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SUBJECT: Report on SIGGRAPH 2017 Conference  
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## **SIGGRAPH 2017 CONFERENCE**

SIGGRAPH is an annual industry conference held on the topics of advanced graphic design and interactive technologies. Content is presented in varying ways throughout the week-long event. Segmented presentations of available interactive experiences, formal talks on technical and artistic research papers, and panels hosted by industry leaders and influencers give opportunities for broad audiences to learn more about SIGGRAPH subjects. Major subjects this year included advances in virtual reality (VR), augmented reality (AR), mixed realities like projection mapping and hologram technology, real-time rendering, physics-based graphics, realistic lighting, and philosophical and social implications of highly immersive environments. Additionally, events like the Trade Exhibition, Job Fair, Welcome Reception, and common-interest group meet-ups give attendees plenty of opportunities for networking.

## **ATTENDANCE AND PARTICIPATION**

I was fortunate enough to attend the full week of programming and participated in a dozen or so presentations, panels, and talks. My initial interest in this conference was the sheer number of discussions focused on VR, AR, and mixed realities, and so I mainly attended those. Given the newness of such technologies, there was a great deal of new information presented to wide-eyed audiences like myself, and almost everything seemed like a novel achievement with huge potential for further advancement.

One of the most interesting presentations was given on a new VR headset technology that combined a traditional head-mounted display (HMD) with neuro-feedback transmitters to produce a VR interface that allowed for mind-activated input. This means that instead of using a common hand-operated controller, one could control an in-game environment with their own mind. Manipulating objects, performing actions, and moving through the environment are all controlled through brain-wave analysis and artificially intelligent programming. For me, the implications for this kind of sci-fi-like technology are incredible, including increased accessibility for gamers and other digital tech participants who lack the physical ability or dexterity to operate a traditional hand-held device, or even lack the vocal ability to perform voice commands. The company that is developing this technology, Neurale, also participated in the VR Village portion of the conference, allowing visitors to try the headset out for themselves. Unfortunately for me, the few available sessions were fully booked for the week, and I was only able to view others using the device. Still, it is an incredible achievement, and I am looking forward to learning more.

I also attended the Technical Papers Fast-Forward session which was a two-hour-long sampling of the 150+ technical and art papers being presented in more depth over the rest of the week. This, I felt, was a great way to get a broad perspective of what the SIGGRAPH community has achieved in the

last year, and since this was my first SIGGRAPH, what they considered to be the most interesting and cutting-edge research in graphic design and interactive technology.

Additionally, I participated in several thought-provoking interactive exhibits including social VR and haptic hologram demonstrations, but my personal favorite was the Art Gallery. Since my interest throughout my academic career has been the intersection of art and technology, this exhibit was particularly fascinating. This year, SIGGRAPH dedicated their entire Art Gallery exclusively to works by Latin American artists and designers. Inclusivity and diversity are incredibly important to me as a woman, and it is undeniably an important movement within the tech industry itself. Therefore, given the heightened social context and each piece's interactive technology component, the overall experience offered by this exhibit was thoughtful and moving. I sat in on one of the artist talks as well, and found it interesting to learn that while some of them embrace their distinction as Latin American artists, others find it limiting and deconstructive. This revelation could bring the positive and negative aspects of strong-armed diversity initiatives into sharper focus as I continue to learn more about building inclusivity into the art and tech industries.

Finally, the available opportunities for networking were equally scattered over the course of the conference. I attended the on-site Job Fair and visited the hundred or so trade booths at the conference Exhibition, noting that many of them were more interested in talking with people who had advanced technical knowledge. Software engineers, Animators, UI Programmers, VFX Professionals, and Pipeline Supervisors could all easily find open positions with companies at SIGGRAPH. Myself, a student of less-technical experience, found conversations with such companies a struggle. Most could not understand how someone with my interests and talents would meet their needs. However, throughout the conference, I did meet a handful of individual people from all over the world that had a genuine interest in what I wanted to achieve in my career, even if they could not help me figure out how to get there.

## **PROFESSIONAL AND ACADEMIC VALUE**

This brief report, while exemplifying some extraordinary experiences, offers only the tip of the iceberg in terms of what I learned at SIGGRAPH. Professionally, I networked with people and companies from around the world, and despite not leading directly to any measurable success like job interviews or dozens of business cards, I was able to practice my "sales pitch" over and over and over again. I refined my skills and past experiences to a few elevator-pitch-length talking points, and gained some greater understanding of my value within the SIGGRAPH community of artists and engineers. I also discovered what further skills and experiences I will need in order to succeed in such a community. Academically, I found that I will need to practice some basic design, including finally learning Unity, a 3D development engine. Truthfully, I knew that something like Unity was going to need to get into my wheelhouse at some point, but attending SIGGRAPH really drove home how imperative it really is.

I would finally like to mention how immensely thankful I am for this opportunity to attend an esteemed professional conference like SIGGRAPH. It was beyond beneficial to my professional and academic career, and I greatly look forward to the opportunity to attend next year.