

Samsung patent wants to get in user's face

April 27 2012, by Nancy Owano



(Phys.org) -- Samsung phones of the future may tell if you are happy, sad, or altogether disgusted. Samsung has filed for a patent on a method and device that can tell a user's emotions based on facial expressions. The patent, "Method and Apparatus for Recognizing an Emotion of an Individual Based on Facial Action Units" [was filed at the USPTO](#) back in October last year but came to light this month. Samsung's approach will be to use "Action Units" (AUs) to recognize how a person feels.

The AUs are components of a facial-action coding system. Several AUs combine to form a string that's detected and matched to an emotion label

that best fits the string. The [patent](#) does not specify smartphones or any other specific form factor; the device is referred to generally in the patent as “an apparatus.”

The language is difficult to understand, but it states that what [Samsung](#) has in mind is “An apparatus for recognizing an emotion of an individual using Action Units (AUs), the apparatus comprising: a processor; and a memory coupled to the processor, wherein the memory includes instructions stored therein, that when executed by the processor, cause the processor to:[sic] receive an input AU string...”

Fundamentally, the patent is talking about a device that will pick up a person’s emotions by “reading” the person’s face, whether the results indicate the user is angry, disgusted, sad, happy, or something else in the realm of emotions. It would be impossible to say that Samsung is the first to entertain the notion of using a coding system for facial expressions or the notion of computers reading emotions.

Facial Action Coding System(FACS) is an index of facial expressions that was [developed](#) by Paul Ekman, Wallace V. Friesen, and Richard J Davidson in 1978. Action Units (AUs) were described as the fundamental actions of individual muscles or groups of muscles.

“Our primary goal in developing the Facial Action Coding System (FACS) was to develop a comprehensive system which could distinguish all possible visually distinguishable facial movements,” said Ekman and Friesen.

Also, over at Cambridge University, Prof. Simon Baron-Cohen, Director of the Autism Research Center, has provided a [taxonomy](#) of facial expressions and the emotions they represent. Researchers have worked up a computer system based on his research.

At MIT, the Affective Computing Research Group is working on computers that can read [facial expressions](#) and track basic states like confusion, liking or disliking.

The four people filing for the Samsung patent, meanwhile, are from Bangalore, India. That a new mobile breakthrough might emanate from Bangalore would come as no surprise to those familiar with Samsung India Software Operations (SISO), a Samsung R&D center.

While the SISO site makes no mention of an emotion-reading device in the works, there is mention of a Samsung research area where SISO plays a significant role, “the Next eXperiences Team (NXT).” These researchers are tasked with working out new ideas through “user research and design with a special focus on mobile devices.”

That emotion-reading technology is coming to your smartphone may be later than sooner, but Samsung’s patent application implies they want to step in that direction. As *Ubergizmo* specifies, “Perhaps future Galaxy range [smartphones](#) from Samsung will be able to tell whether you are happy or sad.”

Outside the realm of Samsung, scientists consider the concept of facial-reading technology worth pursuing. Medically, such technology would teach people with disorders to better recognize emotions. In fact, “emotion measurement technology will be soon ubiquitous,” says MIT Media Lab Research Scientist Rana El Kaliouby. “It will allow people to communicate in new different ways. It's a kind of very sophisticated version of the 'Like' button on Facebook,” she [told](#) the BBC.

© 2012 Phys.Org

Citation: Samsung patent wants to get in user's face (2012, April 27) retrieved 24 April 2024 from <https://phys.org/news/2012-04-samsung-patent-user.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.