Report: IBC 2022 at RAI, Amsterdam

2022 IABM Engineering Student Awards

Matthias Hofmann – September 21st, 2022

Introduction

My name is Matthias Hofmann. I am a 25-year-old student from Germany living in Mainz near Frankfurt and am currently in the process of finishing my master's degree in advanced media technology at the RheinMain University of Applied Science in Wiesbaden. This is my written report about my experience of the International Broadcast Convention (IBC) in 2022 at the RAI Amsterdam Convention Centre, which took place from September 9th to September 12th in 2022. This exhibition was made possible through the IABM Engineering Student Awards. I would like to thank my professor Wolfgang Ruppel for encouraging me to attend this exhibition as well as IABM for awarding me with this possibility. Also, I would like to thank Lucinda Meek for organizing everything and helping me with any questions before and during the event.

Journey

I started my journey from Germany on Thursday afternoon, so I could attend on time on Friday. Even though my train was delayed, I arrived with no problems and could get to my hotel room with ease thanks to the public transport in Amsterdam.

Convention

One of the most exciting parts of visiting IBC was the fact that, for the past two years, most students hadn't been able to really encounter the world of broadcast. While classes could still be done remotely and professors did the best they could during COVID, it was almost impossible to work with professional equipment or to meet people in person. So after two years, I was very excited to attend such a large gathering of like-minded people and find out what's new in this field of work. As expected, quite a lot of people were present on the morning of the first day, so there was quite a queue in front of the badge collection.

The Convention Center itself is much larger than I had imagined. I already knew that there were over ten halls covering a lot of area, but I was overwhelmed by how large the convention actually was. You could almost get lost and spend hours just walking through all the different booths of all the companies.


Most people were really excited about their product and would always be more than happy to explain everything even to someone, who has never heard of their field.

For example, one company showed a drone equipped with different kinds of antennas to measure the frequency response of radio towers, and the owner explained everything in great detail. While most people have never heard of this specific use of drones, it's a very important field of work that became easier when drones replaced helicopters. Most people browse the Web and social media on their mobile phones, but for the infrastructure to work, a lot of work is required in the background.

While cloud computing and "big players" like AWS and Google become more and more important in the broadcast environment, I am still more interested in more classic technologies. This does not mean that the before-mentioned exhibitors didn't have anything interesting to show. For example, during one of the presentations AWS gave in the showcase theatre about workflows for colour in the cloud, it was quite interesting. Still, for most of the time I held an eye out for "normal" broadcast equipment. Of course, there were a lot of cameras, lenses, light equipment, and things like cranes and steady cams, which caught the attention of many people. You can barely wrap your head around the idea of walking through several halls of similar technology and still being able to see something new around every corner.
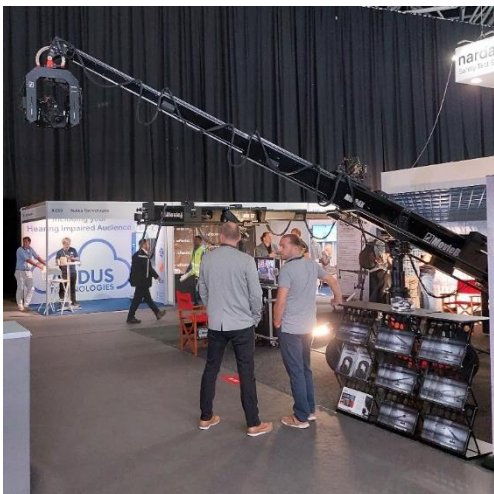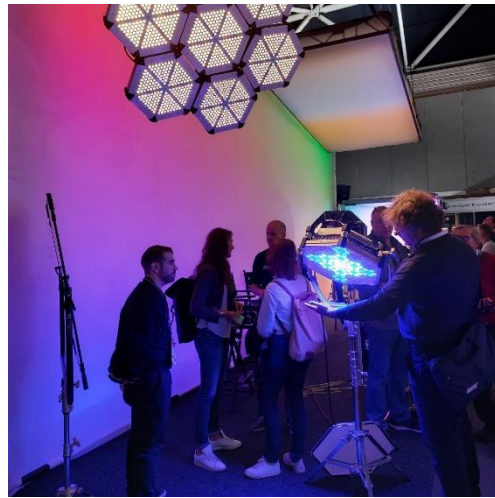
Also, while you may not specifically think about harsh weather conditions when learning about camera sensors and signal processing during lectures, people working with this equipment are often confronted with harsh weather conditions such as rain, snow, or heat. The equipment they use has to withstand not only water but also stark temperature differences so that nothing fails and they can continue to work during the filming of a movie or while broadcasting sports events. Many companies showcased this in very interesting ways, such as cameras submerged in water tanks.
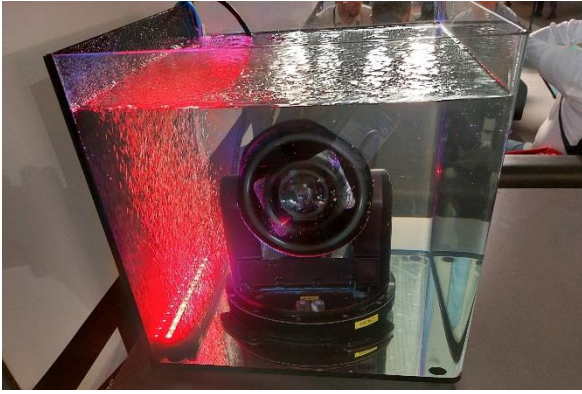
Also, while I knew LED-Walls existed and were widely used, it was still amazing to see them up close and in different configurations, such as corners.

And one more thing I found interesting was the way many companies tried to get the attention of the people near them. Of course, there are customers and partners you've known for a long time, but people unfamiliar with your products may have difficulties approaching you. There were booths with musicians (Sennheiser & LTO Program) or activities like racing cars or even a flight simulator (Supermicro). This shows, how creative many of the exhibitors are when it comes to getting people to approach you.
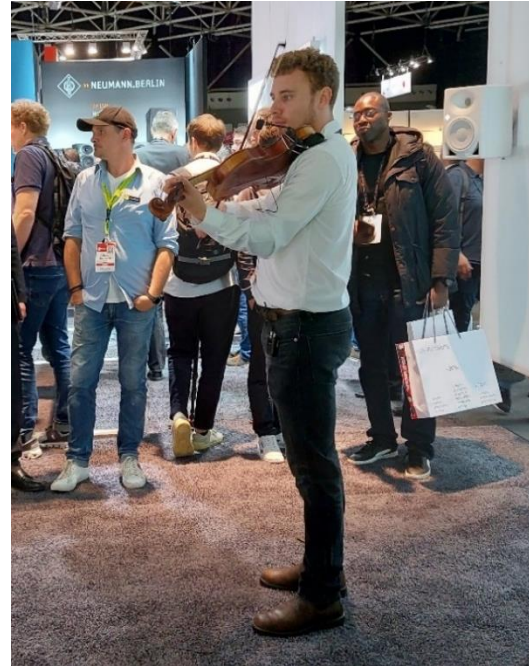
Naturally, there were many booths that handed out drinks like coffee or other beverages in the afternoon. I learned that while of course the focus of conventions and exhibitors is to present new products and hopefully create new ties with customers for future endeavours, the engineers do have a lot of fun and show their passion for their products. One example would be the booth of the company Riedel, which decorated their booth with "fiber-flowers" and used one of their communication products (Bolero) as bottle openers near the end of the day. After all, these people try to have fun with their work, and it really shows and makes this field of work so special.

Another thing I found interesting were the many film scanners you could see on the show floor. It's still an important medium, and it's great to see that there are still new products being made.


Highlights

One of the things that really impressed me was the NHK booth. They showed several things in development that were quite interesting on their own but were also combined in a very clever way. The first thing was a real-time multi-layered H.266 encoder and decoder, which was able to put several versions of the same video with different resolutions into a single data stream. The fact that this is already possible in real-time was really fascinating.
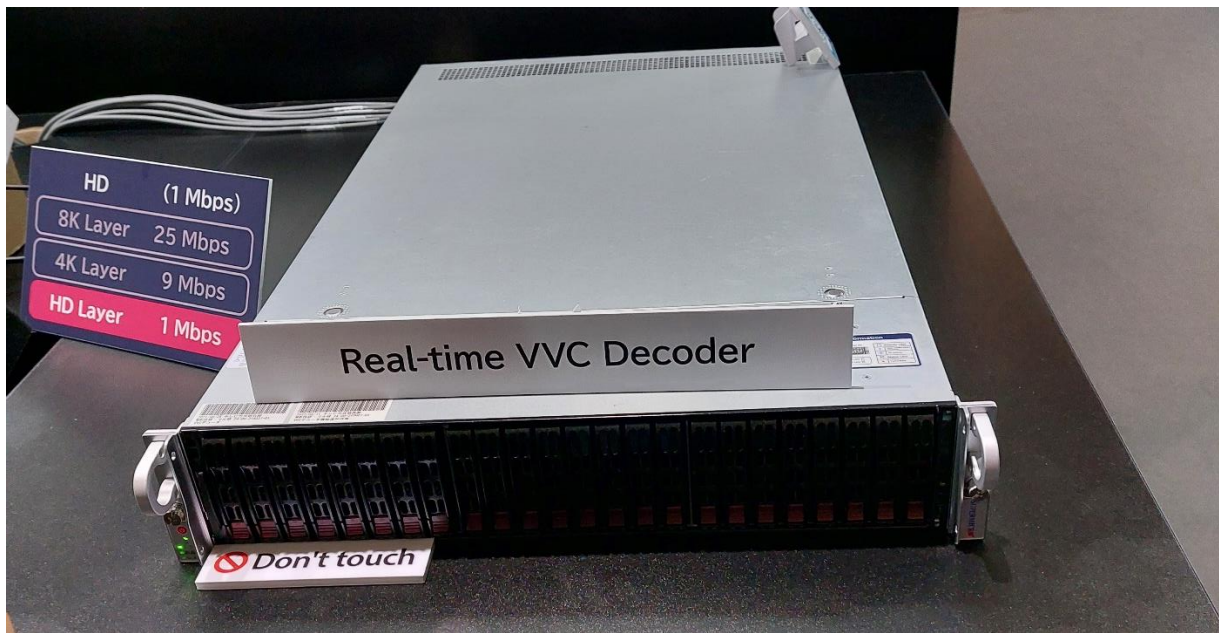
The second innovation was an AI based way to generate animated sign language avatars from automatically generated subtitles, so that deaf people can be included more in everyday life.
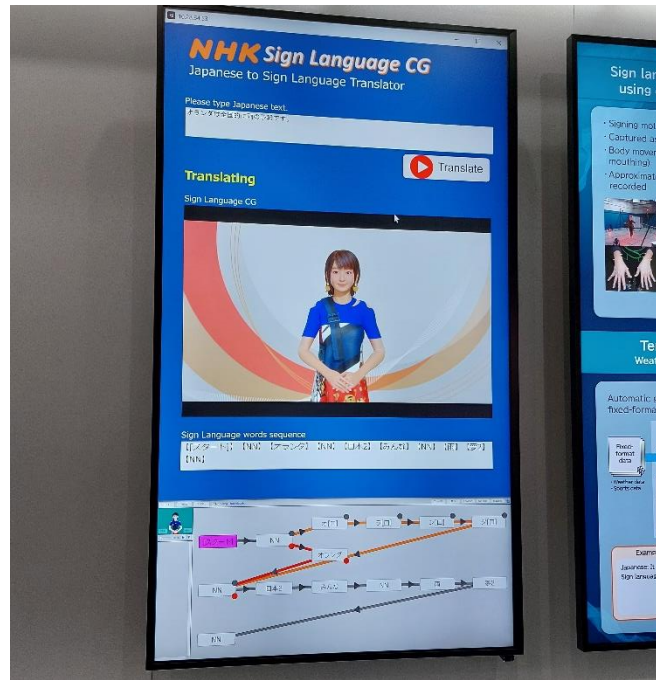
What really struck me was the way both of these technologies can be combined. By switching on and off a separate layer in the video signal, you could show the sign language avatar without having to broadcast several data streams, much like you can switch the language of the video currently. This is a great application of both developments. Frauenhofer showed similar technologies, such as an AI-based way to integrate keywords in archive material.

The second thing that really interested me were Keyboard Video Mouse (KVM) systems. This technology is something that happens in the background. If everything works, you never notice anything. A KVM System consists of a transmitter, receiver, and switch and allows people to use a PC without having to be in the same physical location. This way, you can have many different systems available at a single desk. While this does not sound very exciting, it is crucial for many companies. There were a lot of manufacturers there, which I went to and asked to show me their products. Every system has its benefits and is perfect for different applications. It was great to have different companies near each other and the show floor. This way, it was easy to compare the systems and ask questions that you maybe wouldn't have thought of otherwise. The booths I visited were Boxilla, G&D, Adder, and IHSE.

Conclusion

I was extremely excited to finally visit the IBC, to say the least. It was amazing to not only see so much of the technology I find interesting and plan to invest a lot of my time in, but also to meet like-minded people. There is no doubt that I will be working with some of the people I met in these few days in the future, and I am very excited about that. I could learn a lot about broadcast technology I was already interested in as well as a lot of things I did not know much or anything about. Everyone was so helpful and excited to tell me about their company or product. It also felt really great to finally see so many things we learned about and to draw connections between all the different kinds of technologies. It is safe to say that this was a very important event for my future work life and that the IBC definitely surpassed my expectations. Everyone interested in media technology should take the chance to visit a future IBC when possible, as it is such a rewarding experience.