Transparency Bridges: Bridging Transparency Requirements in Smartphone Ecosystems

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Project Details

The key objective of the project is to understand how different regulatory environments for data privacy (EU and US) shape technical affordances and user behavior within smartphone ecosystems. To do so, the project studies variations of privacy perceptions and expectations in EU and US populations, across and within different smartphone ecosystems. We look specifically at different approaches transnational ecosystem providers take in providing transparency for users under varying regulatory, technical and social conditions. The project explores the following research questions:

1. What are the transparency mechanisms in different smartphone ecosystems and how do they map to transparency requirements in the EU and US data privacy frameworks?

2. How is the effectiveness of transparency offered by apps dependent on the app ecosystem and do ecosystems influence the business models of apps in this regard?

3. How do transparency expectations vary with different populations (US, EU, incl. NL) and across different smartphone ecosystems (Apple, Google) and operating systems (Android and iOS)?

4. How can ecosystems improve data privacy protection to conform with people's privacy expectations, preferences and concern? And how can regulators and lawmakers respond to the role of the ecosystem providers in protecting privacy?

This project is the first one of its kind to apply an interdisciplinary (law and human computer interaction) approach to the question of how differing legal and cultural factors in the US and Europe affect US/EU citizens privacy expectations, preferences and user behaviors.
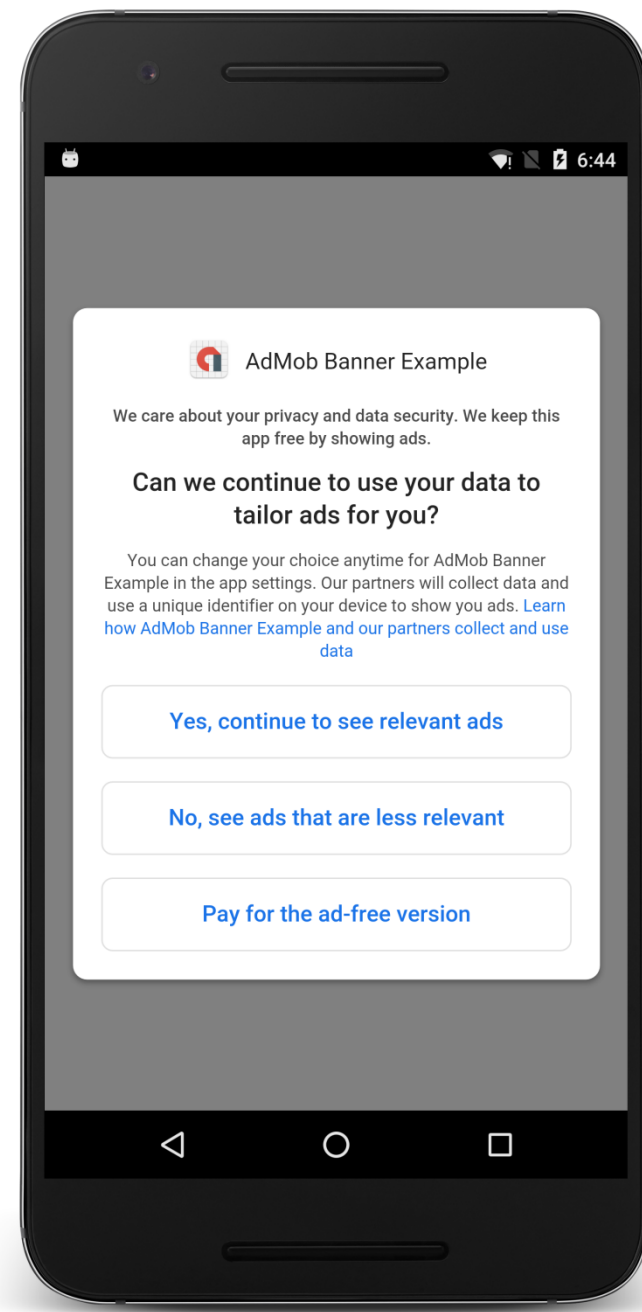
Results: Mapping Transparency Requirements in the US and EU

- **Objectives**: Examine the transparency mechanisms in different smartphone ecosystems and how they map to transparency requirements in EU and US data privacy frameworks.

- **Method**: Conducted an analysis of EU and US legal requirements, including regulatory enforcement action and guidance by regulatory authorities, such as the FTC.

- **Results**: Mapped the transparency requirements in data privacy law to the smartphone context, and the way in which different regulatory environments for data privacy (EU and US) shape transparency about the collection and use of personal data in dominant smartphone ecosystems (Android and iOS).

Results: Study on App Business Models and Data Monetisation

- **Objectives:** Examine the role of mobile platforms in shaping app business models, the monetization of personal information; and app transparency about collection and use of personal information.

- **Method:** We conducted a study on selection of popular game apps available in the Google Play (NL) app store, and Apple's App Store (NL), in order to gain insight into business models that are adopted by apps; and examined Google's and Apple's developer platforms in depth.

- **Results:** Developed an app business-model typology; and we show how that the increasingly dominant business model within the game app economy is free-to-download apps, with data mining, analytics and targeting being used to encourage users to make in-app purchases.

App	App Store	Google Play	App	App Store	Google Play
Color Ballz	Free	Free	Clash Royale	Free	Free
Word Snack	Free	Free	Homescapes	Free	Free
F1 2016	€2.29	€2.29	Jachtseizoen	Free	Free
Minecraft	€7.99	€6.99	Rider	Free	Free
Pokemon Go	Free	Free	Plague Inc.	€0.99	Free
Candy Crush Saga	Free	Free	Monument Valley	€4.49	€2.29
Pocket Pool	Free	Free	Castle Clash	Free	Free
Fut 18 Draft	Free	Free	Candy Crush Soda Saga	Free	Free
Push	€1.09	€0.99	Bike Race Pro	€0.49	€1.09
Construction Simulator	€0.99	€0.10	Wordfeud	Free	Free

## Results: SEC Study on Mobile Platform Dependencies

- **Objective:** Examine the dependence of mobile apps on mobile platforms for the collection, use and monetization of personal information. In particular, explore how app business models are shaped by the governance of user data by mobile platforms.

- **Method:** We conducted a study of the SEC filings of a set of US public companies that predominantly operate their business, or important parts of their business, as a popular app in the mobile app environment.

- **Results:** Found systematic evidence of how app business models are shaped by the governance of user data by mobile platforms. The analysis of SEC filings produces new and unique insights into the data practices and data-related aspects of the business models of popular mobile apps and shows the value of SEC filings for privacy law and policy research more generally.

Public Company	Popular apps	IPO
Snap Inc.	Snapchat, Bitmoji	2017
Facebook Inc.	Facebook, Instagram, WhatsApp, Messenger	2012
Twitter Inc.	Twitter, Periscope	2013
Match Group Inc.	Tinder, OkCupid, PlentyOfFish	2015
Pandora Media Group Inc.	Pandora Music, Pandora Premium	2011
Zynga Inc.	Zynga Poker, FarmVille, Words With Friends	2011
Glu Mobile Inc.	Taylor Swift, Kim Kardashian	2007
Activision Blizzard Inc.	Candy Crush Saga, Hearthstone	1993
Electronic Arts Inc.	Star Wars: Galaxy of Heroes, SimCity BuildIt	1989
Take-Two Interactive Inc.	Grand Theft Auto, Dragon City, Monster Legends	1997

Future Plans

- **Objective:** Examine the appropriate regulatory and legislative response to the role of mobile platform in protecting privacy.

- **Ongoing:** An analysis of new EU regulatory proposals on online platforms and ePrivacy to survey the role of app ecosystems and their role in striking a balance between data-driven app businesses and user privacy.
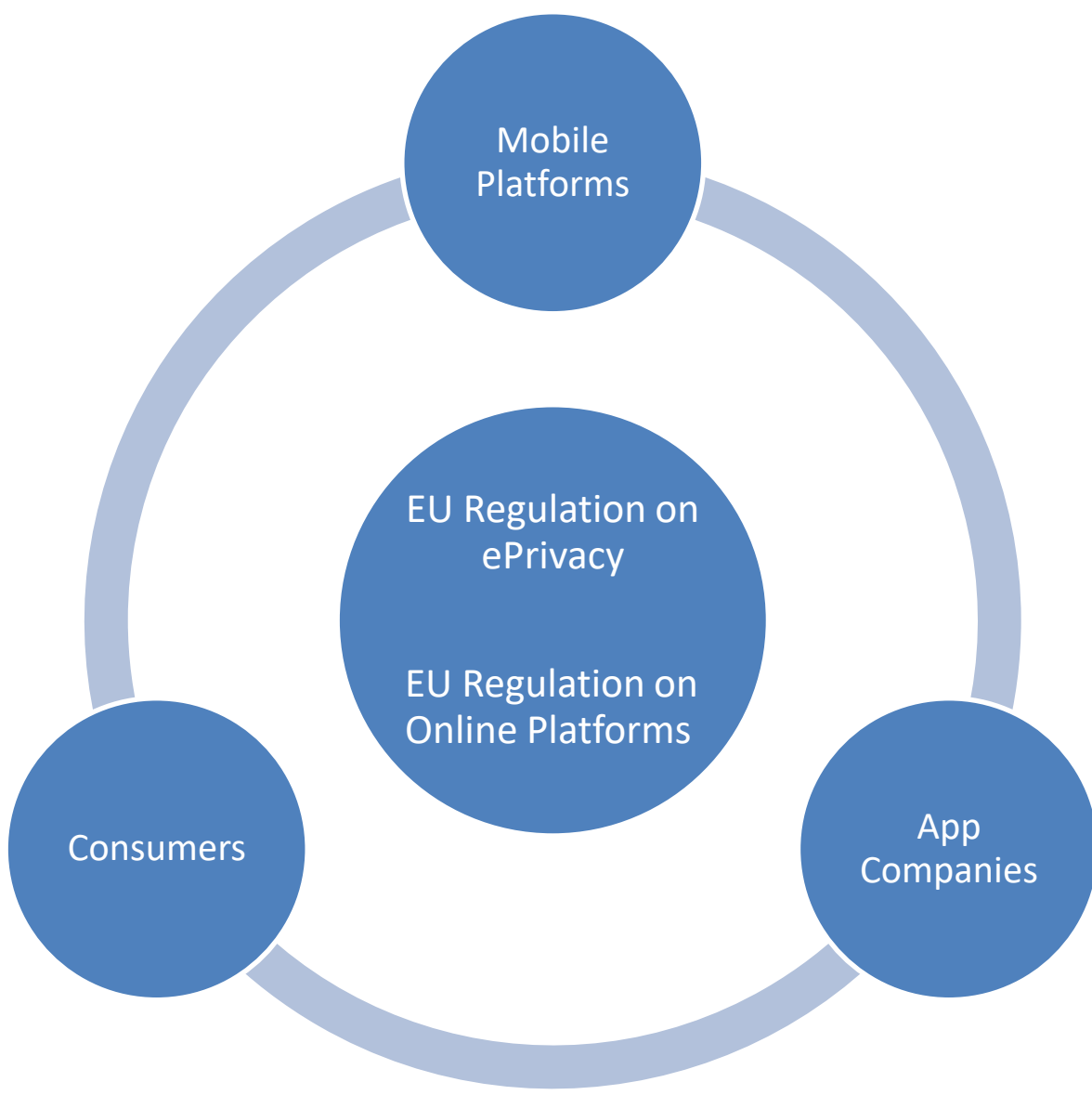
- Proposed EU Regulation on ePrivacy

- Proposed EU Regulation on Online Platforms

Publications

- R. Fahy, J. van Hoboken & N. van Eijk, *Mobile Privacy and Business-to-Platform Dependencies: An Analysis of SEC Disclosures*, 13 Journal of Business & Technology Law (2018) (forthcoming).
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