A Personalized Privacy Assistant for Mobile App Permissions

Bin Liu, Aerin Shikun Zhang, Norman Sadeh – sadeh@cs.cmu.edu

Motivations

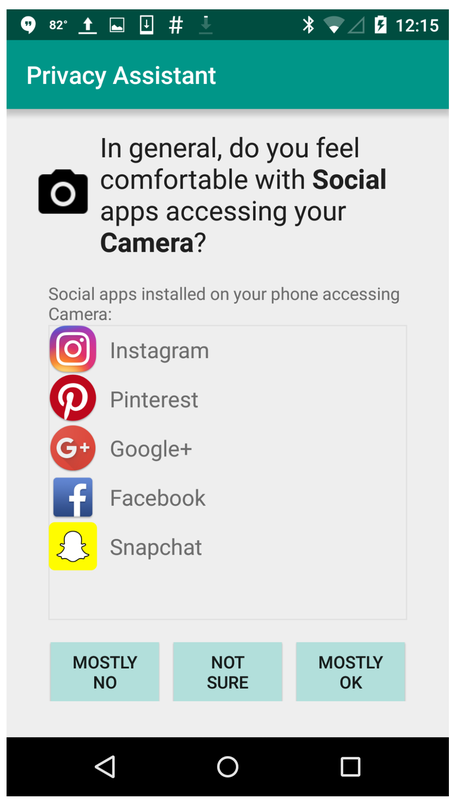
- Mobile apps request access to increasingly **diverse sets of permissions** (e.g. user's location, contacts list, photos, etc.)
- Because people have **diverse privacy preferences,** there are no good defaults for these settings
- With average users having 50 or more apps on their phones and many of these apps requesting 2 or 3 permissions, an **average user may have to configure 100 or more permissions.**

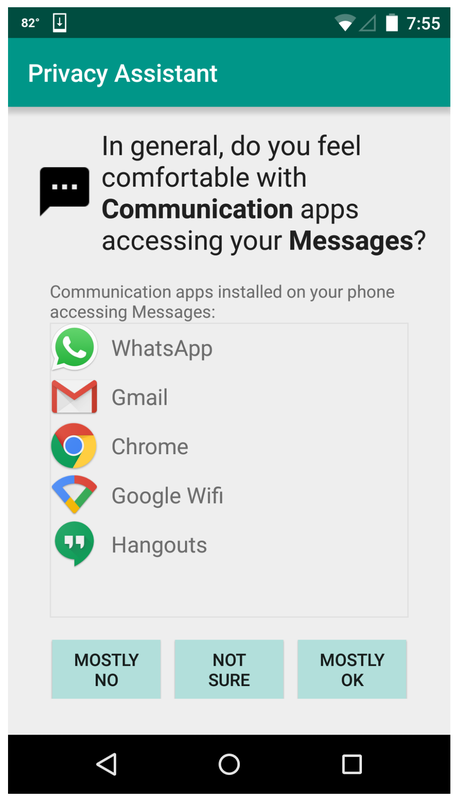
Personalized Privacy Assistant

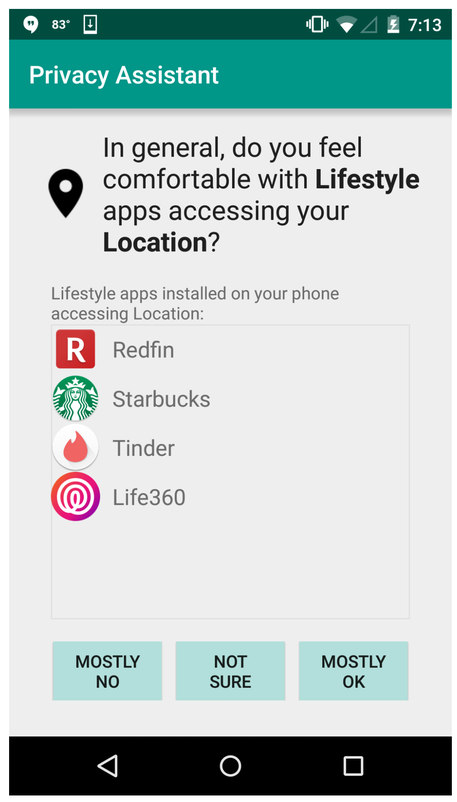
- Our research group has shown that it is possible to use **machine learning to predict a large percentage of people's privacy preferences** based on their answers to a small number of personalized privacy questions
- The Privacy Assistant operationalizes these findings and helps users configure their privacy settings
- Pilots with Android users have shown that people find the assistant to be very useful

Interactive Profile Assignment

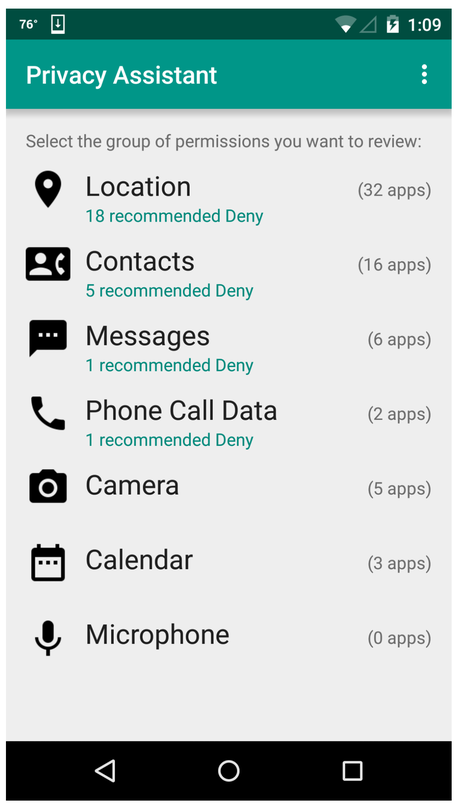
- We generate questions for users in order to capture their app privacy preference and estimate their privacy profile assignment.
- The Assistant scans the apps on the specific device and generates between 3 and 5 questions designed to determine the privacy preferences of the user

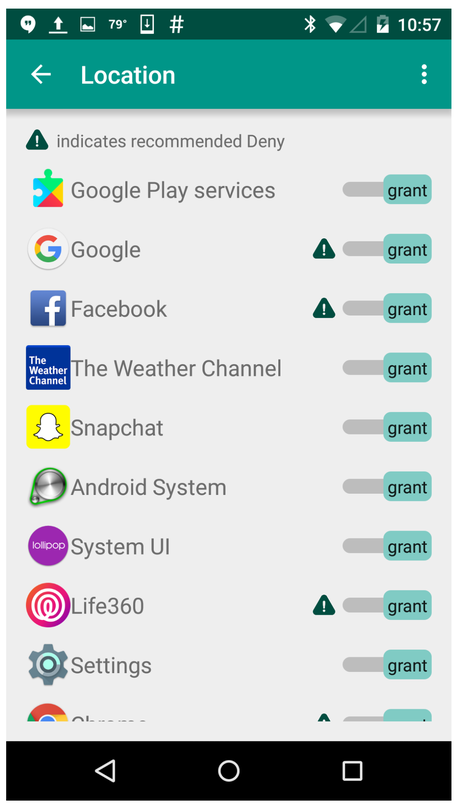






Review Recommendations





- Based on the user's answers, the Assistant assigns him/her to a profile of like-minded users
- The Assistant uses the assigned profile of the user to recommend a number of permission settings
- The Assistant also displays notifications with privacy recommendations for the user's newly installed apps

Carnegie Mellon University CyLab Security and Privacy Institute

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PRIVACYASSISTANT.ORG
the personalized privacy assistant project

*** The Assistant is available as an app on the Google Play Store** (for rooted Android 5 devices at this time)