

# Exercising the CCPA Opt-out Right on Android

Sebastian Zimmeck · Nishant Aggarwal · Zachary Liu · Sage Altman — Wesleyan University  
 Konrad Kollnig — Maastricht University

*Legally mandated, but practically out of reach*

PoPETs 2026(2) · pp. 662-679 · doi.org/10.56553/popets-2026-0065 · CC BY 4.0

California law lets residents *opt out* of the sale and sharing of their data. We tested whether Android apps honor that choice. Across two experiments, the switch flips — but the tracking *doesn't stop*.



OPT-OUT SET · TRACKING CONTINUES

48/100

popular apps offer the **legally mandated opt-out setting**. The other 52 give only a privacy-policy link — or nothing.

62–81%

of the 1,811-app dataset are **required to respect** the CCPA opt-out right (95% CI), as their operators sell or share data.

338:26

**still opted in** vs. opted out to ad network Vungle — even after sending GPC *and* disabling the AdID.

RQ1 · MANUAL UI OPT-OUT

## Opting out by hand, app by app

100 popular apps · in-app settings · network capture

- Fewer than half implement a CCPA opt-out control; many bury the choice behind a policy link that isn't *clear and conspicuous*.
- Some apps that **do** offer the toggle never tell ad partners. Two of 14 apps kept `Vungle ccpa = opted_in` after the user opted out.
- Non-compliance appears across most app categories — and runs heaviest among casino and card games.

RQ2 · AUTOMATED GPC OPT-OUT

## Sending the signal at scale

1,811 apps · injected GPC headers · 4 conditions

- Global Privacy Control is **largely ineffective**. Privacy flags rarely change to reflect opt-out when GPC is sent.
- The `US Privacy String` appeared in just 199/1,811 apps (11%), and almost never carried an opt-out value.
- Disabling the Android **AdID** makes no substantial difference — connections to tracking domains and identifier sharing hold steady.

THE PROPOSAL

## One device-wide opt-out, with legal force

Android already ships an ad-tracking switch — the AdID setting — but its only force is Google's own policy, and disabling it has little effect in practice. Opt-out is a platform-level coordination problem no single app can solve — so **re-purpose the AdID setting** as a legal opt-out right, set once and applied everywhere.

- 01 Treat disabling the AdID as **exercising the opt-out right** — one unified setting, surfaced at device setup as a universal choice.
- 02 The opt-out flag already exists (`isLimitAdTrackingEnabled`) — give it **legal meaning under the CCPA** and propagate it like GPC, not just Google policy.
- 03 Legislation stops at the browser — AB 566 covers Chrome from 2027, but the AB 3048 veto **left mobile apps out**. The CCPA can still step in and guide platforms under the existing CCPA Regulations.