



ANNOUNCING THE ACQUISITION OF SURREAL VISION

[Oculus blog](#) | Posted by Oculus VR | 26 May 2015 | [Share](#)

Surreal Vision Joins Oculus

We're thrilled to announce that the Surreal Vision team has joined Oculus Research!

Surreal Vision is one of the top computer vision teams in the world focused on real-time 3D scene reconstruction – generating an accurate representation of the real world in the virtual world. Great scene reconstruction will enable a new level of presence and telepresence, allowing you to move around the real world and interact with real-world objects from within VR.



Richard Newcombe, Renato Salas-Moreno, and Steven Lovegrove of Surreal Vision

The three founders, all PhDs from Andrew Davison's pioneering lab at Imperial College London, are **Richard Newcombe**, the inventor of KinectFusion,

DynamicFusion and DTAM (Dense Tracking and Mapping) and co-inventor of SLAM++; **Renato Salas-Moreno**, the inventor of SLAM++ (SLAM at the level of objects), and Dense Planar SLAM; and **Steven Lovegrove**, the co-inventor of DTAM and author of SplineFusion.

The team wanted to share a few words on their vision for Surreal at Oculus:

“From the human point of view, the world is constantly in motion. As we move around, our eyes dart about the scene and the rich dynamical nature of the scene’s contents come flooding in. We’re able to make sense of those changing signals to produce a coherent understanding of the world we live in, which we effortlessly navigate and interact with. Over the past three decades, a great deal of work in computer vision has attempted to mimic human-class perceptual capabilities using color and depth cameras.

At Surreal Vision, we are overhauling state-of-the-art 3D scene reconstruction algorithms to provide a rich, up-to-date model of everything in the environment including people and their interactions with each other. We’re developing breakthrough techniques to capture, interpret, manage, analyse, and finally reproject in real-time a model of reality back to the user in a way that feels real, creating a new, mixed reality that brings together the virtual and real worlds.

Ultimately, these technologies will lead to VR and AR systems that can be used in any condition, day or night, indoors or outdoors. They will open the door to true telepresence, where people can visit anyone, anywhere.

Much progress has been made toward this future, but significant challenges remain. For virtual reality, the accuracy and quality of the continuously updating 3D reconstruction must be near flawless, which is a requirement almost no other modern computer vision problem faces. When we cross these seminal thresholds, users will perceive the virtual world as truly real – and that is the experience we’re driving toward.

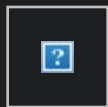
By achieving the ability to continuously reconstruct and track the world around us, we’ll be able to build an understanding of the world at a semantic level. This will

bring the power of the digital world to the myriad of interactions we as humans perform everyday, leading toward a breakthrough in human-computer interaction and a computing platform that has true spatial awareness.

Given the team, the resources, and this shared vision, there's no better place for us to help bring about these breakthroughs than Oculus. We're incredibly excited for the future." — **Richard and the Surreal Vision team**

Richard, Renato, and Steven will continue their work pushing the boundaries of computer vision and scene reconstruction as part of Oculus Research in Redmond, Washington. Please join us in welcoming them to the team!

— The Oculus team



QUEST 2
RIFT S
ACCESSORIES
APPS & GAMES
SUPPORT
DEVELOPERS
OCULUS FOR BUSINESS

ALL PRODUCTS

Quest 2
Rift S
Accessories
Quest
Go
Rift

MORE OCULUS

FORUMS
BLOG
VR FOR GOOD
CREATORS
DOWNLOAD SDKs
RESEARCH

ABOUT

Careers
Facebook
Connect

Get News & Updates

By signing up, you are agreeing to the Oculus [Terms of Service](#) and Oculus [Privacy Policy](#). You may unsubscribe at any time.



United States of America

English (UK)

Privacy

Legal

© Facebook Technologies, LLC.