

HOLOGRAPHY

A QUANTUM LEAP IN THE AUDIOVISUAL LANDSCAPE

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Holograms, three-dimensional images created by the interference of light beams, have long been used in Hollywood movies as a symbol of the future. Today, holographic technology is being utilized by Audiovisual (AV) professionals to transform and disrupt industries. Holograms make AV experiences realistic and experiential for all participants. Holographic implementation is improving with advances in projector hardware, 5G, data enhancements and augmented reality (AR) adoption. As artificial intelligence (AI) and machine learning technologies advance, individual consumers should also be able to dynamically interact with holograms in the future. While any industry that relies upon AV is vulnerable to holographic disruption, the most imminent use cases include enterprise conference calls, entertainment, business networking events, retail and HR / employee training.

HOLOGRAPHIC CONFERENCE CALLS TO ENABLE BETTER COLLABORATION

Current conference call AV technology faces numerous hindrances to effective communication between parties, including an inability to reflect in-person body language and emotions. Holographic conferencing will dramatically improve communication and collaboration between individuals and groups within the enterprise. Holographic projectors could eventually take an individual's entire body from long distance and augment it as a digital overlay into a physical meeting room. Holographic meeting attendees will have the ability participate as if they were physical attendants, unlocking unparalleled opportunities for individual expression and participation in the physical meeting experience.



RESURRECTING MUSICIANS AND CELEBRITIES TO TRANSFORM ENTERTAINMENT

At the Coachella Music Festival in 2012, Tupac, considered to be one of the greatest rap artists of all time, performed post-mortem on stage via a holographic rendering of his body. Since then, numerous technology companies have been working on honing entertainment applications of holograms, many of which are due to launch in the near-term. The estate of Amy Winehouse, the late musician who passed away in July 2011, announced plans to operate an Amy Winehouse hologram tour in the near future. Widespread adoption of holograms for entertainment will have numerous and far ranging implications, including drastically expanding the total addressable market for “live” music events. One can envision a world where one celebrity could “perform” simultaneously across numerous local venues, increasing the aggregate number of production opportunities for AV businesses. In addition, these technologies enhance the value of content rights for deceased celebrity estates that can continue to monetize performances. While the initial entertainment use case appears to be in music, it is also possible in the medium-to-long term that applications effect Broadway performances or movie cameos, especially as these holographic renderings become more realistic with advances in both software and hardware.

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UNLOCKING NEW NETWORKING OPPORTUNITIES AT INDUSTRY EVENTS

Industry conferences are a phenomenal way of showcasing a product and talented teams, as well as generating new business through speaking engagements. Holographic AV technology has the potential to accelerate all three of these benefits. First, for teams that are resource and time constrained, it will provide the opportunity for entrepreneurs and management teams to “attend” additional events and still be able to interact with conference participants as if actually physically present. Teams could network at multiple events simultaneously through pre-recorded holographic

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videos embedded in booths. Second, event speakers could present at multiple engagements simultaneously. The ability to duplicate keynote speakers across events would create an explosion of new local and regional events that would benefit from a smaller, more intimate networking environment

// without compromising headline speaker quality. Third, for those physically manning company booths at events, holographic technology provides a plethora of new opportunities to demonstrate and distinguish one’s products. Products that require specific parameters to demonstrate effectively could be pitched through the re-creation of specific environmental conditions via holographic imagery.

REDEFINING THE CONCIERGE AND CUSTOMER SERVICE EXPERIENCE THROUGH IN-STORE AV

Retailers are riddled with labor inefficiencies and quality issues for customer service offered both in-store and via phone / web. In-store attendants often are not knowledgeable enough to answer difficult questions about products or provide quality recommendations to customers. In the future, retailers will equip their stores with dynamic holographic AV setups that allow consumers to interact with virtual hospitality representatives strategically positioned throughout the store.



CREDIT: VNTANA

Sophisticated AI-powered holographs will be dynamic enough to answer a variety of product / store related questions and provide customized recommendations to drive faster inventory turns and higher average tickets at checkout. VNTANA and Satisfi Labs are currently collaborating on an AI hologram concierge specially designed for retail, sports and hospitality. In addition, Ricoh USA is in the process of rolling out virtual concierges that automatically deliver highly targeted messages to customers on behalf of brands. While retail could be the initial use case for holographic-based concierge technology, hotels and stadiums could also benefit from similar applications. Moreover, outside of the in-store experience,

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holographic concierges eventually delivered via mobile phones (once phone hardware sufficiently progresses) would be a more personalized and time efficient way for brands to connect with their consumers.

IMMERSIVE TRAINING EXPERIENCES WILL POWER MEANINGFUL WORKFORCE IMPROVEMENTS

Workforce training traditionally takes place through paper literature, online courses / examinations and in-person lectures. However, for many professions, the most effective method of training employees is through experience, often times in environments that may be tough to re-create. A prime example is in the healthcare industry, where medical students and doctors can learn more from real patient encounters or practice procedures than from traditional training methodologies.

Holograms enable experiential and immersive training experiences without worry about the consequences of any errors made by the trainee. HoloPatient, for example, provides a suite of holographic immersion situations to train medical students. Within healthcare, holograms have numerous training applications, including patient diagnosis, medical device operation and complex surgery practice. Numerous additional training situations will benefit from implementation of innovative holographic AV configurations. Industries that require operation of complex machinery such as aviation, oil / gas and construction represent just a handful of sectors that will be transformed by an AV sea change

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THE BOTTOM LINE

As hologram adoption accelerates, businesses across retail, healthcare, entertainment, industrial and numerous other end markets will leverage holographic technology to differentiate their offerings. Growth in demand for holographic implementation will unlock numerous new monetization opportunities for AV providers and those with holographic capabilities will be able to provide clients a differentiated offering. As a result, companies with strong access to hologram technology will be better positioned to capitalize on continued growth in the AV sector. Those companies without hologram capabilities could benefit from considering acquisitions of, or strategic partnerships with, hologram providers to avoid potential disruption in today's dynamic AV landscape.

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The PJ SOLOMON Media & Tech Services team provides investment banking advisory and financing services to advertising and marketing services-based businesses, global out of home media, AV, global retail tech / in-store media, and event technology companies.

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