enrollment is 900 students and growing, and we've seen our graduates go on to exciting careers.

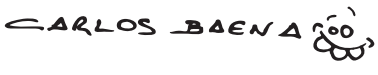
We believe the keys to a successful animation career can be found in "The Three P's: Practice, Perseverance and Personality." We cannot give you any of the Three P's – you must bring these to the table on your own in order to become the best animator you can be. What's unique about Animation Mentor is that we provide you with unparalleled animation training and support so you learn animation and graduate with an awesome demo reel. Our 18-month animation program teaches you everything that we know about character animation.

We hope you enjoy Animation Tips & Tricks Volume II. This is just a glimpse of what we're teaching at AnimationMentor.com. We hope to see you in class soon!!

Wishing you the best of luck in your animation journey!

Bobby Beck

Shawn Kelly



Carlos Baena

TESTIMONIALS

Check out what animation enthusiasts are saying about animationtipsandtricks.com. Here's a glimpse of what readers have posted on the Animation Tips & Tricks blog.

"Thanks a lot for this new blog Shawn! I'm absolutely loving it, and have it bookmarked as RSS. Cheers, and keep up the awesome tips!" ***-Cuby***

"These posts just keep getting better and better. All I've done this summer is an animation internship and read this blog and watch the webinars, and it's the best summer I've ever had" ***-Snow***

"This blog totally rocks. I check it every day before I start animating at the games company I work for. Please keep it up! Won't be long before it's a creative goldmine!" ***-Aron Durkin***

"I really love people with such experience sharing all their knowledge. Thanks and looking forward for more!!!" ***-Jorge Rausch***

"Thanks for this blog Shawn. Really is a great thing you're doing for the animation community :) Now among my list of daily-checked sites." ***-Ben C***

"This is a great opportunity for all of us animators to learn and grow with the help of this blog. Looking forward to more such great posts." :) ***-Ratul Sarna***

"Thanks for starting this blog, it helps to not lose any of the precious advice you are giving. About the topic animator vs. lead animator/ supervisor: I seem to be in the rare position of really wanting to become a supervisor one day. I love working in teams, seeing people's talent evolve (and help them find it), and taking the responsibility for my team. I always liked that, and even though I have so, so much to learn still - that has always been my dream." ***-Alex M. Lehmann***

(shameless school plug)

Now's Your Chance to Learn Character Animation From Animation Mentors Working at Leading Studios!

If you're reading this book, you love animation and enjoy learning about the art of animation. If you'd like to learn more from our mentors, we invite you to check out AnimationMentor.com. It's the only online animation school dedicated to the art of character animation. Our mentors teach you everything you need to know to create a great demo reel and land your dream job in just 18 months. We're always looking for new talent, so check us out and see how we can help you reach your dreams!

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ANIMATION CAREER ADVICE

How Important Is an Art Background for an Animator Who Is Starting Out?

By Shawn Kelly

There was a time when I thought that there was nothing more important for an animation student than a solid background in traditional art. Painting, drawing, color theory, art history, the works. At least that's what I was told, back in the day, and on the surface, it makes sense, doesn't it?

Of course an artistic background will help you as an animator. It's a no-brainer. Color design may inform staging decisions, drawing classes will certainly help with composition issues, figure drawing and an understanding of anatomy are helpful for any animator.

But if the question is whether or not an art background is absolutely NECESSARY to becoming a great animator, experience has taught me that the answer is no.

It isn't.

Now, to be clear, it certainly doesn't hurt! I'm thankful, in particular, for all those years of figure drawing. I may be a decade out of practice, and unable to accurately draw anything to save my life right now, but the anatomical and biomechanical knowledge I soaked up in those classes helps inform my animation decisions to this day.

If nothing else, as strange as it sounds, it was very helpful for me to just sit in a room with a naked person and study how their body worked without any of the important hip/spine interactions being hidden by clothing. I actually even learned more in between the model's poses than when he or she was actually holding a pose for us to draw! As an animation student, it was fascinating to watch them move from pose to pose, or climb up onto the stage, etc. In fact, I think I'd say that considering the sad state of the animation program I was attending at the time, I probably learned more about body mechanics during the spaces between figure drawings than I did in any of my "animation" classes!

That said, it isn't absolutely necessary. In fact, you know what kind of background would be helpful for an animator who is just starting out?

Yours! That's right! ANY background is going to be helpful in SOME way. I've met animators who were fighter pilots, detectives, maintenance workers, engineers, architects, soldiers, bartenders, and athletes. All of these people bring their unique backgrounds and knowledge base to their work, and these life experiences inform the acting decisions of their characters, the stories they will tell, and the style of their work.

As animators, observation is one of the most important aspects of what we do. In order to bring a character to life, there is almost nothing more important than having a collection of interesting actions and acting choices we've observed and either committed to memory or written down or sketched. These actions we've set aside to remember are our secret weapons in the creation of memorable character performances.

Image courtesy of Rachel Ito.

In light of that, just about any life experience you have may come in handy during your animation career!

Image courtesy of Rachel Ito.

I would say that any artistic experience you can have, whether it's studying photography, visiting museums, or even reading comic books -- these are all more immediately helpful to you as an animator than your memory of the drunk who spilled everyone's drinks one night when you were tending bar. The drunk may come in handy at some point down the line as you craft a performance that takes place in a bar, but the artistic growth you've experienced in the first three examples is something that you'll be able to use from Day 1 as you jump into animation.

So sure, any art background is helpful to the animator, and obviously I think that figure drawing classes, in particular, can be very beneficial, but I've met too many incredible animators now who have next to no art background at all to be able to say that it's completely necessary.

While an art background, used properly, will be an advantage for any animator, the computer has removed the absolute need for draftsmanship. Keeping a character "on-model" is no longer an issue, at least as far as maintaining the mass goes. (Taking the facial animation and acting choices off-model is still as big a problem and challenge as it ever was, though!). Being able to draw an accurate turntable of a character is a fantastic and enviable skill, but as our computer tools get more and more robust, there is increasingly room in the ranks of the world's animators for animation artists who have never picked up a pencil for serious drawing.

Of course, if you want to pursue 2D animation, obviously that means you WILL need strong draftsmanship and a well-rounded background in traditional art, but the question I get is usually referring to a career in 3D animation, which is a different story all together.

Animation students who don't have any artistic background at all may need to work a little harder to make up for it, but it's simply no longer necessary to have the drawing skills that many of our animation heroes possess.

What's necessary is that you have a passion to learn animation and a hunger to seek that knowledge out anywhere and everywhere. What's necessary is a keen sense of observation throughout your daily life, and the ability to learn from what you are observing. What's necessary is the ability to apply those observations to your work, and to accurately recreate and exaggerate the life you see around you. What's necessary is the patience to plan your work out, and the tenacity to be detail-oriented enough to completely finish it. What's necessary is the desire to find criticism of your work and to grow from what you hear.

THAT's the stuff that's absolutely necessary. If you're missing any of the above, you might as well give up right now -- you aren't going to make it as an animator. I'm sorry. That's the stuff you can't live without. Everything else is gravy. Sometimes the gravy really makes the dish, though - something we shouldn't ignore. In other words, your ice-cream sundae might be delicious, but it might not be able to compete with your neighbor who actually put the cherry on top, you know?

I do think that you can make a pretty darn good sundae without any art background, but if our goal as animators it to never stop learning (which it SHOULD be), I'd encourage all of you to study any and all aspects of art in any way you can.

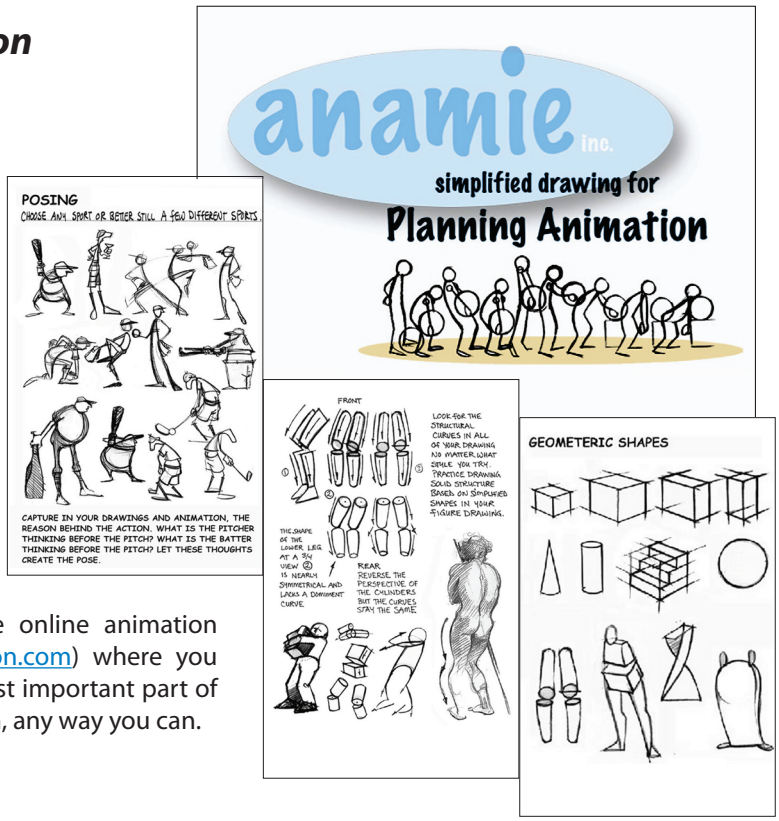
And if you become an animator having no art background at all, then guess what?

You're an artist. ...

Which I guess means you have an art background now! Cool, huh?

Shawn :)

Advice on Supplementing My Animation Education with Books or Forums
By Shawn Kelly



I'd recommend *Simplified Drawing for Planning Animation* by Wayne Gilbert which you can get at: http://www.anamie.com, which I think is not only terrific, but is the best bang for the buck out there when it comes to animation books

Wayne was my mentor, and he taught me pretty much everything I know about animation. I still flip through his book from time to time. There are some really cool ideas in there, and much deeper stuff than the title leads you to believe, including some cool stuff about force and body mechanics.

I'd also recommend plugging yourself into one of the online animation communities, like CG-CHAR (http://www.cgchar-animation.com) where you can show your work and get critiques. Feedback is the most important part of learning animation, so push that aspect as much as you can, any way you can.

Shawn :)

When Do You Know If You Are Ready to Apply to Movie Studios?
By Shawn Kelly

For me, I lucked out and had an amazing mentor in Wayne Gilbert. He's an amazing teacher and he and his wife are incredibly generous people who took me under their wing and without his mentoring I have zero doubt that it would have taken an extra 10 years for me to get to ILM, ever I ever made it at all. I worked on the animation assignments he would give me (while working at my games job during the day) for about two years until Wayne said he thought it might be ready to send a demo reel in. So, for me, I knew it was ready when a professional told me so.

Obviously, this is an ideal situation to seek out, though not everyone will be able to find a professional. The best bets are to go to conferences like SIGGRAPH or animation festivals and find professionals you can show your reel to. Many professional animators would be eager to look at your stuff and offer advice. This is something we have been doing at the Animation Mentor booth at SIGGRAPH for the last couple years (having your demo reel critiqued by pros). The feedback has been great so I think a lot of people are finding this sort of thing very helpful.

If you can't travel to any major animation/CG conferences, then I would seek out online animation communities such as cg-char, which is what many of us did back in the day. Forums and communities like these can be invaluable for figuring out where your skills are.

Lastly, I would encourage you to just apply for the jobs you want! There's really no downside to sending in a reel that might not be 100% ready. Maybe it's 95% ready, and they'll see the potential in you. Who knows? If you know for sure that it's nowhere near ready, that's another story, as you don't want to get a reputation for wasting the recruiter's time at a specific studio, or for badgering them with nonstop demo reels. Only send it in if you think it truly might fit with what they may be looking for, AND only reapply if you have made some significant changes to the reel. If they've already seen your older reel, be sure to put your newer stuff at the beginning or they may recognize the old work and say, "Hey, we've seen this one already" and turn it off.

Shawn :)

Who Is Cut Out for Animation? Answer: You!
By Shawn Kelly

I've been getting a lot of questions emailed to me asking what it takes to be an animator. I've talked a bit about that stuff before and elsewhere, but I thought I'd address those questions again here.

I believe with all my heart that ANYONE with the passion and drive and desire to learn animation, can learn animation. Yes, there will always be those VERY few lucky people who just naturally have crazy amounts of animation talent, but they are few and far between. I've been either learning or teaching (well, always learning!!) animation one way or another for 13 years now, and can only think of three students in all that time who really fit that description. Maybe four.

Those people are very rare. For most of us, we just have to study our brains out and practice like crazy and sacrifice a lot of sleep in order to try to get the hang of this animation stuff.

You're probably worrying about competition in the industry, and you know what? There WILL be competition, and a lot of it. In fact, hundreds of people will probably be competing with you for that job at your dream studio. But gosh, if that's your dream? If that's your absolute dream job, how can you not give it a shot?

I really think that unless you have serious time-consuming family obligations or other extenuating circumstances and responsibilities -- unless you're in some kind of situation like that, you owe it to yourself to chase after that dream. If you want it more than those other hundreds of people, and work harder for it than those other hundreds of people, then it's those hundreds of people who should be worried about YOU, and not the other way around!

When I was in high school, I wanted to work on ***Star Wars*** more than anything in the world, and they hadn't even officially announced that there would be more ***Star Wars*** movies. It was just rumors, but I made it my goal to get to ILM. ILM was where I wanted to work, period. In light of that, every single decision I made was based on "does this decision take me one step closer to ILM or take me a step away from it?" If it was the former, then that's what I did, no matter what kind of burden it created on my time, my social life, schooling, etc.

I worked my butt off to somehow unbelievably make it into ILM after years and years of training, networking, and working at smaller studios. I learned that something my grandfather once told me was very true: simply "following your dreams" isn't enough -- you have to aggressively and proactively HUNT your dream down.

People spend their entire lives "following their dreams" and the vast majority of them never arrive. If you want to get into your dream studio, you have to be better than that. You have to be a hunter.

If you can combine a true passion for learning animation with the tenacity necessary to hunt down your dream job, then I have zero doubt that someday I'll see your name in the credits of my favorite TV show, a video game that I've been lost in for weeks, or at the end of a film in a packed theater. It might not happen right away, and you'll probably have to slowly build experience and your reel as you work your way up through smaller studios, but if you just never let go of that dream, and base your decisions on it, you CAN make it come true.

I know, because I've been there. And the hard truth is that I saw plenty of people who could have tried harder. Back when I was in school, I saw plenty of students leave the animation lab at 10 p.m. to go play video games or hit a club or go to sleep. The people who stayed in that lab until it closed at 2 a.m. EVERY NIGHT are largely the people who have their dream jobs right now.

We made animation our LIFE, and put everything else on hold. Could it be a coincidence that those are the people who ended up with the jobs everyone else wanted? I don't think so. I think it ended up coming down to who wanted those jobs the most, and who was willing (or able) to make the sacrifices necessary to completely immerse themselves in their art.

For me, it was a great life lesson, and one I feel happy and lucky to have learned, so I figured I should pass it along...

I also want to add that I'm not merely talking about joining Animation Mentor. I realize that many of you aren't in a situation where you can join the school right now -- that's fine! Seek out other ways to hunt your dream down. There are a lot of free online resources that can at least help get you started, such as forums, online animation and art communities, and blogs. There are great books out there such as ***The Illusion of Life*** and ***The Animator's Survival Kit***. There are fantastic making-of documentaries on any number of your favorite DVDs.

Seek that stuff out and soak it up! Do the best hunting you can with whatever is at your disposal right now, and take that first step that brings you even the tiniest bit closer to your goal, whatever it may be.

Best of luck!

Shawn :)

How Important Is Music on a Demo Reel?
By Keith Sintay

Demo reels can be tricky things. Everything about what we do as artists is subjective; not everything you do will please everyone. And, putting together a demo reel not only involves your visual elements, but the auditory ones as well. I never used to be a fan of music on a demo reel. I was happy just letting my dialogue shots (and any incidental music that might be behind the dialogue) carry the sound portion of my reel. I had seen too many demo reels with, what I felt, was 'cheesy' music that didn't help the flow of the reel at all, but rather hindered it. So, I figured, it's just safer to leave the music off.

Well for anyone that may have seen my reel lately, you will notice that I finally made the leap and put music on my reel. What changed my mind? Well, I was looking at my reel, and because of the length and variety of shots contained on it, I didn't feel like it flowed as nicely as it did when it was shorter and I had only animated a few things. I looked at my colleague's reels and saw how proper music can tie together your shots. Now again, this is all subjective, but I tried to pick music that was upbeat and not overly distracting to the animation, and above all that didn't drown out my dialogue shots

I think music on a demo (show) reel is a matter of taste. I am not an expert in this field, but from what I have seen in my professional experience, bad music can take away from great animation, and good music can help disjointed shots flow together seamlessly (like in movie trailers for example).

I would simply ask around and find out if your friends or colleagues like the music you have selected. Get some feedback and then use that to help you make your decision.

Keith Sintay

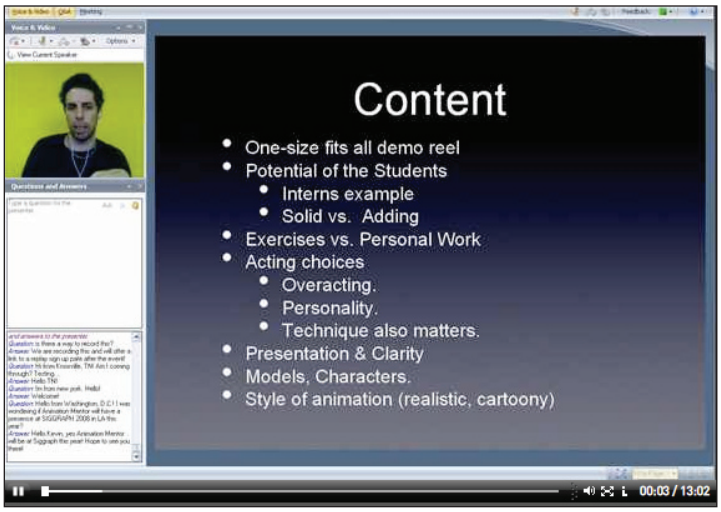
Demo Reel Dos and Don'ts
By Carlos Baena

Throughout my animation career at different studios and as a cofounder/director of sorts at Animation Mentor, I've watched many student and industry demo reels. I have also gathered information and spoken with recruiters, animators and supervisors about how they select candidates based on the work they see in a demo reel and their interactions with the job applicants. For you, I've created a list of valuable tips for creating an animation demo reel that has a better chance of landing you a job at the studio you'd like to work at.

Also I recommend reviewing my webinar from July 9, 2008, called Demo Reels Dos and Don'ts which you can watch at Animation Mentor.com.

Go to www.animationmentor.com/webinar and click on the Past Webinars tab. Also, check my blog www.carlosbaena.com for more information, tips, and ideas as I continue to learn and share more about animation.

1. Do NOT try to make a one-size fits all demo reel. This works in small companies, but for the main studios it may hurt your chances more than anything else. Make your demo reel specific to the position and studio for which you are applying. When applying, as an animator to a big animation studio where departments are very specialized, everything on the reel should be specifically "animation," not "texturing," "lighting" or "modeling".



2. You should NOT include everything you've worked on throughout the years. Keep it short. Remember that recruiters/supervisors only have a short time to look at reels and want to get to the point right away. It should be no longer than a minute or so. Chances are that people who are reviewing your reel are looking at another 100. So, the easier you can make it for them, the better. You don't want to bore them. Instead, they should see your strongest work (even if it's only 30 seconds). Leave them wanting more. Here's another tip: put your very strongest work first because if they aren't hooked in the first 10 seconds, they may not watch the rest of your reel.

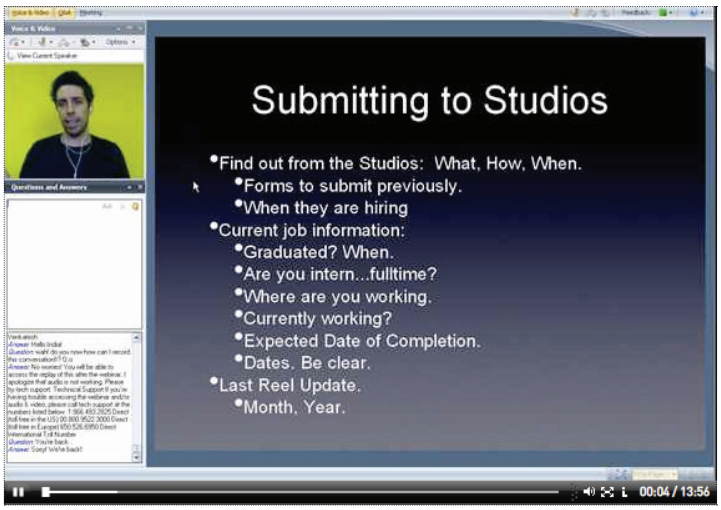
3. Make the reel original on the inside, NOT on the outside. Human resources, along with actual animators, will be looking at your reel, and they don't care about a fancy outside package or what you include along with the reel and resume. From key chains to toys, I've seen people include all kinds of things with their reels that do not relate to their animation skills. Put all of your originality into the actual animation content. Make it fun and original for people to watch, but don't overdo it. Your best bet is to put your resume and shot breakdowns as the cover insert of the DVD case so it can't get lost or separated from your reel. Also, put your name and contact info inside the case and on the DVD just in case it gets separated and passed around. You'd hate to think they fell in love with your reel and then couldn't figure out who it belonged to!

4. Do NOT include stuff that is too distracting, whether it's music or fancy titles. If you have a reel with a dialogue animation test, and the music is too loud for people to hear the dialogue, or you overdub mega-loud techno music throughout the whole thing, it will conflict with the purpose of the reel, which is to show your animation skills as clearly and simply as you can. Everything else should be secondary.

5. Do NOT include anything animated by others. Be very clear and honest about what you have done. The industry is very small -- people go from company to company and they are very familiar with everyone's work. Always include a credit list of the shots on the reel and what you animated for them. In the event that a shot is actually shared by two or more animators, you should clarify the work that you did.

6. Bring your own personality to the reel. Ultimately, many people can learn the techniques. What's interesting to see and what recruiters look for, is the personality, the actor behind the reel. You'll stand out if you can show your creativity in your acting choices. Show you can be subtle as well as do big performances. Don't include content based on others' animations. We don't want to see a "Pixar" reel. Instead, we are looking for the talented actor that can help a studio make their work much more distinctive. It does help to be aware of the style of animation that a particular studio has or what kind of work they create. You wouldn't want to apply to a VFX Studio with a reel that has only cartoon work, or apply to a place where they do cartoon-type of work with a reel containing only creature work.

7. Find out what to submit and how. Go through the studios' online sites and find out exactly what they need from you before you apply to them. Chances are, they may need you to submit a form before you send anything, or they may ask you to submit your portfolio in a particular way or format.



8. Be respectful and patient with the people reviewing your work. It doesn't help your chances if as soon as the studio gets your reel, you call or email the recruiters and animators a dozen times a day. Be considerate with their time, and most importantly treat them with respect. They are here to help you and their job is not easy with hundreds of reels to watch over several hours. This is good to keep in mind after you send a reel, and you don't hear from them immediately.

9. Pay attention to the details. Check your DVD and make sure it works before you submit it. Don't use menus or make a recruiter work to figure out how to play your reel. Keep it simple. The best DVDs just start playing as soon as you load them.

10. And lastly, keep trying, and keep refining your animation. When you've progressed, resubmit your reel to show your growth and the new work. It takes time, motivation, skill and creativity to succeed in this fun and motivating career.

I hope this helps you!

Carlos

Making It – Dream Jobs
By Carlos Baena

In response to an earlier question I received about "making it," or how to get your dream job, I'd like to share some of my thoughts. Please note, these are only MY opinions on what I've noticed over the years.

I found that "making it" often changes over the years. People have different priorities. I feel like I've always had my dream job (working on films, period) and for a long while "making it" for me was to make it to ILM and Pixar and work in the movies. That I have always felt and feel pretty lucky about it. So, I'm not an expert and many other people probably will have additional suggestions or their takes on what "making it" implies. In my opinion, I think it depends on many factors I think. Some of these I've found to be:

1. ***Experience:*** Working on other projects will always help you, especially from the point of view of working with directors and different crews.
2. ***Patience:*** Be easy with yourself...sometimes you can't get what you want overnight. And that's OK. Enjoy the ride and don't pressure yourself. I've heard of people that want to be at a certain studio within a year. That kind of pressure will drive you nuts...and honestly, will kill any fun you can get out of what we do. Take it little by little.
3. ***People:*** Helps to know people. They will be the key people that will inform your future co-workers regardless of where you go, how you are to work with. It helped me to know people that not only were very generous and helpful, but that also gave me tremendous advice as to how to go about things.
4. ***Motivation:*** I've said this in the past. Just because you may get rejected once doesn't mean you have to throw the towel. Give it time, and try again...try as many times. But remember to keep learning in between. Don't send the same reel you sent a year earlier just with one additional animation or two to places because animators or recruiters won't see much progress if that's all you added.
5. ***Persistence:*** If you want something, keep that goal in your mind. You can also be persistent with the places you apply to without being too much, especially for recruiters or people watching your reels. Remember how many they have to watch and how many people they have to talk to.
6. ***Timing:*** That's a self-explanatory one. I was called for an interview to work on Monster's Inc. They called me while I was in living in Spain back in 2000. The interview I was told later went well. A few days later, I found they needed someone right THEN.

   Unfortunately, I didn't have a working US Visa...and at the time it would take me eight plus months to get one. So they passed on me. Obviously the timing wasn't right for me. I was bummed at the time. Who wouldn't be? However, I tried really hard in looking for other things that would make me excited. As I look back now, if that didn't happen, I wouldn't have worked on ***Star Wars*** with the crew at ILM in 2001 whom I had a really fun and special time working with. I have really good memories of both the crew and those days. The whole thing is, just because sometimes the timing may not be right for something, don't let it get to you or your dreams. Something unexpected and really cool may come along the way.

7. ***Personality:*** Some places will want to know who they hire more than what he/she has worked on or how well they've done it. No one wants to work with big egos, jackasses or people that simply are done learning. That'll get no one nowhere. Also it's important to want to help your peers in whatever ways you can and not take things as a big competition. Our industry is a competitive one, and we all know that. But there is healthy competition in where you want to push yourself as an artist/help others and destructive competition in where you wanna walk all over people in order to get somewhere.
8. ***Talent/Originality:*** Do things that only YOU would do and don't copy others. That's key not necessarily in "making it" but in being true to yourself as an artist. As I go over my early student work, I'm guilty as hell in trying to animate or create some things in a "Pixar" way. The stuff I was glad I did also work on wasn't influenced by ***Star Wars*** or ***Toy Story***...instead, they were the other things that in my head I was like let's try that. It's those reels that I go "ok, that's something I haven't seen" that probably other people will say the same...and that will get you noticed.

9. ***Practice:*** For animation that's pretty self-explanatory. As I said earlier...don't set yourself a timeframe for renewing your goals. Enjoy the process, because it's a long one.

10. ***Age:*** Don't think you can't make it just because you are "too old". Who cares about how old you are, when we only get one chance in our lives to do whatever the hell we dream of doing. I've met animators who changed careers in their 50s...some students at AM, some people I've gotten to work with. Amazed me how much they wanted a life change after things such as security, family, location do matter so much. Yet, they went for it. Don't let people tell you what you can do or not, just because you are this or that old.

I think, these are some of the things to think about. At one point I feel like I'm rumbling or repeating certain things. "Making it" sounds certainly subjective and up to people's takes on how they want to make it. Just be honest as to what it is you want to achieve and why. I hope this helps.

Carlos

What's the Role of the Animator? Is It Beneficial to Explore Different Disciplines?
By Shawn Kelly

At any medium-large studio (including games, TV, or feature films), an animator is hired to animate. Not to create textures or model characters or light scenes. Most bigger studios recognize that these are all skills that take decades to truly master, and that the true path to beautiful imagery onscreen is to fill the studio with expert specialists. In other words, most studios aren't too hung up on finding people who "know a little about a lot of different disciplines." Most features and games studios are looking for an artist who "knows a LOT about ONE discipline."

It's the pairing up of these experts that results in the truly memorable work you'd see in any blockbuster film or A-list game.

Of course, there is nothing wrong with dabbling in all the different disciplines available to you as a CG artist, but we generally recommend that once you've found which discipline you are the most interested in -- be it animation or modeling or lighting or rigging or textures or whatever -- once you've found your "true calling," your best bet is to put the rest of that stuff aside and focus as much time as humanly possible on becoming a true expert in whatever that chosen field is.

Many people will say that this will limit your job opportunities, and guess what?

They're right. It will.

But I guess it boils down to you deciding what kind of job you are looking for, and what kind of career you are going to attempt. There is nothing wrong at all in deciding to be a generalist, and continue to learn about all aspects of this stuff called Computer Graphics. There are many jobs, especially junior-level jobs at smaller-to-medium-sized studios, where generalists are specifically sought out and encouraged.

However, I can't tell you how rare it is for a generalist to get a job as an animator at a major feature studio or large game studio. Almost every professional animator at that level has decided to focus at least MOST of their time on animation, even if they also enjoy other disciplines deep down...

Before I end that thought, though, it's really important to point out that if you are new to the industry, getting a junior job as a generalist can be one of THE best ways to break into this business.

Getting your foot in the door of a studio and getting *any* kind of professional experience is invaluable, and will help you make connections, learn the ropes, meet people to learn from, and will look great on your resume.

If you aren't getting to spend most of your time at work actually animating and growing as an animator, then my advice is to work hard, do a great job, and then go home and animate your brains out and practice as much as you possibly can in your spare time. Read animation books, get involved in online animation communities, meet up with some animation student friends and watch some animated films frame-by-frame and talk about what you see...

Getting a job where you aren't doing *exactly* what you hope to be doing doesn't mean that you have to stop striving towards your dreams of working as an animator! It's more than common for animators to have to work their way up, and slowly climb that ladder until they finally get their dream job.

It's very rare for that to happen overnight, so don't automatically turn your nose up at jobs that aren't exactly what you hoped for. Just don't let that job stop you from continuing to move forward.

Shawn :)

Questions about the Animation Job Market
By Shawn Kelly

Hello from the other side of the planet!

As I write this, I'm in Singapore for six weeks to help train some animation apprentices and am having the time of my life. What's more fun than visiting an exotic location, meeting new friends, reuniting with old friends, and getting to talk about animation all day?! It isn't all Happy-Go-Lucky-Land - I *am* really missing my family, my US friends, my ILM work, and especially my incredibly understanding wife, but home is just two weeks away at this point, so I'm on the home stretch!

Singapore is amazing, by the way. Really friendly people, it's super safe, the streets are shockingly spotless, and I've met some really talented people here...

I know what you're wondering, and I was wondering the same thing: "I know Singapore is famous for its great food, but how is the fried chicken?" Well, I'm still working on getting a full overview of Singapore's fried chicken situation, but so far it's pretty decent! They have the requisite American fast food stuff (a KFC at the zoo!), and a US-style diner that I went to, which actually had some pretty terrific fried chicken, and then there is obviously lots of Chinese fried chicken, but that's been a little hit-or-miss so far -- but I'm still open to trying some more places! You can never taste-test too much fried chicken!

This is actually my second trip to Singapore, and during the two trips I've eaten some truly bizarre things -- or at least bizarre to my American eyes: chicken-foot soup (which is exactly what it sounds like), century eggs (pickled robin's eggs, or something?), durian (AAAAAAAAAA! Just run away! Sorry, Singapore -- I know you love it, but holy moly, my white-trash taste buds just cannot handle the horror of the Durian "fruit"), and a grape-sized fish eyeball that my friend Snowy convinced me to eat. Meanwhile, she's completely disgusted by the concept of eating a banana!

Gotta love Singapore...

Anyway, I got a great question about the animation job market in the comments on Animation Mentor's new Tips & Tricks blog (www.animationtipsandtricks.com) that I thought I'd go ahead and answer here.

I'm not the expert in the job market, by any means, but I'll share at least what I've personally observed... I'd definitely still recommend that you guys ask around to other sources, because my experiences certainly aren't all-encompassing, and are largely limited to the feature animation and vfx animation niches...

QUESTION: ***What types of jobs are available to animators? (I'm assuming character animation in film/TV isn't the only possibility) Which jobs are in the most demand and which are in the least demand? What are the best job market cities in the U.S./Canada (abroad as well)? Do you have to move to a big city to get a job?***

What jobs are available to animators – it's right to assume that the industry is much larger than simply "film/TV" jobs. Character animators have found work in many companies and studios, doing – among other things: character animation for feature animated films, character animation for visual effects films, a huge variety of TV shows, TV commercials, in-game video game work, cinematic video game work, bringing to life architectural CAD flythroughs, Internet flash animation, online greeting cards, web-based video games, crime-scene recreation, automobile safety simulations, 3D motion "rides" at amusement parks, teaching, and have also put their artistic talents to use in a variety of graphic design, illustration, and marketing jobs.

So yes, there's definitely a variety of jobs out there, and everyone has their own preferences of what they enjoy the most.

As for demand, that's very difficult to answer, as all of the above industries fluctuate considerably, often in a very cyclical pattern. For example, sometimes (such as for the last few months), the visual effects industry hits a slow patch, and it can be very difficult to get (or keep) a job. And then, often just a few months later, the demand for animators is suddenly huge as a bunch of films get green-lit and studios scramble to fill animation positions. Demand is very difficult to predict, but especially when you don't have a lot of experience, it can be difficult to find a job at times. That's for sure.

I would generally advise greener animators to not expect their first few jobs to be the most glamorous, but those jobs will often be terrific learning experiences as you climb the ladder to your dream job!

The best job-market cities would be difficult to nail down as well, because the animation industry is growing a lot in Europe, India, and Southeast Asia right now, as well as in Mexico and a number of other countries. Traditionally, the big animation cities have been LA, Northern California (San Jose and San Francisco Bay Area), London, Paris, New York, Vancouver, etc. However, Oregon, Florida, and Texas all have strong animation markets these days, as do cities in India, New Zealand, Australia, and of course all over Asia. Singapore's industry is growing quickly as well, and many governments (such as Singapore's) are making a concerted effort to support and fund a home-grown animation industry.

So basically, animation is growing pretty much all over the place right now!

As for having to live in a big city, I would say that for most of the larger animation studios, you would have to live at least near a large city, yes. However, I see the day rapidly approaching where animators can work from home much if not most of the time. Once security and confidentiality concerns can be properly addressed, I wouldn't be at all surprised to see many studios adopt at least some amount of a "work from home" system. Once that's here, which realistically is still years away and would only work for certain mediums, I suppose we'll be able to work from wherever we want!

That's the dream, anyway, because I BADLY want to animate a transformer while sitting on some sand with my feet in a warm ocean! :)

Ahhhhh... someday.... OK, maybe that'll never happen, but I can dream, can't I?!

Hope that answers all your questions!

Shawn :)

What Are the Responsibilities for an Animation Supervisor or Lead Animator? Are There Any Special Skills Required to Become a Lead Animator?
By Shawn Kelly

Again, this can vary from studio to studio, but for us at ILM, the animation supervisor oversees all aspects of the animation on a movie. They're in charge of the movement, staging, composition of the characters and scenes. Their job is largely to be the one who spends the most one-on-one time with the director of the film, shows him/her our work, and gets the feedback to give back to the animators. Their job is also to cast the shots (decide who should animate what), and to determine when our work is ready to be shown to the director.

The lead animators are sort of like mini-animation supervisors. Some studios want leads to be in charge of specific characters. At ILM, if you are animating a shot, you're going to animate every character in that shot. Instead of being in charge of a specific character, our lead animators are usually in charge of specific sequences (A "sequence" would be a series of shots. A whole "scene" in a film, in other words, made up of lots of little cuts). The lead animator will give ideas and feedback to the animators working on his sequence, will help determine when it's ready to be shown to the animation supervisor, and will also usually be doing a lot of animation himself or herself. The lead is also there to troubleshoot problems and answer questions from the animators in order to help the animation supervisor not be distracted from the bigger issues he's dealing with. In other words, the leads try to put out fires before they get to the anim sups.

As for how these people are chosen, it's based on skill and experience, but as you mentioned, it is also based largely on leadership ability. Solid communication skills are a must, not to mention being organized and having a highly developed sense of time management. And of course, most essential of all, is to have a great "eye" for animation -- knowing when something is wrong, and more importantly, now to fix it. OK, well I hope that answered your questions!

Shawn :)

Animator Vs. Animation Supervisor
By Shawn Kelly

QUESTION: ***How do you feel about remaining an animator where you're still involved with hands-on animation versus being promoted to an animation supervisor or director where you are managing a team and providing critiques?***

This is a really good question, and it's something that many animators eventually face as they become more and more experienced. It can be difficult -- weighing the pros and cons of actively pursuing a promotion like that. On the one hand, you'd have a lot more prestige, more say in the final product, and probably a nice pay-raise. On the other hand, you'd be spending a huge amount of your time in meetings, you'd probably animate a fraction as much as you would as an animator, and you'd have to deal with all the politics and demanding responsibilities of that role, not to mention the enormous pressure of performing at a high level and constantly trying to impress the studio heads and their all-important client.

I guess this is something that everyone eventually has to decide for him or herself.

Since you ask about me personally, I used to say that I never wanted to be a lead animator or a supervisor, because I always wanted to be doing the actual animation. I feared that in a leadership role, I would no longer have that chance. For a long time, because of that, I never pursued any kind of lead role.

Since you ask about me personally, I used to say that I never wanted to be a lead animator or a supervisor, because I always wanted to be doing the actual animation. I feared that in a leadership role, I would no longer have that chance. For a long time, because of that, I never pursued any kind of lead role.

However, a great opportunity came up and I had my first chance at being a lead animator recently (for ***Transformers***), and I have to say, I really had a blast. It was such a fun experience, I learned a ton from my fellow leads and my animation director (Scott Benza), and it was really an amazing feeling to have a little bit bigger impact on the film than I would have otherwise.

For me, the lesson was that while I feared that I wouldn't like being a lead, it actually turned out to be my all-time favorite project, and while the work was incredibly challenging, I've never had more fun. The trade-off of having more pressure and responsibility was totally worth it, and I'm really excited to be doing it again.

As for moving up to a supervisor, that's still another story. I really tip my hat to those guys -- the longer I'm in this industry, the more I see how difficult that job is on so many different levels. For myself, I'm just not ready for a job like that in every possible sense. I have a lot to learn before I could even start to think about that, and on top of that, there are incredibly talented people at work who I would definitely put in that role long before me.

I guess I've learned just enough about this stuff to know that I have a lot more to learn before I'm ready to be the captain of the ship. For now, I'm just having a blast enjoying the ride, and learning as much as I can from my captains along the way...

Shawn :)

THE WORKING LIFE OF AN ANIMATOR

How Do You Spend Your Week at Industrial Light & Magic (ILM)?
By Shawn Kelly

Honestly, it totally depends on what we are working on, and where we are in the production schedule. But I would say that my general statistics would be working around 45-50 hours per week. I get to work around 8:45 a.m., and on a typical day go straight to dailies where our work is shown up on the big screen and we all talk about how to make it better. Then it'd be back to my desk to catch up on my email, phone messages, and a couple hours of animating before lunch. Most of the animators eat together every day in our dining area, and we're a very close-knit family. After lunch, it's hard-core animation for me, and I animate until I go home, generally around 8 p.m. or so.

The truth is that I am crazy blessed with this job, and literally get to just sit in a room with most of my closest friends and laugh all day long. We work hard, but we keep the mood light and fun as much as possible.

Shawn :)

What Is Your Life like as a Professional Animator? Do You Have a Life Outside of the Studio?
By Carlos Baena

My life as a professional animator has been exciting, difficult, inspiring, challenging, gratifying, special, rewarding...altogether. It's been unique and special because of the people you meet and the movies you get to work on. That in itself, has no price. At the same time, because it's not always easy to stay creative constantly, you have to find ways to keep the momentum going. You get a shot every week, and with every shot, a lot of creative energy needs to be put into it. It's so true the quote, "you are as good as your last shot." It's not a job where you can relax in what you did 5-10 years ago. And to keep yourself motivated and excited year after year is not always easy.

In a place like Pixar, where people are really talented and passionate for this, you have to continue finding something exciting in every single shot you get...regardless of whether it's a great juicy shot or not. Sometimes you'll get great shots, and other times you may not. Sometimes a production needs certain shots to be done sooner than later...they may not be the most exciting shots, but the bottom line is, they need to get done and when you work in a team, you have to help your neighbor in whichever ways you can sometimes. There have been productions where I worked after hours (even if I was in a different film), just to help the remaining crew finish a film, as did many other people. As years go by, it's difficult to continue doing this as it can be physically exhausting to be in front of the computer for that many hours, especially for those who have families to get back to.

That said, I've been trying to balance what I do. Since it's my job, I've been paying more attention over the last few years at how I'm taking care of myself, physically and mentally. I hope this doesn't sound too new age. But back 10 years ago, I was easily spending 15-18 hours a day on some projects. Barely getting any sleep...and going out with friends on the weekends. Pretty soon my body started telling me that I had to chill the hell out and figure out a balance between work, personal life and health. I still struggle with that balance to tell you the truth.

I had to find a life outside the studio otherwise I would have burned out fast. I've seen it happen with other friends, and didn't want it to happen to me. For me, doing things outside of work kept bringing me back to work with energy and motivation to do things. This inspiration outside came in a variety of ways: Live-action, shorts/videos, photography, music, artwork, and teaching. The Animation Mentor school I cofounded was great for me because I found myself going back to really figuring out what I was doing everyday in order to pass my findings to other people as clear as I could. Additionally, doing other projects and learning things outside animation but within the world of filmmaking, has become an amazing hobby and personal self learning process that has helped my animation as well. So my life outside the studio these days, I keep myself busy learning things I always wanted to learn, but never had the chance/luck to learn. I never went to film school...so when I started working at Pixar, I told myself I was going to study it on my own and learn what I could from different areas, projects, films, directors, coworkers. I'm still there...and hope to be there for a long time. I love what we do. I try to pass on whatever I can, but I also try to keep myself learning. What I sure don't want to do is to be at a place where I'm done learning.

As for Pixar, it's not a brutal place. People there have a life, and they do maintain a balance. Are there standards? Of course there are. Are there high standards? Yes, I think they are. And I'm glad that there are because that shows in the work the animators put in these films. A shot will not go by if it's lacking. Too many people will catch it. As an animator/artist at Pixar I'm always challenged professionally and it's the best creative environment I've been lucky enough to be in.

I hope this helps.

Carlos

How Does Creating Animation for Films Differ from Games?
By Aaron Gilman

As someone who has been back and forth between games and film for many years, I thought it might be interesting to offer my perspective on what I think are vastly different animation pipelines.

In my opinion, when it comes to animation, games and film begin their production process needing (not wanting) vastly different things, and this ultimately sets the tone for how animation is critiqued, processed and approved over the course of almost the entire project.

In general, prior to crewing up for a major animation feature, there needs to be in place some form of animatic that fairly accurately represents the needs of the client. From this animatic we can begin laying the groundwork for shot management, resource needs, asset needs, etc. The process is fairly linear in the sense that each respective department follows on the heels of the previous department, until eventually the shot is finalled and goes to film.

For games this process is fundamentally different. By virtue of the fact that playability is required first and foremost, the only way to test the viability of the game play systems is by already having a large amount of assets on hand. This means that a lot of animations need to be blocked, put into the game engine, linked together by programmers and tested by game designers. This circular process of creating, testing, scrapping, and then creating some more, can go on for years. If during this process animation becomes overly concerned with aesthetic quality, they risk losing valuable time assessing the primary objective of any game, namely, "is it fun?"

In film, ensuring a strong narrative is to a large extent already done. Practically speaking, this is not always the case as many of us in the field are well aware of how often a project gets edited on the fly, shots get cut, sequences change, etc. But often those issues are merely a consequence of polishing the narrative and addressing budget constraints. Unlike games where animators serve a pivotal role in developing the game play systems, animators in film are not tasked with creating the overall narrative from scratch. Most of the groundwork has already been done. We have storyboards, an edit, a puppet, a layout scene, a camera, etc. Almost all of our time is dedicated to making amazing animation that communicates a narrative already (for the most part) locked down by the director.

So the division in methodology between games animation and film animation is quite clear to me. In games, animations are finessed and tweaked once the game play systems are fun and functional. Getting game play to this level takes so much time and requires so much creating and re-working of animations, that making them beautiful needs to come much later in the process and is often left to the wayside purely because time and money have run out. In film, we move from blocking to second pass much sooner in the process, and very rarely do we have to completely scrap our work as a result of core narrative changes affecting our shots.

Ultimately, I think of the film pipeline as linear, each department more or less sequentially following the next department down the pipe. On the other hand, I think of games as an intricate web. Each department is inextricably linked to multiple other departments, going around and around until a cohesive playable system is created. After these bare bones are built, then time can be allotted to perfecting the animation within the constraints of the system.

Animating for games can be a fulfilling process. What I enjoyed so much about it was the incredible sense of teamwork I felt on a regular basis. There is a big difference in the way film and game animators appreciate their work. Once you've completed a game, you won't sit back while playing it and say, "Get ready, here comes my walk cycle.....there it is...see...I did that!"

The reason is because often the work a gaming animator has done is fused into so many aspects of the game that it becomes very difficult to pinpoint an element and say it is exclusively yours. For that one walk cycle, a programmer has blended it with dozens of other animations made by other animators, a game designer may have tweaked it in the code, and other animators may have worked on it.

In film, I can watch the movie, and when my shot comes up, I know the animation in that shot is exclusively mine. I can cut it out of the edit and point at it over and over again and say, "I did that." But in film, the process of creating animation work is often isolating and impersonal. The sense of team (and I should specify this is not always the case on every project), is dramatically less intense.

In games, you are constantly communicating and brainstorming with so many people from so many departments. That is rarely ever the case in film. But I personally will always love making films more than games simply because I love being part of movie history and knowing that my work may be seen by millions for years to come.

Aaron Gilman

Have You ever Been in a Situation Where You Had to Forgo Animation Principles to Get the Animation Done According to the Director's Expectation?
By Shawn Kelly

Oh, boy -- we're starting off with a bang, huh?

This is probably kind of an explosive topic, as the situation you mention is not only incredibly frustrating, but sadly not all that uncommon in the industry, regardless of the medium you are working in.

Yes, this has happened to me. Yes, this has happened to most of the animators reading this. Yes, it's very frustrating. All you can do is keep in mind that you are the tool (remember?) of the director, and the job you've been hired to do -- when you really boil it down -- is to make the client happy by putting something onto the screen that matches the vision they see in their head.

Sometimes clients don't really have any solid grasp of body mechanics or how things should move, or how to properly stylize something in a way that is clear and entertaining. Sometimes (OK, often!) clients have no idea about the principles of animation. Sometimes (d'oh! even more often!) clients aren't even sure what they are looking for.

In these situations, your job is to take their comments, and do the best you can to make the work look good and special IN SPITE OF their comments.

You want to get their ideas in there, and as much as possible, you want to try to find a creative solution that makes their ideas work. Sometimes, however, this will mean that the animation will be "wrong," in your eyes, as frustrating as that is. I will also add that if you have the time, it can sometimes be helpful to show the Director two versions -- one that has their "wrong" idea in it (say, no hip movement in a walk, or something like that), and one that is more of a compromise and has more "correct" body mechanics, exaggerations, etc. Often, they will choose your "better" version. Sometimes they won't.

Be ready to accept either decision, and try not to let it sap away your enthusiasm for the project because once that motivation is gone, that's when the job will get really tedious.

Shawn :)

As an Aspiring 3D Animator Looking to Work for Film, TV, or Games, What Frame Rate Should I Use?
By Shawn Kelly

QUESTION: ***In my 3D animation classes that I have taken so far, I have had different instructors require different frame rates to use when working on shorts or even when doing exercises. Some have said 24 fps, while others have told me 30 fps, citing the fact that since we are not animating for film, there is no reason to use the frame rate native to film (24). As an aspiring 3D animator looking to do work for film, television, or games, what frame rate should I use from now on? Does animation for television have a different frame rate than animation done for film?***

Your instructors are correct that those are the two most common frame rates that animators would work with, and honestly it's up to each studio to decide which frame rate best fits their workflow and is most appropriate to the medium they are working in. I would say that the majority of animators I know work at 24fps, even if they are animating for television, but I'm sure there are plenty of animators out there working at 30fps. Truthfully, there's really no right or wrong, though 24fps seems to be a bit more common in my limited experience, and would probably be the better rate to get used to.

Most modern DVD players and TVs play recorded films back at their native 24fps, and for film and TV, 24fps is a bonus for animation/fx work because it's less rendering time. The most important thing, though, is that it doesn't matter one bit which frame rate you are working in! Your poses will be the same, and your timing/spacing will be the same, only with slightly different frame numbers. The end result of a scene done at 24fps vs. 30fps should pretty much look exactly the same to the naked eye. The 30fps scene might look slightly smoother, but it'll be a small difference. As for your demo reel -- you can just convert your 24fps clips to 30fps through QuickTime pro (I'm pretty sure?) or any major video-editing package such as Premiere, Final Cut, or even iMovie.

Shawn :)

How Many Frames Do You Do in One Week?
By Shawn Kelly

QUESTION: ***On average how many frames do you do in one week, and what is required weekly for feature film, TV production, TV commercial and anything else you know? I have heard TV requires 500 frames a week.***

This is a tough question, as every studio handles expectations and quotas differently. Generally speaking, the bigger the budget, the higher the expected quality, which means you get more time to create the animation. At a studio like ILM, there are expectations to perform at a very high level, of course, but we generally don't have any specific quotas. However, as professionals we all know what speed is generally expected, and it's obvious when someone isn't keeping up, so we all work hard to put out as much quality work as possible.

The better studios also boast production departments that work hard to shield the artists as much as possible from the stresses of the overall production. These studios set things up so that 99% of the time, the artist is concerned far more with the quality of the work than they are with the quantity (number of frames) being finished. Of course, this changes a bit as any production at any studio moves into the "home stretch" and the final project deadline starts to approach. At that point, no matter where you work, you definitely start to become more conscious of the deadlines, at least to some degree...

Shots also can vary wildly in how long they take to do. One hundred frames of a character not doing a whole lot might get finished in three days, but those same 100 frames might take a month to animate if it's six giant creatures running around and fighting. Because of this, it's really hard to estimate a weekly frame count. As for the rest of your question, each studio handles that stuff differently. I've even heard of 800-1000 frames per week at one TV animation studio, which to me is just insane, but I guess they're fine with that level of quality. There is always a trade-off between speed vs. quality of the animation, so it's up to each studio and production to determine the level of quality they are willing to pay for.

Shawn :)

MAKING A SCENE

How Do You Know When to Stop Planning and Start Animating?
By Keith Sintay

I am a firm believer that workflow can play a big part in your success as an effective and marketable animator. The amount of planning that I do for a shot varies as widely as the shot content itself. Usually bigger shots that involve several characters talking require a good knowledge of staging and composition. It's really important to know where to lead your audiences' eye; where you want them to look while each character is speaking. Or, if it's only one character, spending time on staging and composition might not take as long, so you might have more time to finesse and explore the acting. If a shot requires video reference, I usually allow at least a day for that and thumbnailing. It's important to use as much time as you feel comfortable making mistakes or changes in planning, so you won't be doing as much of that when you are actually animating. I think about my shot when I am driving in the car to and from work, or I might pull out old ***Honeymooners*** episodes or watch other things that inspire me and try to get my mind to picture the shot as I might see it animated.

Don't be afraid to go back and re-block or re-thumbnail a portion of your shot if it isn't working -- even if you have started animating it. But generally knowing when to stop planning and start animating goes with having a plan, and then animating it. Simple? Maybe not, but my advice is to just to know your deadlines and plan accordingly; don't ever try to start a shot without a good plan of attack.

Keith Sintay

How Do You Do Video Planning?
By Animation Mentor Staff

This is a great question. The answer, however, depends on who you ask. Each animator finds his/her groove when it comes to tools such as video planning. Some shoot their own video reference, and some gather video reference from all sorts of different sources. Video planning is as unique as the animator using it. However, there are some things to keep in mind when it comes to video planning and reference material. The first thing to keep in mind is that you will want to use this material for what it is: reference. It doesn't make sense to copy your reference material blindly…that's more like rotoscoping, and you will find that your animation runs into the same limitations as live action -- you can only animate what you can act out.

But if you really LOOK at the reference material, you can see all sorts of subtle movements and weight shifts that you can capture, and really accentuate and emphasize. Plus, it's just great practice to get in there and study the way your body works. You will be surprised when you slow down reference material of dynamic things like bouncing or even running...the human body is incredibly flexible, and very, very interesting. So we would encourage you to shoot video material for reference.

If you are doing a dialogue shot, try lip-syncing for a few takes, but when you've got the dialogue down, go ahead and really vocalize what the actors are saying, you may be surprised how much the acting actually changes. Don't be afraid, shoot LOTS of reference; it's your chance to try out a bunch of different acting ideas, and you may find that you like a gesture in one take, and another gesture in a different take. Through the magic of animation, you can combine your favorite acting choices into a stellar performance.

Animation Mentor student's video reference for his dialogue acting shot.

The biggest thing to keep in mind is that there is no 'right' way to do video planning, but finding a method that is FUN is certainly one good way to do it. If you are having fun while you are acting out your video reference, you will be more likely to do it, and you will end up with material you are more interested in studying.

Best of Luck!
Animation Mentor Staff

What Should Be the Main Goal in a Scene?
By Aaron Gilman

Animation is narrative through movement. A painter expresses an idea, a story, a concept, or an emotion in a single image. An animator is tasked with the same thing, but instead of paints, brushes and colors, his job is to use posing, principles of movement, and most importantly experience and observation to communicate a concept. If I work on a single shot in a sequence of 30 shots, my ability to do my job well should be measured by the strength of my animation in so far as how it tells the story. Through my small contribution, if the viewer can be led safely down the narrative path without for a single moment questioning the validity or believability of my frames, then I know I've done my job well.

Narrative can be something as concrete as a physical action, like a punch, fall or jump. In this shot the character punches, or in this shot the character falls. Or narrative may be as complex as an abstract emotion such as pity, sincerity or revenge. Whatever the narrative is trying to convey, the animator's primary and fundamental goal is to communicate the very essence of that idea in the limited frames of their shot. If you are asked to animate a punch in a particular shot, the very first question you should have is "why?" Why does the character punch? Is it an accident? Maybe he slips and falls forward, lunging out with his arms to catch his fall and accidentally punches the man beside him in the mouth? Is the punch out of anger because the person being punched slept with the character's wife? Whatever the answer may be, when you animate a shot you must be concerned first and foremost with the character's motivation, purpose, intention, drive, etc.

You need to understand the actions in your shot contextually. What is happening in the shots surrounding yours? You must look at the animatic, read the script, analyze the storyboards, speak with the animators working on the same sequence, and listen to your supervisor as he explains in his words the purpose of your shot.

Aaron Gilman

What Determines the Duration of a Scene?
By Shawn Kelly

QUESTION: ***What determines the duration of a scene (movie)? Is it the animation itself or the dialogues in the movie? How can the movie director tell how long the movie will be?***

This is a very common question, and the answer is that the length of any scene in a film is usually determined by a combination of the storytelling demands of that scene and the style of the project. Generally, it is the director and his editor who work together to decide how long the sequences (a sequence, or "scene," actually being made up of a lot of shorter "shots." A "shot" would be from a cut to a cut) should be.

The goal for the director is for the scene to be long enough to tell the story he needs to be told in that scene, but short enough that it doesn't get boring or start to feel aimless.

As animators, we are usually given a predetermined frame-range to work with, so those decisions are usually made before the animator starts a scene. Every once in a while, though, a chance might come up for the animator to affect the length of the scene. Sometimes you might create a really cool action that will change the director's original idea for the shot, and he might add more frames for you to work with, for example. But usually, they'll tell you that you have a certain number of frames to work with, and part of your job as the animator is to find creative solutions that will make your animation ideas work in that exact number of frames.

Shawn :)

What's the Best Way to Plan a Scene?
By Keith Sintay

I don't know if there is a best way to plan a scene, but I would like to mention here some effective things that I have picked up in my career as an animator that might help someone who is reading this.

1. Know how your scene (shot) fits into the whole of the story. If you haven't seen a whole cut of the film yet, at least ask about the context of the shots surrounding yours.
2. Find out what the director wants (hopefully through a direct 'launch' from the director themselves, or from your supervisor).
3. Look at the storyboards and study the poses. The poses and composition were great at telling the story, so make sure you study them and find out why they worked in the sequence as a whole. Then, expand upon those ideas with animation to really bring the characters to life.
4. If no storyboards were made for your shot, create some thumbnail story poses of your own. These 'storytelling' poses may become your keys later on.
5. Listen to your dialogue track and write it out both regularly and phonetically. Listen for subtleties and nuances. Listen for cadence and accents. Listen for breaths and pregnant pauses. Make note of all of these things.
6. Act out your shot. Explore as many ways as you can to tell the story simply and in an entertaining way. Ask a friend to act it out; they may have different ideas or mannerisms that you might not have thought of yourself.
7. Video record yourself acting out the shot.
8. Make thumbnails from your extreme (key) poses.
9. See how you might make those thumbnail poses stronger; better silhouette, stronger line of action.
10. Start blocking out the key poses and have fun!

Keith Sintay

How Much Average Time Does It Take to Create a Shot?
By Shawn Kelly

That's a difficult one to answer. Each studio has its own set of deadlines and expectations, which will also vary wildly by medium (games vs. television shows vs. advertising vs. films, etc.). Generally, as you move into larger studios, the deadlines tend to become more realistic (read: a little more spaced out). The larger studios can charge clients more money, which the clients are willing to pay because they know the trade-off is a higher standard of quality. The studio knows that more quality will need more time, so deadlines become a little less intense once you get to a top-tier animation studio, generally speaking.

However, even the larger studios are increasing their productivity all the time (via new technologies, faster machines, better artists, etc.), and the "average time to do a shot" is getting less all the time, it seems.

Of course, the biggest X factor in all of this has to do with the content of the shot. I've done a shot in a couple hours (of a hand, in the movie ***A.I.***) but I also got bogged down for about six weeks on a shot in ***Hulk***. On ***Transformers***, we had a really streamlined situation with a really fast feedback loop, a lot of amazing animation tools at our disposal, and terrific animation rigs, all of which helped us get our animation time down dramatically. One shot I did of Bonecrusher on the highway only took a few days, while another took closer to four weeks -- so, yet again, it all depends on the number of characters and what they are doing in the shot. It's always going to take longer to animate a giant robot tackling another robot in slow motion than it will to animate one robot skating down a highway. (There's an example I never would have thought that I'd have at my disposal! ha ha ha.)

Shawn :)

When Have You Been Challenged with a Shot and How Did You Overcome It?
By Carlos Baena

This is a tough one to answer as it changes with every shot I find myself having a hard time with. I'll try to be as direct and upfront with my answer.

I think the main thing is to not let it get to you. It's normal, and it happens to even the most experienced animators I've met. We all get challenged for different reasons in different shots. Not one shot comes easy. However, how you get out of that funk is something that will be a challenge in itself as well. So, yeah, the main first step I'd say is to not get stressed out about it, and accept that the shot is just difficult and you are struggling with it. And that's fine.

When that happens to me, I usually get the hell out of my office. I'll do whatever else. Go to the gym. Go watch something that while it may be related to whatever it is I have to animate, is not putting pressure in me having to finish it. Is this making sense? I hope so. The main thing is to get distracted and find inspiration/motivation somewhere else. What I'm looking for here is an outlet, so that I can go back to the challenge with a different perspective.

Now, these are the difficult parts:

1. If the challenge is a technical one (splines, blocking to polish, polish back to blocking) I'll address where I am at. If I'm at a polish face, and I just have gotten notes for a major change in the shot, that's not easy to address. Sometimes you'll save more time by going back and simplifying your curves, even going back to blocking (address the notes) and then polish again...than if you had to fix it all within the polish. That keeps things more organized somehow.
2. If the challenge is an idea (acting choices, shot ideas), I don't even touch the computer. Seriously. I can't start animating until I know what it is I'll animate and how I'll approach it. It goes back to being organized, and that applies to having all your homework done beforehand (or as much preparation as you have time to do). So, if I'm stuck with my ideas...I may brainstorm with a coworker or two. Usually find people that will be constructive and will want to help. Sometimes in that collaboration, something cool will come up. (Or not).
3. If it's a company/studio challenge...that's a whole different story. Remember that politics are everywhere. We are not kidding ourselves, and sometimes you'll have to work with very different people, artists specifically, people with different skills, with different agendas. You'll find egos and others with no egos at all, you'll find people that are difficult to work with and vice versa. In my case, when I have found myself having a hard time on anything like this, I prefer to waste that energy going back to doing my work and really focusing on that. Chances are, by the end of the day, I (hopefully) have forgotten what was worrying me in the first place. And if it hasn't...well, I can go home, jump on the couch and watch a movie. :)

It's all relative. This is more or less how I'd start thinking about some of these challenges. But it's always different. Every challenge will be different. Just be aware that no one is perfect, that a lot more other people have it a lot worse and that having bumps in the road is part of the process, especially for one as slow as animation. It's more how you manage to get past these bumps what will be the main challenge.

Carlos

The Art of the Tracking Shot
By Carlos Baena

Some things to think about from what I've noticed over the years:

The camera should never call attention to itself. It'll take an audience out of a film. It should bring people inside the film based on the story points.

Regardless of the medium, the camera still has weight, and if it moves too light and flips around 20 times, chances are, the audience may not be into that as much. I loved the camera work on ***The Incredibles***, because even though it was in a CG world, it always moved and felt live-action to me. Very real cinematic feel in how it was animated.

Always keep in mind composition. Even though the camera is moving, it's re-composing shots in every frame. It's a constant choreography of elements around the screen. So when you go and move the camera from one place to another, the audience should still know where to look, and story points should be clear after the camera move. The camera should always help the story, not fight it.

What lenses are used will obviously affect the composition of the moving camera. Wider lenses tend to be used in steadycams and/or when following people around and are easier to follow focus as well. Longer lenses are more difficult to track people in my opinion. However, longer lenses are always a lot more personal to a character.

Camera height matters. It's not the same to have the camera at eye level, above eye level or below eye level. Depending on the camera height level, we'll react differently to what is being shown to us. Also, how close or far the camera is in relation to the character/prop will tell you a lot in terms of how identified/personal we are with them or how detached/removed. Additionally, the character eye-line (for example, where they are looking at or who they are talking to) and our proximity to it, also gives us additional filmmaking tools to measure how intimately we want the characters to relate to the audience. Why and how the camera is placed should always be based on what's being told. There are many books on things like this, and I highly encourage people to learn more about it.

The camera should work with the actors, and follow them and the story. Don't move the camera exactly at the same time the character starts to move. Usually follows afterwards. Study films to see how this is done differently. Be careful if you anticipate the camera to the actor, as if there is not reason for the move, it can make things look too staged and not as spontaneous. Watch Hitchcock's ***Notorious*** to see how he used the camera in different ways throughout the film. Again, some of these things are regardless of the medium.

Don't move the camera just to move it. Keep it still if you are unsure what to do. It's always the best way to start learning, but don't move it for the sake of moving it.

No rules to any of this, but a good practice is to always ask yourself why you are using camera moves.

Carlos

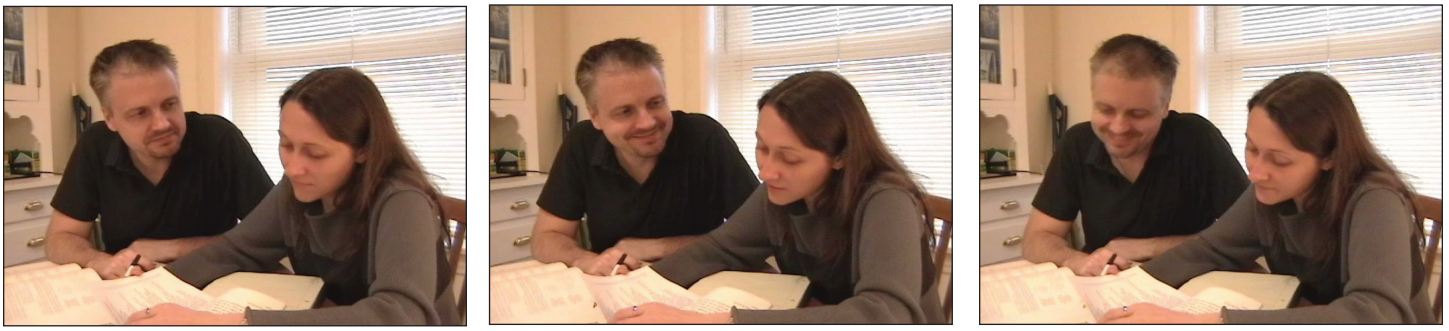
ACTING

Making the Best Acting Decisions
By Shawn Kelly

This is all about animation scene planning, and I *DO* think that's very important, no matter how tight your deadline is. I usually recommend spending 20% of your time planning, no matter how little time you have.

If you have a week to do a shot, spend the first day planning. If you have only one day to animate the shot, then spend the first couple of hours planning. As long as you can do SOME planning, your work will *always* be stronger, and will *always* get done faster.

I know this can be difficult, because often producers and supervisors (and clients) have a hard time understanding this. Sometimes you can help them understand by explaining that the work will end up looking so much better, and can often finish even faster, but some people will just never accept this fact. In these situations, all you can really do is try your hardest to find time to plan whenever you can...



An Animation Mentor student's video reference demonstrating subtle acting.

For acting decisions in particular, it's all about acting it out yourself. First, you have to figure out exactly who your character is, what he wants, etc. Really get into his head as much as possible. Film yourself if you can, as well as your peers or friends. Play the dialogue line really loudly on your computer, and just act it out in front of a camera over and over, until you stop thinking about what the character is saying, or the timing of the lines. You want to film it until all you are doing is truly feeling the real emotions and desires of the character. Once you do that, you'll find some takes with terrific acting choices, because they will be (hopefully) real.

Shawn :)

How Important Is an Acting Shot for Getting a Job in the Gaming Industry?
By Shawn Kelly

QUESTION: ***As a student who's just finishing school, it's hard to have every kind of animation on your reel, physical and acting. How important is an acting shot going to be for getting a job in games industry as those are the only companies which have entry-level jobs?***

This is a difficult question to answer because both types of scenes are very important to have on your demo reel. However, I do think that having strong physical "action tests" on a demo reel is more important than strong "acting tests" for junior animators. As you say, many studios hiring for junior animation positions aren't as interested in your acting shots, as the juniors may primarily be doing more physical work. Additionally, at even the largest studios, it's the physical stuff that is the most important. You might have some great acting choices, but if your weight and balance are wrong, or your arcs aren't appealing, or the force just isn't there -- well, those great acting choices alone are not going to get you that job.

The best acting shots can be destroyed by very small mistakes in body mechanics (how the body works -- what moves what, etc.). In my mind, a decent acting scene with bad body mechanics is a demo-reel killer.

It screams "newbie," and tells the recruiters that you haven't yet mastered the basics. However, a shot with great body mechanics and only "OK" acting choices -- this isn't ideal, but it certainly doesn't ruin the reel. It will still show that you know the basic fundamentals, and show your potential as an animator. In light of that difference, I guess I'd have to say that the physical stuff is more important to focus on when you're newer to this stuff, and is certainly the stuff to make sure really shines on your demo reel.

Best of luck!

Shawn :)

What Does an Animator Have to Learn about Traditional Acting? How Should It Be Applied to Our Animation?
By Shawn Kelly

First, I'd recommend checking out a couple older Tips & Tricks articles from back in the day related to acting:

http://www.animationmentor.com/newsletter/0406/feature_geek.html#animationTip
http://www.animationmentor.com/newsletter/0106/feature_geek.html#animationTip

The quick answer would be that as an animator, your job is to bring the character to life, which means that in a very real way, you have to be an actor. Your job is to BECOME the character, especially in your reference and planning, if you want the performance to be unique and believable. This is a must. As animators, we don't necessarily have to know *everything* about acting. Generally, we are being given an existing line reading, for example, but we also must know how to dissect that line reading and figure out what the actor was thinking when he delivered that bit of dialogue. What was his subtext? What is the operative word? What are his motivations? What does he WANT most in the scene, and what is preventing him from having it? Sometimes you have to make some of this stuff up to create a whole picture that you can work with, but it's very important to go through the process.

For me, the main stuff I find that I apply to animation includes subtext (it's often better to animate what the character MEANS rather than what they are SAYING), operative words, back story (who the character is, where they came from before the scene, where they will be after the scene), the desires of the character, the obstacles keeping them away from their desires. In my video reference (using all of the above), I always try to truly get into my character's head, and TRULY feel the emotions and desires the character is feeling. When I don't do that my reference always ends up being useless and predictable. However, when I *do* become the character, the reference is always a huge help.

Shawn :)

What is "Interior Monologue?"
By Shawn Kelly

Interior monologue has a close relationship with "subtext," but it isn't the same thing. Subtext is literally "beneath the text." It's what the character MEANS, rather than what the character is saying out loud. Subtext is what you should always base your acting decisions on (rather than the actual lines). This is also related to what's known as "operative words," or the most enunciated and emphasized word or words in a delivery. A classic example I've heard used is the line "I love you." If you emphasize the word "I" when you deliver that line, what you are saying isn't just "I love you." No, now what you are truly saying is "He doesn't love you."

If you emphasize "you," on the other hand, now what you are truly saying is again different, and the subtext has become "I don't love her."

So, if the operative word can help you discover the subtext, that's nice to know, but what the heck is interior monologue?

Well, a monologue is someone speaking aloud, often to themselves. It's almost like thinking out loud. So "interior" monologue is the same thing, but it's internal. It's silent. It's the thought process that we don't let past our lips.

Why is this helpful for animators? Well, because if our hardest job (and it IS our hardest job) is to create a believable feeling that our characters have an internal thought process, then figuring out the interior monologue of a scene gives us actual thoughts to key off of, and actual changes in though process to base our acting decisions on.

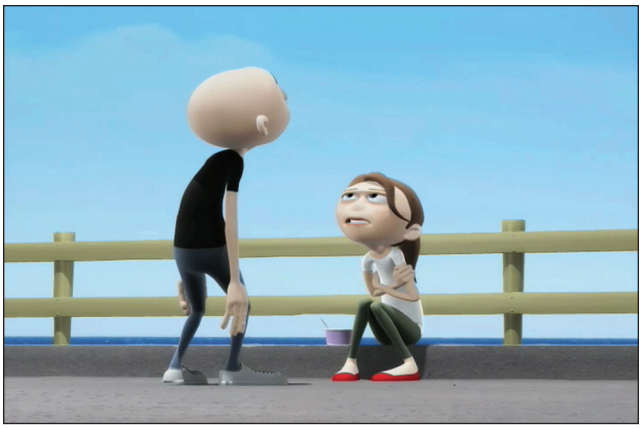
Let's say that in the scene, a man and a woman are arguing, and he's jealous of the way she's been flirting with a friend. Her line is "I love YOU," with the emphasis on "you." So we know that what she means is "I don't love him, I love you." When you are animating to that line, you could say that the monologue is "I love YOU," and the *interior monologue* is "I don't love HIM! How could even think that? Don't you even know me?"

Now, when you are working out the acting decisions, you can treat the interior monologue just like actual lines of dialogue, and you can time your head shakes, blinks, searching eye movements, etc. – you can time all that stuff off of this imaginary line that isn't ever heard, but through your animation, we will FEEL it.

And *that* stuff is the meaty stuff that will bring your character to life.

Shawn :)

What Factors Help You Decide on Poses for Acting Choices?
By Shawn Kelly



The most important thing needs to be the communication of the pose. You should choose your poses based on what that pose is saying to the audience. The pose should, in some way, accentuate the emotion or intention of the character, and augment the performance. The body pose should echo the face in most instances (a shy pose with a cocky facial expression just feels weird and confusing), so that's a good indicator as well.

There is no hard and fast rule for this, as sometimes the performance will call for a character hiding their emotions. In these cases, you usually want to betray the emotions in some way, at least to the audience if not to the other characters, through subtle shifts in the pantomime body poses, or through the eye animation, etc.

But in general, my recommendation would be to film your video reference over and over and over, until you are no longer thinking about the actual words of the line, and instead are thinking only about the subtext (what the character means instead of what they are saying) and are actually feeling the true emotions of the characters. If you can get yourself to that place in your video reference, you will discover some very communicative body poses that will take your performance to a whole new level!

Good luck, and have fun!

Shawn :)

BRINGING CHARACTERS TO LIFE

Where Do You Draw the Line on Exaggeration?
By Aaron Gilman

As a creature animator who has worked primarily on hyper real content, exaggeration is a constant issue in my work. For example, just a few days ago, my animation supervisor told me my shot was an "eleven," and he wanted me to take it down to an "eight." What he meant by this was that the creatures in my shot were too energized. I was breaking the boundaries of believability within the context of this particular project and the edit. While my characters moved mechanically correct, and even the actions in their performances were good, everything was too bouncy, too fast, too BIG! Maybe this would have been fine if I was making a cartoon. Knowing where to draw the line between over exaggerated and contextually believable is part and parcel of a creature animator's job. The only real difference between a cartoony animator and a creature animator is in how far the principles can be pushed.

Anticipation vs. Action

In cartoons, the relationship between the speed and size of an anticipation versus the subsequent action can be played with and manipulated to create a wide variety of different emotional responses. You might have a slow and big anticipation showing heaviness and a building of power, followed by an unusually fast action, thus creating a strong contrast in physics and timing. Or the opposite might be the case. A character takes a quick leap off a ledge and then hits a long moving hold as he hovers in mid-air over the precipice.

Obviously, with hyper real animation these kinds of timing relationships must still exist between antic and action, but the contrast must be toned down to the point that real world physics exists unquestionably in the mind of the viewer. And this is no easy task! This is very often why viewers can watch realistic CG animation and come away feeling something looked odd or unnatural about the performance. They may have no clue why they feel this way, and more often than not it is because as animators we have somehow failed to create motion that can deceive what the human mind is already an expert at, namely the scrutiny and perception of the physical universe. As a side note, these issues segue into the Uncanny Valley, (see page 38) and are the source of why so many movies to date have failed to convince the viewer that humans can exist seamlessly and believably as CG characters.

Striking a Pose

In cartoony animation there is a great deal of emphasis placed on hitting a pose to elicit an emotional "signal" to the viewer. A character expressing fatigue might inhale deeply, hitting a long upward and expansive anticipation, followed by a quick compression of the body and lungs, his shoulders and head slumping downward and striking a strong exhaustion pose. Since the origins of classical animation, we have become experts at breaking down the structure of poses to understand how they can elicit various emotional responses from the viewer.

In hyper-real animation we concentrate much less on striking poses. Of course, the methodology and workflow that goes into creating animation will have very minor differences between a cartoony project and a realistic one. We still block our shots in very much the same ways (a cartoony animator may block in stepped while a realistic animator may block in spline), making sure the blocked performance has all the necessary key poses to convey the narrative. But our main goal is to create a fluid and organic performance based in reality, and is less about punching an emotion on a given frame; so more time and energy at even the earliest outset is placed on the breakdowns and in-betweens.

What do I mean by this? Most creature animators I have worked with choose to block in spline. From the very beginning of our shot we need to place a great deal of importance in understanding how the weight, mass and energy of a character unravel through the performance. It is less about striking emotive poses and more about offsetting and layering the motion so that it never feels like parts of the character are landing at the same time. The parts of the character have to be perfectly grounded in physical reality, so that there is a constant justification for how muscles, bones, tendons, and organs react through the movement. I could go on and on scrutinizing how different animation principles are handled differently between animation styles that favor strong exaggerated movement and those that do not.

The point is that exaggeration is a constant give and take in the type of animations I have done throughout my career. Under some circumstances we may need to push a pose much harder than is physically realistic, but more often than not this is for technical reasons. A pan on a camera may be softening the look of a pose from that particular angle, or a character may be unflatteringly

foreshortened and need to be "cheated" to make sense. As a general rule, exaggeration is a good thing if it brings life and energy to the performance, but it quickly becomes a bad thing when that part of the human brain rejects it as "weird" or unnatural. That's when we know we've gone too far or have simply interpreted the physical world incorrectly.

Aaron Gilman

Eye Animation and Blinks
By Shawn Kelly

Hi everyone! I just wanted to give a big shout-out to all my friends (old and new!) up in Montreal. Carlos Baena and I were up there where we were honored to have been invited to speak at ADAPT conference. We had a blast!

Carlos and I gave a presentation about eye animation and blinks, and someone had a good question about whether or not the character design might affect the way the eyes are animated. It seemed like something worth posting on the blog, so I thought I'd throw it on here in case anyone is interested.

I would say that generally, a particular character design probably wouldn't affect the way I would animate the overall eye movements, as far as eye darts (saccades, if you want to get fancy), timing of the eye looks, etc. However, the audience member did have a really good point that the character design can sometimes affect the eye animation in larger, more global ways.

For example, a character may have an injured eye, or the design may simply call for one eye to be larger than the other. In these cases, the design will definitely dictate the way you shape the overall eyes, and will also affect how you relate them to the brows.

That said, though, I think I'd say that the main thing always needs to be that the eyes should communicate clearly to the audience, and in order to do that, the audience needs to be able to relate to the eye animation you've created. They need to recognize themselves in your work, and recognize the way we all use our eyes to communicate. Our eyes are our most communicative visual feature, and overdone or overly unique eye animation will jump out to us and just feel strange, at least on a subconscious level.

Don't get me wrong, it's always great to add a little special something into your work - something that makes that character unique, but there is a fine line between stylized caricature and over animated confusion.

So, I guess I'd say that it's important to take the design into consideration, but as always, your primary focus needs to remain attempting to create a performance that is not only believable and entertaining, but is clear and communicative.

Thanks to everyone in Montreal for coming out to see us! We had a blast meeting all of you, and look forward to hopefully hanging out with you guys again next time!

Shawn :)

Are Facial Expressions as Important as the Body on Acting Shots?
By Shawn Kelly

I feel like you can sort of breakdown the performance into four categories of exponentially decreasing importance: the body, then the eyes, then the face, then the lip-sync.

Most animators would agree that the body language and pantomime is by far the most important aspect of the overall acting performance in a medium shot or wider. (i.e. not a close up on the face). Unless we are face to face with someone, the body is the first place we unconsciously read in order to communicate with someone. Why? I'm not sure, but it might be because our body language often betrays our true feelings, our true mood or personality, our true intentions and desires, etc. When we consider that, it isn't surprising that we would pay at least some amount of attention to the body language of the person we are approaching.

In short, if you can get the emotions and ideas to read in the body, then the audience is going to understand what's going on and feel those emotions.

Next on our list of descending importance are the eyes. If the body is 90% of the acting performance, the eyes are 90% of the facial performance. After considering what the body will be doing, the next most important thing is definitely your eye performance. As always, the most important (and sadly, the most often skipped) aspect of doing eye animation is to know WHY you are animating the eyes. I see a lot of demo reels with randomly floaty eyeballs, and it can really kill a performance.

Know exactly when and how and (most importantly) why you are going to move the eyes before you dive into your animation. Blinks go along with this, and are just as important for communicating thought process and emotion, and in certain instances I'd include the brows in this category as well.

After the eyes, we've got the overall facial expressions, including mouth emotions (smiles, hanging jaw, frowns, etc).

Obviously the eyes are a part of a facial expression, and the whole face should be thought of as one cohesive unit, but for the sake of this talk, we can think about it as a separate entity -- only because the rest of the face, while very important to the overall communication of the character, is simply not quite as important as the eyes themselves. If you animate a great body performance with great eye animation, that performance is going to read perfectly, regardless of whether or not you have a full facial rig to work with. This shows the importance of the eyes over the rest of the face, but that's not to say that you shouldn't take great care in the creation and choice of your facial expressions.

Last, and certainly least, is the lip-sync. Great body acting paired up with expressive and alive eyes, combined with well-timed facial expressions -- that combination is going to look terrific, even without the lip-sync. This is why you'll hear a lot of people say that lip-sync is the icing on the cake of the overall animation. It's that last extra little bit of "wow" you can add to your scene, and by far the least important aspect of your acting performance.

None of this is to say that any of these four categories are unimportant, some are just more important than others. Really terrible lip sync will certainly ruin a shot on a demo reel, but my point is that mediocre lip sync combined with otherwise great animation will probably go unnoticed, and the recruiter will be left with a feeling that the overall shot was great, even though the lip-sync itself might not have been fantastic.

So, I guess as far as which is the icing on the cake, it sounds like the eyes are the icing on the body language cake, the facial expressions are the icing on the eyes, and the lip-sync is the icing on the face.

In vaguely related news, I love cake but really dislike frosting/icing, which my wife thinks is completely insane, but she doesn't mind as it leaves more icing for her...

Thanks for reading!

Shawn :)

Forget About Animating the Legs
By Shawn Kelly

QUESTION: ***In your first ebook you wrote something on "forget about animating the legs." Can you elaborate?***

I'll try to be clearer than I was in the first ebook. Basically, the idea is to hide the legs of your character. (I create a layer for them in Maya and make that layer invisible). Then you just forget about the legs completely.

So at this point, you have a character with hips, a torso, arms, and a head. The idea is to just animate that, according to the way you've planned out the scene ahead of time, and keeping in mind what you basically will want the legs and feet to be doing once you put them in.

If you follow your planning, and get the body moving around at the correct speed, with the correct ups and downs, etc., and you just work on that until it looks right, THEN you unhide the legs.

Now the legs are super easy to animate. You just set up your first pose the way you had planned out, and then as the character moves forward, you just save a key on the planted foot one frame before the leg would have hyper-extended (creating an IK pop, which you want to avoid at all costs!), and then animate it taking the step or whatever.

In other words, if the body is moving at the speed you want, it's going to dictate when you HAVE to pick up the feet and move them, right? So it's kind of removing one layer of complexity from your initial animation pass by saving the feet and legs for a second pass, and on that second pass, the feet/legs are almost a no-brainer because their timing and possibly posing is being dictated by what you've chosen to do with the body.

You'll probably have to make some small edits to the body timing here and there, but if done properly, it should work.

I know it's a weird way to approach, and as I said in the ebook, I thought it was completely insane when Glen McIntosh suggested it to me, but considering he's probably the best animator I've ever worked with, I eventually figured that I should try it, and the Yoda shot I did that way (in Episode 3, where he fights some clone troopers and throws a lightsaber into a trooper's chest) really came together quickly and it ended up being a really cool way to work.

I still only would use that method in an action-heavy scene (lots of running around, jumping, etc) or else for a many-legged character (spider-shaped characters with four or more legs work even better for this method!), but in those instances it's a technique that comes in really handy.

Shawn :)

How Do You Go about Timing Out Animation That Can't Be Performed in Real Life?
By Shawn Kelly

That's a tough one, and it depends entirely on the style of the project you are working on. The timing is going to be very different between Davy Jones jumping vs. Mr. Incredible jumping vs. Horton jumping. These projects all land at different places on the meter of stylization, and each of those character's movements and timings are dictated heavily by those chosen styles.

If you're working on a more stylized piece, and are creating a performance that you can't find or create reference for in the real world, then my advice would be to use the principle of exaggeration to push the timing and poses that you see in the real world.

You always want to base your animation on the real world while adhering to the rules of the universe that have been set up by the style of the project you are working on. No matter how stylized the motion, if it has zero connection to the world we live in, the audience is going to have a hard time connecting to it, and will likely find it confusing or off-putting. You want to give the audience some anchors -- something they are familiar with, and use that as the jumping off point for your stylizations.

As an example, let's say that you are animating a character jumping up into the air, but you want to give them extra "cartoony" hang-time. In this instance, I'd encourage you to study (and maybe even film) the mechanics of how a real jump works. Jump around at your desk and feel what happens in your own body. Study how the whole body squashes on the anticipation, stretches on the launch, squashes at the top of the jump, stretches on the way back down, and squashes on the landing. Just study ALL that stuff about how a real jump works.

Once you know how a real jump works, you're ready to animate your exaggerated jump. Just take what you've observed and apply your knowledge of the principles of animation to it (including and especially exaggeration, in this case) and you'll be fine! Keep that overall squash and stretch for at least the launch and landing as anchors, for example, and be sure to have a frame where at least one toe is still on the ground with a very straight leg so the character feels like he's pushing himself upward. Maybe get his arms involved, as people do, etc.

With those anchors in there, you will successfully communicate the idea of a jump, no matter what other craziness you now add to the mix. Give him a longer hang time, for example, but try to hang onto those anchors as well. Keeping him on a nice arc would probably be another good anchor to keep things somewhat rooted in the way the audience understands how our gravity works. But that doesn't mean you can't elongate that arc and keep him in the air for as long as you possibly want to!

Have fun, and keep animating!

Shawn:)

Facial Follow-Up Question: Timing the Face to the Body
By Shawn Kelly

Hi everyone! Here's a good question that is worth quickly clarifying:

If the body is animated in the first pass and then the face is done, how do we know, or how do you TIME the face with an already animated body below exactly to the dialogue? Isn't there a huge possibility that the lip sync when done in the second pass will not match the body movement which was already done?

This really comes back down to the very first articles I ever wrote for the AM newsletter back in the day (which you can read in the first ebook). There is nothing more important than planning your shot, especially if you're in the first few years of being an animator.

It's the planning that will help you make all of your action and acting decisions, and also your rough timing decisions. Obviously, sometimes you tweak the timing a bit once you have your stuff in the computer, but it should theoretically be pretty close to your original planning unless major changes were required or requested midway through the process.

The planning should help you nail down the timing of your actions, and that includes the facial acting choices including eye direction changes, expression changes, blinks, etc. Many animators might not do separate thumbnails for every single eye blink (I don't), but should at least make notes to yourself of what frame this expression will happen on, or what frame these blinks will happen on.

The point of planning is to give yourself a relatively fast way to try a lot of different options, settle on your ideas, and make all of your decisions before the decision-making process gets into the computer and becomes a nightmare of editing curves, keys, and controllers. It's so much simpler if you know what you're going to animate before you turn your computer on.

As such, your planning should have already helped you decide when and why your character's face and eyes will be moving/blinking, and how that will make your character's attitude and emotions feel.

If you have time to do some decent planning, then the timing of the face *will* match up to the timing of the body, because you have planned them to work together.

My previous post was all about what aspects of performance are the most important to focus on, but when you really get down to it, it's important to nail them all, and most important to make sure that all the aspects of the body's movement and performance are working together cohesively.

If you've already animated the body, but haven't done planning for the face for some reason (not recommended!) and are under a tight deadline and just have to get *something* finished, then my advice would be to just make sure that you design the facial animation carefully to match the body animation that is already working. If your body performance is already reading, then the face should accentuate it and make those actions, ideas, and emotions even more clear than they already are.

If the face seems to be distracting from the overall actions, ideas, or emotions, then you've definitely done something wrong and need to go back and figure out what's up. Most likely it's a timing problem, or else the facial performance is conflicting with the body language...

Hope that answers your question! Thanks again for swinging by...

Shawn :)

What to Do with a Character's Balance and Weight When Walking
By Shawn Kelly

QUESTION: ***I've noticed that a feature of the Animation Mentor graduate animation are great walks, they seem mechanically spot on and always have a strong sense of attitude. I've been animating for some time, but still haven't heard or seen a definitive breakdown of what to do with a character's balance and weight when walking. How long do you have a character off balance for in a walk? Obviously this varies according to attitude (stomping to creeping) and mass (a heavy or light character), but I would love to hear how you work out what you're going to do in this regard. Do you animate the body movement first and then just get the legs working under the body as needed? Or do you place out your foot positions and then place the body relative to the feet so as to have the weight over the feet at specific times?***

Walks are deceptively difficult, and require a lot of study and research before you starting diving into them. A walk is something that cannot be tackled properly until you have a really strong grasp of all the principles of animation (such as follow-through, anticipation, ease in/out, arcs, balance, etc.). Once you have a strong understanding of all those concepts, a walk is much easier to figure out.

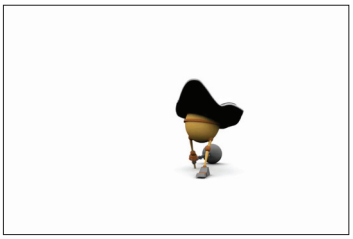
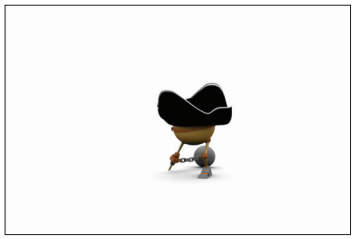


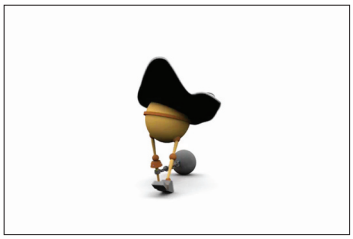
That said, the main thing to keep in mind is balance. You cannot move without unbalancing yourself, and the speed you move forward will be determined by where you move your centerline, or your "center of gravity." In other words, the further you unbalance your hips in front of your feet, the faster forward you will move. A common description of a walk for animators is as a "controlled fall." You are constantly falling and catching yourself, creating locomotion forward, and the further forward you move the character's weight, the faster he will fall. The faster he is falling, the faster his legs will have to move to catch those falls, and pretty soon you have a run!

Unlike many other ideas in animation, there is no real "gray area" when it comes to balance. There isn't much room for artistic interpretation. Something either has correct balance or it doesn't. It's right, or it's wrong. So be sure to make a detailed study of how balance works in a walk before diving into it...

Other than that, it's essential to remember that in a walk you cannot lift either foot until the body weight is mostly over the other planted foot. It's important to remember how the hips rotate in at least two axes, and what that, in turn, will do to the shoulders. It's important that the wrists and feet have nice arcs, and the path of action of the hips and head are appealing and organic.

In short, what's truly important is that you take the time to research and plan a walk, just as with any other animation. For some reason, a lot of people seem to think that a walk is a good "basic first exercise." In my opinion, a walk is an incredibly complex piece of animation that should only be attempted when you feel somewhat comfortable with the fundamental principles of animation, and can draw on your knowledge of those principles, and how they relate to one another, to figure out exactly how the body needs to be moving in that walk.



My advice for tackling your first walk cycle would be to watch a lot of reference first. How do some of your favorite animated characters walk? What differences and similarities do you see? How about live-action walks? Go to the park or to the mall or just a street corner and watch how people walk. People with different sizes and shapes will walk a bit differently. How does the size affect the hip rotation and foot placement? How about the differences between male and female walks?

One of my early animation teachers and a good friend of mine used to strip down to his underwear and put black tape on his hip bones. Then he'd walk towards a mirror or video camera over and over and study how his hips moved!

Now, I'm not saying you should all start making underwear movies (or if you do, can I please put in an early request that you guys don't send them to me? Thanks! ha ha) -- but he did have the right idea, and he learned a lot of studying his own body this way.

Whether or not you have pants on, the important thing is to find ways to research and study how these animation ideas and body mechanics work in real life – that kind of observation is invaluable and incredibly necessary to your growth as an animator!

Shawn :)

Weight in Animation
By Wayne Gilbert

Weight is described through the visual presentation of opposing forces. That's it. Stop here or continue reading for accompanying babble and random thoughts.

He is opposing the downward pull of weight/gravity by driving his legs down to lift up.

We want to believe that the character moved, not that someone moved the character. That means you have to animate a character that looks like it is dealing with weight and balance through its own thoughts and efforts.

Force does not exist in animation. It is implied through posture, path of action, balance, timing, arcs, successive breaking of joints and on and on. It is implied by what the character does. Deciding why a character moves will reveal how it moves.

Hold on, this is about weight, not force. No, wait, weight cannot be shown without the visual implication of FORCE. Wait, force and weight don't exist in animation, there can only be a visual implication. There are two types of FORCE – internal and external.

The Principles of Animation as listed in ***The Illusion of Life:***

Squash and stretch
Staging
Straight-ahead animation
Pose to pose animation
Follow-through
Slow in Slow out
Arcs
Secondary action
Timing
Exaggeration
Solid Drawing
Appeal

Nine of the Principles of Animation are a result of, or create a FORCE. Let's take a stab at re-thinking, re-defining and prioritizing the Principles of Animation and call them, say, The Principles of Movement.

FORCE - priority one
External
Internal

Physical
Squash and stretch – (Compression and Extension)
Follow-through
Slow in and slow out – natural (physics), character controlled or mechanical
Arcs – natural and controlled
Secondary action
Timing – the strength of the greater force dictates how fast something moves

Aesthetic - creates an emotional/psychological response/force in the audience
Staging
Exaggeration
Appeal

Skill and Methodology
Straight-ahead animation
Pose to pose animation
Solid Drawing – a must for 'Traditional Animation' and great for planning

Weight is all in the timing. Well, posture and timing. But then context plays a role in why the character moves which dictates how. Aw man, now I'm rambling and sound like Shawn Kelly. Do over.

It's all in the timing. True, but what are we timing? We're timing thought and effort/force. How much effort must the character exert to successfully accomplish the task it decided to accomplish? For an animator, weight is a visual presentation of opposing forces. When a character jumps up, it is actually driving down against the ground. The faster it can drive down the higher it will jump. The character can enhance the power of the jump by properly timing the thrusting of shoulders and arms in the direction of the jump. Study a high jumper or long jumper.

Once the force needed to jump is believably represented visually, the principles of movement are initiated. If the character is weak and heavy it takes more effort to jump, pull or push, which influences timing which influences the principles.

Why does the ground shake when the '500 pound' Incredible Hulk walks? He's strong enough to jump half a mile, he should be able to tip toe quietly. OK, I'm rambling again. When I read this article tomorrow I'll probably want to re-word it as I have everyday since starting it and now I sound like Shawn again.

'Random thought' in an animated walk -- make sure that the 'impact' is visually defined. That could be one goal for showing weight. Watch slow motion live action walking and pay close attention to the impact frames.

Going into the impact/compression shows how much effort is exerted to stop the body weight from its downward motion and coming out of the impact/compression describes how much effort is needed to raise the body 'weight'. Keep in mind, the slower the cadence the more weight shift from side to side there needs to be. The further apart the feet are the more you have to shift weight side to side.

As these following examples are copyright protected I can only direct you to the source. In American History X, just before Edward Norton is arrested there is a sequence of him walking toward the camera. The shot is from the waist up but you can tell what the hips, legs and feet are doing. This is proof positive that you have to animate what is not seen as well as what is in frame if you want it to be correct.

Balance is extremely important to support the visual implication of weight. Weight must be over or nearly over one foot before the other can be raised while maintaining balance. Stand with your feet shoulder width apart, raise one foot 18" off the ground and hold it there for five seconds -- but don't shift your hips (or hold on to something or fall). Weight must shift from side to side in leading the balance during a walk. These examples from ***The Iron Giant*** do not address the fact that we may be looking at a directorial decision for mechanical stylization. (See if a lawyer can get through that one).

The ***Iron Giant*** – to shift weight or not? At the electrical station and in the final battle scene the giant lacks 'human characteristics' and there is no weight shifting in his walk, but at the pond there is.

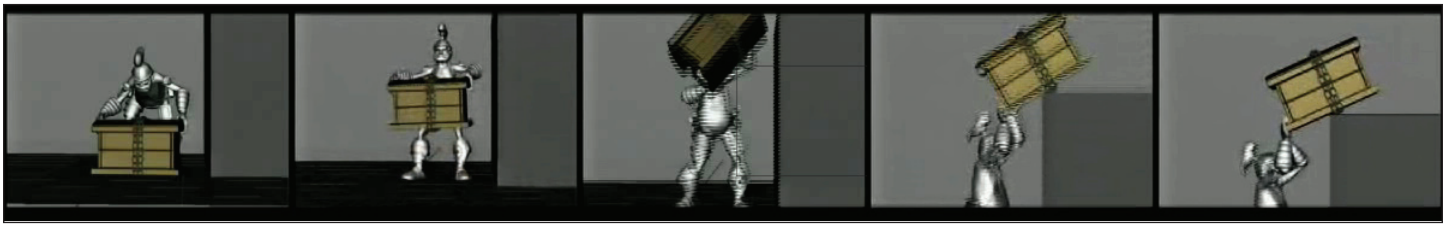
1. First time Hogarth sees the Iron who walks over him at the power plant. No weight shift and impossible – mechanical stylization?
2. Final battle when the Iron Giant has transformed and walks into the fight. No weight shift and impossible – mechanical stylization?
3. At the pond when the Iron Giant walks back to take a run at the pond. Weight shift – human characteristics at this time.

The timing of a character lifting a heavy object has to be properly blended with the correct posture and balance to describe appropriate effort.

- Three hundred pounds can look light if the character is strong
- Fifty pounds can look heavy if the same character is tired or ill
- A 300-pound character can be strong or weak
- A 98-pound character can be stronger than a 300 pound character

You create the rules – be consistent throughout your animation.

Here is an example of an animated character that looked at the story reel, planned what he wanted to lift, did sketches and then shot video reference before proceeding.



This is an example of an animated character that didn't bother planning beyond the story reel. He got a bit cocky and didn't evaluate the repercussions of beginning the action before he knew what he was doing.

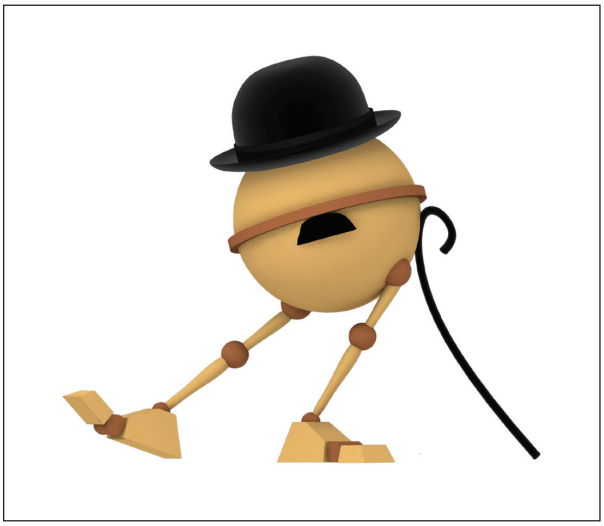
Weight is described through the visual presentation of opposing forces.

Wayne Gilbert

How Do You Make an Unappealing Character Design Look Appealing?
By Aaron Gilman

In my opinion, an animator should never be concerned with the design of a character. Countless animators have proven over the years that animation transcends the aesthetic appeal of a character. I remember when I was in school studying animation. A student graduating a year or so before me had created a brilliant short film about a scarecrow chasing a crow through cornfields. The scarecrow was entirely made of thin tubes, with no textures, and a low-poly straw hat. The weak uncreative character design didn't hinder the performance in the slightest. In fact, in some ways it augmented the quality of the animation because the animator didn't have to think about weighting issues, intersection problems, muscles, textures, etc. It was raw animation in its truest form.

I think this rings true for all great animation. The appeal or lack of appeal of a character's design should exist independently of the animation. Of course, that's not to say a great design won't bring more appeal to the viewer's relationship to the character. Having a great design is...well....great! But an animator's ability to make the viewer connect with the performance, personality, and nature of the character's "soul," will not be impeded by poor design.



Let's look at some concrete examples of this. Take the characters we see animated in so many animation school programs. I've seen sack jump animations that have had me on the floor laughing. Ballie, at Animation Mentor, is a couple of leg tubes and a sphere. This is hardly creative design at its best. But when a student flawlessly makes Ballie perform in a way that touches me, the symmetry, lack of textures, and flat surfaces, fall to the wayside.

We can look at poor design choices and how they may have affected a character's performance in films as well. I've spoken about Luxo Jr. in another article. The design of Luxo is nothing special. I'm sure no one would disagree with that. It's an ordinary metallic lamp with nothing interesting about its design per say.

And yet, when it moves, it springs to life. The animation works so strongly that the essence of a child screams out at you. You cease to think about the design and become absorbed with the character's thought processes. When he reacts to squishing the ball, I sincerely feel he's sad. Look at the design for Eve in ***WALL-E***. It's an oval! And yet the animation is nothing short of fantastic, and we never question the design choice. In fact, as an animator, I revel in the fact that Pixar purposefully chose a simplistic design and then made me ignore that stark fact by absorbing me into her performance so skillfully.

As an animator working in the industry, you will always be given characters that have poor designs. Even psychologically, you can work everyday on low-res puppets that look terrible. But as long as the animator can connect with the essence of the character to create an intriguing performance, it will always come out in the final product. And in some cases, when the animation is brilliant, it will rise above all aesthetic obstacles.

Aaron Gilman

Animation and the Uncanny Valley
By Keith Sintay

I recently became aware of a name for something that many of us as artists have seen, experienced and possibly even fought against. It is called, "The Uncanny Valley." As defined on Wikipedia: "The uncanny valley is a hypothesis that when robots and other facsimiles [CG Characters!] of humans look and act almost like actual humans, it causes a response of revulsion among human observers. The "valley" in question is a dip in a proposed graph of the positivity of human reaction as a function of a robot's life-likeness. It was introduced by Japanese roboticist Masahiro Mori in 1970.

A similar problem exists in realistic 3D computer animation, such as with the films ***The Polar Express*** and ***Beowulf.***" Mori's hypothesis states that as a robot [CG character] is made more humanlike in its appearance and motion, the emotional response from a human being to the robot [CG character] will become increasingly positive and empathic, until a point is reached beyond which the response quickly becomes that of strong repulsion. However, as the appearance and motion continue to become less distinguishable from a human being, the emotional response becomes positive once more and approaches human-to-human empathy levels.

The phenomenon can be explained by the notion that, if an entity is sufficiently non-humanlike, then the humanlike characteristics will tend to stand out and be noticed easily, generating empathy (think of how we anthropromorphize automobiles or other inanimate objects; giving them faces, etc.). On the other hand, if the entity is "almost human," then the non-human characteristics will be the ones that stand out, leading to a feeling of "strangeness" in the human viewer. In other words, a robot stuck inside the uncanny valley is no longer being judged by the standards of a robot doing a good job at pretending to be human, but is instead being judged by the standards of a human doing a terrible job at acting like a normal person. So, with thanks to my friend Tom St. Amand, I wanted to discuss how the Uncanny Valley impacts us as CG animators and as portrait painters and artists in general.

First, let me list things that put our more realistic CG characters into the "Uncanny Valley."

1. Lack of eye jitter (small, darty movements of two or three frames when someone is looking at something).
2. Crossed eyes, or wall-eyed eyes. These eyes generally appear to be unfocused (think of wax dummies of famous people, if they don't focus the eyes, the uncanny valley swallows them up). Actors need an eyeline.
3. Wavering focus of the eyes -- eyes not looking at a consistent target. Under this, I would put actors looking like they are reading from cue cards. Or, not looking at another actor when speaking to them at a moment when we would expect them to be. Wavering eyes can also appear to be a sign of inebriation or brain damage.
4. Eyes that look like a doll's eyes, or that have the texture of a doll's eyes; eyes that read as glass eyes.
5. If the eyes always move with the head when the head rotates, it looks robotic. Put in eye tics to lead the head rotation.
6. Lip sync is off. Look how off-putting a bad dub job can be on a live action film.
7. A perceived slackness in the face.
8. When the face moves in a robot-like, mechanical way or when the different parts of the face look uncoordinated.
9. When characters don't blink at all, it looks odd. The average person blinks once every five seconds.
10. When your character makes an "out of character" expression, it looks disturbing (as it can be in real life). If Jerry Lewis crosses his eyes in a film, it can be seen to be part of his character. If Dean Martin does it, it seems weird.
11. People are made comfortable when you show them what they expect.
12. Unnatural skin color or texture. Mottled skin (actors usually wear makeup to hide mottled skin to make it look more pleasing and 'natural' on camera).
13. Unnatural lighting. An actor won't usually be lit to look bad, unless they are playing someone sinister.
14. Don't be so in love with reality that you make your character look sick. Think how he would look if he were an actor/real person in your movie. Would you play up his flaws?

15. Changes in facial expression that seem too slow, or are late.
16. Facial features that are mirror-imaged. A lot of people have one side of their face smaller than the other. Features that seem too "perfect".
17. Movement on one side of the face only; this looks like you have had a stroke.
18. Facial movement that seems uncoordinated with what the body is doing.

So, how do we get our characters OUT of the "Uncanny Valley"?

1. Think about micro expressions; fleeting changes of expression.
2. Nostril flares and raises.
3. Brow and cheek raises.
4. Changes in volume in the cheeks (like cheek blow).
5. Make sure 'sticky lips' are in there if that is available on your rig.
6. Be careful when moving facial shapes in isolation.
7. Make lip shapes for consonants, etc., simple and readable.
8. Don't over-enunciate. More cartoony characters can sometimes get away with this.
9. Don't forget swallows, gulps and neck tightens.
10. Some people's heads shake and bob involuntarily instead of moving in a "key-framey" fashion. Don't just leave the head static. Try to break the regularity of even movements.
11. When we blink, sometimes the brows come down, the lower lids scrunch up. Also, the cheeks can raise up to 'meet' the blink.
12. People also squint and half-close their eyes; their eyes can narrow and remain so without fully opening again.
13. Look for places to widen or flare the eyes.
14. Eyelash flutter. Lids don't always close all the way down.
15. Eye twitches (lids and the areas above and under the eyes)
16. The jaw can move side to side and in and out as well as up and down.
17. Lips sometimes stick to teeth when we talk (dry lips).
18. Don't forget breathing (chest rise and fall)
19. Get the tongue animation in there!
20. If your character looks like a Zombie, try and figure out why. Sometimes even a live actor's performance is criticized for having no "spark."
21. Offset raising and lowering of the brows occasionally, instead of both at the same time.
22. A smile will generally raise the cheeks.
23. A smile should be reflected in the EYES as well as the mouth.
24. Paul Ekman: In a fake smile, only the zygomatic major muscle (cheek muscle) which runs from the cheekbone to the corner of the lips, moves. In a real smile, the eyebrows and the skin between the upper eyelid and the eyebrows come down very slightly.
25. Teeth and the inside of the mouth should look wet.
26. Think of all the actors/actresses who have had botox or face lifts, who then don't look like themselves anymore. Part of their faces looks "frozen."

27. In a squint, the area UNDER the yes moves too, not just the lower lids.
28. Make sure the expression fits the voice.

These are just some of the ways that you can create more realistic characters whether they are CG or portrait paintings. Hopefully, some of the things on this list will allow you to stay out of the Uncanny Valley with your performances or renders.

Be sure to check out more of our latest tips at animationtipsandtricks.com. Best wishes and happy animating!

Keith Sintay

Motion Capture
By Shawn Kelly

Let's get something out of the way right off the bat. I realize some of you really dislike motion capture. Some of you even have a real hatred for it. So before we dive into what is sure to be a sticky topic, know this: I don't care how much you hate motion capture, I have hated it more than you. Period.

Back in 1995, my whole life was about trying to learn this animation stuff, and I believed motion capture was a knife in the art that I held so dear. A robotic and artless solution to the budgetary dilemmas of short-sighted producers who had long since sold their withered souls to their great god: Profit. A shortcut that would not only put all of us animators out of business, but also delivered awful results. Sure, the motion was technically accurate, but in leapfrogging over the absolutely essential step of filtering a performance through the eyes of a true animator, the end-result looked like some kind of zombie brought back to some semblance of life.

For 1995 Shawn, motion capture was animation lobotomized.

Back then, I had my hater-pants belted firmly around my waist and had nothing but upturn-nosed condescension for this new technology. I'm sure some of you feel that same way right now. But guess what? Some of you won't want to hear this, but an enormous percentage of you are going to work with motion capture in one form or another at some point in your career.

Scared? Don't be!

It turns out that I was wrong about the potential that exists in motion capture, which, over the last decade, has evolved into a robust and useful tool for us to use.

Now, does 2008 Shawn think that motion capture is an art form? Nope. No more than a camera is an art form, or a paintbrush is an art form. The *creation* of any artistic tool could certainly be described as an art form, but the finished tools themselves are no more than that -- tools waiting for the magic of an artist's touch. It's the painter and the photographer that are the artists here, as are the joint-effort of the motion capture performer and the animator.

Motion capture has evolved and grown into a truly useful TOOL. It's nothing more, but it's also nothing less.

Does 2008 Shawn specifically enjoy working with motion capture? No, of course not! My preference is the same as most of yours -- to start from scratch and bring characters to life through my keyframe work.

(And to be fair, I haven't done *that* much motion capture work. Of the over 250 shots I've done at ILM, I've used motion capture in exactly 12 of them (yes, I counted), and almost all of those ended up being mostly keyframed by the end of my process. So I'm not claiming to be a huge motion capture expert, just giving my two cents on the issue...)

However, when motion capture is used properly, it can be a solid addition to your animation toolbox, but (and this is the important part!) when used IMPROPERLY, I still think the end result feels about as alive and emotional as a doorknob.

That said, here are some pointers if you find yourself working with mocap:

1. The usefulness of motion capture is DIRECTLY tied to the intended style of the project. It's pretty much only useful for ultra-realistic work. Trying to motion capture a film like ***Horton Hears a Who!*** or ***WALL-E*** would be a huge waste of money and time, and the end result would be an ugly shadow of the gorgeous hand-keyed work on display in either of those films, no matter how much an animator tried to augment the captured performances. Trying to push and pull motion capture around to turn it into something very stylized would be incredibly frustrating and time-consuming for any artist. I would expect that an animator could have simply hand-keyed a far superior version of that same shot in a fraction of the time it would take to capture,

clean up, and then try to augment the motion capture data.

2. This goes for games as well: while motion capture is a great foundation for a photo-realistic football game, it would be silly to use much motion capture in something like ***Halo 3***. While the movements are pretty realistic in ***Halo***, the style of that universe demands a certain level of subtle stylization to the movements which would probably be faster/cheaper to achieve by simply starting with hand-keyed animation.

3. Along those lines, in most cases it would be a waste of time to attempt to motion capture any extreme physical actions that are above and beyond what a human can do, even in a photorealistic project using human characters. In other words, there's no sense in trying to motion capture superheroes flying around and battling each other in hand-to-hand combat when an animator could again create that same shot, most likely having a better result and costing the studio less money.

4. Motion capture can often be far more trouble than it's worth, and many of us know how common it is to waste days trying to somehow edit motion capture data into the performance that the director is looking for only to eventually have to scrap it completely and key it from scratch.

5. For feature films, television, or game cinematics, motion capture straight out of the box, untouched by an animator, will invariably have less life than it otherwise could have had, and has a very high likelihood of looking dead, stiff, boring, wrong or just plain creepy.

6. For in-game work, depending on the movement style and budget, motion capture is very commonly used, and I think this is a proper place to do so. However, as games become more cinematic, and resolutions and graphics continue to climb, more care should be taken to ensure that animators have the proper amount of time and allocated budget necessary to give these characters more life, more dynamic poses, more interesting timing, etc. While motion capture will continue to be an important part of the equation in the creation of sports games and other lifelike games, studios need to keep in mind that it is only one step of the process, and those characters are never going to feel truly alive until their motions and emotions are augmented by a talented animator.

7. Motion capture can be an excellent and data-rich source of 3D reference for any animator, working in any medium. If you happen to somehow end up with motion capture data that you won't be able to really use for one reason or another, it still might be very valuable to at least study and learn from what the performer did.

8. MOTION CAPTURE IS ONLY AS GOOD AS THE PERFORMER BEING CAPTURED! If you're going to be motion capturing something, be sure to cast the actor appropriately, and have the director involved as early as possible in the capture process. This will save a fortune in reworking the performances later.

9. No matter what, animators will ALWAYS need to do some amount of reworking the mocap data, almost regardless of the intended style.

10. Untouched mocap, or even *cleaned-up* but not augmented mocap, is rarely going to be acceptable as the final product if there are any quality standards at all (If any producers happen to be reading this, please do the rest of us a giant favor and factor this into the budget from the get-go!).

11. Most important of all: If you are working with mocap, your primary focus needs to be on exaggeration. You'll want to subtly exaggerate the poses to push them into something more dynamic or exciting, or more forceful. Exaggerate the weight a little bit, push the line of action, etc. You'll also probably want to exaggerate the timing in some way speed this part up slightly to make it a little snappier, slow this part down a little to give him more of a pause here, etc. In other words, use the mocap as a foundation upon which you can use YOUR artistic skills, and your knowledge of the principles of animation, to create a true performance that can hold up on-screen.

Some of you out there might be 1995 Shawn. I'm here to tell you that there is a light at the end of the mocap tunnel. That it doesn't have to be scary, and it doesn't have to be anything other than an occasionally useful tool. Not only that, but particularly in the games industry, motion capture makes a lot of projects possible that would otherwise be cost-prohibitive, and as such, actually *creates* a huge number of animation jobs.

There's an elitist vein of snobbery running through our industry right now, where some "keyframe" artists like to stand up on their pedestal and look down their noses at animators working with mocap. Some of these animation purists even have the unbelievable audacity to proclaim themselves the only "true" animators, and that animators working on photorealistic films such as ***Lord of the Rings*** or performance captured films such as ***Beowulf*** are not "animators" at all, but rather some tech-heads doing grunt work or something.

How quickly they've forgotten that not so long ago, the 2D animation industry was saying the exact same thing about them!

Back in the early 90s, many 2D animators had those same elitist opinions about computer animators in general -- that the only "real" animators used pencils. From here in 2008, that sounds ridiculous, and I would be willing to bet that even the most ardent among them would be forced to admit, in the face of ***Kung-Fu Panda*** or ***WALL-E*** (or any other amazing CG film!) that they were wrong.

To these thankfully few people, who clearly just don't understand how an animator might properly embellish motion capture, I would suggest you get over yourselves and realize that this art is bigger than any one tool, bigger than any one project, bigger than any one medium, bigger than any one style, and it's certainly bigger than you.

Yes, I agree with you that plenty of animation that began as mocap data looks absolutely horrible. Dead, lifeless, boring, or just wrong. But you know what? Plenty of animation that began with a blank piece of paper ended up looking horrible as well, and plenty of animation that is keyframed in the computer looks just as bad or worse!

I think we can all agree that the end result has more to do with the artist and their environment and training than with any particular tool.

As far as I'm concerned, a solid well-trained animator who is allowed to apply their artistic animation vision to whatever tools they are working with will always have the potential to create something terrific, regardless of the tool or medium.

Animation is the act of bringing characters to life. If that's what you do, I don't care if you're using Maya, Softimage, Lightwave, Animation Master, Flash or Motion Builder or your H1B pencil or an armatured puppet! I don't care if your reference is video reference, yourself in a mirror, or a day at the park, and I certainly don't care if you are using your animation skills to mold a crappy motion capture performance into something memorable and truly alive! If you are using the tools at your disposal to bring characters to life, then guess what?

YOU ARE AN ANIMATOR.

And don't let anyone tell you otherwise.

Shawn :)

WORKFLOW

What Kind of Workflow Do You Use or Recommend?
By Shawn Kelly

Everyone has their own workflow that they find comfortable and works for them. For me, this is what I usually do:

1. Get assigned a shot.
2. Research and study. Learn about the character, the required actions, what my character wants, where he came from and where he's going. If it's just action or is a creature, then I study the physiology of that creature, figure out how he should move, etc. As much as possible, it's good to find reference of a similar creature that exists in real life. (For example, if you're animating a dragon, you can study eagles and lions)
3. Do my thumbnails and video planning (so I know which poses will happen on which frames -- at least roughly, and include breakdown poses). When possible, I'll show this planning (or video reference) to my animation director for feedback.
4. Then I simply recreate my thumbnail drawings in the computer, thinking of each pose as a "whole drawing," where I'll pose out the whole character and save a key on every single controller, even if it hasn't been moved.
5. At this point, you should be 80% finished, if you've done your planning correctly. (See my very first Tips & Tricks articles about this). This is when I'll show my shot again for more feedback.
6. If they like my blocking, then I start polishing, doing the hands, feet, fingers, toes, tail, whatever.
7. Then I do the face.
8. Then I do the mouth.
9. Then I show it again and hope to hear the magic word "Final!"

Shawn :)

Workflow for Fully Rigged Character
By Shawn Kelly

QUESTION: ***In simpler models, I would key everything together at the same frame so I would not be confused when I tried to move things around. Now I'm working with a character with a mouth, eyes, and full facial rig. Do I key the face controls along with the rest of the body, or do I re-block them on their own pass? What is a normal workflow?***

Working with a new character is always intimidating (but exciting, as well, as you get to explore how that new character works, puzzle out new solutions for movement, etc.!), and jumping into your first "fully rigged" character is even scarier than normal. I work just like the above -- I block in the scene in a "pose-to-pose" way, using my reference and planning as a guide, and saving keys on every body controller as I go.

HOWEVER, your question raises a great point that I don't think I've mentioned in the past, and that is the fact that I do NOT save any keys on the face at all during this first pass at blocking. I just ignore the face completely, and in my mind, I imagine what the face will eventually look like. Even with eye darts or blinks -- all that stuff I save for a completely separate pass. I don't know if that's the "normal workflow" or not, as everyone works in whatever way works best for them, but in my experience, doing any facial work in the first pass of blocking has a decent chance of being a waste of time. The body performance/timing might not be really locked down yet, and the facial emotions and thought-process needs to be very integrated with the acting choices, gestures, and body mechanics. You might as well wait until the body is really nailed down and 90% finished before jumping into any facial stuff, because if you end up having to change the overall body stuff, the facial stuff might all have to be scrapped completely as well. It'll save you a lot of headache in the long run, in my opinion, to hold off on the facial stuff.

Remember, the facial animation is the "icing on the cake," and if the emotions, actions, and ideas aren't communicating through the body language and physical performance, that should be a huge red flag for you that the scene is in trouble. The greatest facial animation in the world is not going to save your scene from poor body mechanics or bad body language...

So yes, in answer to your question, I save the face for last, and by the time I'm keying the facial work, expressions, jaw, and lip-sync – at that point, I'm no longer at all concerned with what frames my initial body-blocking poses and breakdowns were on. This is completely separate, and while it's very important to make sure the face is very related to what's going on in the body, it's very normal for the facial keys to be on completely different frames than the body keys.

Shawn :)

How Much Time Do You Spend on Each of the Workflow Steps?
By Animation Mentor Staff

When it comes to AnimationMentor.com, there is a guideline to live by -- the more you put into it, the more you will get out of it. Animation Mentor students are definitely a hard working crew, and this is because animation is not easy. If it were, everyone would be doing it well.

Finding the timing of your workflow is just like the rest of it, you have to see what works for you. Your first instinct may be to rush the planning and go right to animating, but you will soon discover that this is not the most ideal way to work, since you will most likely spend more time fixing things in the end. Finding the right amount of planning, roughing in, getting feedback, blocking, getting feedback, refining and polishing is something that takes time.

For beginners, it also takes trial and error, since you can't be told what the best workflow for you is... you have to build it yourself! But to answer your question more directly, you can expect to spend at least 20 hours a week on your Animation Mentor assignments. But you probably should plan on it taking longer, upwards of 40 hours a week, so you aren't surprised when it turns out to be that sort of time commitment. Animating is time consuming, and until you have really hammered out your workflow, you should expect it to take a while.

Rock star animators can move more quickly, but that is because they have spent their time "in the trenches," taking their knocks, and learning from experience. And you know what they say… "Experience is what you get when you don't get what you want." So don't expect it to be easy, or else you may be let down.

Good luck!

Animation Mentor Staff

Workflow and Timing for Animating Wings
By Shawn Kelly

QUESTION: ***I would like to know a little bit more about having different layers with different timing. Can this workflow be applied to the wings of character?***

I think for me, animating the wings as their own "layer," or their own entity, would depend mostly on the size of the creature. If I were animating a small insect or a hummingbird, I'd probably hide the wings completely, animate the bird zipping around, and once the bird is blocked in, only then would I turn on the wings and flap the heck out of them super fast, possibly even with little regard to what I animated the body doing.

However, if I were animating a dragon or another creature with big wings (a large bird, an angel, etc.), I would be thinking more about those wings being integrated with the overall poses of the character, and the timing of the wings would be very integrated with the timing of the body. As the wings heave down, they are going to affect the body and be affected by whatever the body does, particularly near the connection points to the wings. Because they are so intertwined, I'd animate them together, which would work out better anyway because it presents a lot of great opportunities to get strong poses where the wing pose can accentuate the body pose.

Check out the great animation of the fell beasts (dragons) in the ***Lord of the Rings*** trilogy. Study how the wings affect the body and vice-versa. This type of animation would be very difficult and time-consuming to tackle if you were attempting to animate the body and wings as completely separate passes. At the very least, you would have to go back and edit your original body animation after you added in the wings in order to refine the way they are working together, so it's probably best to do it all as one thing. One complete creature -- that's the way to think about it.

So, I guess it all depends on the character or the creature, and there's no universal answer, in my opinion. Like pretty much every other aspect of animation, none of this stuff is hard-core etched in stone 100% of the time for 100% of the shots you will animate.

Animation is an art, you can't nail it down with a mathematical formula. Every rule we talk about can be bent or even broken in the service of the style you are working in. There really isn't a right or wrong for how you choose to animate the wings. All I can tell you is that from personal experience including the wings in your overall keys and breakdowns on a large creature will result in achieving stronger poses much easier and quicker than doing them on a separate pass, and that hiding the wings on a small creature and forgetting all about them until your little guy is all blocked in is a great workflow as well – but that's just my opinion. The more experience you get, the more you'll find workflows that make sense to you, and I'd encourage you to not be afraid to try new ways of working if you are finding any particular "workflow" idea to be difficult to deal with.

There's no right or wrong to this stuff – it's an art! Have fun with it, and see what works best for you, and what gives the best result!

Shawn :)

How the Heck Do You Change Your Animation after You've Already Started Polishing the Shot?
By Shawn Kelly

This tip is huge. Honestly. At least for me, and my workflow, it's massive. The concept is simple, but it's truly essential. I have a feeling it will be new to many of the beginners out there, and may even be new to those of you who have already been animating for a bit.

So raise your hand out there if this has happened to you: You've been working hard on a shot and are nearly finished with it. Your supervisor/director/client/boss/friend/mom bought off on your original ideas, loved your blocking, and you dove in head first to do all the fun little polishing bits. You've been adding all the little buttons and bows, dotting your i's and crossing your t's, and any number of other tired clichés. The shot is looking pretty great (finally!), and you're looking forward to putting this one to bed and starting on something new. And then it happens.

Oh yeah, you guys totally know where this is headed, don't you? I can feel you cringing from here. You're minutes away from doing your final render of your masterpiece, when along comes your supervisor/director/boss/friend/mom with the most dreaded five word sentence in the animator's vocabulary: "I have a new idea." I know. Brutal, isn't it? We've all been there. I'd be willing to bet that some of you are there right now, in fact.

Unfortunately, in a client-based industry such as this, the collaborative nature of it is a two-edged sword -- it offers the excitement of constant fresh ideas when you are beginning a shot, but that sword can just as easily swing back and lop the head off of the original idea you've so invested yourself in. In short, this situation just isn't all that uncommon. Rare is the director (or supervisor, or client, or boss, or friend, or mom) who has the detailed imagination to truly envision the way an idea will truly look in a shot.

Many of the people you will work with in this industry simply will not know if an idea or movement or acting decision will truly work until they actually *SEE* it animated in your shot. Most will be able to tell from your blocking (thankfully), but every once in a while, they'll need to see it fully fleshed out. Just as common are the folks who will simply change their minds.

Luckily, if you are working in a studio, it is simply too expensive for the clients to constantly change their minds, or at least the looming deadlines will eventually force them to make a decision (long after you'd like them to, of course), but the chronic mind-changers are – sadly – a thriving race of people you *will* have to face at one point or another. So, what do you do?

I mean, what are you supposed to do when you get these change requests and your nice and neat (hopefully) blocking keys are a thing of the past, and you've already started offsetting all kinds of stuff, refining your arcs, tweaking this and that? Well, if it's a massive overall change, sometimes you'll have to bite the bullet and (ugh) start over. If it's a medium-sized change, then it could go either way, but a lot of the time it's actually faster to just start over than to try to cram a pretty big overall idea change into a shot. Obviously this depends a lot on what the shot and change are. But usually, it will be a smaller thing. Something you *could* fit into your current animation. A timing issue, maybe, or a new movement in the middle of the shot.

This is the case I'm going to talk about today. Your curves are already exactly the way you want them, but in the graph editor they look like a plate of angel hair pasta. They sit there in a tangled mass, leering at you. Impenetrable, daring you to try to decipher their meaning.

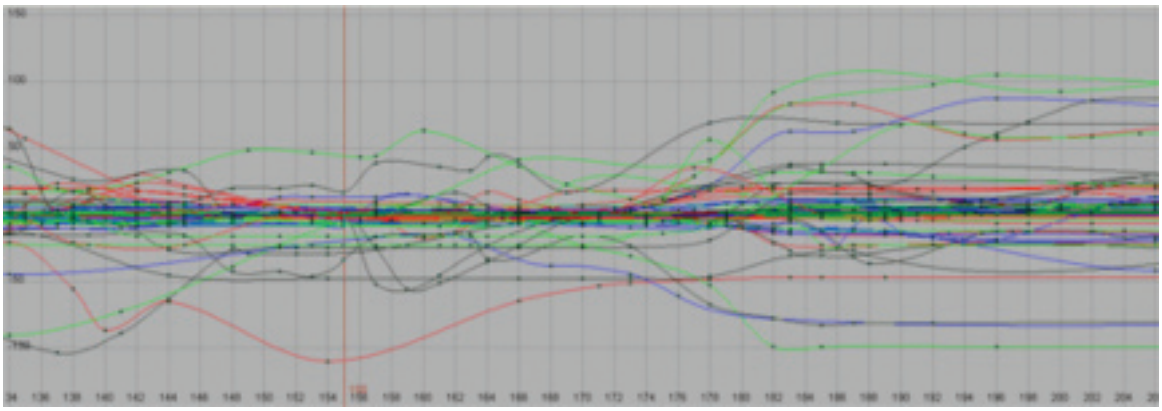
Well, guess what? It's actually very easy to deal with this if you have a plan of attack. So, what do you do? TIP: Bring It Back To Blocking! Sounds hard, right? It isn't! Nothing could be easier. All you do is throw on your hard hat and start building what I call a "Construction Zone." Basically, you need to wall off the area that you're going to work in before you bring in the bulldozers and tractors and start trashing the joint.

So, let's do this. Let's talk about two different situations you might deal with in the following shot that you have just animated

SCENARIO ONE: THE SHOT:

A character walks into a room, sees on the television that his favorite hockey team just scored, and runs to the TV and gives it a big hug.

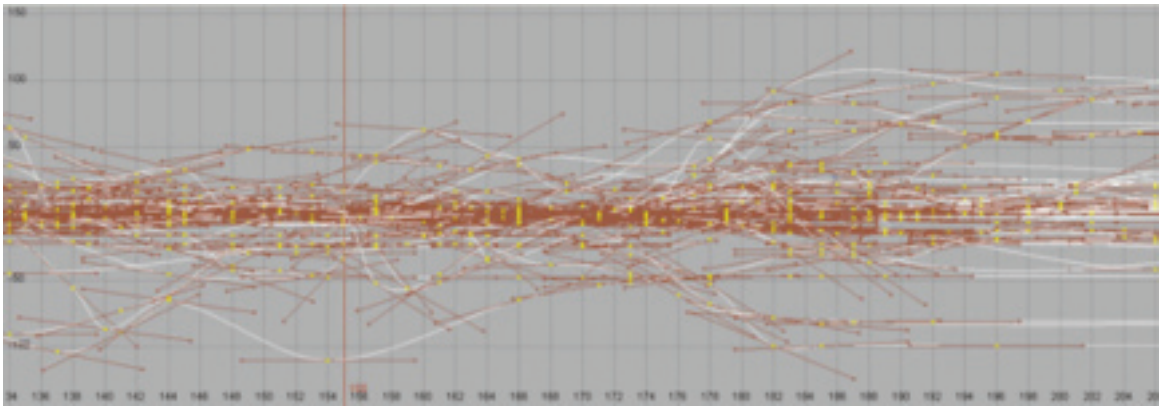
THE DIRECTION: This is looking really great. I love how he walks in and his first reaction to seeing the TV, and I *love* the way he hugs the TV, but instead of running to the TV, I'd really like him to jump excitedly into the air and spin all the way around first. Yikes, right? This won't be easy, but the first thing you need to do *is* very easy, and that's to build your construction zone. Let's say that your curves currently look like this in your graph editor:



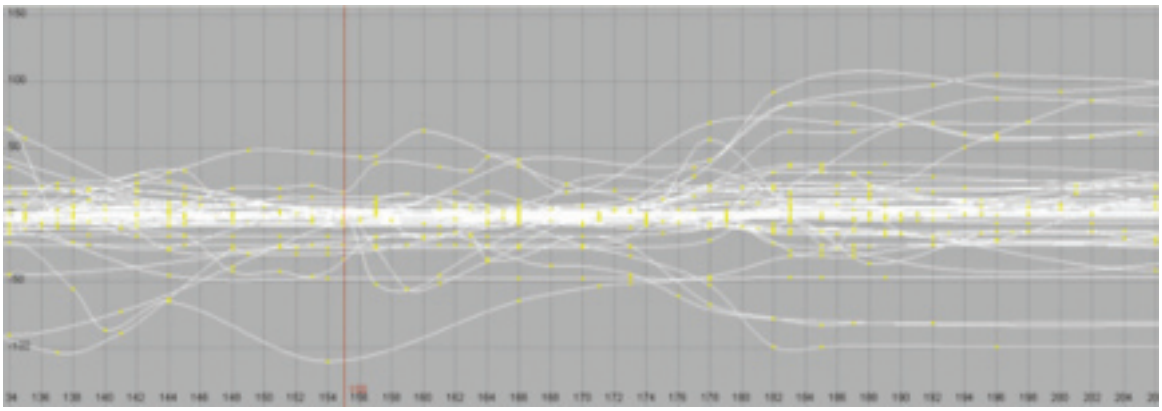
OK, not the "cleanest" keys in the world, but a lot of the time, your curves might end up looking like this for a variety of reasons. I try to think of my key poses as "drawings," and tend to keep my keys all on the same frame so that one pose/drawing won't ever get messed up, but after I'm out of my blocking phase, and all of my timing and ideas are nailed down, then I stop worrying about that and shift my focus to just making the shot as dynamic and clear as I can.

Oh, I just thought of a whole other tip! Uh oh, buckle up for a patented "Tips & Tricks Tangent"....

This will be REALLY quick. Check out the selected curves/keys below. See the crazy mess of tangents?

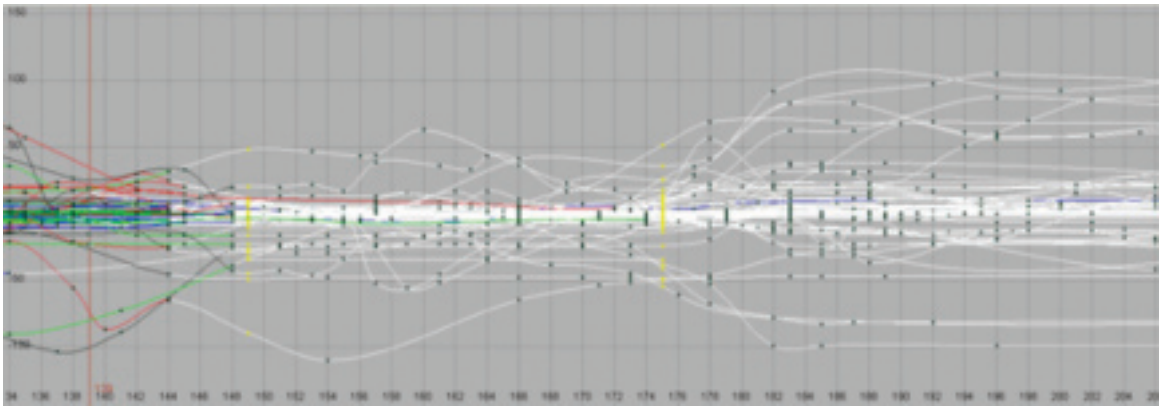


I don't know about you, but I can't even look at that. It's too confusing to see where my keys are. So my "mini-tip" is to make a hotkey in Maya (or whatever you use) that will turn your key tangents off. Like so:



Ahhhh, isn't that better? So much easier to look at. Creating a hotkey to flip back and forth is a lifesaver when you are working in the graph editor...

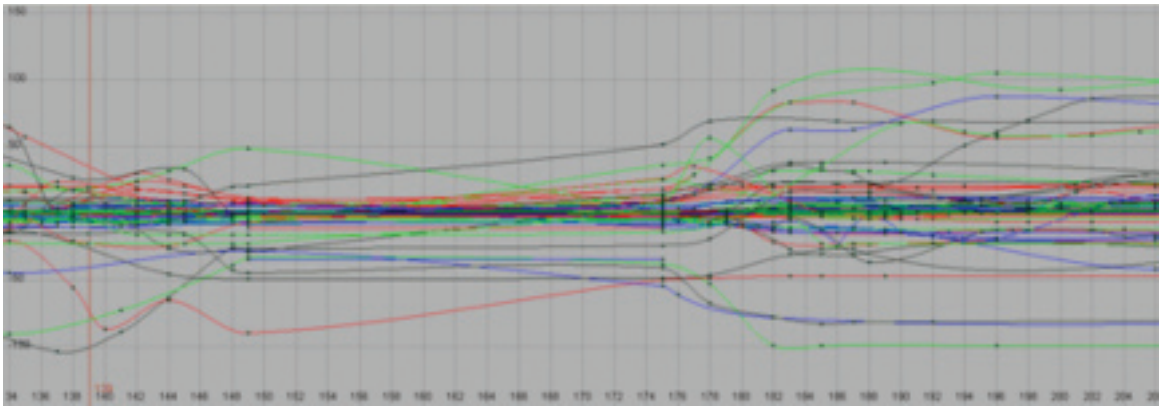
OK, back to our regularly scheduled article: Let's say that frames 149-175 represent the bit where our guy runs to the television. The part we need to ditch, and replace with a mid-air excited jump/spin.



The first thing you'll notice about the image above is that I've saved a key on EVERYTHING in my scene (the guy, the props, anything he interacts with, maybe even the camera) on frames 149 and 175 (You'll notice they are selected in the above image).

This is the first step to walling off your construction zone. With these keys in place, you can blow away everything in between them with a fair degree of safety. The only time this would screw you up would be if you didn't have any keys saved within a few frames of these frames, in which case I'd guess there's a decent chance you're letting the computer do too much of your in-between work...

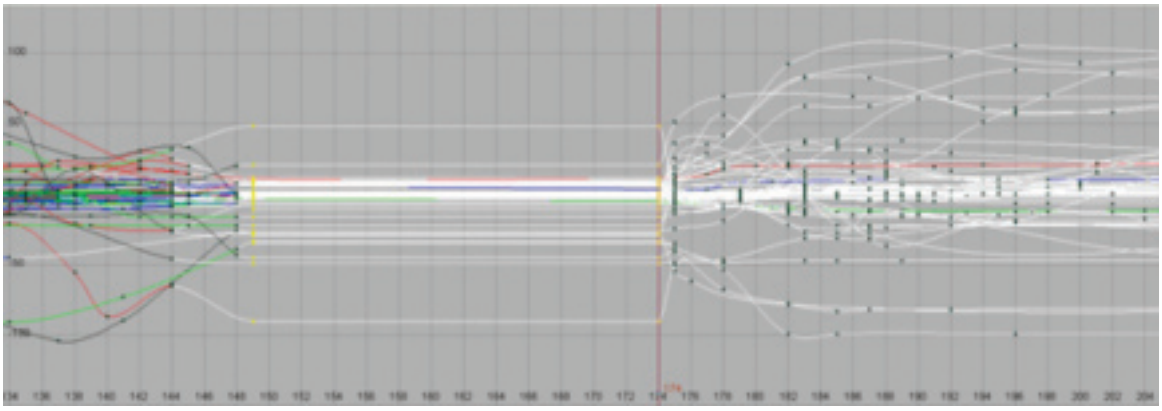
Anyway, now you can blow away the stuff in the middle:



Now, sometimes you'll need to do a little minor clean-up, but in theory, the first 149 frames should look exactly the same as they did a moment ago, as should everything after frame 175.

This is a good start, and you've just given yourself a chunk of space to block in a jump/spin. However, you have this problem of your character being in a constant state of motion as you are trying to animate him. He'll slowly be morphing into the pose at frame 175, right?

Well, there are probably a few ways to work around this problem. But the way I like best is to simply copy the pose from frame 149 to the frame just before my construction zone wall, which in this case, would be frame 174:



Ta-daa! Now you have a blank canvas upon which to paint your new and (hopefully) improved masterpiece. All I did was go to frame 149, and hold down my middle mouse button as I scrolled to frame 174, and then I simply saved a key on everything. This is a great and easy way to copy/paste your poses as you work. As you save each new pose of the jump spin you are now animating, you can copy/paste it to frame 174, giving you a constantly updated "flattened area" to work in.

Obviously, you'll eventually have to replace the key at frame 174 (or just delete it) in order to flow smoothly into 175 and all the following original animation.

SCENARIO TWO:

THE SHOT: Same shot

THE DIRECTION: The shot's looking great, but I really want him to run to TV a lot faster. Like, twice as fast. And have him kiss it a couple times when he gets there.

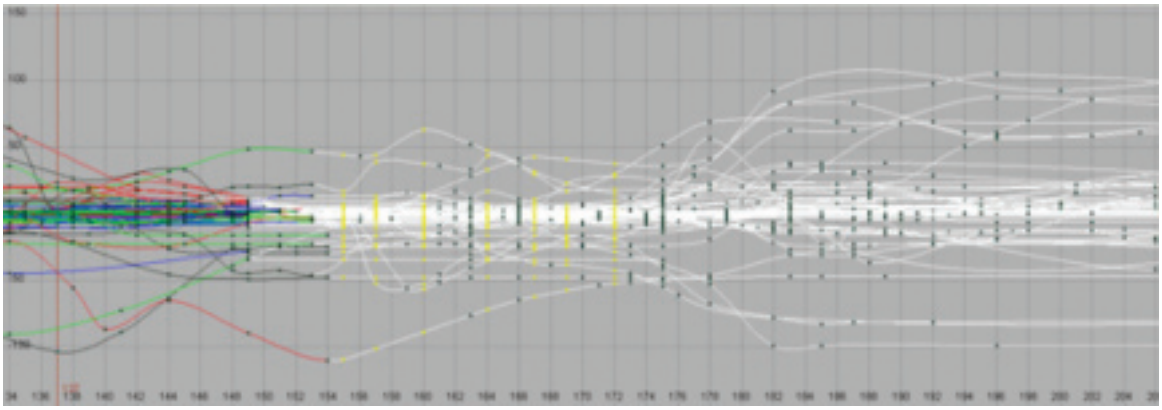
OK, so this is kind of similar, but creates a whole new problem for you. Now your client or supervisor actually wants you to keep the guy running to the TV, but he wants it to happen faster, *AND* he wants you to add some kissing in there.

Obviously, you can't just blow away everything in between 149 and 175 this time. Well, that's not true. You *can* if you want, but this sounds to me like it'd be silly to have to completely rework that section when you mostly just need to change the timing and add a couple little things in.

For this, you'd build your construction zone just like in the first scenario, but instead of just deleting your keys, you need to do something new. You need to clean up your curves.

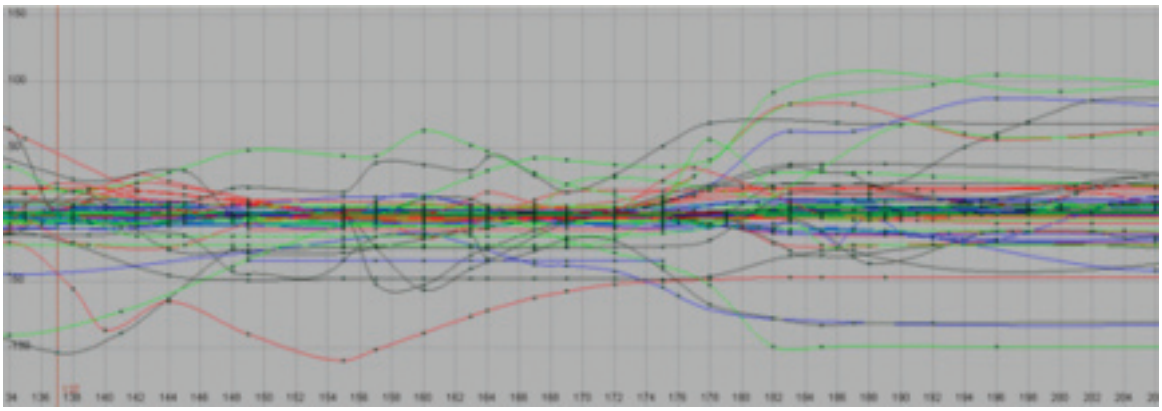
Basically, all you do is step through your animation and examine it the way you would examine video reference. Look for anytime something important happens, or something changes direction, or it could even be something technical, such as a frame where some constraints turn on or something.

On any frame where anything absolutely essential happens on any important part of the body, save a key. On *EVERYTHING*. If he's running, and his foot picks up off the ground and you like that pose, save a key on every controller on his body:



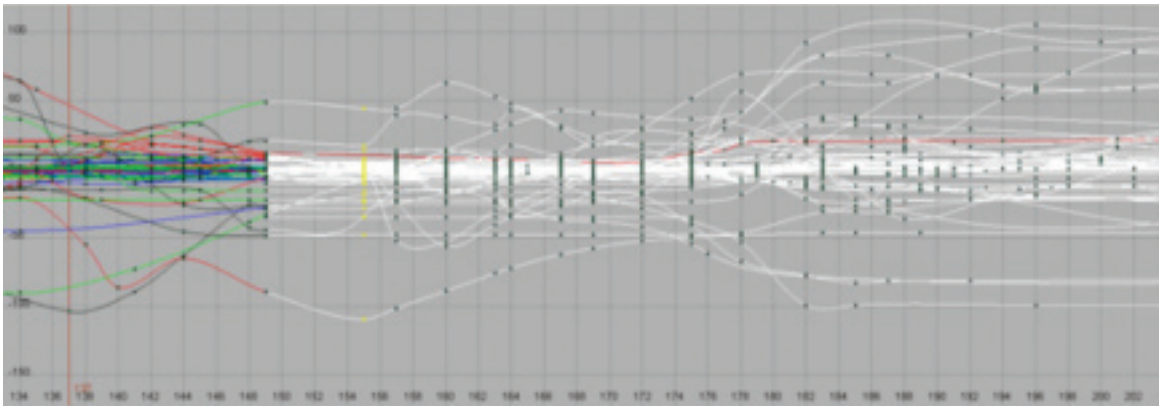
The frames with the yellow keys happened to be the ones I felt were important to keep around. Even though many controllers didn't have any keys saved on them on these frames, I included them anyway. That's a really important part of this process.

Next, it's time to delete everything that is in between the keys we just saved, which leaves with this:

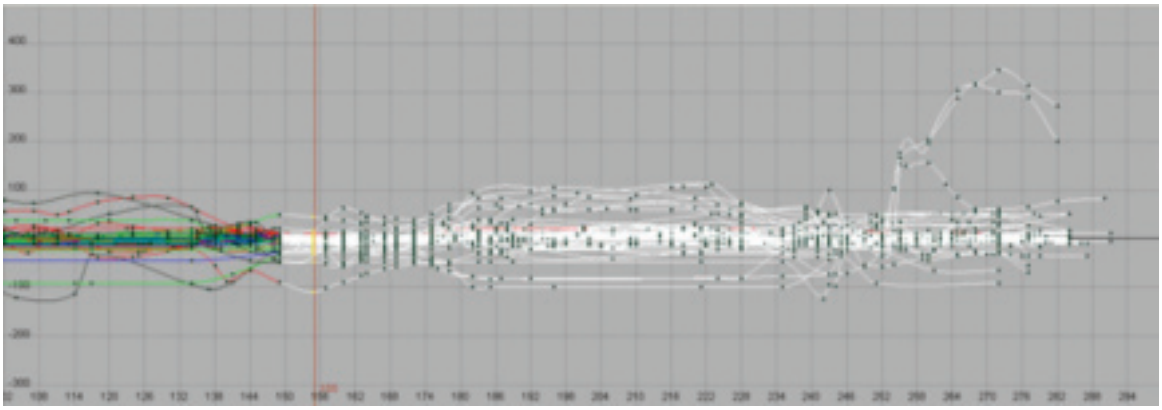


If you play blast this, the animation should look pretty much exactly the same as it did, minus a few minor nuances. If it looks wrong, then you've missed some controllers or missed an important frame you should have kept around.

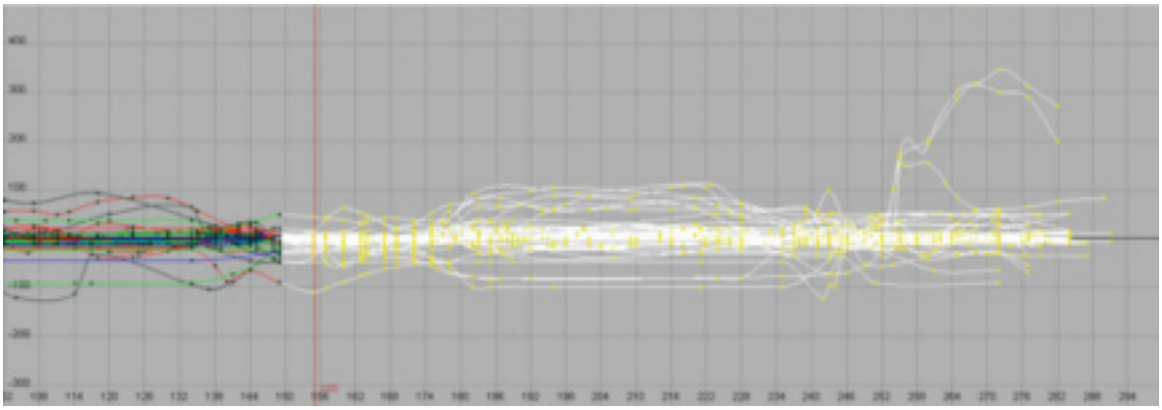
The point is that we've taken our garbled spaghetti curves and organized them into something we can truly work with! Now it's SO easy to speed up this bit of animation without screwing up your poses. Simply select the first one you've kept, which in this case is frame 155:



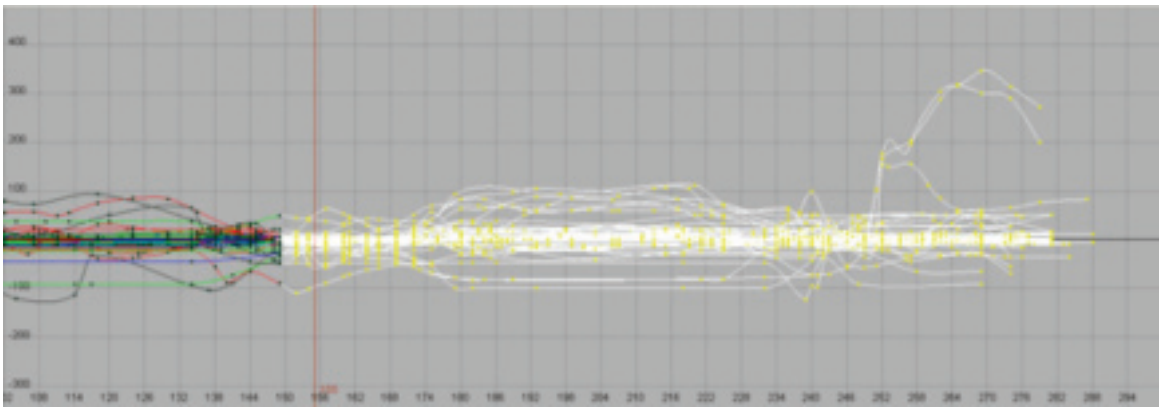
Now zoom waaaaay out in your graph editor, so you can see everything that comes after this key:



Since you've selected the keys at frame 155, it's still easy to see which key it is that you're working with. You can also put your timeline to frame 155 which gives you that nice red line as a good reference point of where it is you should be worried about.
At this point, just make sure you have selected frame 155 and every key that comes after it:



And then just slide everything backward as much as you need to in order to properly speed up the first bit of your run (the part between 149 and 155):



Then you just deselect the keys at 155, which should leave everything selected from the next key onward, and slide that back as much as you need to.

And so on and so forth. Eventually, you'll have a faster run, AND a blank area of keys you can put a kiss into, and eventually hook back up to what was once frame 175, but what now might be 165 or whatever.

Some of you might wonder why I wouldn't just select the run animation and scale the keys in order to speed it up. Honestly, I might try that quickly to just see how it looks, but I just don't have enough manual control in that situation, and more often than not, I won't be satisfied with the results. Aside from the fact that a faster run will probably need extra time easing into the run and out of it at the end (rather than simply scaling it uniformly), the more important thing for me is that a pose that I love that will help the run be clear and strong, or really show his weight or force might end up in between a frame and never properly show up on screen.

Your poses are your babies in animation. You've hopefully put a lot of thought into their creation, so cherish them, and avoid automated stuff that might hide or destroy them. That'd be my advice, anyway.

Hopefully that makes sense. In both cases, it's important to think of your character as one unit rather than a collection of separate controllers. Because you've already started polishing him up, you want to salvage as much as you can, and this "construction zone" method of bringing a section of your animation back to what your blocking should look like is a terrific way to deal with late-in-the-game change requests from the people you are working for.

Well, that's it! Hopefully this is new to some of you and you find it helpful. Next time we might jump back to the Q&A format as I have a lot of great questions to address, or maybe I'll do a little half-and-half. Feel free to email me and let me know which you prefer!

Keep animating, and as always, have FUN!!!

Shawn :)

Tips on Speeding Up Animation Workflow and Animating Faster
By Shawn Kelly

QUESTION: ***I was wondering if you had any tips on how to speed up animation workflow, and animating faster in general? In many situations, the faster you have to animate, the less quality you can afford to achieve. But even in the "big budget" movies, there can be stressful crunch times when you have to animate pretty darn fast -- but you can't sacrifice quality either. Since you have so much production experience on big projects that require high quality animation, I was wondering if you've found any time-saving tips, if you ever felt you took a big leap forward in speed, yet managed to produce great work?***

Ten quick tips for speeding up your work:

1. Don't skip the planning process. Seriously, I know a lot of you feel too busy to plan your scene before you open Maya or Max or whatever you're using, but even if you can only dedicate 30 minutes to creating and/or studying some video reference and writing down some notes, it will help you finish faster. SOME amount of planning will *ALWAYS* speed up your work, no matter what. The best scenes I've ever done, and the quickest that finished, were the shots where I spent the most effort planning before sitting down at the computer.

2. Hot keys are your friend. Any time you find yourself doing anything repetitive in Maya (or whatever animation program you are using), create or find a hotkey for it. I have and use hotkeys for working quickly in the graph editor (hiding/showing tangents, hiding/showing channel curves, etc.), for saving keys, for hiding/showing animation controls on the model, for X-ray mode, to make joints visible or invisible, for scrubbing time in the graph editor, and for instantly creating more workspace when I don't need to see all the menus and channels. Those are just some of the hotkeys I use every day, and boy have they sped my work up.

3. If you have the ability to create or use a GUI that allows you to select your character's animation controls, that can be a big help, especially for working with hands, tails, toes, etc.

4. Don't get too bogged down in changes. If your director wants you to change the middle of your shot, just block it off (construction-zone style, as I wrote about in the newsletter), and create all new keys and breakdowns. You can really get slowed down if you start trying to make any major changes simply by tweaking the curves you already have in the graph editor. Very often, it's just faster to wall that part of your animation off (so you don't screw up the surrounding bits the Director *does* like), and redo that section from scratch. Cleaner and easier to edit, too.

5. Don't be timid! Push your ideas and go for that dynamic pose. It's much easier/faster to take something too far and then back off on it than it is to slowly push your pose or idea a little bit further, a little bit further, a little bit further, etc. Just go for it and then reign it in if you need to.

6. Use light models if possible. Something that speeds up my work like crazy is the ability to just hit play in Maya and watch my animation play reliably at 24fps without having to do a playblast or render. Use the lowest-res version of your character as possible, at least for your initial blocking.

7. Same Avoid the black hole that is (insert favorite website here). For me, I have to be careful with sites like Digg, YouTube, Gizmodo, etc. -- these web sites that I really love can suck me in if I'm not careful, and suddenly I've lost an hour of time that I could have spent animating. Discipline yourself to only check your favorite sites when you have to, when you're on a break, or when you're rendering.

8. Same with email. Between ILM, Animation Mentor, my personal email, the blog, and the newsletter, I get hundreds of emails per day. Prioritize and only read the most essential emails until you're on break or finished with your work for the day. For me, I try to only read email at work that is directly related to the show I'm working on, and then try to catch up on the rest before bed. (By the way, if you've emailed me and I haven't emailed back -- I'm really sorry! I'm kind of behind on my email, but I'm trying to catch up and will hopefully get back to you soon!)

9. CPU, RAM, a decent-sized monitor, and graphics card. Don't underestimate the boost you'll get from investing in the core bits of your computer. Beef up that machine for fast interaction with your character! The quicker you can interact with the character, and the quicker your program will update the frame, the quicker you'll get your animation done. Along those same lines, a larger monitor will give you a lot more screen-space and make it much easier to see your character, saving a lot of "zooming in and out" time...

10. Use the 15-minute rule. If you come up against a technical problem that you can't solve on your own in 15 minutes, give up, and find help. If you're in a studio, ask a peer or pick up the phone and ask tech support. If you're at home, jump online and start searching through Google or post your question on the forum. In the past, I've wasted half a day trying to solve some problem on my own and it turned out that I could have solved it in 10 minutes if I had just asked someone for help. Update!

11. I just thought of another great tip someone once told me, so I'm adding it to this post! If you're given, or give yourself, a list of changes for a shot, don't do a test render of that shot until you've addressed all those changes. In other words, if you're given 10 things to fix, don't fix one and then re-render. Wait until you've fixed a bunch or all of those 10 things, and THEN do your playblast to see how it's looking. The goal, of course, being to cut down on the time it takes to playblast and analyze the shot.

Shawn :)

LIGHTNING ROUND

with Shawn Kelly, Carlos Baena and Keith Sintay

SHORT AND SNAPPY TIPS FROM OUR BLOGS:

carlosbaena.com* and *animationtipsandtricks.com

Do You Have a Process or Checklist of Animation Rules You Follow?

Ha! Do I ever!

When it comes to animation principles and body mechanics "rules," there are just far too many to list. We spend 18 months teaching these rules and methods at Animation Mentor, so I just can't possibly fit that stuff into a blog post, but I will say that the 12 principles of animation as laid out by Frank Thomas and Ollie Johnston in their seminal book, ***The Illusion of Life***, is a good place to start. When I was a newer animation student, in fact, I had a list of those principles taped to my animation disc and also to my computer monitor. As I would animate, I would look at it occasionally, and make sure that each of those principles was being properly addressed in my work.

I had that on my monitor at ILM as recently as a few years ago, in fact, and it really wouldn't be a bad idea for me to have it up there still! It comes in handy, just as a good reminder, especially as I'm planning or blocking my work in. Just being able to glance up and see the words "line of action" can help me notice that I'm missing something in my work

One thing I've learned through the process of helping create Animation Mentor is just how deep the "basic fundamental principles" of animation are, and how deep they can go. Interviewing so many amazing animators for the video lectures at the school was a shocking experience for me, because I was continually learning new things about principles that I thought I already knew! It was a really cool by-product of being a part of the school, and a good reminder that we will NEVER know everything there is to know about animation. It's simply too deep and complex..

But man, that just makes it even cooler! It'll never get boring, and there will always be new discoveries waiting for us!

Shawn :)

What Is a Key Pose?

By Shawn Kelly

Key poses are the "key" moments that most clearly describe the important physical actions or emotional moments in a scene. These are basically your most important poses -- in fact, these are so essential to the movement/acting that if you removed any one of them from the scene, it would no longer work. I use A LOT of key poses. I find it helpful to be very detailed with my key poses. In a full-figure animation, a key, for me, will be any moment something important changes. It could be that the character is going to take a step to the right, so he has to shift his weight to the left first. Even though it isn't a "big" action, I will think of the weight shifting to the left as a "key pose" or an "extreme," which are both terms that are often used to describe the same exact thing, depending on who you are talking to. So, I will save a key on every controller on the frame before he starts to shift his weight (this is a key pose for me), then I'll go to where his weight shift finishes, and I'll pull his body to the left some. Then, even though I've only moved a couple controllers, *I'll save a key again on EVERY controller on the character,* including hands, shoulders, etc. This is another key pose or extreme, for me. I save keys on everything because it makes it much easier to edit later on, and much less confusing in the graph editor when you are blocking. Eventually, I will have to break up my keys somewhat as I get into fine-tuning the animation and polishing it up, but for now, it's good to work this way.

An easier example to think about might be a bouncing ball animation, and the key poses would simply be the frames where the ball hits the ground, and then the frames where the ball is at its highest peak.

Shawn :)

Could You Provide an Animator's Point of View and Ideas about Storytelling?
By Carlos Baena

Well, I have a lot to learn about story and telling stories which I really feel is a life long journey. However, I do feel like animation and story are definitely interconnected one another. Stories are constantly being told...whether it is in a Feature Film, in a sequence, or in a shot. We are telling something with our characters through our animations. That's why pantomime is such a tremendous thing to study. No dialogue is being used. It's storytelling through just animation and performance. Watch a Charlie Chaplin film every few months or every few years at the very least...you'll be surprised that the more you learn about animation, the more amazing some of his films are. He was in a whole different level - we can all still learn from tremendously.

We can say so many things by the way we are making our characters move -- the possibilities are endless. I love that part of the process. The exploration. The ability to push our stories through the performances. I'm personally very inspired by stand-up comedy. The way Bill Cosby will tell a story is completely different to the way Eddie Murphy will tell it. It'll affect people differently. It'll have different payoffs, and different kinds of people will relate more one to another. Same thing happens with animation. People will have different sensibilities about what's being told through the performance. It's up to us how to tell them.

So stories are essentially why we are doing this. We are telling "something" through our animations. So when you listen to your friend tell you a story, when you watch a co-worker's animation shot, when you watch a comedian or when you see people improvising, stories are being told. What's important in my opinion, is that we say something new or something meaningful.

Carlos

Software Shmoftware
By Shawn Kelly

I've been getting a lot of questions about software lately. ***What software should I use to animate with? What software will help me get a job? I only know 3D Studio Max, Animation Master, and Maya -- is that enough to get into a studio? How many years of software training is necessary to work on a film?*** Here are some quick answers to all of those types of questions:

Will some amount of software knowledge help you get a job? Possibly. It sure won't hurt. But is it 100% necessary? Depends on the studio. Some studios won't care at all, some will care a tiny bit, and a few will care a lot. My advice is to research the companies you are interested in, and make sure you're prepared for whatever qualities and skills that studio is looking for. Generally speaking, the big studios won't care very much what software you are familiar with (and many of them use their own proprietary software anyway, so those studios couldn't care less), while the smaller studios may care more about specific software experience.

Most 3D animation packages work very similarly to each other. Once you learn one, it isn't very hard to learn another. As animators, we're only really using probably 5% of the program anyway. We need to save key poses, adjust timing, and manipulate the pose -- that's about it, generally speaking. Because of that, I think someone who knows XSI could learn enough about Maya to get started in a day or two, and most of the medium to larger studios have some kind of training program to cover that stuff.

How do you keep up with so many different revisions and so many different packages? That's a great question, and the industry DOES move very fast. Because of that, it's futile to try to "keep up" with the latest and greatest software when you are an animation student. It's inevitably impossible because things change so quickly, and you end up wasting a mountain of time that could have been spent studying your animation fundamentals. So choose one software, and stick with it. The industry standard right now seems to be Maya (though many games companies still use Max), and you can use an educational version for free. Whatever you choose to practice with, just stick with that program so you don't waste time learning a new one when you could have been busting out a whole other awesome action shot for your reel!

Is it a good idea to lie on my resume and put software experience down that I don't really have? Uh, no. This is a pretty terrible idea, and if the studio does end up caring about your software experience, they are going to find out pretty quick that you lied, and you'll likely be let go from the job and saddled with a bad reputation. NEVER LIE ON YOUR RESUME OR REEL! Bad Bad BAD idea...
OK, hope that helps someone!

Shawn :)

What Are Figure 8 Curves and How Do They Fit in with the Movements of Characters?
By Keith Sintay

There are things you can do to your shot to really enhance its fluidity and rhythm. Different types of movements can call for different types of arcs. For example, faster movements usually benefit from more circular movements (like tying a bow really fast for example). Figure 8 curves are another type of curve that enhance a movement to keep the motion alive.

Gesturing with the hands, for example, in a figure 8 movement (the sides of the "8" don't have to be equal, in fact it may add more texture if you have a big loop and then a smaller one or vice versa) is a way to move the arms in one direction, then reverse the direction in a pleasing visual way.

Again, tying a bow or similar faster movements are examples of using a figure 8 curve to change direction quickly but fluidly

Keith Sintay

Is It Necessary to Learn Rigging?
By Shawn Kelly

This is a great question, and of all the CG disciplines, rigging is certainly the most relevant to what we do as animators. Rigging truly is an art, and the rig an animator is given will make a huge impact on that animator's work -- both in what the animator is capable of doing with the rig, and in how quickly the animator can get his work done.

Having a fast rig that you can work with quickly can make all the difference in the world when it comes to hitting your deadlines. On the flip-side, it takes a true rigging expert to create a rig that is fast, but is also very flexible and powerful, and has all of the options the animator requires when posing that character and creating a performance.

So for me, rigging is an incredibly important aspect of what we do.

That doesn't mean that we need to know everything about rigging ourselves, of course, as our job is often to simply be the animator. HOWEVER, if there is one thing that it is helpful to study a little bit and get *some* amount of understanding of, it's the basics of how your rig works, and how it's built.

I don't have a very deep understanding of how Optimus Prime is rigged up, but I know enough about his rig to know how I can pose him, what will break him, etc. And having a very rudimentary knowledge of how expressions work and so forth will help you at times with working with your character.

Additionally, many smaller studios prefer their animators to have a strong knowledge of rigging, and these smaller studios often have animator/riggers doing both jobs at once.

This is a case where knowing a bit about both jobs will open up more job opportunities for you, but be aware that these jobs are not generally going to be at feature film studios or often even larger games/TV studios. The big studios are still, by and large, looking for experts in each given field, as that structure has proven to provide the best quality work...

Anyway -- like pretty much anything else, it can't hurt to learn a bit about rigging as long as it isn't distracting your time away from learning more about animation, but I wouldn't spend a ton of time with it unless you really love doing it!

Shawn :)

About AnimationMentor.com

Animation Mentor is the only animation school built by professional animators specifically for people who want to become animators. Animation Mentor teaches you the art behind animation under the guidance of professional animators who are currently working at leading studios. Our approach also prepares you with the skills needed to succeed as a professional character animator in a studio environment.

By graduation, every student has worked in a production-style environment where mentors, who are working studio animators, stand in for directors, and assignments stand in for film or game shots. Students learn how to accept guidance and criticism, to meet deadlines and to budget and schedule their time to succeed in the working world. At the end of the 18-month program, students leave with a professional demo reel they can use as their résumé to land jobs. Upon graduation, Animation Mentor coaches graduates and helps them locate job opportunities with major recruiters, video game companies, and film studios.
To learn more about our online animation school, visit www.AnimationMentor.com

Additional Free Learning Resources From AnimationMentor.com

Animation Tips and Tricks Volume I
The first edition of our Animation Tips and Tricks ebook featuring how-to articles and information from Industrial Light & Magic animator Shawn Kelly who is also a cofounder of AnimationMentor.com.

www.animationtipsandtricks.com
Animation Mentor's tips and tricks blog featuring advice and mentoring from ILM animator, and Animation Mentor cofounder, Shawn Kelly, and from Animation Mentor's mentors: Aaron Gilman, Keith Sintay, Jason Martinsen, Kevan Shorey, and Nick Bruno – all professional working animators.

The Animation Industry Special Report
Behind the Characters: Job Satisfaction, Career Outlook and Salary Survey is an industry report chock full of industry statistics, facts, figures and survey responses from more than 1,200 professional animators.

Animation Industry News
The AnimationMentor.com newsletter features special features about the animation industry, animation careers, and advice and tips from our mentors. In addition, you can see what Animation Mentor students are working on and get the inside scoop on how they are creating animation.

Carlos Baena's Blog
Animation Mentor cofounder and Pixar animator Carlos Baena shares his techniques for animating along with movies he likes, and artwork he looks to for getting inspiration and ideas.

Bobby Beck's Blog
Animation Mentor cofounder and CEO Bobby Beck talks about what it takes to be an animator and how to stay inspired, motivated and creative in life and on the job.