

ShakeIn Secure User Authentication of Smartphones with Habitual Single-handed Shakes

ABSTRACT

With the powerful computing and sensing capabilities and a large storage of a modern smart phone, instead of just making phone calls, a rich set of complex applications, such as taking photos, investing in stocks, sending emails and banking, are made possible to run on such devices. According to the report of the European Union Agency for Network and Information Security, data leakage resulting from device loss or theft and unintentional disclosure of data has been the top two information security risks for smart phone users. The security problem of private information (e.g., personal photos, contact list, emails and bank accounts) stored on smart phones therefore is of great importance to smart phone users.

EXISTING SYSTEM

In Existing System, Smart phones have been widely used with a vast array of sensitive and private information stored on these devices. To secure such information from being leaked, user authentication schemes are necessary. Current password/pattern-based user authentication schemes are vulnerable to shoulder surfing attacks and smudge attacks. In contrast, stroke/gait-based schemes are secure but inconvenient for users to input.

DIS ADVANTAGES

- Suffer from biometrics hacking attacks.
- Decrease the reliability of the authentication scheme.

PROPOSED SYSTEM

In Proposed System, we propose ShakeIn, a handy user authentication scheme for secure unlocking of a smartphone by simply shaking the phone. With embedded motion sensors, ShakeIn can effectively capture the unique and reliable biometrical features of users about how they shake. In this way, even if an attacker sees a user shaking his/her phone, the attacker can hardly reproduce the same behaviour. Furthermore, by allowing users to customize the way how they shake the phone, ShakeIn endows users with the maximum operation flexibility. We

implement ShakeIn and conduct both intensive trace-driven simulations and real experiments on 20 volunteers with about 530; 555 shaking samples collected over multiple months. The results show that ShakeIn achieves an average equal error rate of 1:2% with a small number of shakes using only 35 training samples even in the presence of shoulder-surfing attacks.

ADVANTAGES

- It can achieve very high accuracy.
- Accurate shaking velocity, the accumulative error will be eliminated.

SYSTEM REQUIREMENTS

H/W System Configuration:-

Processor	-	Pentium –III
RAM	-	256 MB (min)
Hard Disk	-	20 GB
Key Board	-	Standard Windows Keyboard
Mouse	-	Two or Three Button Mouse
Monitor	-	SVGA

S/W System Configuration:-

Operating System	:	Windows95/98/2000/XP
Application Server	:	Tomcat5.0/6.X
Front End	:	HTML, Jsp
Scripts	:	JavaScript.
Server side Script	:	Java Server Pages.
Database	:	MySQL 5.0

Database Connectivity : JDBC

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