

BBD VIEW

VIRTUAL EXPERIENCES



By Caspar Schutte, BBD Software Developer

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MOVING TOWARDS A HANDSFREE DIGITAL REALITY

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In today's fast-paced world the push for smarter, more intuitive and immersive technology - that eases the burden of complex systems - is continuous.

VR and augmented reality (AR) are not just for entertainment or media, the technology is being used in innovative ways. The International Data Corporation estimates the total revenue for both AR and VR will be over \$162 billion by 2020.

Not sure of the difference between the two technologies?

- **VR** is an escape from the real world via an immersion into a fantasy "reality", effectively cutting you off from the physical world. This is achieved with headsets (head-mounted displays), earphones (3D surround sound), optional motion controllers and position tracking. VR environments can be as detailed and engaging as the creator wants, able to run off both a mobile or desktop computer.
- **AR** combines the real world with a virtual world, by creating virtual layers on top of your physical environment. This is best achieved with non-isolating smart glasses, enabling interaction with the virtual 'world' while still staying in touch with the real world.

The healthcare, training, education, military, gaming, mining, marketing, real

estate and entertainment industries are all finding unique uses for the technology. As immersive technology becomes more easily available to the public, the extent to which it can be useful will constantly be redefined. Gartner predicts that 20 percent of large-enterprise businesses would have evaluated and adopted AR and VR solutions by 2019, while consumers and businesses will have easy access to quality devices, systems, tools and services by 2020.

AR and VR are not as new as some may think. Large organisations were already using the technology in the 1990s for mining and flight simulations.

“ **Current growth behind AR and VR is due to the technology becoming more cost-effective for smaller businesses and private customers.** ”

Coupled with this is the growing need for this technology in sectors such as workforce training, education and the medical sciences.

I have always been interested in creating 3D worlds and see a lot of potential for the growth of AR and VR, despite the current drawbacks. When using mobile VR - challenges such as phone batteries, processing power, overheating and low resolutions are somewhat balanced out by the complete freedom of the fully mobile setup. Desktop VR with its greater

processing power negates some of the mobile issues, but one has to remain connected to the PC.

A workaround to try and achieve the best of the mobile and desktop options is through a gamer's laptop. These contain graphics cards, better processing power and with the use of a backpack, are portable. VR and AR each have their own specific markets, dependent on the user's needs for interacting with the physical environment.

Now that we have the potential to immerse ourselves in knowledge through virtual experiences, we can truly change how we teach, learn and understand.

About Caspar Schutte

Caspar has been a Software Developer with BBD since 2012. He has a keen interest in virtual and augmented reality, with extensive experience in computer-based training and VR simulators.

About BBD

A provider of custom software development and application design solutions, BBD's 34 years of technical and developer expertise spans the banking, insurance, telecommunications, education and public sectors. Employing over 700 highly skilled, motivated and experienced IT professionals - BBD is South Africa's largest independent custom software development company.