

## **Where do you see web development going in the next five years?**

by Max von Hippel

Natural user interfaces (NUIs) are user interfaces which rely on movement or touch sensors (such as the Leap Motion controller or the Xbox Kinect) to allow users to interact with the digital world through the same modes of communication as they do with the real world. For example, in an application exploring the elements for desktop, a NUI approach would let users manipulate 3D models of the atoms by moving their hands around as if they were holding the atom(s) in their hands. This sort of approach negates the need for traditional UX design and replaces old forms of interaction with a seamless experience between the natural and digital worlds, in which we interact similarly with both.

Web design has long been relatively hardware independent. Certainly some hardware does not support Flash, or is not powerful enough to run a website, but it is nigh on impossible to find a site which requires a specific type of keyboard or model of computer to work. In the future I believe that certain types of technology will become so ubiquitous that websites will be able to require them, and I count natural user interface sensors chief among them. We have relied too heavily on the mouse and keyboard for too long- NUIs present an alternative which is in some cases far more effective. I should be able to flick through webpages as I would turn pages in a book, and grab and save links as I would pick up interesting stones on a beach. The internet is a world unto its own, anarchic and weird, and I should be able to interact with it in as much detail as I do with the physical world.

I predict that new modes of communication will rise through the advent of the NUI. I predict that augmented and virtual reality, NUIs, informatics and other emerging computational fields will fundamentally change web design. The internet is interesting specifically because it is not static- as proved by the dark web, among other things- and we have moved on from the Netscape era. In the next five years much will change, and I only hope the mode of communication between and us and the internet will be chief among them.