Don't let personal data escape your smartphone

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(Phys.org) —Two EPFL researchers have developed an application that automatically secures shared information on a mobile phone. The Android app should be available in late summer 2014.

Social networking and the instantaneous sharing of information have revolutionized the way we communicate. Our mobile phones are able to automatically obtain information such as our current location and activities. This information can be easily collected and analyzed to expose our private life. What's even more malicious is that the personal data contained in our smartphones can be disclosed via installed applications without our being informed.

Two EPFL researchers have developed an intelligent application that, once past the beginning machine learning stage, decides for the user what information to transmit or not, and at what level of detail. A large-scale Android OS trial is scheduled for late summer 2014 to provide real data to validate the approach and refine the tool.

How to maintain control?

Up until now, before accepting a new "friend" on Facebook, you were compelled to manually check many parameters in order to define the degree of intimacy with friends and the type of information to share. Igor Bilogrevic and Kevin Huguenin, of the Laboratory for Computer Communications and Applications 1 (LCA1), developed the first semi-automatic system via an application that filters which information from a mobile phone can be transmitted to a third party (a friend or service line) or made accessible.

During use, the intelligent software learns the criteria – the time of day, location, or relationship with the person or application seeking access to information – that influence the decision of the user. It assimilates information with software that recognizes voice or writing, in order to make the decision automatically. It can also be driven in a fun way by making a targeted ping-pong of questions and answers called active learning or by correcting incorrect decisions made a posteriori by the software.

Seeking Users

The first phase of evaluation, based on situational questionnaires, just finished with the help of a panel of experienced users. It included many questions about the habits of people who use social networks and the effectiveness of active learning. The evaluation demonstrated that the

automation system was between 80% to 90% reliable.

Now, researchers need to compare their work to real users' data. The SPISM, "Smart Privacy-aware Information-Sharing Mechanism," application should be downloadable by the end of the summer.

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