

Publication: Tech Coffee House Online

Date: 12 July 2018

Headline: SMU's FaceLive: Simple and better than current facial recognition tech

SMU's FaceLive: Simple and better than current facial recognition tech



Researchers at the Singapore Management University (SMU) have developed FaceLive, a new face authentication technology to further secure the current facial recognition technology that's prone to face biometric hacks.

FaceLive uses the front-facing camera of the mobile device and inertial sensors to determine if the subject accessing the smart device is the "legitimate face biometrics" of a real person or a forged one.

When a live user attempts to access the mobile device, the front-facing camera and the inertial sensors are activated to read the face and the head movement of the user. These sensors then collect the data to compare it with the movement of the device. If all data matches, the user can proceed to access the device.

In the interview with the National Research Foundation, Associate Professor Li Yingjiu from the Secure Mobile Centre in SMU said that "media-based facial forgery attacks pose a severe threat to existing face authentication systems."

While facial recognition is one of the secured methods to access mobile data, it's not entirely hack-proof. Attempts of hacking into mobile devices have shown successes using forged face biometrics before.

The implementation of FaceLive could prove to be the vital layer of security that is missing in smart devices today to deter unauthorised access to smart devices, without having to reinvent the wheel.

Associate Professor Li said:

"Rigorous user studies and experiments have shown that media-based facial forgeries can hardly spoof FaceLive. FaceLive is practical because it does not require any additional hardware but a generic front-facing camera, an accelerometer, and a gyroscope, which are commonly available on mobile devices."

The researchers behind FaceLive is now working on a 3D virtual face model with a Singapore-based company, i-Sprint innovations to "improve the resilience of FaceLive," which will involve the reading of expressions and facial movement.