Written by Marco Attard 28 February 2013

The PC desktop of the future might leap from the 2 dimensions of old-- MIT graduate Jinha Lee presents the SpaceTop at the 2013 TED conference, a 3D desktop environment where users "reach inside" the computer.



First developed at Microsoft Applied Science, the SpaceTop desktop unites 2D touch-based Uls, gesture-based control systems (such as Leap Motion or Kinect devices) and 3D visuals with the combination of transparent LED display, keyboard and a pair of cameras.

Users place their hands behind the transparent display, which acts as a "box" one manipulates the UI in. One camera tracks hand gestures in 3 dimensions (allowing users to grasp and flick through objects on the display) while the other camera tracks eye position to maintain the illusory 3D environment on the display.

SpaceTop demos shows different interactions, including one where one hand scrolling through a document before the other reaches up and flips through a pile of folders and another where a 3D model is created with free-form manipulation.

Also shown by Lee at TED are a collapsible pen one can push "inside" the display and a smartphone app /augmented reality goggles combination allowing users to "try on" a virtual watch before puchase from an online store.

Watch This: SpaceTop

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"Programming the world will alter even our daily physical activities," Lee says. "With our two hands we're reaching into the digital world."

The interfaces on display are still in early stages, and it is unclear whether they will gain mainstream adoption or become the preserve of scientists and architects. But Lee insists 3D interfaces "should be in the hands of normal people... It's really important to have that eye when we think about what we want to do with this to design a beautiful world. It could be anything when the power of digital escapes the screen but it's really our responsibility to design this together."

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