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Unobservable Re-authentication for Smartphones

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Inventors

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Background

Smart phones are very popular and used by over seven billion people. Each day seven million dollars worth of cell phones is lost or stolen. Without an authentication device, personal data stored on the device can be used for identity theft or the phone can be used for unauthorized purposes. Most authentication systems authenticate a user only once when he logs in to the device. These systems require inputting a password to unlock the device and do not provide periodic re-authentication. Unfortunately, this allows an un-authorized user full access to the device until it is shut off. There is a need for a re-authentication system that is convenient to use. Most re-authentication systems that are currently available require a user to constantly input passwords inconveniencing the user.

Invention Description

Researchers at Arizona State University have developed an authentication system for handheld devices. Once a user is authenticated, the system continually re-authenticates to insure only authorized use of the device. The gestures used by each person to operate a handheld device are unique, like a fingerprint. The system monitors the way the keystrokes are done and the amount of pressure used in keystrokes and taps. The system saves information about the user's gestures and uses that information as a standard for re-authentication. When an unauthorized user operates the device, the system detects a different user. Additional authentication is needed to reactivate the device. Re-authentication is invisible to users and causes no inconvenience.

Potential Applications

- Cell phones
- Note pads
- Electronic tablets

Benefits and Advantages

- **Convenient** – Re-authentication not noticeable to user
- **More Power** – Constantly re-authenticates user
- **Retrofit** – Works with existing handheld devices
- **Low Cost** – No additional hardware needed

Intellectual Property Status:

Patent Pending

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