

Professional Development Grant Report

2018 SIGGRAPH Conference
August 12th-16th Vancouver, BC

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B. Restatement of Creative Work / Professional Enhancement Activity

In August 2018, I attended the annual SIGGRAPH conference held in Vancouver, BC. The conference is a showcase of Visual Effects, Game Design, Web Development, VR/AR and emerging technology. The conference website for this year can be found at <https://s2018.siggraph.org>.

C. Brief Review of Creative Work / Professional Enhancement Activity

During my time at the conference, I attended several panels, workshops and presentations. The following is an overview of the individual sessions and their content:

August 12th

Technology That is Changing Business Models

This session had a panel discussing the impact of artificial intelligence, globalization, and new collaborative tools on the changing business landscape. Some of the statistics mentioned were last year's content consumption, including advertising, totaled 2 trillion dollars and that last year in India, 77% of the video and game consumption occurred on mobile devices. They also discussed the impact on social change on businesses and the growing effort to have a diverse workforce.

Story: It's Not Just for Writers... Anymore!

This session discussed the building blocks of quality storytelling by identifying character motivations and examining story structure. The presenter was Craig Caldwell, a faculty member from the University of Utah and author of the book *Story Structure and Development – A Guide for Animators, VFX Artists, Game Designers, and Virtual Reality*. During his presentation, he used various video clips from films and filmmakers to reinforce his points.

In the afternoon, I also attended an educator's reception with meet and greet.

August 13th

Educator's Forum Panel: FuturePrep -- Industry Views on Education

This panel discussed many aspects of the game and visual effects industries including how each person got into their respective fields. The pros and cons of specialization versus a generalist education were discussed in light of what companies are looking to hire. They also emphasized the importance of soft skills for students including clear communication, thinking about how they present themselves, developing a thorough resume, and understanding the jobs they're applying for. The panel encouraged educators to be advocates and sometimes intermediaries on behalf of students looking to break into the game and vfx industries. The panel included

representatives from Adobe Research, Zoic Studios, EA Games, Kabam, and Liion Animation Studios.

DNEG, Framestore and MPC Present: The Visual Effects of “Blade Runner 2049”

This production session covered the visual development of the world and characters of the film Blade Runner 2049. The motion capture and digital double methods used to generate realistic actor performances were of particular interest.

Keynote Session

The keynote speaker for this year’s conference was Rob Bredow, Senior Vice President, Executive Creative Director, and Head of Industrial Light & Magic. He discussed how new technology can enhance great storytelling and inspire creativity. He served as supervisor for visual effects on the film Solo and discussed some of the innovative processes working on that film.

Also on this day, I attended the computer animation festival and opening conference reception.

August 14th

For the Love of Tech Art

This session presented technical discussions of various game and animation projects. I was able to attend a presentation on the aesthetics and challenges of real-time rendering in the online adventure game Sea of Thieves.

Foundry Exhibitor Session - Breaking Into the VFX industry (Student Panel)

This panel was geared towards students who want to acquire jobs in the visual effects industry. Much of the advice echoed the Educator’s Forum Panel where students were told to consider how they present themselves and ways to put their best work forward. They were also warned of the long hours that these jobs can entail and encouraged to market themselves and develop practical skills such as dealing with taxes. The panel included a talent development recruiter from Blue Sky Studios, an independent animation director, a digital effects supervisor from Method Studios, and a compositing supervisor from MPC.

A Processing Primer for Artists

This workshop allowed people unfamiliar with coding to experience using Processing which is a Java based language geared towards visual artists. Crafting different functions and changing variables allowed for dynamic visualizations in a compiler window. Some of the things we were introduced to include how to create lines of different direction, color and weight, as well as add user interactivity through mouse clicks.

August 15th

V-Ray Days: Cinematic Worlds: Overview of Creating Game Trailers - RealtimeUK

This session discussed the process of creating game trailers briefly covering everything from asset management to look development. The presenter showed work on trailers for Sea of Thieves and Dropzone.

Three Keys to Creating the World of "Ready Player One" - Visual Effects & Virtual Production

This production session on the film Ready Player One detailed new uses of motion capture and particularly VR to create elaborate visual effects sequences.

It's Time to Kill the Demo Reel

This was a very interesting session from two educators of the Vancouver Film School. In this talk, they explained what students need to know to be successful and adaptable in the job market. They discussed the four pillars of problem solving: research, critical thinking, craft and story. They showed examples of student reels and touched on problems in the vfx industry that students are likely to encounter. They called for more diversity in storytelling and for creators to become “owners” of their work to avoid exploitation by large companies.

Pixar Animation Studios – From Pixar Intern to Technical Director (Presenter Christina Faraj)

This speaker presented her journey from working as an intern with Pixar to her full-time employment with the company as a CG modeler and set dresser for some of Pixar’s most recent major films like Coco and The Incredibles 2.

V-Ray Days: VFX Powering Wakanda’s Warrior Falls – Scanline VFX

This presentation featured one of the visual effects supervisors from Scanline who worked on Black Panther. The session showcased the difficult process of creating realistic waterfall and flow effects in one of the major vfx set pieces in the film.

August 16th

Stories in Virtual Reality - Part 2

This was a fascinating session on the development of storytelling for Virtual Reality. The session featured 5 speakers across 4 projects dealing with issues of race and sexual orientation in a VR format and its ability to create empathy. The presenter of a VR film named Arden’s Wake discussed the unseen difficulties of structuring a story in VR including modeling, movement and transitions. The project I AM A MAN told the story of Martin Luther King Jr’s assassination from the perspective of a sanitation worker. The VR experience 1000 Cuts allows users to experience a piece of being a black man in contemporary America including run-ins with the police. And lastly, the VR work Queerskins: A Love Story lets the user experience a narrative involving the family of a young gay man that has died of AIDS.

Creating physically Accurate 3D Visualization of Complex Materials Using Total Appearance Capture

This workshop highlighted a piece of software called TAC or Total Appearance Capture and was presented by Marc Ellens of X-Rite Pantone. The demo included showing how to easily crop stitch and apply textures to 3D models.

Making the Kessel Run in Less Than 12 Parsecs – The VFX of “Solo: A Star Wars Story”

This production session discussed the visual effects of Solo including traditional practical techniques such as fire charges along with new methods such as wrap around projection.

The Making of Marvel Studios’ “Avengers: Infinity War”

This was the final production session of the conference and featured several VFX artists who worked on many aspects of the latest Avengers film with particular interest paid to CG characters and performance/motion capture.

In addition to all the sessions listed above, I visited the onsite production gallery, exhibitors, and VR Immersion Theater as well as briefly toured the job fair.

D. Summary of Outcomes / Experiences

The conference was an enlightening experience and allowed me to see the scope of the Visual Effects and Gaming industries. In particular the educational panels conveyed important information for students getting ready to enter the work force. I saw how companies and individual creators are using VR technology in new and exciting ways as well as some predictions for where the technology will take us.

E. Conclusions and Recommendations

Overall, the conference was an excellent experience which gave me new insight into the industry jobs our students are pursuing. The Department of Art is already fulfilling the goal of developing students’ professionalism through the sophomore review, portfolio courses and the new Business of Art course. However, information from these panels can be reinforced every day in the classroom. I am grateful for the opportunity I was afforded to attend this conference and I hope to return in a future year to further understand the changing professional and technological landscape.