

Brent J. Zorich

B.S.I.D. M.A. M.S. *candidate*

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To Fellow Computer Graphics Researchers, Engineers, Executives, and Artists,

Prior to the animation industry, I worked for the architectural firms ranked number one (Gensler) and number two (NBBJ) in the world as an interior architect; having graduated from the department of Industrial Design (where I was given honorary admission from high school) at THE Ohio State University- the top five rated design school in the country. I studied and completed my first Masters of Arts in Computer Visualization at ACCAD at THE Ohio State University (where CGI was founded- typically getting over 200 applicants a year and accepting eight - being recommended by a partner at Gensler); focusing my research in bio mechanical character setup. This research involved working directly with supervisors from DreamWorks SKG via the DreamWorks SKG Outreach Program. The end project entitled "The Mystery Dinosaur" aired on The Discovery Channel. I first interned at Electronic Arts on the title Superman Returns where I did such a good job artistically I was tasked to do Lex Luther, the second most important part of the game. At Take 2 Interactive, research was done on ways to streamline current rigs to make them lighter for game play on the award winning title NBA 2K. Later, I returned to EA Sports as a technical artist implementing rigging techniques as well as doing research on more advanced character setup for the top selling titles in the world, including MADDEN (the top selling title in North America). In 2009, I was approached by the editor of 3D ARTIST to be the featured Industry Insider. The article referred to me as one of the top people in this industry.

At Lucasfilm, Ltd. I was a part of the team on film game convergence by collaborating on global "Star Wars" related projects while working with all three divisions: LucasArts, Lucasfilm Animation, and Industrial Light and Magic. I created Jedi Padawan Ahsoka Tanu and got her to work on both the XBOX 360 as well as in film perfectly; the end result was shown to and approved by Mr. George Lucas in Singapore. For the ease of better global communication, I was relocated (via order of the executive committee) from the Lucasfilm Animation Singapore studio (LAS) to the home office (The Presidio and the Skywalker Ranch) in San Francisco to continue research on this subject matter. I was also selected by The Director of Animation Technology (former Chief Technology Officer at Weta Digital who made The Lord of the Rings) to be on the Lucasfilm, Ltd. steering committee setting best practices and digital standards for Lucasfilm, Ltd. globally. I was put through executive training at Lucasfilm, Ltd. with Mr. Larry Seal. There were approximately eight of us in training (head of public relations, legal, head of marketing, head of distribution) and I was the only computer graphics person being trained to become an executive. I wrote an executive proposal entitled Offensive Attack Strategy for the President of LucasArts, Mr. Darrell Rodriguez; after reading it, Darrell requested a digital copy and forwarded it to the board of directors at Lucasfilm. I was also in Creature Research and Development at Industrial Light & Magic with the Creature Department Supervisor. It was in these meetings where I critiqued color on the film Transformers Revenge of the Fallen, the top grossing movie of 2009. My character that I did technical direction on, Ultimate Evil, was the character chosen for the cover of the Star Wars title, Star Wars: The Force Unleashed Ultimate Sith Edition; a very prestigious honor. In addition, I was also tasked on Indiana Jones Intellectual Property written by Mr. Steven Spielberg and instrumental in the cancellation of the XBOX 360 and PS3 version of the title. Lastly at Lucasfilm, I was in charge of prepping the monthlies for the studio which included organizing and editing presentation shots on Harry Potter and the Half Blood Prince. This was shown to the entire staff as well as the executives at Lucasfilm, Ltd.

Finally, I have successfully started my own vendor production studio, BRENT ZORICH PRODUCTIONS LLC, selling my own custom tools and software via direct digital download that is based on experiences with previous employers and have made a profit on this venture. I look forward to speaking to other graphics researchers on the subject matter listed above and am always open to accepting linkedin invitations from colleagues in the industry who share my passion for doing great work.

Sincerely,



Brent J. Zorich

BRENT ZORICH PRODUCTIONS, LLC *Chief Technology Officer and Chief Creative Officer* **2011-Current**

Handled banking setup, web development, marketing, tool development, and billing.
Currently have two autorig tools and one environment tool for sale and working on a fourth.
This company has made a profit.

COMPLETED MASTERS of ART at The Ohio State University **2010-2011**

COLUMBUS COLLEGE of ART AND DESIGN *Paid Guest Lecturer* **2010**

LUCASFILM, LTD. *Senior Technical Artist/ Character Technical Director (Lead Rigger)* **2008-2009**

“Star Wars The Force Unleashed Ultimate Sith Edition” (lead rigging and submitted concept artwork)
“Indiana Jones and The Staff of Kings” (rigging and character deformation research and development)
“Star Wars The Clone Wars: Season Two” (color correction and compositing) Showcased at annual firmwide meeting.
“Transformers Revenge of the Fallen” (shot approval)
“Star Wars The Force Unleashed II” (initial kickoffs, shared assets, file management, eight month rigging r and d)

Multi Divisional Steering Committee setting digital standards for Lucasfilm, Ltd. worldwide- approx ten of us.
Research and Development (ILM, Lucasfilm Animation Singapore, and LucasArts).
Creature dev meetings Industrial Light + Magic.
Research and development shown to Mr. George Lucas in Singapore.
Promoted and relocated from Lucasfilm Animation Singapore to the Lucasfilm Presidio (SF) after only five months.
Executive Level Leadership Training arranged by internal human resources for Lucasfilm, Ltd.
In charge on monthly presentations while at Lucasfilm Animation Singapore and worked on a presentation with the head of ILM Singapore that involved shots on HARRY POTTER AND THE HALF BLOOD PRINCE.

EA SPORTS (ELECTRONIC ARTS) *Associate Technical Artist (Lead Rigger)* **2007-2008**

“Madden NFL 08” 2007 Winner “Best Team Sports Game” Video Game Awards
“NCAA Football 08”
“EA Sports MMA” (research and development)
“Tiger Woods PGA 09” (research and development) 2008 Nominee “Best Individual Sports Game” Video Game Awards
“NFL Tour”
“NFL Head Coach 09”
“Madden NFL 09” 2008 Nominee “Best Team Sports Game” Video Game Awards
“NCAA Football 09”

One of the global meetings involved included myself as well as others critiquing and helping give audio assistance on motion and rigging on FACEBREAKER, NBA LIVE, and FIFA- as well as a few others.
Research and Development (Rigging and Biomechanics).
Madden work also feature on the television show on ESPN “Madden Nation”.
Responsible for the implementation of new player proportions based on scan data from Madden 08 to Madden 09.
Given a raise after three months of working there.

2K SPORTS (TAKE 2 INTERACTIVE) *Character Technical Director* **2006**

“College Hoops 2K7”
“College Hoops 2K8”- research and development
“NBA 2K8” 2007 Nominee “Best Team Sports Game” Video Game Awards - research and development

EA (ELECTRONIC ARTS) *Modeling Rigging Intern* **2005**

“Superman Returns The Video Game” - Lex Luther creation

DREAMWORKS SKG OUTREACH PROGRAM *Participant* **2005**

Partial finaling work on “The Mystery Dinosaur” airing on The Discovery Channel

BRAVE NEW PICTURES (via a grant to Ohio State ACCAD) *Visual Effects Artist* **2003 - 2005**

“The Mystery Dinosaur” airing on The Discovery Channel

GENSLER (architectural design firm ranked overall #1 in the world) *Interior Architect* **1999-2001**

Clientele: Volkswagen, Solomon Smith Barney, Adidas, Lincoln Mercury

NBBJ (architectural design firm ranked overall #2 in the world) *Interior Architecture Intern* **1998-1999**

Clientele: The Republic of China

Software Experience

Maya, Motion Builder, MEL, Python, Photoshop, ZENO (ILM's software), After Effects, Final Cut, VRML, Pixar's Renderman, Slim, HTML, C++

Education

Bachelor Science Industrial Design The Ohio State University 1998

Masters of Art in Technical Animation at ACCAD at The Ohio State University 2011

Masters of Science in Computer Science at Strayer University 2011 (expected graduation SU '12)

Honors

Portfolio and Biography featured in Issue 10 of "3D Artist" magazine

Portfolio featured in panel at Siggraph 08

Multiple Graduate Associateship Scholarships

Chairperson's Discretionary Scholarship voted as Undergraduate Design Circle President

Selected to be a member of Cambridge's Who's Who run by Donald Trump Jr.



Industry insider
Brent Zorich

Character technical director,
 Lucasfilm

Each issue, 3D Artist finds out how the top people in the 3D industry got their jobs and what you need to know to get a foot in the door



About the insider

Job Character technical director/lead rigger
Education Master's of Fine Art at ACCAD at The Ohio State University
Company website www.lucasfilm.com
Personal website www.brentzorich.com
Biography Prior to immersing myself in the animation industry, I had worked for the top two architectural firms in the world. I pride myself on trying to be on a team that does the best work, no matter what project. I push technology as far as I can on whatever team I am affiliated with

There are few people in the 3D industry who can claim to have worked on bestselling EA games titles one year and hung out at Skywalker Ranch with Lucasfilm the next, but **Brent Zorich is a man who can.** Zorich was part of a steering committee meeting for Lucasfilm on film/game convergence. In addition, he was lead rigger on *The Force Unleashed: Ultimate Sith Edition*. On this title, he was working in the LucasArts division, looking at pipeline and storage optimisation and lead rigging on such characters as Jabba the Hutt and Boba Fett. Zorich was also dealing with convergence on all divisions from Lucasfilm to LucasArts, Lucasfilm Animation, Industrial Light & Magic and Lucasfilm Animation Singapore.

3D Artist: What did this role of working on convergence mean in practice?
Brent Zorich: As a part of the senior staff, I wrote proposals to help set the direction for Lucasfilm Ltd as a company. In Singapore, not only was I part of research and development prior to my promotion and relocation to the home office in San Francisco, I

also worked on colour correction and compositing for *Star Wars: The Clone Wars*.

3DA: How did you get this job?
BZ: I applied online and was hired after Lucasfilm Animation Singapore saw the great work I did on EA Sports' football franchise.

3DA: What kind of course did you do at university, or training did you do?
BZ: At ACCAD at the Ohio State University, I did extensive research on the following topics: VRML; procedural animation; Pixar's RenderMan; motion capture. I also researched Wayfinding in real-time simulation (the subject analysed and improved upon was the game *Spider-Man The Movie*).

First of all, the Wayfinding tool was created out of VRML and theories worked on with an eminent scholar. I also studied the enhancement of realism in computer animation through the incorporation of biomechanics and fatigue (the subject analysed was *Shrek*). Next, I looked at rigging of prehistoric animals with my project-based thesis *Mystery Dinosaur* work. Finally, I looked at creatures evolving based on the ecosystem around them. Classes were also taken in digital still-life lighting and theatre lighting.

3DA: For today's generation of students, what is the kind of educational grounding they should be looking to undertake to get a first job as a character animator, or is the entry level a less specific role?

BZ: This is the way that I do it. I have a television next to my monitor. I watch *Harry Potter and the Prisoner of Azkaban* (the Buckbeak scene). If I am embarrassed to look at what is on my monitor then I'm not done, plain and simple. I am my own toughest critic and I have zero tolerance.

3DA: In your role as associate technical artist or lead rigger at EA Sports, what kind of work did that entail?



portfolio highlights

Zorich has worked on a host of videogames over the years. Feast on these...

- 2008-9 *Star Wars: The Force Unleashed, Ultimate Sith Edition*
- 2008-9 *Indiana Jones and the Staff of Kings*
- 2008 *Star Wars: The Clone Wars*
- 2008 EA Sports MMA
- 2007-8 NFL Tour
- 2007-8 NFL Head Coach 09
- 2007-8 NCAA Football 09
- 2007-8 Madden NFL 09
- 2007 Tiger Woods PGA Tour 09
- 2007 Madden NFL 08
- 2007 NCAA Football 08
- 2007 College Hoops 2K8
- 2007 NBA 2K8
- 2006 College Hoops 2K7
- 2005 Superman Returns: The Videogame
- 2003-5 The Mystery Dinosaur for The Discovery Channel



- Character rigging on SW Force Unleashed
- Brent at Lucasfilm Animation
- NCAA college football from EA

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 cassandra.gilbert@imagine-publishing.co.uk

Note: portions of subtext misleading. Characters shown on 360 and PS3 version of Indiana Jones and The Staff of Kings (the version I helped cancel due to gameplay) were untouched by myself. The character technical director that I helped hire and led did the manual work on Obi-Won and Player-Tatooine (I trained and oversaw him).



BZ: I needed a complete understanding of physiology of humans built for strength and speed. Because I was an athletic trainer who trained football players, it came to me naturally. I know how a football player flexes, I know how they run and sprint and I know how they get prepared for collision. Often, because I have a football player's body, I would go into the washroom at EA where there was a mirror, take off my shirt and flex both my traps and my arms to see the proper deformation. This is how I got into character and what made it so easy is that the character I was getting into was myself!

BZ: My best advice to any student is try to do an internship in a studio. Do not rush to get out of school; stay in and develop your craft. Finally, do the Buckbeak test as I mentioned above.

3DA: What are the key skills required to work as a character animator or character rigger?

BZ: Observation, patience and the goal to push technology. Everything you do, imagine you have to present it to George Lucas. Then you will work harder and will expect the absolute best from yourself and your team.

3DA: Is there much of a culture or professional working practice difference between working for someone like EA and a company like Lucasfilm?

BZ: You are who your team is. Lucasfilm, as a company, is a natural fit for me. We both have zero tolerance when it comes to the quality of our work.

We push the absolute limitation of technology in every way, shape

and form. Because we are not on yearly titles, we have the ability to push back a launch date to guarantee that we are doing our best to break new ground.

3DA: If there was one feature missing from current software apps that you would like to see implemented to help with any aspect of CG animation, what would it be?

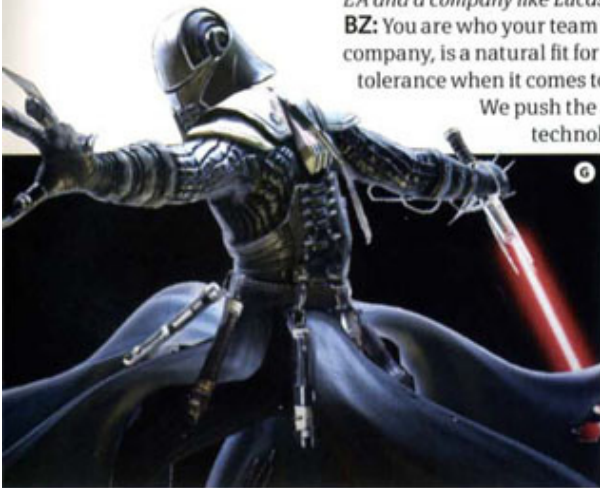
BZ: I saw a demo from a company where you can actually draw arcs of motion on a Wacom tablet and the object will have an animation path.

3DA: Professionally, what's the most satisfying project you've worked on and why?

BZ: Seeing my name at the end credits of *Star Wars: The Force Unleashed*, *Ultimate Sith Edition* makes me incredibly proud. I saw the first *Star Wars* film when I was three in 1977. It motivated my whole career. To see my name in a *Star Wars* product gave me a sense of satisfaction.

3DA: What would be your dream project to work on?

BZ: One that continues to push film/game convergence on every level. The ultimate goal for me would be to have an engine that supports a controlled character and the user cannot distinguish between real-time and render.



3DA: What software packages and tools have you used for rigging and animation?

BZ: I use Maya, the

proprietary software to Industrial Light & Magic, and After Effects and HyperCam for documentation.

3DA: Do you think there is a shortage of skilled digital artists doing animation and did you find it difficult getting into the industry?



C Tiger Woods PGA Tour 09

F Character work on NFL Tour

H Indiana Jones and the Staff of Kings

E Artwork from SW: TFSU Ultimate Sith edition

G College Hoops 2K7

I The Ultimate Edition in full



Lucasfilm, Ltd. Steering Committee Sample Notes

Part of the research and development being done at Lucasfilm, Ltd. involved setting standards for the company globally. I was selected by the Director of Animation Technology for Lucasfilm to be on the committee benchmarking and setting these standards. In these meetings we discussed rigging, modelling topology, rendering, and colour. The following pages are some of the sample notes from one of our meetings. The hope was to set standards for Lucasfilm Animation, LucasArts, and Industrial Light and Magic.

Meeting (#6): Best Practices Review

Date: February 5th 2009

Present: Bertand Ong, Jeffrey Lim, Tommy Burnette, John Sanders, Mark Cronin, Micheal Koperwas, Roberto Calvo, Parimal Aswani, Russell Paul, Jeffrey Odell, Dominic Hamon, Robert Clarke, Brent Zorich, Marlon Montgomery, Kate Shaw, Jayesh Dalal, Monique Bradshaw, Tauni Oxborrow, Abhilash Menon, Jayesh Dalal, Lee Stringer, Paul Zinnes

Apologies: Philip Schneider

Purpose: To follow up on the previous meeting discussing the Asset Sharing Best Practices/Review of notes.

Agenda:

1. Introduction:
 - a. New addition and roles
2. Proposed Timeline:
 - a. Asset Collaboration Timeline.vsd
3. Mailing List/Phone site w/ timeframe into Timeline
4. Expansion Planning Update
5. Asset/Model Best Practices Comments
6. Wrap-Up

Best Practices Comments:

Micheal K:

Changed some images to be a generic DD, and switched to a 1 unit = 1 foot scale. Also changed an image of hard edges on flat surfaces to be more explicit as a No-No.

Possible areas of question:

- Should we discuss directory structure? i thought about removing it, but think it's worth keeping in if we can standardize that moving forward.

- ILM tradition is X-forward, a horrible carryover from Softimage days. Not something that's likely going to change. Could be scripted based on who is checking something out, but it's a weird one, i know. (see *)

- image file format in the file is PSD and Targa. For ILM it's PSD and tif; we don't use tga. That's also scriptable based on who is checking something out.

- Could the shading network requirements be reduced in the document? i separated the docs into one for Model sharing, and one for Texture sharing.

* Tommy Burdette:

- Drop that old X-forward ILM/soft convention and deal with making ILM handle it properly later. Scripting a transformation like that would be trivial and could add any number of places along the pipeline so we shouldn't worry about it too much at this stage.

Philip Schneider:

- Being a representative of ILM R&D at these meetings, I have only an engineer's perspective on "best practices", rather than a modeler's. Probably much of what follows will overlap considerably the input from Michael Koperwas and Russell Paul.

My bias is towards what works with Catmull-Clark surfaces, as that is what we use at ILM for models, pretty much exclusively. Michael and Russell can verify this, or perhaps point out the exceptions. However, from my experience the best practices for Catmull-Clark also apply to polygonal models that might be used in today's games.

- Topological Issues:

used.

- It should be remembered that predefined vertex normals are not meaningful for Catmull-Clark surfaces.

Brent Zorich:

- Best practices of topology according to deformation:

1. When doing deformation without enveloping sculpts, it is always best practice to try to keep one seam in the center of the joint, and two above and two below. The optimization practices of the mesh should be done in such a way that any alterations being done would still maintain the same silhouette while changing the topology.
2. Automation would be an ideal situation in this case. By incorporating techniques and practices of the other divisions we can work on convergence of Lucasfilm globally.
3. What could be an ideal solution for character generation would be the incorporation of block party into a set of standards. This is currently being ported from linux to windows and can be used for generation of assets for automation purposes. What could be great is if by using the volume guide in block party we could then transfer the mesh topology as a starting base as well as generate the rigs at the same time.

