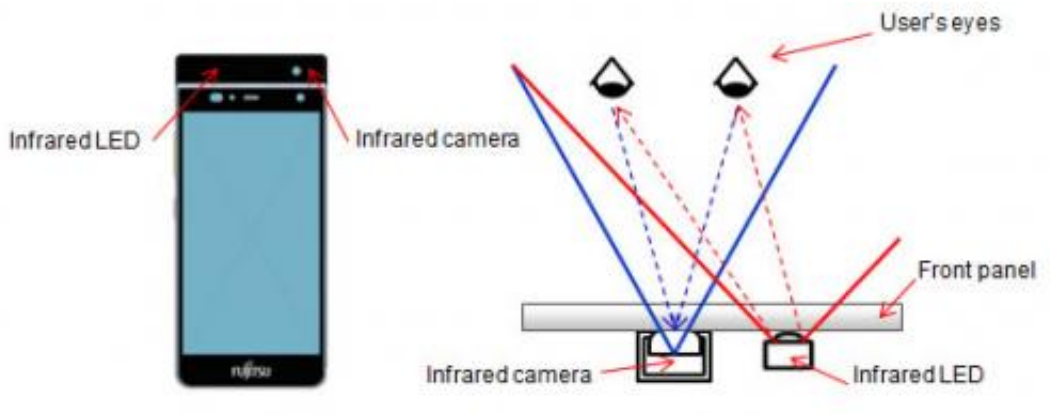
Fujitsu shows iris recognition system that unlocks phones

March 3 2015, by Nancy Owano



Schematic of smartphone prototype equipped with infrared camera and infrared LED

In the bid to come up with authentication solutions beyond passwords, fingerprint authentication from Qualcomm is making news, and so is Fujitsu's iris recognition, yet another potential authentication tech step forward. Fujitsu announced that it has developed an iris authentication system, and they built it into a prototype smartphone, shown at the Mobile World Congress 2015, running from March 2 through March 5 in Barcelona. The biometric authentication approach uses infrared light to acquire the pattern formed by the iris—the pattern of one's iris does not change much at all after the age of two. Iris patterns are unique for each individual, much like a fingerprint. Tim Hornyak, Tokyo correspondent, IDG News Service, said the prototype being shown at the

Barcelona event was the first of its kind for a smartphone, according to the company. Hornyak said it can work even if the user wears glasses or contact lenses. The prototype, he added, had a piece of hardware weighing less than 1 gram grafted onto a regular smartphone.

How it works: Movements of the smooth muscle of the iris make human eye openings larger or smaller, adjusting the amount of light that enters the retina. Iris authentication technology discerns a person's identity using the pattern of the person's irises. That pattern is read by shining an infrared LED light on the eyes and taking an image of them with an infrared camera to acquire the iris pattern, which is registered and used to verify matches.

Fujitsu said its system achieves "highly precise authentication." The company prides itself on this achievement because the parts that make up existing iris authentication systems have not had the size that would lend them to phone use. Fujitsu's team worked to develop a custom compact and high-output infrared LED, and a custom infrared camera. Is the infrared LED light safe? "In standard photobiological safety testing (IEC 62471)," said Fujitsu, "the infrared LED light was verified to be safe for the eyes."

By looking at the smartphone's screen, the user's iris gets read instantaneously, enabling the smartphone to be unlocked, said Fujitsu, spelling out the system's advantage in convenience. "While smartphones all come with some form of security as a standard feature today, many users choose not to use these features because of the trouble of inputting a password or using one's hands. To resolve this problem, Fujitsu developed the new iris authentication system, which, in addition to being secure, offers ease of use." Fujitsu noted that the tech approach "eliminates the trouble of having to use one's hands such as at times when one is wearing gloves and cannot use one's fingerprint." The systems uses ActiveIRIS from Delta ID, described as a high-reliability

iris recognition engine.

In addition to unlocking phones, said the company, "authentication could be used to log into web services without having to input an ID or password, enabling simple and secure access." Hornyak quoted Takuya Kitamura of Fujitsu's Ubiquitous Business Strategy Unit, who said, "Fujitsu is also working to make this an enterprise security solution, adding iris authentication to fingerprint and vein scanning."

More information: www.fujitsu.com/global/about/r … es/2015/0302-03.html