



7 Things about Leap Motion

1 - What is it?

The Leap Motion Controller is a small device that connects with a PC or Mac and enables users to manipulate digital objects with hand motions.¹ Working with other hardware the Leap Motion controller adds a new way to interact with the digital world.² Programs designed to interpret gesture based computing allow the user to play games, create designs, and learn in a 'hands on' way.³

2 - How does it work?

The Leap Motion Controller uses an infrared scanner and sensor to map and track the human hand. This information is used to create, in real time, a digital version of the hand that can manipulate digital objects.⁴

3 - Who's doing it?

The Leap Motion Controller was developed in San Francisco California by the Leap Motion Incorporation.⁵ Their software is open to developers who want to create new programs that use their technology in creative ways.⁶ As of early 2014 the Leap Motion Controller costs \$79.99.⁷

¹ <https://www.leapmotion.com/product>

² <https://www.leapmotion.com/product>

³ <https://www.leapmotion.com/>

⁴ <https://learn.sparkfun.com/tutorials/leap-motion-teardown>

⁵ <https://www.leapmotion.com/company>

⁶ <https://developer.leapmotion.com/>

⁷ <http://store-us.leapmotion.com/>

4- Why is it significant?

Up until this point nearly all interactions with computer programs required an intermediary step (Mouse, keyboard, etc.) between the human hand and the digital environment. The Leap Motion Controller is a big step towards bridging this gap and allowing humans to manipulate computer programs in a similar manner that they manipulate real world objects.⁸

5 - What are the downsides?

The Leap Motion Controller only works with programs that are specifically written for it.⁹ This means that what it can do is strictly limited to the programs that were built with the Controller in mind. Also, while much of the software works very well¹⁰ it has a tendency to be inconsistent.¹¹

6 - Where is it going?

With the ability for developers to design their own software for the Leap Motion Controller its creative potential is incredible.¹² The creators of Leap Motion have put the tools into the hands of others to experiment with and modify. This is already leading to the development of new, unique, software and uses for this technology.¹³

7 - What are the implications for higher education?

Because Leap Motion Controllers allow users to manipulate 3D objects in an instinctual way they can be used to familiarize students with complex structures. Currently anatomy students with Leap can use software like Cyber Science 3D¹⁴ to dissect a body and chemistry students can examine molecules from the RCSB protein bank¹⁵ using the Molecules program.¹⁶ Both are just a few examples of the educational benefits of gesture based computing.

⁸ <https://www.leapmotion.com/product>

⁹ http://www.nytimes.com/2013/07/25/technology/personaltech/no-keyboard-and-now-no-touch-screen-either.html?_r=0

¹⁰ <http://www.engadget.com/2013/07/22/leap-motion-controller-review/>

¹¹ http://www.nytimes.com/2013/07/25/technology/personaltech/no-keyboard-and-now-no-touch-screen-either.html?_r=0

¹² <https://developer.leapmotion.com/>

¹³ <https://developer.leapmotion.com/>

¹⁴ <http://www.cyberscience3d.com/leap.php>

¹⁵ <http://www.rcsb.org/pdb/home/home.do>

¹⁶ <https://airspace.leapmotion.com/apps/molecules/osx>