Request for Information (RFI) on

Advancing Privacy Enhancing Technologies

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Statement from Aram Zucker-Scharff and Sean Turner to OSTP on PATCG

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This is a response to OSTP's Request for Information on Advancing Privacy-Enhancing Technologies [Doc. 2022-12432] on behalf of Aram Zucker-Scharff and Sean Turner - members of the public.

BACKGROUND: Private Advertising Technology in the W3C

Historically, web-based advertising has involved the collection and processing of significant amounts of data about web users by a variety of parties within the digital advertising ecosystem. In recent years, a number of these parties (including Mozilla, Apple, Meta, Google, and others) have begun to redesign the mechanisms used to carry out a variety of advertising-related functions in more privacy-preserving ways.

In October of 2021, participants in the World Wide Web Consortium (W3C) chartered the Private Advertising Technology Community Group (PATCG) [1][2][3][4] to incubate web features and application programming interfaces (APIs) that support advertising while acting in the interests of users, in particular providing strong privacy assurances. The CG welcomes participation from browser vendors, OS vendors, mobile application vendors, advertisers, publishers, ad buyers, advertising platforms and intermediaries, privacy advocates, web application developers, and other interested parties.

The CG is developing use cases and requirements to better scope the private advertising problem space. A threat model is being developed that will enumerate the actors in the digital advertising ecosystem, their capabilities, potential attacks, and mitigation strategies. Mitigation strategies the CG is already investigating include technologies that rely, in part or wholly, upon multi-party computation (MPC) and/or trusted execution environments (TEEs). The CG is also investigating multiple APIs including:

- Interoperable Private Attribution (IPA), which proposes a mechanism for advertisers to understand the performance of their ad campaigns that is based on MPC and upholds differential privacy guarantees;
- Private Click Measurement (PCM), which aims to allow for ad clicks to be recorded without tracking users across websites; and
- Topics, which is intended to allow advertisers to target ads to users based on users' interests, without personally identifying the users.

TECHNICAL STANDARDS AND PRIVACY TECHNOLOGIES

Technical standards are crucial in the deployment of protocols for sharing data and analytics, because the mechanisms used for preserving privacy fundamentally involve multiple parties that need to interoperate. This need is even more pronounced in the context of protocols that rely on a non-collusion assumption. Such protocols require at least two entities to communicate for each measurement or collection of data, while strictly limiting the extent of their coordination. In the

absence of relevant technical standards, these parties would have to collaborate deeply to establish communication, threatening the non-collusion assumption.

RECOMMENDATIONS

To advance private advertising technology in the OSTP's work, we offer the following recommendations:

- Support the development of new private advertising techniques.
- Encourage private advertising developers and researchers to make their work compatible with open standards.
- Encourage deployment of open standards to support private advertising technology as opposed to proprietary solutions.
- Encourage privacy-respecting practices that leverage private advertising technologies among marketing and advertising companies.
- Ensure that federal procurement of private advertising technologies is based on open technical standards when possible.
- Encourage federal privacy regulators to monitor and support the development of private advertising technologies based on open standards.
- Support research into privacy-enhancing technologies that can improve the state of the art and its public understanding.

[1] https://www.w3.org/community/patcg/
[2] https://patcg.github.io/
[3] https://www.w3.org/community/patcg/participants
[4] Community Groups are participant-driven community fora for discussion and incubation prior to (potential) formal standardization activity at W3C.