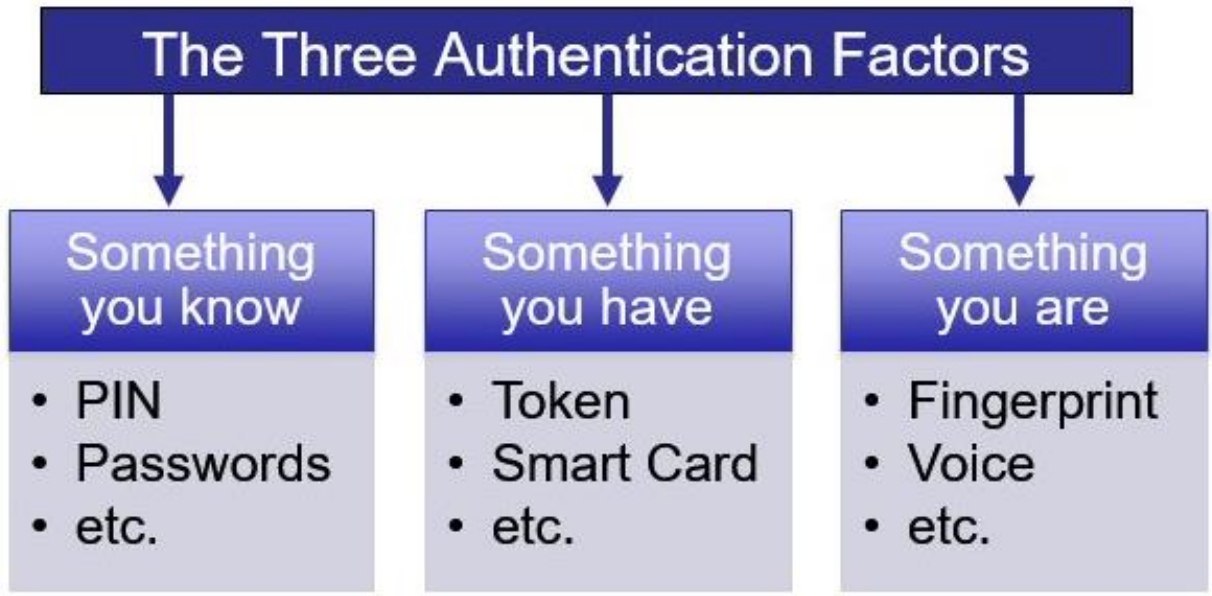
TASC Talk "Touch Gesture Biometric Authentication" by Nasiru Ibrahim

Thursday 18th January, 2018

With the increased development and usage of smart mobile devices, users are able to perform complex tasks effectively and efficiently which previously might have only been executed on desktop computers. These tasks range from sending emails to tracking health status and everything in between. These devices have become vital in storing personal, corporate, confidential and sensitive information. Hence, it is essential to protect the data and consequently the devices by employing secure and usable authentication schemes. Schemes such as PIN, Password and Physical Biometrics have for long been employed even though with numerous challenges ranging from usability to threats and privacy concerns.

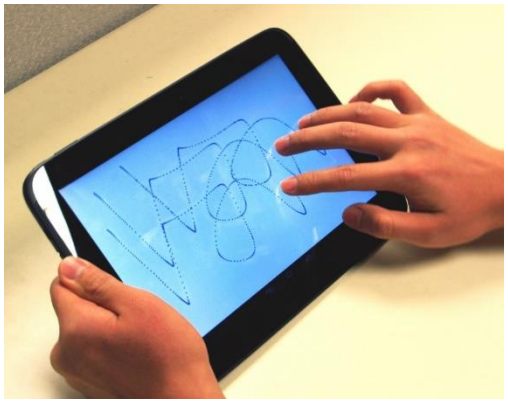
Gesture Authentication was proposed as an alternative to Passwords and PINs due to the superiority of human memory to graphical information. We will discuss the different types of touch gesture authentication, the security

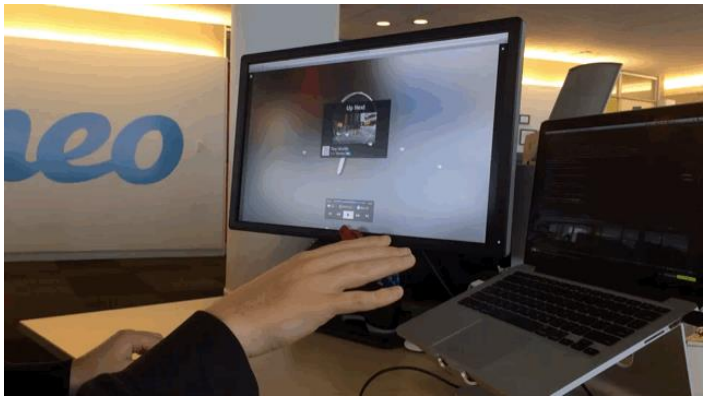


aspects and improvement approaches including incorporation of biometrics to provide multi-factor authentication.

The talk was presented by Nasiru Ibrahim, who is a post graduate student at Buckingham University Applied Computer Department and was

basically an update from a previous talk given by a colleague of his at the beginning of last year. He discussed the viability of using Gesture





authentication for accessing modern day devices i.e. smart phones, tablets etc.

Evidently 71% of Internet usage is now on mobile devices; mobile users spend 89% of their time in Apps and 11% of their time in a browser. Following this he outlined the various different ways that authentication could be achieved and their respective good and bad points. We found out that many people tend to rely on easily crack-able passwords, such as “password” and “123456”, as well as shapes like Z and 5 for pattern unlocking methods.

In conclusion he has been investigating using combinations of standard methods along with Biometric identification techniques to improve the security of our everyday mobile devices.