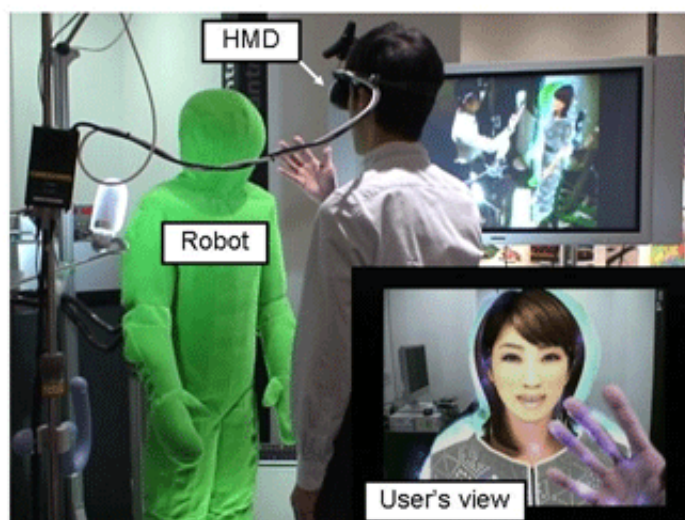


# New robot takes augmented reality to a new level

February 11 2013, by Bob Yirka

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Users see composite images via a head mounted display which has a pair of video cameras inside.

(Phys.org)—Researchers and engineers at a Japanese company called Different Dimensions have taken the concept of augmented reality to new heights by adding the touch of an avatar to the experience. That touch comes courtesy of a robot they've built that mimics commands sent from an animation generator—it's covered with green material to

allow for connecting augmented reality imagery with the real world robot. They call it a "virtual humanoid."

Augmented reality, is of course where information is projected over real-world images in ways that cause them to seem connected. Overlaying arrows on streets to provide [driving directions](#), is one example. Another is where a person's name appears in a bubble next to their face. This all is made possible by donning a helmet or [goggles](#) that allow the wearer to see through to the real world, but also allows information to be projected onto the glass in front of them that appears to be physically connected to the real world objects.

In this new effort, the researchers thought it would be neat to allow for an animated human being to be projected onto a heads-up device, to create the illusion of conversing, and touching with a computer generated person, making them seem more alive. To make that happen, they created a three dimensional [avatar](#), in software and then a green-material covered [robot](#) that exists in the real world. When a person wearing the goggles looks at the robot, they see the projected image of the avatar—in 3D, overlaid onto the robot. And as if that's not enough, the robot can move its head, torso and arms, which means it can reach out and touch, and be touched by the person wearing the goggles as well, adding a dimension of [intimacy](#) that has never before been seen with an augmented reality device.

At this point, the avatar is just that, a computer generated image of an imaginary person. But it's not difficult to see the concept being extended to people sitting in front of 3D [video cameras](#) (and Kinect devices), allowing for remote virtual touching. Reps for Different Dimensions say the company will be ready to begin taking orders for the new system as early as this March, though prices will be steep, ranging from \$4,800 to \$5,300.

**More information:** [wingover.jp/](http://wingover.jp/)

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