Is Windows 8’s Lack of Windows a Mistake?

Usability guru Jakob Nielsen says Microsoft’s new OS takes a giant step backward

BY Steven Cherry // Fri, December 07, 2012

**Steven Cherry:** Hi, this is Steven Cherry for *IEEE Spectrum*’s “Techwise Conversations.”

Back in January, we had an article in *Spectrum* about whether Windows 8 could succeed in what we called [Microsoft’s greatest challenge ever](http://spectrum.ieee.org/computing/software/windows-8-a-redo-from-redmond): writing a single operating system that would work not only on the desktops and notebooks of yesteryear but also the tablets and smartphones of tomorrow.

Microsoft first showed Windows 8 at a conference about a year ago. We quoted one attendee who was "blown away” by what he saw. He said, “They have what looks like two different operating systems side by side. And the part that took everybody by surprise was that you're switching back and forth between them casually.”

It was a stunning technical achievement, but the question remained: Will it do the job for the millions of users who need to log into the billion or so Windows devices out there in the world?

Recently, [software guru Jakob Nielsen](http://www.useit.com/) gave [Windows 8 a thorough vetting,](http://www.useit.com/alertbox/windows-8.html) with usability testing on both desktops and tablets. His verdict? Journalist Preston Gralla of *Computerworld* summed it up this way: “[Windows 8 is bad on tablets and even worse on PCs](http://blogs.computerworld.com/windows/21357/interface-design-guru-windows-8-weak-tablets-terrible-pcs). [Nielsen] blames dueling interfaces, reduced ‘discoverability,’ ‘low information density,’ and more.”

That sounds terrible. And if true, it will be terrible for the millions of people using millions of computers and mobile devices, [82 percent of which still run one version or another of the Windows operating system](http://www.netmarketshare.com/os-market-share.aspx?qprid=9). It will also be terrible for Microsoft, if its bet-the-farm wager on Windows [comes a cropper](http://www.phrases.org.uk/meanings/come-a-cropper.html).

So I invited Jakob Nielsen to describe Windows 8, since most of us haven’t even spent any time with it yet, and to tell us just what’s wrong with it. He’s the cofounder, with another legendary software and interface expert, Don Norman, of the Nielsen Norman Group, in Fremont, Calif.; he’s the author of Useit.com, the website on which he published his Windows 8 usability report; and he’s my guest today by phone.

Jakob, welcome to the podcast.

**Jakob Nielsen:** Thank you, Steven.

**Steven Cherry:** Here’s your complete summary: “Hidden features, reduced discoverability, cognitive overhead from dual environments, and reduced power from a single-window UI and low information density.” And then you wrote, “Too bad.” Let’s take them in reverse order. “Low information density”—what’s that?

**Jakob Nielsen:** Well, that just means that you get relatively little information on the available screen space, and certainly for different sizes of screens they can give you different amounts of information. If you have a phone, that will inevitably have little information, but if you have a bigger screen and a tablet you want more, and if you have a really big screen like on a desktop you want even more. And so, having a design that works well for a phone will not work perfectly in a tablet, and it will work terribly on a PC. And the problem is when you just look at screen shots in, let’s say, advertising or marketing literature, the Windows 8 designs look rather pretty and colorful and nice—and you might even say clean, as opposed to cluttered, as a lot of older designs do. But the problem is that once you start using them, you discover that you get very little information on any given screen. Particularly on the big screens, there’s a lot of wasted space; everything is really big and bright but doesn’t actually tell you very much. And in the long run, which means the sustained daily basis, that is just not acceptable. That is not why people use computers.

**Steven Cherry:** So, the next one up was “reduced power from a single window.” Is that just more of the same problem?

**Jakob Nielsen:** It’s a related problem. It also stems from their big mistake, which is to try to have to do a single design for everything because a single window works perfectly on a phone—I mean, you have to have just one window when you just have that small a screen. On a tablet, I would say most of the time a single window is good on a tablet as well; you want that kind of full-screen environment and focusing and doing one thing at a time. Now, we scale up to the desktop computer, and that falls apart completely because you want to do multiple things. I mean, the reason the entire system is called Windows with an *s*, with a plural, is that it comes from the realization that the older approach of using computers with a full-screen design didn’t really work for the modern office environment: for the knowledge worker, for the power user. You know, we did user testing on Windows 8, and people had a very hard time doing tasks that involved doing more than one thing. Let’s say one thing we tested was a task that said, “You want to make a list of three possible things to go out to see”—so, like movies or concerts or whatever—and send that list to a friend. So, “I’m going to propose you a list of three different things to do”—that’s kind of the scenario. And that was very clunky. I mean, they could do it, but it was just too much work. That’s the type of things that the Windows computers should be able to do easily, but what I say is they shouldn’t call it Windows any more; they should call it Microsoft Window, in the singular, because it’s just one window. It’s not enough.

**Steven Cherry:** It’s kind of ironic. The very first version of Windows didn’t do windows; it could tile information, but it couldn’t actually switch between applications, and we’re kind of going back to that. And I guess there’s another irony, that it’s never been cheaper or easier to have a large screen or multiple screens attached to your computer, and that’s what most people do these days.

**Jakob Nielsen:** Completely. And that’s been the trend for the last 20 years or so, has been bigger and bigger monitors, because being able to see a lot of information at once is vastly superior to seeing some information at one point in time and then later some other information. Because that notion of switching environments or switching views presents a large burden on your short-term memory, to remember what you saw even just 5 seconds ago. It’s already weaker than just switching your eyeball and just looking at it. I should point out, by the way, that some people have kind of criticized my analysis, but they do actually allow you to have several windows if you go into the legacy mode. And on the one hand, that’s true, they do have a legacy mode. On the other hand, that almost kind of proves that the new design doesn’t work, that they feel the need to maintain a legacy mode. And also, that introduces its own set of usability problems because now you have two different user interfaces on the same computer, and you have to remember what you can do, where you have to switch between them. Again, just switching environments is in its own right cognitive overhead.

**Steven Cherry:** Yeah. That was the very next one on your list, “cognitive overhead from dual environments.” The one after that or before is “reduced discoverability.” I guess discovery is a good thing, so reducing it is bad—but what is it?

**Jakob Nielsen:** Well, discoverability means whether you can find out or discover what features or support you have available from the system at any given time, as opposed to having to remember it or just know it. And people are just not very good at remembering things, whereas they’re much better at noticing things and being reminded, “Oh yeah, I could do this.” And so, if things are visible, they’re much more likely to be used, and this was the last revolution in user interfaces. The big revolution in user interfaces was the graphical user interface that made that change to a much more discoverable user interface, because things were now represented on the screen by icons, by menus and so forth, as opposed to the older style of DOS and the Unix line-mode interface and so forth—command-line interfaces, where you had to just know what the commands are as opposed to being told what the commands are. And the history has shown that graphical user interfaces were, in fact, successfully used by vastly many more people than the people that were able to use the command-line interface. Now they’ve taken a lot of this away by hiding the icons, by hiding the menus, by making it that you had to remember, you had to, like, put your mouse in the upper right-hand corner to reveal things. Now sometimes you have to do this because of reasons of lack of space.

So again, if you think about designing for a phone, a very small screen, you cannot show all the icons, all the menus, at all times because then there would be no room left for the content.

**Steven Cherry:** Yeah. You mentioned the icons, and Microsoft has kind of moved away from icons in this environment, although as you say they are available in the legacy environment. The new environment uses tiles, and a friend of mine, another journalist colleague, [Wayne Rash of *eWeek*, he reviewed the Nokia 810 phone](http://www.eweek.com/mobile/nokia-lumia-810-from-t-mobile-shows-windows-phone-8-to-good-advantage/) recently, and it uses Windows Phone 8. He thought that the tiling was a great feature. Let me just read you what he wrote:

*Once you get used to the tiles, they are as intuitive as the icons on Android and iOS devices, and more useful. There’s less wasted space on the screen and in many cases the tiles include live content. For example, when I* [*downloaded*](http://www.windowsphone.com/en-us/store/app/weatherbug/49518004-03d7-df11-a844-00237de2db9e) *the WeatherBug app, the tile on the start page gives me the current conditions for my location. With* [*the iOS version*](https://itunes.apple.com/us/app/weatherbug/id281940292?mt=8) *of the app, I get a WeatherBug icon. Seeing the current conditions at a glance is more useful.*

Is it possible Microsoft created a great smartphone operating system that’s a terrible computer and tablet OS?

**Jakob Nielsen:** I think that’s probably the real story behind it—that they knew they were in trouble on the phones, where Apple and Android have really been dominating. And so they probably emphasized that, to the detriment of their vast traditional customer base of all the business users and even also the home users as well. Going back to the tiles, I think that’s a good example of it’s not 100 percent clear-cut that user interface design is something that’s good or bad, because I do think the tiles have some benefits. Because first of all the tiles are rather big, and that means that they are easy to touch, so on a phone or a tablet that’s a great advantage; you don’t want these tiny little things that are very error prone to touch. So that’s good: the tiles are easy to touch. That’s a great benefit. Secondly, as pointed out in the quote you just read, they have what’s called “live tiles,” that the information inside the tile will update, whereas an icon tends to look the same no matter what. And the example of the weather forecast is the example of good use of a live tile; unfortunately, [there are] a lot of bad uses as well. This is not something that’s inherent in the system; this is something that’s due to, maybe, sort of exuberant or overly excited designers who say, “Wow, we have this new feature—we have to use it!” No, you don’t have to use every possible feature at your disposal.

**Steven Cherry:** Ironically, [Apple seems to be slowly converging iOS, its phone and tablet operating system, and OS X, its computer operating system](http://www.tuaw.com/2012/04/29/the-road-to-osxi-where-ios-and-os-x-suffer-a-teleporter-acciden/). Do you think that it can pull that off, or do you think it would fall prey to some of the same problems you found in Windows 8?

**Jakob Nielsen:** Well, if it’s 100 percent conversion, then I think it would be a mistake because they are different platforms hardware-wise and therefore also user interface–wise. A desktop computer, a tablet, and a phone—they are three different things. Phones and tablets are relatively similar—both portable, both sort of small, and both touch screen–driven—but there’s quite a large difference from those two up to the desktop. And so if you have identically the same user interface...which actually even Microsoft doesn’t quite do that; there’s a few differences in the gestures to be used between the touch screen design and the mouse-driven design. But they’re essentially the same. So if you try to do things that are identical for two very different platforms, you will not optimize for either one. And I think Microsoft tried to almost optimize for the mobile scenario, and that’s why their desktop design falls through so bad. In the case of Apple, who knows what they would do. They might try and do a little bit of a compromise, which would also be bad for both platforms.

I think what one should do is to rather recognize there’s a lot of differences between the platforms, and therefore there should be a lot of differences in the user interfaces as well. On the other hand, there can also be many similarities. As an example, in the visual language, if you’re going to have an icon for, say, search, you might as well use the same icon everywhere so it’s easy to recognize. Or to take an example, one of the good things Microsoft did [was] they introduced something they call “charms,” which are generic commands, which are ubiquitous, always present features that work on everything, and search is one of those. So there’s always search, and it’s always available on the right hand of the screen—if you remember it, because it’s hidden. So that’s good. It’s good that it’s always available, and they might as well always use the same icon, always have search run in about the same way.

**Steven Cherry:** Very good. Well, it takes experts to write these systems for Microsoft and Apple and Android, and it takes experts to evaluate them, so on behalf of all users, thanks for testing Windows 8 and thanks for telling us about it.

**Jakob Nielsen:** You’re welcome. It’s good to get a chance to tell you what happened when we got some real users to try it out for real.

**Steven Cherry:** We’ve been speaking with Jakob Nielsen about how real users are finding Windows 8 on many different devices.