

Metaverses are coming: what can we expect?

An interview with Sarah Nicole from Project Liberty Institute



Metaverses are immersive, virtual worlds based on the technology of extended reality (XR). They have a range of applications among others in industry, research or service and military training. At the same time, metaverses are being depicted as a next-generation of social and gaming platforms, where users can enter a completely new level of interacting with each other and with the virtual environment. In this interview, we talk with Sarah Nicole, Policy and Research Associate from Project Liberty Institute about the predictions and expectations towards metaverses - both the positive and the negative ones.



Sarah Nicole has expertise in emerging technologies and cybersecurity as well as in policy and technical governance. Previously, she worked for big tech companies on these issues at the European level. She also published reports on the future of cyberspace for the CyberPeace Institute, including one on the metaverse, as well as on the geopolitical race driven by quantum computing for France Digitale and Banque de France.

Currently, Sarah is a policy and research associate at Project Liberty Institute, an interdisciplinary and action oriented institute advancing ethical governance for responsible technology. Through this role, Sarah is an active contributor to the ITU Focus Group on the Metaverse -Security, Data & Personally Identifiable Information (PII) Protection. She also takes part in the AFNOR Metaverse commission of standardization.

Emilia Zalewska-Czajczyńska is a lawyer specialising in regulations in the area of cybersecurity and Internet governance. She works as a Specialist for Strategic Analysis in Cybersecurity at the Cybersecurity Strategy and Development Department, NASK. Her main fields of interest are emerging technologies such as AI and metaverse, and human rights in the digital environment.

Emilia Zalewska-Czajczyńska: As recently as 2022, metaverses were one of the most fiercely debated technology trends. What might have been the reasons for this widespread interest in the subject?

Sarah Nicole: Actually and contrary to the perception of being a recent topic, the concept of the metaverse dates back to 1992 when it was first introduced by Neal Stephenson in his science fiction novel, "Snow Crash." The author envisioned the metaverse as a virtual three-dimensional space where human life and communication could occur through digital avatars. Despite its early conceptualization, the idea gained traction in the tech community and captured imaginations over the years.

The infusion of substantial investments by big tech companies into the metaverse field further fueled the widespread interest and discussions around the topic. When major tech players pour billions of dollars into a specific field, it not only attracts attention but also sets the stage for rapid advancements and potential disruptions in the industry. In this case, the significant investments in metaverses signaled the technology's potential to reshape how we interact with digital environments, leading to heated debates on its implications.

However, one of the drawbacks of the intense focus on big tech, particularly Meta (formerly Facebook), is that it overshadowed the broader historical context of the metaverse concept. While Meta's involvement brought more visibility to the topic, it tended to dominate the discussions, limiting perspectives and neglecting the contributions and developments that predated their entry into the metaverse arena. In reality, various virtual reality platforms, such as World of Warcraft and Rec Room etc., had already been launched in the gaming industry, and some of these platforms could be considered early versions of metaverse platforms. These pioneering efforts laid the groundwork for later discussions about metaverses, but they often received less attention amid the dominance of Meta's activities.

It is crucial to acknowledge the earlier contributions and developments in the virtual reality space, as they were instrumental in shaping the metaverse narrative long before Meta's involvement took center stage. EZC: What is the current state of affairs - when can we expect metaverses to come into common, everyday use? Or is this already happening to some extent?

SN: Metaverses are expected to become increasingly prevalent in our daily lives through a gradual process of adoption. Initially, we will witness augmented reality (AR) and virtual reality (VR) technologies being used in isolated contexts, paving the way for a fully immersive metaverse experience. Already, we can observe their applications in various sectors such as healthcare, education, and the gaming industry.

Currently, some metaverses serve as platforms for contact and interaction between users, much like existing social media platforms. The comparison between these two types of virtual social spaces highlights both similarities and differences in their functionalities and user experiences.

The pivotal question revolves around the extent to which metaverse environments will truly enter the mainstream, transcending the realms of business-to-business interactions to directly engage consumers and a broader user base. As technology continues to evolve and integrate with our daily lives, the metamorphosis of metaverses from niche applications to widespread adoption will depend on factors such as accessibility, user-friendliness, and the seamless integration of these virtual worlds into our everyday routines.

EZC: Then let's take a look at what opportunities are offered by metaverse social platforms - what users can gain from using them?

SN: Social metaverses present a plethora of opportunities, with one of the most significant being the potential to revolutionize the approach to data privacy in contrast to the current Web2 social web. This transformation could address concerns related to data exploitation and manipulation, enabling users to have more control over their personal information.

Additionally, the business model behind the existing social web, known as the attention economy, can lead to issues like addiction and polarization. By transitioning towards more open and decentralized models of metaverses, we have the opportunity to move away from a centralized and fragmented social media landscape.

To fully embrace the opportunities presented by social metaverses, it is crucial to adopt a holistic view that involves all relevant stakeholders. Engaging all actors around the table allows for better collaboration and informed decision-making. This holistic approach encompasses governance models, technical infrastructure and user empowerment.

First, the development of healthy and sustainable governance models for metaverses is essential. A well-defined governance framework can guide innovation in a positive direction, ensuring that these virtual spaces benefit society as a whole.

Then, examining the technological infrastructure level, the use of open protocols like DSNP (Decentralized Social Networking Protocol) can facilitate greater interoperability and seamless communication between various social metaverses, fostering a more connected and inclusive virtual experience.

Finally, another significant opportunity lies in empowering users to generate value through their data. In this way, metaverses can create a more equitable and rewarding ecosystem for individuals and content creators alike.

Metaverses offer the potential to address critical issues such as data privacy, business model challenges, and user empowerment. By embracing open and decentralized approaches while establishing thoughtful governance models, we can harness the full potential of social metaverses for the betterment of society and the virtual landscape.

EZC: You mentioned the possibility of using an open protocol DSNP. Could you please explain more about what this technology is and how it could be implemented into the metaverse's environment?

SN: The DSNP is a communication protocol, an open standard that defines how machines may collaborate over a computer network.

DSNP allows applications to offer users control over their social identity (how they present themselves to the world, what they wish to share and with whom), their social graph (the matrix of interests and relationships they share), and their "announcements" (messages they wish to share, along with the means to verify the authorship of that content).

Identity and graph data are stored on a consensus system such as - but not limited to - a blockchain, which is widely distributed and highly resistant to control by a single entity. Additional content may be stored by any provider as long as it is linkable. DSNP uses cryptographic hashes to ensure content authenticity and Provenance.

In the social metaverse, where user interactions and social experiences are at the core, DSNP's features and decentralized nature could play a vital role. By offering users greater agency over their digital identities, social connections, and content sharing, DSNP aligns with the vision of a more user-centric, transparent, and inclusive virtual world. As the metaverse and social metaverse continues to evolve, protocols like DSNP hold great importance in shaping the future of social interactions and user experiences within these immersive virtual spaces.

EZC: What about the other side of the coin – the risks that may be associated with the development of metaverses? Are there any ways in which they could be mitigated?

SN: Among the risk associated with the emergence of virtual worlds we can note all sorts of cybersecurity threats (extensive data collection, manipulation, theft of identity etc.). Risks that were present already in a 2D environment will certainly be amplified and have more dramatic consequences on populations, especially the most vulnerable ones.

Mitigating the risks associated with the metaverse requires adopting an ex-ante approach, emphasizing proactive measures during its development rather than relying solely on ex-post regulation after potential issues have emerged.

These proactive measures have to be the outcomes of multistakeholder collaboration. Engaging all relevant parties, including technology companies, policymakers, academics, and civil society, in ongoing dialogues can result in the formulation of effective guidelines, standards, and best practices for metaverse development and usage. While regulation can play a significant role in addressing certain risks, it is not sufficient on its own. A more comprehensive approach involves conceiving and building the metaverse with an ethical-by-design approach. This means incorporating ethical principles and safeguards into the technical infrastructure right from the outset.

By integrating these ethical considerations at the foundation of the metaverse's development, we can help prevent or minimize potential risks related to data privacy, security, and user rights. Such an approach ensures that user well-being and societal values remain at the forefront throughout the evolution of the metaverse.

Ultimately, a multi-faceted approach that combines ethical design, proactive measures, and collaborative efforts will be key to mitigating the risks associated with the metaverse. By taking these steps, we can create a more secure, inclusive, and beneficial virtual space for users and society as a whole.

EZC: Thank you very much for the conversation.