

Mouseless, the 'invisible' computer mouse (w/ Video)

July 8 2010, by Lin Edwards



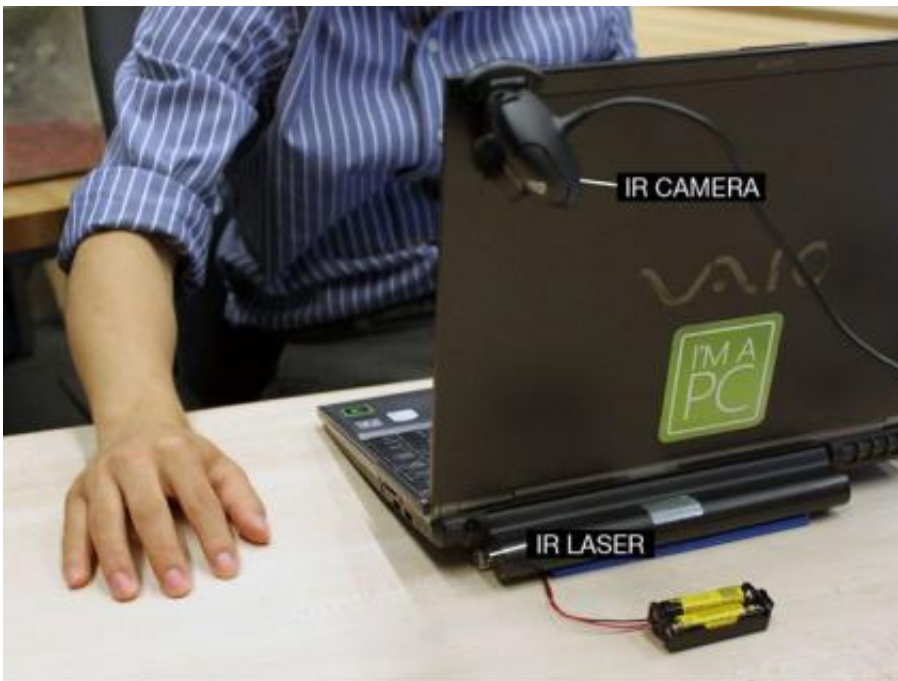
(PhysOrg.com) -- Mouseless is a computer mouse that allows you to interact with a computer with a mouse in the same way as usual - except that there is no mouse hardware. The researchers call it an "invisible mouse."

A group of scientists working with the Fluid Interfaces Group at the Massachusetts Institute of Technology (MIT) Media Lab in Cambridge Massachusetts, were interested in removing the requirement for a physical [mouse](#), while still allowing computer users to interact with their computers in a way with which they were familiar.

The researchers, Pranav Mistry, Liyan Chang, and Pattie Maes, developed an infrared (IR) laser beam and associated camera that could be incorporated into the computer so that a plane of IR laser would be created just above the surface on which the [computer](#) is resting. The user

acts as though a physical mouse were present and the [laser beam](#) is intersected by the hand, and parts of the hand are shown up as bright spots of light that change position as the hand moves. The built-in camera then interprets the changes in position of the hand and fingers and translates them as moves of the mouse and clicks on the two buttons, and the [cursor](#) on the screen moves as if the user was operating a physical mouse.

There are no plans for commercializing the "invisible mouse," but the prototype Mouseless was built for around \$20 USD. The MIT group of researchers are now working on improvements to the recognition and tracking algorithms with the aim of building up an expanded command library. This may in the future lead to more complex [gesture recognition](#) than is possible at present, and could ultimately give the Mouseless a number of advantages over a physical mouse, since the number of functions handled by a physical mouse is limited.



Mouseless working prototype system

The MIT Media Lab's Fluid Interfaces group works on ways of integrating the world of digital information and services more naturally into our normal lives, by designing intuitive and intelligent interfaces.

Pranav Mistry is a PhD student and research assistant at MIT Media Lab. His project "SixthSense" won the *Popular Science* Invention of the Year award in 2009.

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More information: www.pranavmistry.com/projects/mouseless/

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