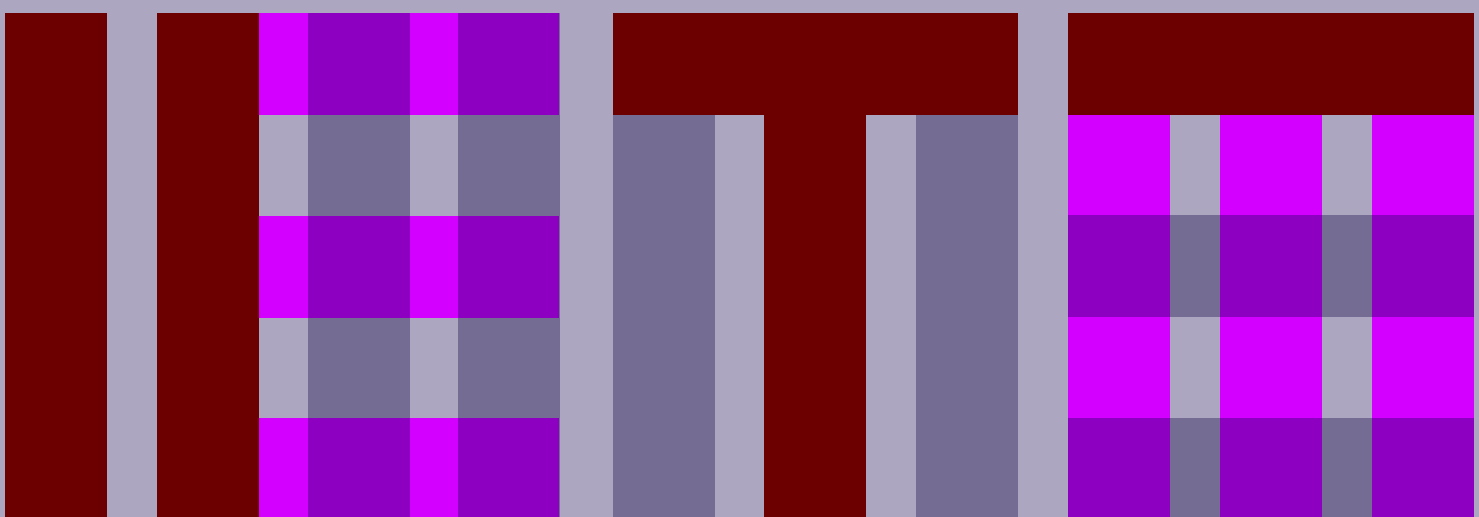


Report

AI, Immersive Tech & Creativity

From the IETM Sofia Plenary Meeting by Ophelia Jiadai Huang



**IETM Report:
AI, Immersive Tech & Creativity**

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Summary

The session ‘AI, Immersive Tech & Creativity’ at the IETM Sofia Plenary Meeting 2024 discussed how Artificial Intelligence (AI) and Immersive Technologies (Virtual, Augmented and Mixed Realities) can be used in creative practices, with hands-on experience facilitated by creators in Europe applying available technologies into creative context, as well as a discussion on the potentials and issues of using these tools at the moment.

Speakers

Jo Mangan, The Performance Corporation, Ireland
Magda Mojsiejuk, Artifact Designer + Futures Synthesist, Spain
Aoi Nakamura, AΦE (AE), United Kingdom
Roslana Yotova, Rawlab, Bulgaria
Caspar Nieuwenhuis, HKU School of Theatre, Netherlands



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Introduction

Arguably the most fast-changing sector in the human world at present, Artificial Intelligence (AI) and Immersive Technologies (Virtual, Augmented and Mixed Realities) can also be increasingly observed in some artistic works of performing arts. The session 'AI, Immersive Tech & Creativity' focused on the application of these technologies in creative practices, and investigated what opportunities and challenges it might bring. It consisted of two parts, starting with a hands-on session for the participants to experience what the application of some existing softwares can do for creative projects, followed by a further introduction of some works of artists and a panel discussion on what it means to combine these rapidly developing tools with artistic creation.

Demystification and Hands-on

The two-hours session started with participants entering a black box like studio, in which four stations were set-up with laptops and screens by four groups of creators who have made use of AI and Immersive Technologies in their own projects, from world building and storytelling to generating visuals as planning tools. Among them, designer and activist **Magda Mojsiejuk** started with a 'Pecha-kucha' style, explaining AI-related glossaries such as *algorithms*, *Large Language Model*, *Deep Learning*, *Natural Language Processing*, *machine learning* and so on. AI as a powerful technology can be applied to various aspects of our life and society. In this session, the focus was on generative AI, which can simply be described as the 'AI that creates texts, images or music, etc'. Through this quick introduction, the audience got acquainted with some basic concepts and facts about AI, such as how these AI models are trained on data sets, such as 'chatGPT' which indicates Chat Generative Pre-trained Transformer. **Magda** also mentioned that the recent breakthrough in the current development of AI came from the inspiration of the human brain. Researchers create artificial neurons and neural networks resembling our brain to enhance AI's learning ability. In this sense, machines are learning like humans. Meanwhile, Gemini, another AI developed by Google, helped Magda boil down the glossary. A show of hands indicated that about one third of the audience onsite considered themselves not familiar enough with the technological terms. Many participants found this quick introduction informative and useful for later discussion in this session. Magda invited the audience to drop in at her station after the talk to get a hands on experience generating pictures with another generative AI 'Midjourney', which can then be produced into tangible polaroid images with very simple devices.

Participants were also free to drop in at any other station to try out different applications during and after the short talk. In the station run by **Roslana** and **Radina** of Rawlab, a collective working between arts and technology based in Bulgaria, participants were shown how to use chatGPT to create interactive canvas without prior knowledge. Since



2019, they have been using technologies such as Machine Vision (the ability for a computer to see) and practising combining the techniques of coding in creative projects. Visitors at this station could also learn how the technology of tracking can generate interactive models to be used in gallery works i.e. installations.

Aoi Nagamura from AΦE (AE), a UK-based dance company specialised in working with new technology, hosted a station where audiences could experience the application of AI, motion capture tools and AR in different artistic projects. With the chat box poem generator, three words were already able to generate a poem. Some audience members also had a go on the device provided to watch virtual performances and to explore what audience interaction is possible in an immersive environment,

At another corner of the venue, **Jo Mangan** from The Performance Corporation introduced the visitors to another text-based tool which can create a 360-degree virtual environment. Visitors were invited to type a few phrases – the 'prompt' describing imagined environment and style, in the application's interface. Within just a few minutes, a 360-degree computer-generated model appeared on the screen. According to Jo, this application can be used to generate a set or virtual space for performances, especially the immersive type. What is even better is that the cost of using these softwares is going down dramatically, thanks to the rapid speed of technological development. Like in some other stations, Jo also shared experience of generating an avatar and creating immersive shows in which audiences can interact with each other and with performers through headset remotely.

These stations allowed the audience to roam freely and talk to the artists about their creative projects and process, experience of working with external collaborators such as computer programmers or research institutions, as well as ask practical questions such as how to choose the

right technological service. For some participants, this part was ‘very technological’ and a great introduction as they have never used any of these technologies before. Other participants may have certain knowledge about the terms but never tried to apply any in the work. Quite a few commented on the incredible speed technology develops. It is not easy to keep up with the latest and it requires a lot of learning. On the other hand, this fast change may also be an advantage. One felt more ‘ready to use it in my work’ after talking to other artists and realising ‘the price is now affordable’.

After all participants came back to the seating area in the middle, they watched a few short videos together introducing some exciting works by the panellists and other makers in and outside of the room, such as Cia Sargantana, Laurie Anderson and Senore Serrano, who all combine AI or Immersive Tech in their creation.



Creative Tool, Future and the Unknown

The session then delved into a stimulating panel discussion led by **Caspar Nieuwenhuis** about the complexity of applying technologies in arts. Although all four speakers talked about technology as a strong tool to serve creativity or to solve practical problems in creation, noticeably technology itself can also be the subject of contemplation or source of inspiration. **Roslana** talked about a critical approach toward technology in their work, taking a step back rather than just to ‘embrace it as a new medium’. For example, in one project they tried to ‘break down AI’ by studying the mechanism of how AI ‘recognises’ humans and converted it into artistic expression. **Magda** commented on how technology can be perceived as more creative than human in a sense that ‘people sometimes are very confined, while machines are more liberated in their thinking’.

As powerful as the audience had the chance to experience earlier, AI and Immersive Technologies seemed to trigger some concern from the audience about the future, including the future of the live sector. One participant asked ‘how we shall face the massive stretch of possibility with technology?’, and another wondered what this means for the performativity or liveness in the future, or if technology will be in conflict with performance. The panellists emphasised that technology should be considered more as a tool rather than an entity. As a tool, it can and will exemplify the questions we already had, both in creative processes i.e. what is our aesthetic language? and in human society, i.e. who benefits from it? **Magda observed that** tangible things will always be an integral part of human sensation, so we shouldn’t worry about the disappearance of liveness. However, **Aoi** noted that as users of this tool we need to know what we want to create with it, otherwise we will get lost.

There were also inspiring comments from the perspective of performing arts. **Jo** shared her nerve-racking experience of working on an immersive project with a team in different places, performing only as avatars and entirely relying on server and self-built platform. ‘We have to embrace failure,’ she said about using technology, rather than beating ourselves up with the ‘the show must go on’ instinct of our sector.

Although technology sometimes can be (perceived as) hard-core, artists’ creativity actually have a lot to offer to the world of technology as well. **Aoi** talked about the artist’s skill of telling stories being very useful in communicating with the public. In her company **AE**, they create educational material about technology to accompany their works. A participant confirmed that artists have unique, creative inquiries which are of great value in collaboration with technology researchers and programmers.

Before the session reached the end, some questions were raised by the audience regarding the ethics of applying technology such as energy consumption. **Aoi** pointed out that using technology has made touring much lighter in some aspects, which shows the environmental potential of applying technology in creating new work. **Magda** reminded us that almost everything we do, from pictures on the phone to performance in theatre, has an infrastructure behind it, which means energy consumption. Artists, as well as other people, should talk about it, and bring awareness to inspire society to push for change.

The last question of the day, interestingly, came from AI's suggestion. Bulgarian musician **Alexander** in the audience said he asked chatGPT for an interesting and controversial question to be asked in a workshop like this. Among ten questions chatGPT provided, he picked one about copyright: *who owns the copyright of generated work: the artist, AI or the developers of AI?* This is no doubt a complicated aspect of AI's application. **Jo** thought that the answer depends on what model AI is using. Some artists are actively building their own models in order to create their own works, which **Jo** believed should be the future.

Various legislation processes going on in the field of AI in different countries also added to the urgency and complication. The other two panellists added that the question of 'who to prioritise' in copyright controversy between tech monopolies and artists is still valid in AI-related consideration. But perhaps when asked, AI might have its own answer to this question, different from ours.

In conclusion, just as applying technology in creative practices is still relatively new in performing arts, AI and Immersive Technologies is the frontier of human society. Art can no longer ignore technology - if art should reflect on the contemporary condition, technology is increasingly part of it. In all senses, we are blazing the trail into the unknown. Courage is needed. So are connection and collaboration. And when we marvel at the fast speed at which this powerful tool develops, we have to remind ourselves of the urgency of asking questions: what we want our tool to do, why and who will benefit from it.



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