

Interview with Mr. Kevin Hart

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Interviewee: Mr. Kevin Hart

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Summary:

I had the pleasure of conducting a research interview with Mr. Kevin J. Hart, the founder and CEO of Aireal an Augmented Reality platform that supports the placement of custom content (2D graphics, 3D graphics, Video & Interactive applications). We discussed the growing area of virtual and augmented reality, different types of augmented reality technologies and Aireal's unique platform. Some of the technologies we discussed included simultaneous localization and mapping, augmented reality metrics, and the theory of a visual Turing test. We also discussed Aireal's unique patented technologies and future endeavors in augmented reality.

Interview:

We began discussing Mr. Hart's background and how he got to where he was. Mr. Hart graduated from University of Texas at Dallas, Naveen Jindal School of Management with a major in Business Administration and a minor in Cognitive Psychology. He then went on to be the National User Experience Lead at Sogeti leading ideation sessions, and designing user experience strategies, as well as, user interfaces for both mobile and desktop solutions for multiple Fortune 500 companies. He also founded Aireal, an Augmented Reality platform the specializes in locational augmentation rather than spatial mapping or marker based augmented reality.

After discussing his background, we went further in depth in discussing augmented reality, and its growth. We compared the differences of virtual reality and augmented reality talking about the different parts involved in each from spatial mapping and depth recognition and then motion detection. We discussed the growing uses for augmented reality how at first it was primarily used for advertising but now can be used for functionality and productivity. Mr. Hart described the potential of Augmented Reality simply by saying, "The world is your canvas".

Interview with Mr. Kevin Hart

After discussing Augmented Reality in general we started discussing different parts and technologies in Augmented Reality. We talked about Digital Molds and their occlusion, and then simultaneous localization and mapping, and Unity. We started talking about the Microsoft HoloLens since they are one of the most popular wearable Augmented Reality devices. Mr. Hart explained some of the limitations of the HoloLens by discussing its limited digital mold talking about how its line of sight was limited to a very small space hindering its ability to be truly immersive. We then talked about the simultaneous localization and mapping technology that some wearables use. Simultaneous localization and mapping works by mapping an area using depth sensors and spatial mapping technologies like Infrared. After creating a map, the devices then attaches an element to a certain spot on a map and displays it whenever it comes within the line of sight. Mr. Hart explained that this technology only works indoors since the UV light from the sun actually disrupts the IR sensors and spatial mapping sensors; concluding, that spatial mapping only works indoors.

After discussing about other types of Augmented Reality, I asked to learn more about Aireal and their technologies. Mt. Hart explained to me some of their patented technologies and some of the things they are working on. Aireal currently is location based, using longitude, latitude, and altitude to map elements. They are also working on allowing objects to interact with their surroundings, so if a virtual leaves are being blown by the wind they will not magically go through a building but actually stop against the building. Another interesting thing they are working on is incorporating the front camera to allow for a more immersive experience. Aireal also has the patent to sell volumetric space for augmented reality advertising purposes, and is working on patenting their weather influenced augmented reality technology. Overall this interview gave me new knowledge about the field of augmented reality, from the limitations of spatial mapping to the advantages of location based augmented reality.