While Microsoft already covers full-body motion control with the Kinect, its Cambridge-based R&D lab reveals a portable means for tracking the 3D pose of an entire hand-- without the need for Minority Report-style "data gloves."

Dubbed the "Digits Project," the wrist-mounted device takes some inspiration from the Kinect. Using diffuse infrared light, IR laser, camera and inertial measurements the system software builds a 3D model of the moving hand the researchers claim is accurate to within one hundredth of a centimetre.

We had to use technologies that are small and use less power," project leader David Kim says. "It shouldn't interfere with daily activity, and we wanted to enable continuous interaction."

The prototype unit might appear a bit bulky, being the size of 2 ping pong balls-- but then again it consists of off-the-shelf hardware tethered to a laptop. The team has ambitions of shrinking it into a wireless unit the size of a wristwatch.

How can one use the Digits device of the future? The team says the system is a "general-purpose interaction platform," suggesting uses such as eyes-free mobile device control and game control applications. With other companies (such as Leap) getting into gesture-based control, expect much more hand waving to feature in the near future...

Watch Digits Hand Tracking

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