

24 August 2007

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LucidTouch  
Patrick Baudisch

## [Windows Aero Is Old News - Introducing LucidTouch User Interface](#)

*For transparent mobile devices from Microsoft and Mitsubishi research*

If you think that Microsoft's journey into the development of natural user interfaces has stopped with the availability of [Surface](#), then think again. The Redmond company is hard at work in a collaboration with Mitsubishi Research to produce LucidTouch. Speaking at the Financial Analyst Meeting 2007 in July, Microsoft Chairman Bill Gates, underscored the fact the upcoming 10 years in computing evolution will be focused - among other things - on developing natural user interfaces. A natural UI is of course designed to scrape the products that have become traditionally associated with the interaction model between humans and computers such as the keyboard or the mouse. The upcoming steps in computing technology will bring a range of innovations. "The one that's perhaps not as fully appreciated as some of the others: natural user interface," Gates stated. "This is the idea that just typing and using the mouse is only one of the ways that we'll interact with these machines. The arrival of cheap cameras with great software, the ability with the pen to write on a surface, have that be recognized; the ability to recognize speech-those are going to come into the experience, and those are central to allowing computing to be pervasive. (...) Natural user interface-you're actually seeing a bit of this in Microsoft products and other products," Gates added referring to Microsoft Surface, but also to the iPhone from Apple and the Nintendo Wii. But in addition to Surface, Microsoft is working on other projects designed to deliver natural interfaces in the hands of the users. Just take a look at the video embedded at the bottom in order to make an idea of what LucidTouch is all about. Of course, currently, LucidTouch is nothing more than a prototype, and it is still a long way away from being integrated into a marketable and commercial product. Essentially, LucidTouch is a natural user interface meant for transparent mobile devices allowing the users to use multiple points of contact in order to interact with the product. Because of the pseudo-transparency mechanisms, users are able to use all 10 fingers simultaneously, as the back touch pad comes with multi-touch input capabilities. "Touch is a compelling input modality for interactive devices; however, touch input on the small screen of a mobile device is problematic because a user's fingers occlude the graphical elements he wishes to work with. LucidTouch is a mobile device that addresses this limitation by allowing the user to control the application by touching the back of the device. The key to making this usable is what we call pseudo-transparency: by overlaying an image of the user's hands onto the screen, we create the illusion of the mobile device itself being semitransparent," revealed Microsoft researcher [Patrick Baudisch](#).