Columbia Technology Ventures

Incentivized location data release for enhanced user privacy control and maximized advertising value

Technology #cu14161

The increasing monetization of user data that is collected from electronic communication devices and online services raises questions as to how mobile application developers and advertisers may capitalize on the economic value of such data while respecting the desire of many users to maintain some control over their data privacy. To address these concerns, the technology enables users to limit release of their location data only to those requesters who are not associated with keyword blacklists specified by users. To ensure data privacy, the technology prevents data consumers from obtaining economic benefit from location data without compensating the user. This scheme also has the added benefit of increasing the potential utility of location data cleared for consumption by advertisers who bid for it.

Software provides user control over location data sharing while maximizing value for advertisers

Users of electronic communication devices or services specify location-related keywords associated with parties that they wish to block from accessing their location data. When a user’s location is sufficiently proximate to venues or establishments associated with blacklisted keywords, the user’s network activity is stripped of location data by a blocking module. Consumers of location data that are not blacklisted may bid against each other to obtain the user’s location. The user is financially compensated for his or her data by the winning bidder, thereby providing an incentive to make such data available to select parties.

The technology has been prototyped as an Android application made available via Google Play to test users. When combined with mobility patterns, business category data, and advertising data, user feedback from a small study of the technology’s use indicates that advertising revenue from sites blocked by users is considerably smaller than that generated by all locations. This suggests that the technology can realize a happy medium between enhanced user control over location privacy and profitable location-based advertising.

Lead Inventor:

Augustin Chaintreau, Ph.D.
Applications:

- User control over location data privacy
- Location-targeted advertising based upon explicit release of data by users
- Reduction of exposure to unwanted location-based advertising
- Collection of commercially exploitable user location datasets associated with explicit user consent to its use for specific purposes in return for incentives

Advantages:

- Enhances user control over location privacy without blocking advertisers from valuable location data
- Precludes subversion of user privacy control by making user blacklists inaccessible to other parties
- Potentially enhances value of released location data to advertisers by associating explicit buy-in by users with released data
- Does not require modifications to existing location data-dependent applications

Patent Information:

Patent Pending

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Related Publications:


Inventors

Augustin Chaintreau