

Request for Information (RFI) on Advancing Privacy Enhancing Technologies

IEEE Standards Association (IEEE-SA)

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7 July 2022

To:

Office of Science and Technology Policy (OSTP) on behalf of the Fast Track Action Committee on Advancing Privacy-Preserving Data Sharing and Analytics of the Subcommittee on Networking and Information Technology Information Research and Development (NITRD).

National Science and Technology Council.

National Artificial Intelligence Initiative Office.

NITRD National Coordination Office.

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RFI Response: Privacy-Enhancing Technologies

The IEEE Standards Association (IEEE-SA) is pleased to submit comments to the Office of Science and Technology Policy's Request for Information on Advancing Privacy-Enhancing Technologies.

IEEE SA is a globally recognized standards-setting body within IEEE, the largest organization of technology professionals in the world. We develop consensus standards through an open process that engages industry and brings together a broad stakeholder community.

As stated in the RFI, Privacy-Enhancing Technologies (PETs) present a key opportunity to harness the power of data and data analysis techniques in a secure, privacy-protecting manner.

However, the RFI noted to date, PETs have not achieved widespread adoption due to a variety of factors, among them, limited technical expertise, perceived risks, and financial cost. It can also be noted that there is a need for more collaborative research and application development.

In response to the OSTP request for information on potential specific actions that would advance the adoption of PETs in a responsible manner, IEEE SA provides the following comments:

One approach to advance PETs research opportunities is to use secure multiparty computation (sMPC) developed by Boston University (<https://multiparty.org/>). It is a proven research technique for privacy preserving data sharing and analytics to inform policy. The City of Boston used sMPC to conduct a study of 60 companies male-female pay gap [Multi-party computation helps address Boston's male-female pay gap](#), with the results of the study posted at <https://www.bu.edu/hic/2021/12/09/addressing-the-gender-racial-wage-gaps-with-data-science/>

Additionally, NSF funded the Northeast Big Data Innovation Hub headquartered at Columbia University, this program has a [National Student Data Corps \(NSDC\)](#) that provides free, open, online data science education, mentoring and career resources. The PETs can be taught through an open curriculum that can be created for the NSDC website, and taught in monthly NSDC webinars, serving the NSDC community of 3,000 individual members (mostly students) from 48 U.S. States and 20 countries.

The NSDC mentoring program can include sMPC and other PET content and mentors. There is an NSDC slack channel with 450 members including mentors and mentees.

Healthcare is a key area for potential use for PETs, as we work to leverage more contextual data to do precision medicine. Sharing of data across entities that do not have a central authority can be enabled securely and privately through PETs, enabling integration of intelligence from healthcare to national security, to provide insight and “wisdom computing”.

As Oliver Wendell Holmes said “... it is the privilege of wisdom to listen”. By listening to more data and metadata, we create more insight and wisdom to tackle difficult and complex challenges, from healthcare to national security.

In addition, IEEE SA has several standards under development that will help support PETs adoption.

- Developing standard IEEE P7012 **Standard for Machine Readable Personal Privacy Terms** will identify and address the manner in which personal privacy terms are proffered and how they can be read and agreed to by machines. [IEEE P7012](#)
- Developing standard IEEE P2895 **Trading Human-generated data** will define a taxonomy which can be used to describe the rules and categories of data rights in data contracts that govern the capture, use, sharing and trade of human-generated data. [IEEE P2895](#)
- Developing standard IEEE P2890 **Recommended Practice for Provenance of Indigenous People’s Data** details the rules by which the provenance of Indigenous People’s data should be described and recorded. [IEEE P2890](#)

We thank NIRD for considering these comments in response to the NITRD Request for Information (RFI) on Privacy-Enhancing Technologies.

We would look forward to further discussions with your agency on the continued use and application of Privacy-Enhancing Technologies. If you have questions, please do not hesitate to contact Karen Mulberry at .