KINECT THE FUTURE

Microsoft's Golden Opportunity

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Since the Office suite, Microsoft has not been able to produce an immediately profitable product, let alone an industry-defining one. The launch of the Xbox Kinect presents Microsoft with the unique opportunity to reposition itself as a pioneering company, or miss the boat on another piece of revolutionary and valuable technology. Designed to replace the Xbox controller, the Kinect uses 3D motion-sensing technology to detect movements in the human body, allowing players to use natural gestures to interact with the video game console. The true value of the Kinect, however, lies beyond gaming. Limited only by the practically infinite combinations of movements of the human body, Kinect technology has the potential to dethrone the reigning champion of human-computer interaction – the mouse.

The Success of the Kinect

Since its launch in November 2010, Microsoft has sold over 10 million Kinect units, making it the fastest selling consumer electronic device in the world. According to Engadget, the ratio between Kinect units and games sold is nearly 1:1, demonstrating that a significant portion of consumers buy Kinects for applications beyond the Xbox.

The applicability of Kinect's Natural User Interface (NUI) technology to both consumer and business markets makes the product particularly exciting. *The Globe and Mail* reports that the

> "You can immerse yourself in the experience. You don't have to take time out in this world to go be with the technology. You're in the environment of what you're doing, and the technology… these new styles of user interface let you immerse [yourself]."
>
> - Steve Ballmer
> CEO, Microsoft

Kinect is already being used in hospitals to allow doctors to use "hand gestures to zoom in and out of images… without leaving the operating table." In the oil and gas industry, Ballmer was excited to promote its use as a web conferencing device with the ability to manipulate 3D models of an oil well via cloud computing. The value of the device beyond consumer electronics is why the Kinect has such significant future potential and is why it has been so successful.

The Kinect has fallen into a category beyond home entertainment; it's pioneering its own genre of technology, its own industry with no one at the helm. There is no clear direction for the blossoming industry and competitors already are and will continue to react to this market. Capitalizing on the power of this NUI technology must be Microsoft's priority in the coming months.

Introducing Kinect Hackers

While Microsoft designed the Kinect as a video game controller, independent programmers, known as Kinect hackers, had other ideas: applying the technology to desktop computing. This underground community extends beyond the at-home enthusiast to research labs at prestigious schools such as MIT. One program built at MIT allows users to manipulate pictures on their desktops using mid-air gestures. The Kinect allows users to experiment

with a new paradigm of human-computer interaction, spurring innovation by giving people affordable access to tools to create what we have, to date, only seen in futuristic films like Minority Report.

Applications and Potential Value Beyond the Gaming Market

Microsoft currently sells the Kinect at cost, profiting from royalties paid by video game developers and by providing the Xbox Live service. In order to capture value outside the gaming market, different software applications for the Kinect are essential.

At the time of launch, however, Microsoft did not fully understand this. When CEO Steve Ballmer was asked about Microsoft's vision with respect to applying the Kinect technology to a variety of different fields, he replied, "For Kinect it's the Xbox" - a seemingly shortsighted view.

After years of relatively stagnant product design, Microsoft has an opportunity to reestablish itself as an innovator and create a new standard for consumer interaction technology. Microsoft must stop treating the Kinect as a niche home entertainment product and embrace its true value. The next few years will be defined by Microsoft's current actions to recognize the niche product, acknowledge independent developers, transform and standardize it as a unique part of its Windows computing platform, and ramp-up the development of its endless applications. The Kinect should be company defining, extending far beyond the Xbox.

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Shrinking Time Frame to Act

In the last two years, the Windows Operating System (OS) has lost 2.6% market share per annum. Failing to seize this NUI opportunity would surely contribute to this negative trend and perhaps accelerate it.

Competitors also realize the potential of NUI technology in consumer electronics. Asus, originally a computer product manufacturer, is working with Microsoft's Kinect supplier PrimeSense to produce a device for PC-to-television browsing. To tempt Kinect hackers into developing code for the Asus platform, Asus prepared a scheduled developer kit launch in 2011 and expects to bring its product to market in Q2 2011. While Apple's customers have settled into their touch interface comfortably, Elliptic Labs has produced a motion sensing dock station for Apple's iPad. With an intended release of a software development kit set for spring 2011, Microsoft may have soon forfeit its first-mover advantage, a key factor in a product's success.

Given the strength in innovation of most of its competitors, it isn't a question of 'if' but 'when' they will release a competing product. In order to defend against these new entrants, Microsoft must move quickly.

What has Microsoft Done so Far?

Since Ballmer's address, Microsoft has hinted towards repositioning itself, calling the Kinect "the first incarnation of the next big thing in computing." Microsoft has also taken steps reactively to support the budding underground Kinect development community. It recently announced the release of an official software development kit (SDK) for the Kinect in spring 2011 to encourage third-party development. This release will allow users to openly develop a variety of PC applications to take advantage of the Kinect hardware and software. Microsoft has decided to package the Kinect SDK into an obscure pre-existing application environment (originally for Xbox game development) called the XNA community. Unfortunately, this development environment discourages innovation with high registration fees for developers, a declining user base, and fragmented access points for application purchases.

Although Microsoft purchases its Kinect camera from PrimeSense, it recently acquired Canesta, a competing American company. Acquiring Canesta has many benefits for Microsoft, most notably Canesta's range of patents for the world's smallest 3D sensor capable of being embedded in PCs, laptops and even smartphones. During the acquisition talks, Canesta CEO Jim Spare was quoted: "With Microsoft's breadth of scope from enterprise to consumer products, market presence and commitment to Natural User Interfaces, we are confident that our technology will see wide adoption across many applications that embody the full potential

of the technology." Through this acquisition, Microsoft insourced a drastically different culture of innovation, perhaps powerful enough to affect Microsoft's current view of the device.

Releasing the Kinect and taking steps to support Kinect developers has helped Microsoft in two ways. First, it allowed customers to sample the technology and begin adjusting to NUI. Second, it pushed Microsoft to the centre of attention for independent developers, driving innovation and generating hype for the next best Kinect hack.

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What Should Microsoft Do?

To date Microsoft has failed to capitalize on the Kinect opportunity. The company needs to ensure that developers bring innovative ideas to Microsoft rather than competitors, which will require providing developers with large-scale distribution through a revamped app store and investing significantly in R&D to shrink the Kinect camera for mobile application as soon as possible. The end goal should be to incorporate NUI technology into its next Windows OS, thus cementing Microsoft's OS as the leading platform for NUI, recapturing OS market share and rekindling innovation in a stagnant company. The benefits of this plan are long-term: if Microsoft establishes itself as the standard in this emerging market, similar to the Office suite, rivals will be unable to compete.

To build a competitive advantage over its NUI competitors, Microsoft should replace its failed XNA community with a new centralized app store that improve its front-end distribution strategy and offloads the cost of developing new applications for its software. When combined with the Canesta acquisition, these investments will help create substantial barriers to entry against competitors, building a significant application base and controlling its entire value chain.

In order to implement NUI technology, Microsoft should prime the market for the technology by selling applications at cost and transferring earnings to its developers. A 90:10 split of profits between developers and Microsoft would motivate innovative ideas and compete strongly against Apple's typical 70:30 split, while covering the full cost of the Kinect application. Additionally, Microsoft earns 70% margins on its operating systems; therefore, it is in their best interest to sell operating systems rather than Xbox units, Kinects, or applications.

In conjunction with the OS release, Microsoft must work to bring the Kinect technology to the mobile market. Working with Canesta, the size of the Kinect camera needs to be decreased in order to embed it into a laptop, tablet or mobile phone. This proposal will be difficult for Microsoft, since it does not control the manufacturing of the devices installed with Windows OS. Microsoft must work directly with its manufacturing partners to ensure that the Kinect camera becomes a standard on future devices.

A key concern is whether Microsoft is prepared for this drastic shift in the way it operates. For years, Microsoft played it safe, choosing to upgrade the Windows OS every two to three years with minor add-ons and fixes. Having recently launched failed products like the Zune media player, Kin mobile phone, and Windows Vista, Microsoft's lack of innovation is apparent. To successfully transform, the company needs to change its corporate culture from a 'play it safe' motto to an innovation-driven philosophy.

Incorporating NUI with the next Windows OS is in Microsoft's best interest. Microsoft must next consider how its competitors will react. Apple and Google are positioned well in the operating system, laptop and mobile phone markets and will surely react to any success Microsoft has in NUI technology. Yet, because Microsoft can leverage its value chain against these competitors, the faster it seizes this new market, the better positioned it is for sustainable growth.

It's time to wake up Microsoft - the Kinect is your future.

Proposed Kinect Value Chain

Microsoft

| Third Party Developers | NUI technology (Kinect) | Operating System | Consumers |

receive 90% of app revenue — provide app store — integrate with Windows 8

Hardware Producers

embed cameras within laptops & desktops