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Reality Check

AR, bringing a figment of one's imagination to life

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Apple has the ability to make an individual's imagination come to life with Augmented Reality (AR). They have the world's greatest AR platform, meaning their devices and apps on their App store operate Augmented Reality. Since Apple hardware and software are completely developed for AR, it is the best way to experience AR.

So what is Augmented Reality? Contrasting to virtual reality, a self-standing cyber environment, AR reinforces realistic visuals, auditory or other sensory information onto the existing world. Augmented Reality optimises one's experience such as in retail, navigation, education, maintenance, industry, entertainment and social media.

In order to deliver the full AR experience, a certain combination of technologies need to be used to measure and detect the real world. Apple is at the forefront of AR, and they utilise LiDAR technology to measure the real world and accurately blend in digital elements. LiDAR is a depth sensor found on Apple's mobile devices from the iPhone 12 onwards. This technology allows for depth scanning in photos and videos. It is used

in collaboration with the high-definition iPhone/iPad cameras as well as facial recognition technologies when needed. The word LiDAR is an abbreviation for "light detection and ranging".

It utilises lasers to ping off of objects and back, using the time of laser travel to measure distance. This is similar to how sonar works, but it utilises light instead of sound. Although LiDAR is not new, Apple has recently made it universally available to the average consumer. It's inclusion in the upcoming iPhone 13 may imply that Apple is willing to take Augmented Reality further to explore new possibilities with this technology.

AR, supported by the LiDAR scanner, is presented in Apple's 'Measure' app. It enables people to use their iPhone as a measuring tape, it can automatically identify the dimensions of an object and provides visible guides. Apple has made it beyond quick and easy for an individual to measure with only a tap of a button. To measure, one has to move their iphone (the dot) to the starting point of the measurement, then

tap the + button. Then, move to the ending point, once again press the + button and the measurement is complete.

The accuracy of the AR measurement is heightened through the LiDAR scanner's ability to study an object in depth and as a whole. This means the 'measure' app can take multiple measurements and also identify a person's height within seconds. Not only is AR and LiDAR presented in the 'Measure' app, but it is also used in a number of other apps used on the Apple iPhone, for example, the IKEA Place app, Snapchat and Plantale. IKEA Place helps an individual to visualise how furniture and other products will look, feel and connect with their home, without actually stepping outside. With the LiDAR scanner and its accuracy, one can use the app to virtually place true-to-scale 3D models in their own space and experience IKEA innovatively through their screen.

AR and LiDAR enhance the way of communicating, this can be seen in

Snapchat. It enables the user to transform their environment into a world of imaginations. Plantale enables plant lovers to strengthen their knowledge and love for plants through the help of Augmented Reality and LiDAR. With this app one can study the detailed inlying anatomy of a root, stem, leaf or a flower. As well as learning and discovering the external and internal functions of plant parts.

So, after seeing Apple's AR technology as well as its current application and usage, what does the future of AR with Apple look like? With the inclusion of the LiDAR scanner in upcoming Apple products and a significant user-base of AR apps, it is evident that AR is alive and striving. A number of apps which apply AR in everyday settings are, Snapchat, Pokémon Go, Sephora, Nike and much more. Apple plans to continue being at the forefront of the industry when it comes to using Augmented Reality to its full potential. With refined AR technologies and increased accessibility implementing Augmented Reality into everyday life, the possibilities are endless.

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