

Gesture Recognition: The Next Big Thing for Smartphones after Touch?

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In recent years, we have also seen considerable progress in terms of how users can interact with mobile phones evolving all the way from QWERTY keyboards to touch screens. What could be next?

The evolution of user interfaces

We've come a long way in terms of both – the evolution of mobile phones as well as methods to use and control these electronic devices, which have always been some kind of a challenge.

Over the past two years, we have seen smartphones explode in their use and capabilities. From entertainment, to work or even to family duties, we now rely on these devices in almost every aspect of our lives. There is, however, still room for our experience with them to be enhanced. Touch was the last great user-interface advancement and hand gesture recognition for mobile phones will be the next.

Gesture recognition is perceived today as the natural evolution of intuitive user interfaces. Since the creation of touch screens, gestures have reigned in an entirely new aspect as to how we interact with our devices. Gestures allow users to perform specific tasks in an extremely efficient and more dynamic manner.

Some of the most used gestures are swipe to unlock, pinch to zoom and pull to refresh. While those are relatively basic by most means, gestures have evolved greatly. There are a number of different companies trying to push forward with touch-free gesture controls. Third party developers have begun to truly utilise the potential that multi-touch displays hold, all within their apps. Gestures can offer an intuitive way to interact with a mobile phone. It is almost similar in concept to Microsoft's Xbox Kinect but on a much smaller scale.

Adding a whole new dimension to multimedia

By adding touch-free functionality to smartphones, there's a brand new dimension to mobile games and applications. We can now take advantage of the Z-axis by using simple hand shapes to enable reality-like experiences. A few examples of supported actions in games include bowling, throwing darts, playing rock-paper-scissors and more.

"Interacting with consumer electronics is about to take another giant leap forward as hand gesture recognition is increasingly incorporated into our smartphones, tablets, laptops, all-in-ones and more," said Assaf Gad, vice president of marketing for PointGrab. "It's an exciting time for both OEMs and end-users, as our devices are becoming even more intuitive and entertaining."

Korean phone maker Pantech, best known in the U.S. for low-end Android and messaging phones, has added gesture-based controls to its Vega LTE handsets to use Kinect-Like Gesture Recognition in Android Phones. By incorporating this recognition software, it allows users to control the handset with gestures. The technology, which comes from Israel's eyeSight Mobile Technologies, is a part of the Vega LTE line of phones.

Applications of Gesture Recognition Technology in Today's Mobile Phones

Few examples of cases, which are enhancing the user experience compared to what is available today are:

- Call control- answer an incoming call (speaker-ON) with a wave of the hand while driving
- Skip tracks or control volume on your media player using simple hand motions- lean back, and with no need to shift to the device- control what you watch/ listen to
- Scroll Web Pages, or within an eBook with simple left and right hand gestures, this is ideal when touching the device is a barrier such as wet hands are wet, with gloves, dirty etc. (we all are familiar with the annoying smudges on the screen from touching)
- Another interesting use case is when using the smartphone as a media hub, a user can dock the device to the TV and watch content from the device- while controlling the content in a touch-free manner from afar

To Sum It All Up

Touch is still a key user interface but with all the sensors in our smartphones, we can expect to see more of this technology as devices begin to adopt what can be called the "invisible interface".

Gesture recognition might seem a mismatch with phones since people tend to keep them close at hand, but it is believed there are plenty of reasons people would want to manage their handsets with motions.

For example, once a phone is positioned on a car dashboard, a driver could utilise gestures to answer or ignore an incoming call, activate voice recognition features, zoom in or out on a map and adjust the device's volume. The exact gestures would vary based on phone model or personal preference but would likely include a series of waves, swoops, pats and flicks.