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## PCAST Releases Report on Big Data and Privacy

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Posted by John P. Holdren, Susan L. Graham, and William Press on May 01, 2014 at 12:09 PM EDT

Earlier this year, President Obama [asked](#) his counselor John Podesta to lead a comprehensive review of policy issues at the intersection of big data and privacy. As a contribution to that review, he asked his Council of Advisors on Science and Technology (PCAST) to examine current and likely future capabilities of key technologies, both those associated with the collection, analysis, and use of big data and those that can help to preserve privacy. Over the past 90 days, we have reviewed the technical literature, consulted with additional experts whose research or product-development activity focuses on the key technologies, engaged complementary perspectives from social science and the law to help put our technical insights into perspective, and deliberated over what we were learning.

Today, PCAST is releasing its analysis via a new report, *Big Data: A Technological Perspective*, which details the technical aspects of big data and privacy. The ubiquity of computing and electronic communication technologies has led to the exponential growth of data from both digital and analog sources. New technical abilities to gather, analyze, disseminate, and preserve vast quantities of data raise new concerns about the nature of privacy and the means by which individual privacy might be compromised or protected.

This report begins by exploring the changing nature of privacy as computing technology has advanced and big data has come to the forefront. It proceeds by identifying the sources of these data, the utility of these data — including new data analytics enabled by data mining and data fusion — and the privacy challenges big data poses in a world where technologies for re-identification often outpace privacy-preserving de-identification capabilities, and where it is increasingly hard to identify privacy-sensitive information at the time of its collection.

The report outlines a number of recommendations, including:

- Policy attention should focus more on the actual uses of big data and less on its collection and analysis.
- Policies and regulation, at all levels of government, should not embed particular technological solutions, but rather should be stated in terms of intended outcomes.
- With coordination and encouragement from the White House Office of Science and Technology Policy (OSTP), the Networking and Information Technology Research and Development (NITRD) agencies should strengthen U.S. research in privacy-related technologies and in the relevant areas of social science that inform the successful application of those technologies.
- OSTP, together with the appropriate educational institutions and professional societies, should encourage increased education and training opportunities concerning privacy protection, including career paths for professionals.
- The United States should take the lead both in the international arena and at home by adopting policies that stimulate the use of practical privacy-protecting technologies that exist today. It can exhibit leadership both by its convening power (for instance, by promoting the creation and adoption of standards) and also by its own procurement practices (such as its own use of privacy-preserving cloud services).

Read the fact sheet [here](#).

Read the full report [here](#).

Read the White House report [here](#).

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*The PCAST Big Data and Privacy Working Group also includes S. James Gates, Jr., Mark Gorenberg, John Holdren, Eric S. Lander, Craig Mundie, Maxine Savitz, and Eric Schmidt. Marjory S. Blumenthal, Executive Director of PCAST, coordinated the development and contributed to the framing of this report.*

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[August 2013](#)  
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[March 2013](#)  
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[December 2012](#)  
[November 2012](#)  
[October 2012](#)  
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