

# Current Topics in Privacy Seminar

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**But Can You Use It? Design  
Recommendations for Differentially  
Private Interactive Systems for  
Accessing Federal Administrative Data**

## Abstract

Accessing data collected by federal statistical agencies is essential for public policy research and improving evidence-based decision making. Interactive systems which allow researchers to query targeted statistics are considered a crucial tier in the data sharing infrastructure, but they have not been practically implemented. This work considers the barriers to developing differentially private interactive systems for federal statistics and offers an alternative way forward that balances privacy, accuracy, and usability of the systems. While substantial theoretical work has been conducted on the privacy and accuracy guarantees, prior efforts have not considered usability as an explicit goal of interactive systems. Based on the three design considerations: privacy, accuracy, and usability, we develop recommendations for making differentially private interactive systems work in practice, present an example infrastructure based on these recommendations, and provide an outline of how to conduct user-testing. This work seeks to move the practical development of interactive systems forward to better aid public policy making and spark future research.

## Bio

Joshua Snoke is a statistician at RAND. He researches statistical data privacy topics such as evaluating and generating synthetic data, the use of differentially private algorithms, and equity in privacy. He has worked on privacy applications for a variety of administrative and survey data. Recent projects include developing a validation server for accessing administrative tax data from the Internal Revenue Service, and exploring creating synthetic data for the National Science Foundation's Survey of Earned Doctorates and the Longitudinal Study of Aging in India. He serves on the RAND Human Subject's Protection Committee (IRB) and on the American Statistical Association's Committee on Privacy and Confidentiality.

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