## Using Virtual Reality for Accounting and Auditing #1

## By Eric Cohen

On December 13, 2024, we held a special event as part of the Rutgers CAR Lab (Continuous Auditing and Reporting) Symposium series, focusing on Virtual Reality and its variants (in particular, augmented reality and mixed reality). I had the honor to organize and act as master of ceremonies for World Continuous Auditing and Reporting Symposium (WCARS) 64, which we held primarily in Zoom, but with demonstrations and brief excursions into virtual worlds and immersive experiences.

Virtual Reality (VR) was chosen as a focus for a number of reasons.

First, VR has not been a focus for many accounting academic or practice conferences, speeches, workshops or research projects for a number of years. Logic says this is because cryptoassets and blockchain/distributed ledger technology overwhelmingly drew the attention of researchers and the profession when Bitcoin took over the headlines in late 2017, and generative artificial intelligence (GenAI) later dominated our attention with the public release of ChatGPT on November 30, 2022.

Good news for fans of VR is that these technologies potentially offer great value to VR. The "Metaverse," or Web3, are said to be immersive virtual worlds where blockchain/distributed ledger technology can provide greater control over VR assets as well as providing cryptocurrencies to support business and trade. Al can be a facilitator of the environments people see, support interaction in virtual worlds and offer other benefits as well.

Second, although some have called the period 2017 to the present "VR Winter" (due to the lack of attention on the topic), the availability of VR technology at a reasonable price has started to pick up with the release of the Meta Quest 3, grown with the Meta Quest 3S, and now sees Google, Samsung, and other vendors releasing new VR headsets.

Third, the post-COVID push-back against returning to the office and budget constraints about traveling, combined with other global issues leading to resistance to in-person international cooperation, call for experiences that offer some fraction of the intimacy of gathering together with other benefits not available through traditional web-sharing environments such as Zoom, Teams or other collaborative platforms. The topic of "gamification" as an enticement to participate and learn has been studied for many years and is often a simple by-product of the use of these platforms for learning.

We will be following up on the takeaways from the event in this blog in the near future. In this entry, however, we wanted to share what we learned from the preparation for the event.

I began with the goal of discovering solutions for "serious" uses of VR, rather than gaming. This would include teaching and training on the pedagogy side, virtual collaborative gathering (including bringing virtual "teams" into traditional collaborative environments such as Zoom), and immersive visualizations and analytics. In upcoming entries, I will discuss these uses in business, from virtual showrooms and tours, through simulations, prototyping, and design.

Teaching and training were not a big surprise. There were numerous solutions providing digital twins of existing physical environments, avatar-infused locations for participants to gather virtually to share documents, presentations and videos, and the ability to leverage 360-degree tours (which are not necessarily fully immersive and interactive but benefit from the ability to feel like you are part of the environment, such as a tourist location or a factory tour).

I was a little more surprised by the insular nature of the collaborative meeting environments. While I enjoyed the opportunity to visit sites such as MeetInVR¹ (which we did show at the conference), I was surprised that few facilitated integration with Zoom. One exception was Meta's own Horizon Workrooms.² I had hoped to leverage that platform to offer a parallel virtual environment for those with recent headsets to join the broader Zoom (for those who did not or could not join in VR); unfortunately, Meta removed much of the collaborative Zoom functionality in June 2024 – no chat, no file sharing, no whiteboards.

Finally, the uses for analytics and visualization were among the most discouraging – until the very last minute!

There are some great YouTube videos about VR for immersive and interactive analytics from 2016 and 2017 – inspiring, showcasing the exploration of data from many angles and views; but those solutions have disappeared. Articles on the topic pointed to websites that no longer exist or solution providers that moved on to other things. While I assume the various barriers to entry and distractions are part of the reason for this, a wide variety of other challenges exist as well. Just before the conference, however, I found a powerful solution combining VR and AR with generative AI. I'll discuss that more soon.

These explorations led to a series of questions we hoped the audience would help augment, clarify, prioritize and begin to answer. And, with that, we sent out the call to join WCARS64.

In our next entry, we'll talk about the conference itself.

<sup>&</sup>lt;sup>1</sup> https://www.meetinvr.com/.

<sup>&</sup>lt;sup>2</sup> https://forwork.meta.com/horizon-workrooms/.