

# PrivacyGrade.org

## Grading the Privacy of Smartphone Apps

### Motivation



- Mobile apps can easily access a lot of sensitive information
- Lack of effective privacy information for the 1,000,000+ apps in the Google Play Store

### Goals

- Develop a system to automatically grade all apps from the Google Play Store
- Build a website that is easily accessible to journalists, policy makers, developers, and end-users to help them understand privacy issues surrounding mobile apps

### Approach

#### Phase 1:



#### Phase 2:



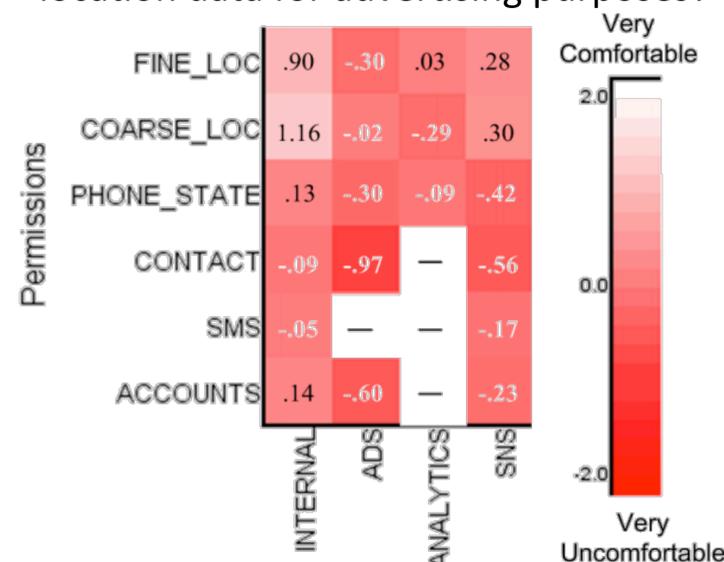
### Analyze App Packages

- Every app is required to declare all the permissions that it uses
- Want to infer the mapping between permission and purpose, for example, "This app uses your location for ads"
- Label 3<sup>rd</sup> party libraries used in apps with purposes, then match the corresponding permissions through the API calls used

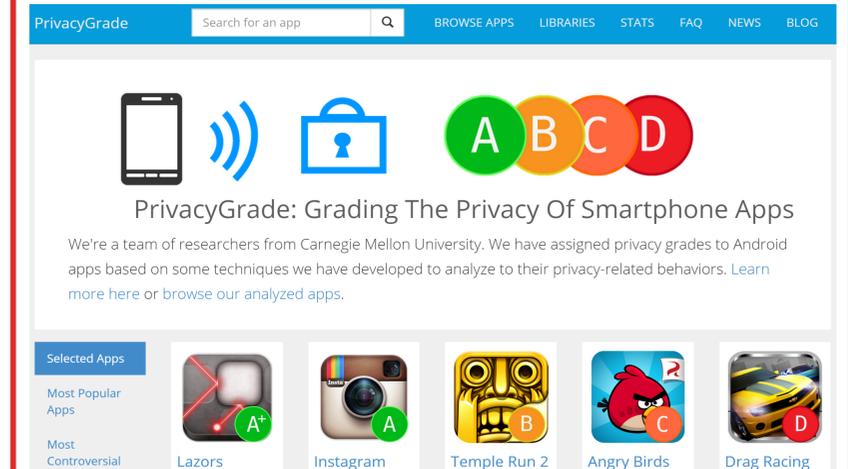


### Crowdsourcing Concerns

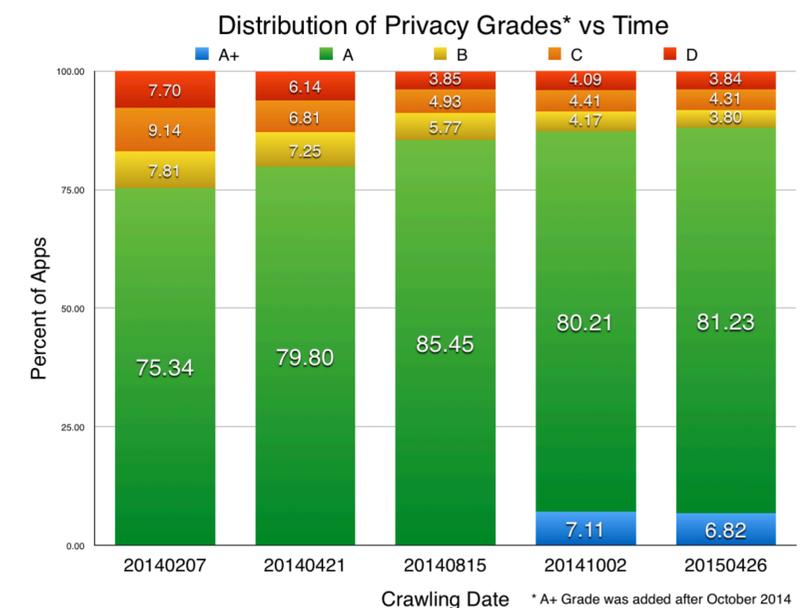
- Used Amazon's MTurk to gather level of concerns about different permissions being used for different purposes
- Asked questions like "How comfortable do you feel with Cut the Rope using your location data for advertising purposes?"



### PrivacyGrade.org



- Website reported by major media such as CNN, Forbes, and The New York Times.
- Since Feb 2014, increase in percentage of apps that scored A or above.



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