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Gates Digs Surface Computing

Microsoft's chairman talks about the company's new tabletop computer technology that relies on touch and hand gestures

The last time computer scientists truly changed the way people communicate with PCs, they created the mouse. Microsoft Chairman [William H. Gates III](#) thinks his company might have the next breakthrough.

On May 30, Gates is unveiling a new technology called Surface Computing that lets people interact with computers using touch, hand gestures, and physical objects equipped with optical tags. The technology turns tabletops into dynamic canvases so users can, for example, browse their music libraries by dragging a finger across the horizontal display or maybe comparison-shop at an electronics store by simply plunking devices onto the screen.

This is more than just touch-screen computing. The screen, which has a set of cameras underneath it, can read 52 touches at a time, meaning small groups can work around it together. The computer can also recognize optical tags on an object, such as a digital camera with Wi-Fi. Then, by just placing the device on the tabletop, folks can automatically zip their pictures onto the computer, then edit them by hand on the screen.

DEVELOPING AN ECOSYSTEM

Microsoft ([MSFT](#)), which will make the hardware as well as the software, plans to limit the initial market to showcase establishments where consumers can learn about the device. The first 30-inch tabletop units, priced between \$5,000 and \$10,000, will debut in November, primarily through hotels and retailers.

Microsoft says Harrah's Entertainment ([HET](#)) will be among the first, introducing Surface Computers at two Las Vegas properties, Caesars Palace and Rio All-Suite Hotel & Casino. There, guests will be able to place their rewards cards on one of several tabletop computers to purchase concert tickets or make restaurant reservations. T-Mobile USA ([DT](#)) plans to use the computers at its stores. Customers will be able to compare cell-phone models by simply placing them on the screen, triggering pop-up windows that detail the assorted features. Then, customers can dive deeper to learn about rate plans as well.

It will be at least a few years before a consumer will be able to buy a Surface Computer and bring it home. To get there, Microsoft will need to create an ecosystem where software developers are motivated to write must-have applications. "This thing is only cool if it works seamlessly," says Roger Kay, president of market research firm Endpoint Technologies Associates. "If it works well, it's game-changing." Should those stars align, Kay says, sales could reach into the low billions of dollars in five years. "Individuals are going to want this much faster than Microsoft is going to be able to deliver it to them," he adds.

Gates talked with *BusinessWeek* Seattle Bureau Chief [Jay Greene](#) about the potential market. An edited transcript of their conversation follows.

Is this an entirely new market?

It's new and it's not. As you start to see it in commercial establishments, in meeting rooms in businesses, in high-end homes, you'll think of it as separate. Eventually this becomes a feature that you'd like to have in lots of PCs. This really is just a Windows Vista PC with the addition of the infrared cameras, and then the magic of the software makes you feel like you're just manipulating the physical world. So it starts out as kind of a separate thing, but go out five years and you'd like to have this horizontal surface just be part of everything you're doing.

As it reaches that point, does it become a secondary PC, or is the technology just going to be part of every PC purchased in five years?

At first, we ought to think of it as complementary, that you have the PC in your office and the Surface Computer in the living room. The simplest way to talk about it is that they're connected up, and the Surface device can control all your TV sets, or whatever vertical projectors exist in the household environment.

How big of a market can this be?

Well, it's certainly a market that is going to be many billions of dollars as we get to different form factors and usage. Why, five years from now, wouldn't you have this in every business meeting where there's a table so you can pull in information and share it? You want those people to be productive, and the hardware over time just gets to be cheaper and cheaper. Likewise, in the home environment, why wouldn't you use this to pick out music with someone else? No doubt natural interface will win out. It's one of these things like graphical interface, that when it wins out, people will wonder why they even questioned that. This is going to be very mainstream stuff.

You said you thought this could be many billions of dollars as a business. How quickly do you think you get to that?

Well, we're not the market forecast experts. I think there will be the pressure on us to get it into a boardroom table or a desktop. I think we'll get a ton of interest in that. I'd expect big things over a five-year time period, but we're not able to be numeric about it. Our goal is to make sure we lead in these things. We can be patient about just making sure we're not the ones holding it back.

You mentioned that you'll see this in high-end homes. The last time I checked, you had one of those. What's the application that you can't wait to get in your house?

I've had a high-end system in my home that actually had touch-screen. Now (a Surface Computer) is much better because it's bigger, it's richer in terms of the interface, you can play kids' games with kids, have it go away, have it come back. So it's just a lot better. This will be a key element when I do version two of (my) home software. I'm just doing the architecture for what that will be like. It will be two or three years, but the Surface Computers will play a central role.

Xerox Color. It makes business sense.