Holographic Reality



Holographic Reality is a necessity born from the information age. It is a new medium through which the digital world materializes into our own, allowing us to better grasp and interact with digital information.

Unlike Virtual or Augmented Reality, Holographic Reality does not require any eyewear, which is an important distinction. 3D holograms come directly out of a screen, can be manipulated in mid-air by gesture, and might even provide a physical sensation of "touch". Real-world objects and faces can be digitized and incorporated into the imagery in real time, providing a fundamentally new way to communicate with other people or with our intelligent machines.

Ever since Doug Engelbart presented the first modern computer interface with his famous "Mother of All Demos," we have strived to achieve more intuitive ways to interact with digital information. That interface has not fundamentally changed over the past half-century, though, even as the scope of information continues to exponentially increase. As we now look to computerized Al to help us navigate and make sense of all of our shared data, we also require a new way to present the information that is intuitive and useful to us.

Our reliance on technology and information will only increase, and our interfaces must likewise evolve.

We are starting to routinely feed the digital world with all kinds of real-world data to help us make faster, better decisions in our professional and private lives. We will increasingly trust intelligent systems to use health data, consumer patterns, social media behaviors, air pollution, driving records, and all other forms of data to perform daily tasks and make routine decisions for us. Self-driving cars will transport us safely and smart-home systems will keep us warm, fed and entertained. We will spend less time in mundane tasks, like driving, shopping and cleaning, and more time interacting with intelligent systems. Communication with these systems will become the integral part of our lives. Technology again will help us make that communication more efficient, intuitive, and even human-like.

In the near future, the digital world will start blending into our own.

One the one hand, Virtual and Augmented Reality (VR / AR) devices will immerse people in the digital world with a headset. These technologies are important ways of re-imagining how we can interact with digital data, but they are all-encompassing and seek to make the user part of the digital.

Holographic Reality, on the other hand, takes the opposite approach. HR is based on holographic screens that do not require any eyewear to function. These screens will be able to project interactive holograms (3D objects made of light) that can be manipulated in mid-air by finger or hand gestures. Augmented by Haptic technology (tactile feedback), these screens will even let us "feel" the holographic content physically at our fingertips. HR brings the digital world to life in our own.

HR will be everywhere: on your phone, tablet, watch, at home on any appliance, in your car, office, you name it. It will allow you to project yourself as a hologram on any device in the world and receive holographic communications in real time from anywhere. We will be able to visit virtual stores, or attend a virtual meeting, class, or conference from anywhere in the world. We will play games with holography, but also visualize complex data, art, and tutorials. HR will enable telepresence for medicine, exploration, or defense applications.

HR will be our primary means of communication, not only with other humans but also with Al systems. And it will be the medium through which Al systems express themselves to us.

At LEIA, we are pioneering Holographic Reality. Our holographic screens can create fully interactive holograms via nanotechnology, yet they are fit for mass markets TODAY since they use LCD panels, a very mature display technology. We have worked hard to take this marvel of nanotechnology out of the forges of Silicon Valley and make it available to the public for the first time in the form of a Developer Kit.

The Dev Kit will let you project holographic content that can be manipulated in a number of ways, by direct finger interaction using the default Hover Touch panel, or with a partner technology such as the Leap Motion controller of Intel Realsense.

Through continuous innovation, our displays will get better and better. They will incorporate the latest in gesture recognition and haptic technologies to give you full and intuitive control over the content with actual tactile feedback. They will adopt various shapes, curved or flat, to better fit your design aesthetics. Soon, they will even turn transparent, a feature enabled by our proprietary "Multiview Backlight" technology.

In the meantime, we invite you to try what Holographic Reality will feel like by <u>ordering a Dev Kit</u> today!



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