Stealth would be worn on the roof of the mouth and functions by identifying the individual via the unique ridges present in the mouth's palate | Photo source Project Stealth Tech

IDENTIFICATION GADGET PROVIDES ACCESS TO DEVICES VIA THE MOUTH

COMPUTING & TECH

Developed as an alternative to passwords, fingerprints and facial recognition, the system could verify the user's identity using mouth biometrics

Spotted: A team of design graduates from the Royal College of Art and Imperial College London have developed a wearable device that can provide “surveillance-proof” authentication using mouth biometrics.

The device, called Stealth, was developed with the aim of making it harder for hackers to replicate out-in-the-open biometric data such as fingerprints or facial recognition, as well as vulnerable systems like manual passwords.

Stealth would be worn on the roof of the mouth and functions by identifying the individual via the unique ridges present in the mouth’s palate. In order to unlock particular devices, a sense code would be sent and users must perform a certain pre-defined, intentional sensory tongue gesture with the tongue in response, like pressing or sliding.

When connected to devices like smartphones, the Stealth gadget could deliver digitally-simulated tastes to communicate incoming calls or messages. A sweet taste might be used to represent a partner, for instance, and the wearer might tap their tongue on a certain spot three times to signify that they will call back soon if they are unable to pick up.

For the designers, the most exciting element, however, is its potential to combine different methods of in-mouth data collection – such as biometrics, temperature, humidity and pressure – and applying this to an artificial-intelligence-based algorithm.

“The data from your saliva is a mirror of your physical and mental health,” says Beren Kayali, Lu Ye, Paul Mendieta and Lea Marolt Sonnenschein, the graduates behind Stealth. “Both the data of the instant and overtime is valuable”.

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25th August 2020
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Takeaway:

People leave traces of biometrics everywhere, which makes them less reliable if they are targeted and forged. Researchers from Cisco Talos found they were able to fool biometric scanners 80 per cent of the time, with a 3D printer and a budget under €2,000. In a few years, as 3D-printing technology matures, out-in-the-open may become something that the industry as a whole needs to reconsider moving away from.