

# Touchscreens still have long way to go

April 9 2010, By Troy Wolverton

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When Steve Jobs unveiled the iPhone three years ago, one of the highlights was a simple pinch.

Jobs showed that users could zoom in and out of photos, maps and Web pages by simply placing two fingers on the screen and pinching them together or pushing them apart. The demonstration showed how intuitive Apple's new device was and how its touch-sensitive screen allowed for new ways of interacting with phones.

Since then, touch screens like the iPhone's have become standard for smartphones. Many of these devices allow users to interact with them using simple [gestures](#), such as tapping to select an item or flicking up or down across the screen to scroll through a list.

But the potential hasn't fully been realized. Even the latest iPhones recognize only a handful of simple gestures. Phones running Google's [Android](#) operating system typically recognize even fewer.

Owners of Palm's WebOS devices, such as the Pre, can use a more extensive list of gestures, such as swiping right across the screen to go back to a previous Web page or menu screen or flicking up to close a program. But Palm's devices haven't caught on with the public and have had little impact on how most users interact with their phones.

Even owners of the latest smartphones interact with them much like they used their earlier phones. The smartphones' interfaces are still largely built around buttons. The only difference is that the new [touch-screen](#)

phones have virtual instead of physical buttons.

To be sure, that is an advance. Unlike physical buttons, virtual buttons can change shape and function and even disappear altogether, depending on the context. But virtual buttons can still have drawbacks.

If they aren't drawn large enough, they can be difficult to press, particularly for users with large fingers. It can be difficult to be certain you are pressing the right button when several are juxtaposed. And even when you have a device that gives you a sensation when you touch it, it can be impossible to know you've pressed the right button without looking at the screen.

One thing I've found annoying about my [iPhone](#) is the slider it uses to show where you are in an audio or video recording. To go back or skip forward several minutes in a podcast or video, you slide your finger along a line.

But just when you think you've gotten to the right place, you can suddenly jump forward or backward by several minutes by accidentally moving your fingertip as you lift it from the screen.

Gestures could address such shortcomings. As Palm has demonstrated, flicks left and right can replace buttons that take you back or forward. And it can be easy to scroll through a list or zoom ahead in a video by simply making a circular motion -- as users do with the touch-sensitive click wheel on Apple's iPods.

Use of gestures on smartphones has been limited in part by the threat of lawsuits. A slew of companies, including Apple, have attempted to patent particular gestures and the multitouch touch-screen technology that enables them. That has led to legal battles over who owns what.

Those battles raise the risk that a common "language" won't be adopted. Consumers might have to use different gestures to do the same function on different phones, forcing them to learn new gestures with each device.

Some touch-sensitive devices, such as the track-pads on many laptops, already recognize a wider range of gestures than most phones. But there are hopeful signs that the gesture revolution has only been delayed for smartphones, not defeated.

Synaptics, which develops chips that power touch screens and touch pads, has been showing off a concept smartphone that demonstrates some new gesture ideas. The Fuse phone has touch-sensitive back and side panels, allowing users to interact with it by squeezing it or moving a finger on its back.

In one of its latest updates to Android, [Google](#) incorporated several multitouch features, including the pinch-to-zoom gesture. The company also unveiled a feature that allows users to search for programs or contacts on an Android device by simply drawing letters on the screen, rather than having to type them on a virtual or physical keyboard.

Similarly, a new program called Swype allows users of Android phones to type words by drawing lines between keys on a virtual keyboard, rather than hitting individual keys. Meanwhile, several reports have suggested that the latest version of the iPhone operating system will recognize a wider range of gestures.

I'm hopeful that these developments are pointing toward a new gesture-filled world.

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