

<https://youtu.be/2zAA1EVGUZU>

The State of VR with Robert Scoble and Philip Rosedale Virtual World Webinar June 9, 2017



A lifelong entrepreneur, in 1995, Philip Rosedale created an innovative Internet video conferencing product (called "FreeVue"), which was later acquired by RealNetworks where (in 1996) he went on to become Vice President and CTO. In 1999, Rosedale left RealNetworks and founded Linden Lab. There he led the creation of a virtual civilization called Second Life, fulfilling his lifelong dream of an open-ended, Internet-connected virtual world. In 2010, he co-founded LoveMachine (www.lovemachineinc.com) as a lab to build several new ideas at the edge of work, computing, commerce, and intelligence. Out of this work, grew Worklist, a global community of web developers, and Coffee & Power. In

November, 2011, Rosedale released Coffee & Power, a site that enabled people to connect for small jobs and services using a free-market system and distributed work principles. At the beginning of 2013, the team at Coffee & Power became a new company: High Fidelity, and are currently working on the prototype stages of a new global virtual world.



Robert Scoble is an American blogger, technical evangelist, and author. Scoble is best known for his blog, Scobleizer, which came to prominence during his tenure as a technology evangelist at Microsoft. He later worked for Fast Company as a video blogger, and then Rackspace and the Rackspace sponsored community site Building 43 promoting breakthrough technology and startups. He currently works for Upload VR — a new media site covering virtual and augmented reality — as its entrepreneur in residence, where he develops new shows, events, and works with other entrepreneurs in the Upload Collective, a co-working space for virtual reality-focused startups.

Invitation:

Join us at 2pm PDT, Friday, June 9, 2017 for a talk with tech evangelist and entrepreneur Robert Scoble and High Fidelity CEO Philip Rosedale about the current state of virtual reality, and what opportunities may arise for VR in the future.

This event takes place in virtual reality and is hosted using High Fidelity's social VR platform. For the best experience, please use an Oculus Rift or HTC Vive headset.

How do I attend this event?

- Prior to the event, you will need to have downloaded and installed High Fidelity, which you can get at <https://highfidelity.com/download>. Please check the download page to make sure your computer meets the minimum requirements to run High Fidelity.

- You will also need to be logged into a High Fidelity account in order to get into the event. If you do not have a High Fidelity account, you can create one here: <https://highfidelity.com/users/signup>

- Once you are in High Fidelity, hit the "Go To" button on your High Fidelity tablet and enter "Zaru" to get to the event space.

How can I contact the organizer with any questions?

Please email contact@highfidelity.com with any questions about the event. Thank you!

Participant Notes:

Apple iPhone in September (2017) will have two 3D sensors on it, so it will be able to put augmented stuff on the phone. – Robert (8:44)

VR and AR are side-effects of a greater transition away from the desktop screen. – Philip (10:20)

The VR/AR market is bifurcating. VR is this really immersive environment. HTC Vive & Oculus Rift VR is 90-degrees per eye per screen, 90 frames per second, and it feels like I'm really here, and the *feeling* is really powerful. AR such as the Hololens will have really small view port area with only 20-degrees per eye. We're going to need AR and VR for a few years until one pair of glasses comes along the does both.
- Robert (13:50)

A couple of retardant factors: motion sickness, the feeling of the headset; 10-20% of the people can't use VR equipment for AR will be more attractive to them. Women are made sick by headsets more than men. The headset is 'nerdville' with the equipment and set-up. The normal person is not going to do that. We need mobile VR to get us to the six-degrees of freedom which we'll see the start of by the end of the year. We'll see how long it takes before the process can reach the kid on a dirt floor in Mumbai. – Robert (16:20)

The Vive has sold about 1-million headsets, the Oculus about 40-percent less. We need the mobile world to evolve faster than it has. The new iPhone in the first quarter is going to sell about 100-million units – more VR than the rest of the industry combined. – Robert (19:30)

In four years, we'll be able to watch a virtual football game on our kitchen table. – Robert (25:20)

Tech words: volumetric pixels, light fields, point clouds of data from real world, combination of modeling, photogrammetry, light-field scanning to get the source material. They're very computationally intensive. The once that do voxels won't have the detail – a 3D pixel, a region of space. - Philip (26:00)

Educational Application Question at (27:30)

"I design courses for universities in California. What practical educational benefits do you see from VR/AR?" – Steven Van Hook

We're using HoloLens glasses and others to teach people how to fix million-dollar tractors at Caterpillar. Boeing has hundreds of HoloLens to teach how to fix a jet engine. The CAD program that teaches is laid upon the actual jet engine, so you learn how to work the screws and panels. There's a bigger space for that overlay training. These VR headsets can be used inexpensively for overlay stuff. – Robert and Philip (27:45)

With VR apps, you can input a math equation into a user interface and then it builds a 3D model of the math that you just tried, and that lets you visualize what you're doing a lot better, and this will help people in chemistry and physics to think through these weirder and bigger problems that are really hard for humans to visualize. - Robert (28:50)

We can teach people astronomy and gravity between planets by actually flying through the universe. Our projection into a virtual space ... it feels pretty darn real. – Robert & Philip (29:25)

Being able to be face-to-face is the secret of teaching. Teaching, for whatever reason, is just messy. We know that it works but we really don't know how, but we do know that it has something to do with being face-to-face with a teacher. – Philip (30:30)

We're doing a lot of stuff with flying voice translation – a bot so it translates right on the screen. That's a big deal – some kind of voice control, showing us something we've asked for, just by voice or hand gesture, that kind of an idea is going to work. – Philip & Robert (31:05)

It will take about two more years for VR and the number of headsets to take off, we need mobile to go six degrees of freedom in a real way without add-ons. There will still be the high-end headsets like Vive and Oculus and Sony PS, and then there will be the mobile area where most people will come in. VR is about moving your head and your hands as freely as possible. The phones have a sensor that sees two-million points of data in front of you, so they can see your hands and you can do gestures. The MS HoloLens has four cameras that see your hands and see the room around you so it does this inside-out VR or AR tracking. There is a role for high-end trackers and controllers, and we'll see how it evolves. Next year is going to be an exciting year for the industry, even this Christmas the industry is going to kick it up again. – Philip & Robert (36:15)

Six degrees of freedom



Six degrees of freedom (6DoF) refers to the freedom of movement of a rigid body in three-dimensional space. Specifically, the body is free to change position as forward/backward (surge), up/down (heave), left/right (sway) translation in three perpendicular axes, combined with changes in orientation through rotation about three perpendicular axes, often termed pitch, yaw, and roll.

With mixed reality (VR/AR/real-world) we'll be able to snap our fingers and suddenly take everybody for a meeting in Yosemite. It is mind-blowing what is about to come. – Robert (42:30)

As pixel resolution gets better, why pay the expense of travel? Why can't we bring people back to life and have Ansel Adams give a tour of Yosemite, and bring up one of his photos overlaid? We could hang out with Einstein, or talk to a famous figure, and hear their life through a storyteller? We can do that today. – Robert & Philip (43:20)

Why have any limitations on the environment we're in? Why can't we go nuts? It's time and money and engineers. We build the things we value most that are meaningful: a house in Malibu, a Ferrari. We're going to mirror and import the real world, and then we're going to go far beyond it. Fasten your seatbelts. – Robert & Philip (46:50)

Adapting games and builds into VR: The budget for Grand Theft Auto 5 was \$400-million, for the detail and quality and experience of it. But costs for teaching, and dancing, and hanging out and giving talks on stage, those ideas are going to carry the day. – Robert & Philip (50:45)

We've been talking about partial attention a lot – technology has given us a lot of partial attention and utility, we're constantly getting text messages, and doing light-weight browsing on our phones. VR is different though for quality time – because we just have to be here, now. It is different to be in the headset and doing something with someone else, even if it is just playing Frisbee. The physicality of space and to be doing something looking at your hands is just magical. – Philip & Robert (52:35)

VR is so positively impacting class and discrimination profoundly. We don't know where each other is from. The reduced cost of things has a similar effect in the virtual world. There is a division between the technology and bandwidth and latency – those who have high-end, to mid-level, to Google cardboard viewer, or no VR at all. 5G may be a great equalizer with bandwidth and latency, with Google and Facebook providing access through balloons and drones. – Philip & Robert (58:30)

This really does feel like we're in front of a real-life audience, and this is a lot less threatening to people than giving a speech in front of a group of real people, for some reason. It doesn't feel so threatening. So many of the good things are the same, and then there's a little less stress. If you're somebody that's pretty shy this is a little better for that. And it can help you prepare and get used to speaking in front of other people. And you have all these tools available – prompters, displays. – Robert & Philip (1:08:25)

Citation:

The State of Virtual Reality. 2017, June 9. VR seminar with CEO Philip Rosedale of High Fidelity and founder of Linden Labs, and tech evangelist Robert Scoble. YouTube video at <https://youtu.be/2zAA1EVGUZU>