The Key to an Open, Functional, and Interoperable Metaverse

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Abstract

The term 'Metaverse' has taken on a new sparkle recently, appearing prominently in the marketing materials of several large technology companies. Indeed, many have attempted, or are attempting, to co-opt it for their own purposes, which has resulted in a great deal of confusion among producers and consumers in the marketplace. Is the metaverse a single walled garden, shared game, or social environment? Or will the metaverse be an open unified space suitable for education, ecommerce, entertainment, and industry applications? How will we move ourselves and our content seamlessly between real, virtual, and augmented worlds? How will we ensure security and provide for user-control of personally identifiable information (PII) or health data? The metaverse may well find itself at the intersection of social interaction, industry applications and virtual expressions, the essence of the global apparel and wearable industries. With this in mind, we must ask ourselves, what the metaverse might mean for the apparel industry and its current outlook and its future.

With this short position paper, the Web3D Consortium seeks to address this confusion by exploring the history of 3D visualization and its formats, that has led us to our current state, providing a workable definition of the term 'Metaverse', and providing a vision for its sustainable, cooperative construction into the future. We believe that all the technologies are in place to fulfill the vision of an open, equitable, and ubiquitous information space. What remains are the key issues that have kept the Metaverse from manifesting the last two decades: user experience.

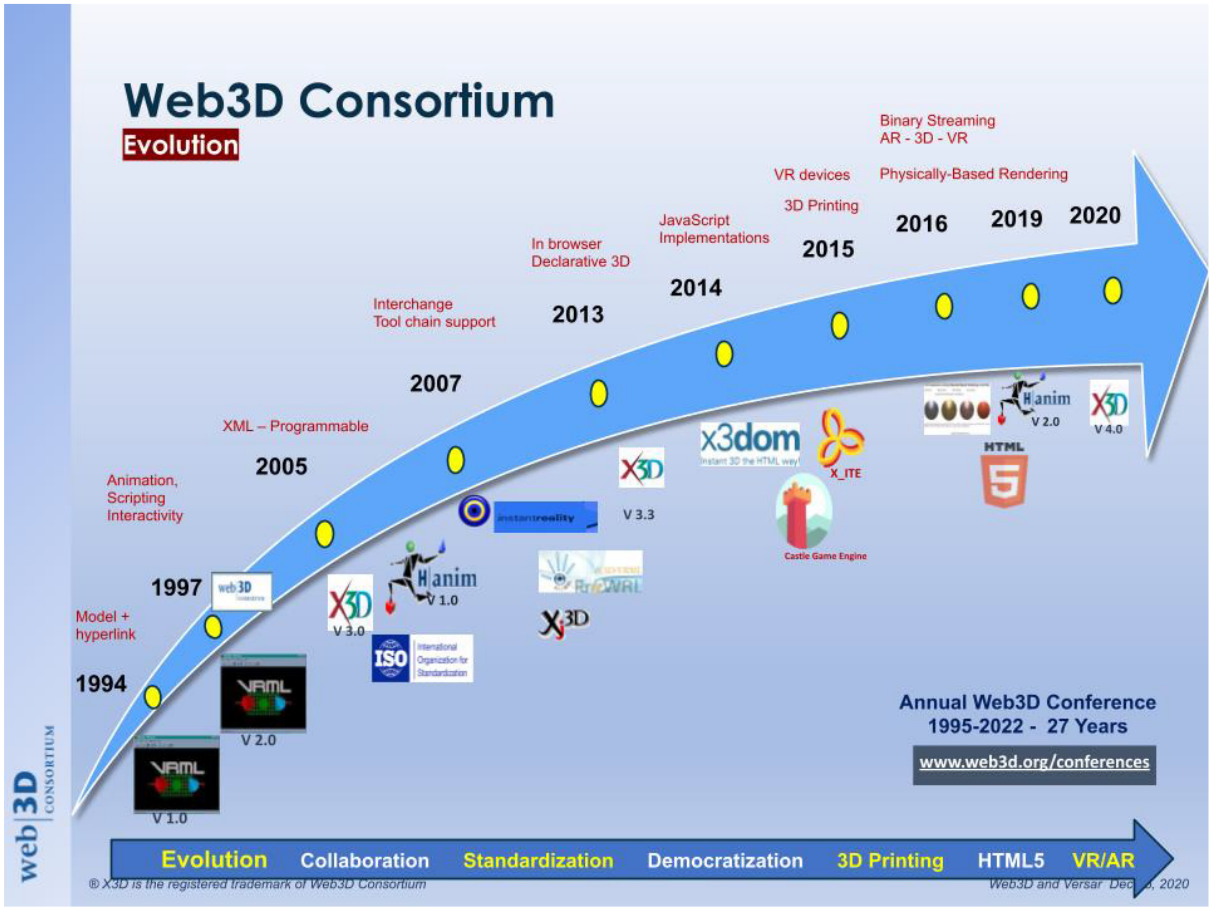

Figure 1: The Evolution of Web3D Standardsnd corporate cooperation.

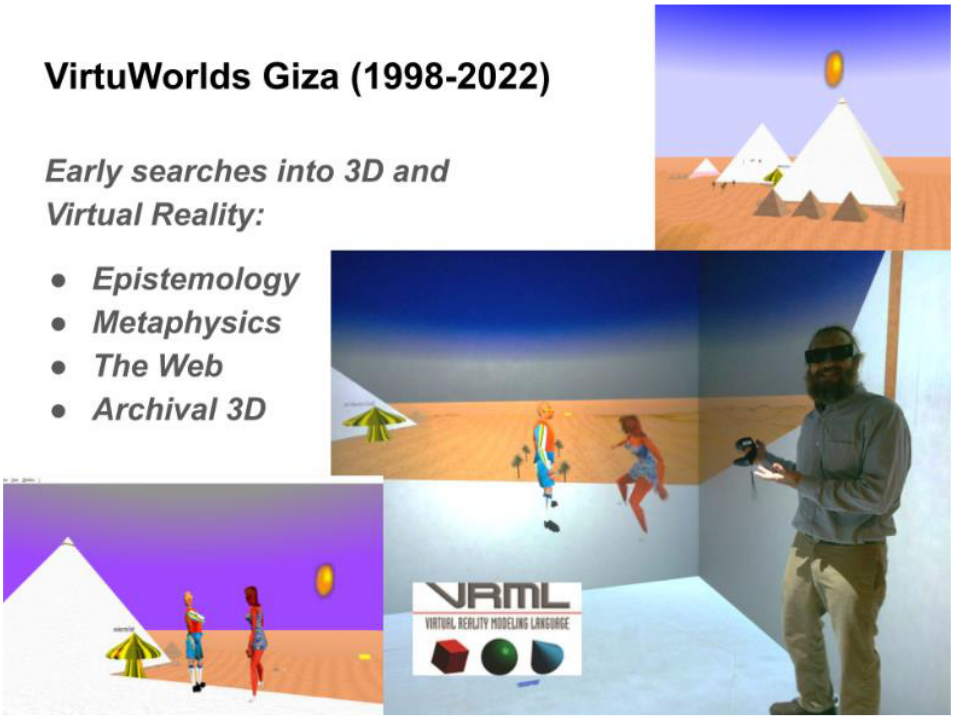

Figure 2: a VRML + HANIM model from 1998 runs faster than ever in a high resolution immersive CAVE in 2022