Leap motion

The Leap Motion controller is a small USB peripheral device which is designed to be placed on a physical desktop, facing upward. It can also be mounted onto a virtual reality headset. Using two monochromatic IR cameras and three infrared LEDs, the device observes a roughly hemispherical area, to a distance of about 1 meter. The LEDs generate pattern-less IR light[25] and the cameras generate almost 200 frames per second of reflected data.[26] This is then sent through a USB cable to the host computer, where it is analyzed by the Leap Motion software using "complex maths" in a way that has not been disclosed by the company, in some way synthesizing 3D position data by comparing the 2D frames generated by the two cameras.[27][28] In a 2013 study, the overall average accuracy of the controller was shown to be 0.7 millimeters.[29]

The smaller observation area and higher resolution of the device differentiates the product from the Kinect, which is more suitable for whole-body tracking in a space the size of a living room.[30] In a demonstration to CNET, the controller was shown to perform tasks such as navigating a website, using pinch-to-zoom gestures on maps, high-precision drawing, and manipulating complex 3D data visualizations.[30]

Leap Motion initially distributed thousands of units to developers who are interested in creating applications for the device. The Leap Motion controller was first shipped in July 2013.[7] In February 2016, Leap Motion released a major beta update to its core software. Dubbed Orion, the software is designed for hand tracking in virtual reality.[31][32]