Chairman Medine, Members of the Privacy and Civil Liberties Oversight Board, and fellow panelists, thank you for the opportunity to provide you with thoughts on what civil liberties and privacy interests the National Security Agency seeks to protect and how we are currently doing so. For the last fifteen years, I have been working in the area of privacy in both the private sector and government. I am honored to have been selected to serve as NSA’s first Civil Liberties and Privacy Officer.

This is an exciting time to be a member of the civil liberties and privacy profession. Our community is growing and evolving and will help inform the debate as the nation continues to reshape its expectations for, and limitations on, intelligence community activities. Changes in the nature of the threat to our national security, alongside the rapid advances in technology, make my job both interesting and challenging. Advancements in technology, whether it is big data, data aggregation, or the Internet of Things, raise novel challenges for government surveillance and even beyond the government. These advancements go to the heart of how we and the world around us view and manage our own individual privacy. Technology provides us with both opportunities and challenges, but ultimately we must guide and shape its use to ensure the fundamental rights we hold dear as a nation remain. Today, I would like to describe NSA’s civil liberties and privacy programs past, present, and some thoughts for the future.

**Historical Aspects of Civil Liberties and Privacy at NSA**

Part of NSA’s mission is to obtain foreign intelligence worth knowing derived from foreign communications in response to requirements and priorities validated and levied upon us by the Executive Branch. One such priority is counterterrorism, but there are many other threats to the nation, such as the spread of nuclear, chemical, and biological weapons and helping to stop cyber
attacks. NSA works directly with and supports our troops and allies by providing foreign intelligence for military operations abroad.

While the part of NSA’s mission I’ve described is called Signals Intelligence or SIGINT, the other major portion of our mission is called Information Assurance. Although the Information Assurance mission is not the main topic for today, NSA also has the responsibility to protect national security systems to prevent others from obtaining U.S. government secrets and sensitive information.

As we consider NSA’s civil liberties and privacy programs over the last sixty-two years, it is important to think about how the threat, technological, and societal landscape in which NSA conducts its SIGINT mission has changed.

(1) *The threat has changed.* NSA previously operated in the Cold War era when the focus of collection for foreign intelligence was directed at nation-states, structured military units, and foreign intelligence services. While threats remain from nation-states, they now also come from non-state actors, including terrorists operating in small groups or as individuals. This transition requires NSA to look at more, smaller, and decentralized targets to protect the nation.

(2) *The technology has changed.* NSA previously operated in an environment where the communications between foreign intelligence targets were frequently conducted over separate, government owned and operated communications channels and equipment. In such cases they were easier to identify and isolate. Now foreign target communications are interspersed with ordinary commercial and personal communications. They flow over the same wires and air waves and are routed through multiple points all over the world. Additionally, the sheer volume and ability to analyze and manipulate big data, which has occurred as a result of significant advances in information technology, can expose information of a personal nature that may not have been previously discoverable and may not be of any foreign intelligence interest.

(3) *How society thinks about civil liberties and privacy has changed.* We have come a long (and positive) distance in thinking through what ought to be private. Personal identifiable information was not a main stream issue 25 years ago the way it is today. In reaction to technology and business practices that can organize data, quickly provide data to others, or create new uses for data already acquired, we’ve begun to reconsider what information is available about ourselves through privacy policies and, in some cases, specific legislation.
Historical Civil Liberties and Privacy Framework

NSA’s civil liberties and privacy protections have historically been driven primarily by U.S. Constitutional 4th Amendment analysis – the touchstone of which is whether a particular search is reasonable under the particular circumstances. NSA has always applied this analysis, which examines the degree to which an action intrudes on individual privacy, to activities conducted under its primary authorities, namely Executive Order (E.O.) 12333 and the Foreign Intelligence Surveillance Act (FISA). NSA’s privacy protection programs implemented this calculus by analyzing where and how data was collected and the status of the individual or entity being targeted. NSA has consistently conducted extensive legal analysis as it considers new types of collection answering these types of questions.

NSA continues to address these interests through a strong compliance program. The compliance program is designed to provide reasonable assurances that NSA is following its legal and policy restrictions placed on collection, processing, analysis, production, and dissemination of U.S. person information. Many compliance activities are embedded into our technology and systems. Procedures are approved by the U.S. Attorney General and, for certain authorities such as FISA, these procedures are also reviewed and approved by the Foreign Intelligence Surveillance Court after adoption by the Attorney General. Long before I arrived, NSA had organizations, training, policies, procedures, internal and external oversight activities, and a strong compliance program to manage these mandates and procedures. Privacy protections include activities to delete data, limit the time data can be retained, and to put tools in place to reduce the likelihood that information on a U.S. person will be obtained. In instances where U.S. person information is related to the foreign intelligence requirements, identifying personal information is masked or minimized before relevant foreign intelligence may be disseminated to authorized and appropriately cleared personnel outside of NSA.

Evolving Our Civil Liberties and Privacy Framework

The current framework is aligned with how NSA is governed by the U.S. Constitution, E.O. 12333, FISA, and their associated updates or amendments. As I have learned more about NSA and its compliance regime, it became clear that while this is certainly one way to address privacy concerns, it is somewhat different from how privacy concerns are addressed outside of NSA. Over the last fifteen years, Congress has passed a variety of laws to protect privacy in other parts of government and in the commercial sector. These laws and policies focus more on the nature and use of the data itself not where it was collected or the citizenship status of the individual.

With the explosion of the Internet and global communications, resulting in everyone using the same communications infrastructure, and new Presidential policy for SIGINT that broadens the privacy protections beyond U.S. persons to include ordinary persons of all nationalities, I believe we have an opportunity to bring together NSA’s current civil liberties and privacy analysis with
a broader approach to privacy and civil liberties. This new approach is a step in the right
direction to support the President’s Presidential Policy Directive (PPD-28) “Signals Intelligence
Activities” mandate to recognize that “our signals intelligence activities must take into account
that all persons should be treated with dignity and respect, regardless of their nationality or
wherever they might reside, and that all persons have legitimate privacy interests in handling
their personal information.”

The Civil Liberties and Privacy Assessment

Implementing PPD-28’s mandate is critical, but we are doing more. As NSA’s first Civil
Liberties and Privacy Officer, I am working to address a broader set of civil liberties and privacy
interests. That is why I am testing a new civil liberties and privacy assessment process that
expands NSA’s views to include considerations of frameworks that the private sector and non-
intelligence elements of government use to assess civil liberties and privacy. To make sure we
get it right, we are beta testing this approach for a variety of mission activities and we hope to
evolve to incorporate a more scientific approach to the assessments. We expect testing to
continue during the next year.

For example, for the first time in its history, NSA is using the Fair Information Practice
Principles (FIPPs) as a framework for considering civil liberties and privacy risks. The FIPPs
have come in many variations over the last forty years, but they are commonly employed within
the U.S. government as the following eight principles: transparency, individual participation,
purpose specification, data minimization, use limitation, security, and accountability and
auditing.

While the traditional NSA civil liberties and privacy questions center on the citizenship and
location of NSA’s foreign intelligence targets, as well as the collection techniques that will be
employed to acquire a target’s communications, FIPPs-related questions boil down to “follow
the data.” Data-centric perspectives mean privacy officials ask a different set of questions: What
data is being collected and how will it be used? As we continue to test how we may adapt the
FIPPs framework to NSA mission operations, we are beginning to ask additional questions that
start with what data is being collected and for what specific purpose. Still in its early stages, we
have designed an initial template and during the next year we will refine the questions and
processes to ensure we are building a repeatable, meaningful, and helpful process to identify and
mitigate civil liberties and privacy risks.

A critical part of the assessment process is to make sure we are not merely checking off boxes,
but fundamentally weighing the risks associated with an activity to form a holistic value
proposition. In essence, we are asking, "Should NSA conduct a given activity given its civil
liberties and privacy risks?"
There are several broad civil liberties and privacy considerations that I think about when I consider new or existing programs at NSA: (1) how intrusive is the program to the individual (e.g., what type of data is being collected?), (2) how broad is the program (e.g., am I obtaining data about more people than my intended foreign intelligence target?), and (3) are the stated use and future uses appropriate given the type of data collected?

We ask questions to ensure that our protections evolve and adapt to this new landscape. As we consider how NSA conducts its mission to protect the U.S. and its foreign allies, we continue to ask questions and provide safeguards to protect the legitimate civil liberties and privacy interests of ordinary individuals.

As part of the assessment process, NSA is documenting both standard protections, such as minimization of personal information and control on who has access to the information, as well as any specialized tools, training, policies, and procedures in place designed to protect civil liberties and privacy. During this testing phase we are working to incorporate the assessment capability into existing compliance processes for each implementation and to promote work force acceptance.

Much like privacy analysis performed in the private sector and other parts of government, we are using the FIPPs as the basis for analyzing what existing protections are in place. I have found that we have safeguards in six of the eight FIPPs. Transparency and Individual Participation are not implemented in the same manner as in organizations with a more public facing mission, and warrant additional public discussion.

Providing Greater Transparency

In addition to evaluating specific activities internally for civil liberties and privacy, we recognize NSA must provide greater transparency to the public, including our international community. This is a central challenge for an Intelligence Agency – both at the individual level, and more broadly for public communications. I will continue to advocate for the individual through my systematic civil liberties and privacy assessment processes and through my continuing commitment to share information about NSA activities with the public.

Transparency generally means organizations should be as open as possible about their activities and notify individuals regarding collection, use, dissemination, and maintenance of personally identifiable information. NSA cannot provide the same level of information as in other parts of the government or private sector, because it risks losing access to foreign intelligence by tipping off adversaries. Instead, NSA provides a great deal of information to its overseers from all three branches of government.

Although NSA has the responsibility to maintain secrecy regarding many aspects of what we do, we are increasing our communications with the public. To date, I have published two reports
based on specific NSA authorities using the FIPPs as the model for analysis of existing civil liberties and privacy protections. You may find the reports and other information on NSA’s public website under the Civil Liberties tab. I also meet with civil liberties and privacy experts in and out of government and overseers to better understand their concerns.

Recently, the Agency released more information into the public domain in response to specific requests and declassification of historical documents. NSA’s senior leadership, including our Director, Admiral Mike Rogers, recognizes the need to inform the public about NSA’s mission, effectiveness, and structure. We are doing so through public speaking engagements and discussions with academics and thought leaders, and we are similarly interested in conversations with the international community on these topics. Additional information has been shared with the public about laws, directives, authorities, and policies that govern NSA activities and associated compliance and oversight framework.

**Individual Participation**

Much like transparency, NSA cannot provide the same level of individual control to consent to the collection, use, or dissemination of an individual’s information, nor can it provide the same level of access or redress offered by public-facing agencies. Because there is a compelling need not to alert foreign intelligence targets that they are under surveillance, NSA can only offer individual participation in limited instances. My office is beginning to engage with members of the academic community as well as the civil liberties and privacy advocacy community to identify potential additional activities that can be undertaken to strengthen the protections related to individual participation.

**Blending the Art and Science of Privacy**

Part of the conversation I would like to have today is how we might consider how to advance the discussion and research regarding the protection of civil liberties and privacy. NSA has many technical experts, computer scientists and mathematicians. We would like to work with other agencies and outside privacy advocates to craft a privacy technology and research agenda that we can use to support NSA’s efforts, as well for others with similar interests to consider.

Protecting privacy and civil liberties to date is more art than science. We have privacy policies that are written to cover a variety of technologies, but we generally do not have technologies that identify privacy risks.

In order to move such research forward, I believe we need a broad spectrum of expertise working together to truly understand policy, legal, technical, and ultimately ethical perspectives, both in the United States and among our allies. Today the science of privacy has made notable strides that include developing technology and tools that promote privacy such as unique encryption capabilities, digital rights management, and trustworthy computing. Great work in the private
sector and academia is also being developed on coding privacy policies such that technology supports only specific uses.

Civil liberties and privacy protections need to blend the art and science of privacy if we are going to harness the potential of technology and incorporate our core values as a nation in this Era of Big Data.

Yet despite significant progress, basic privacy principles, founded in a strong scientific basis, have proven elusive. If we can better understand what constitutes personal information and how such information is used, we believe it will be possible to help determine whether we can develop more practical approaches to evaluate the inherent privacy risk to the individual.

To that end, we are beginning to explore a scientific approach towards a true Responsible Use Framework. Our initial thoughts include development of five sequential building blocks:

1. **Categorize Personal Information.** As a first step, we would like to determine if it is possible to identify and categorize different types of personal information. For example, one category could include biographic information, such as a name or address. Another category could include biometric information. Yet another category could include contextual information about an individual, such as transactional information about an individual’s activities. If we can understand these various categories, it may then be possible to identify relative risks and thus understand the privacy risk of given category of personal information. This would lay the groundwork from which follow-on work would build.

2. **Categorize Uses of Personal Information.** Second, we would like to determine if it is possible to identify and categorize different types of uses of personal information. Similar to what I just discussed above, if it is possible to categorize basic uses of personal information, it may also be possible to identify relative risks of use and consequently, the risk of a particular type of use.

3. **Design a Process to Understand the Inherent Privacy Risk and Use of Personal Information.** Third, if it is possible to develop a categorization of both personal information and uses of the personal information, it should then be possible to develop a scientific process to assess risk. This process could evaluate the risk of the use of individual types of personal information for different purposes as well as aggregated uses of personal information.

4. **Enhanced Privacy Impact Assessments.** These previous three building blocks in hand, it should be possible to apply the established methodology to develop repeatable and scalable assessments and help implement the specific FIPPs of purpose specification and use limitation more concretely. Here, the Art of Privacy blends with the Science of
Privacy; the judgment of experts must always be part of these solutions with more scientific methods assisting to identify and remediate risks.

5. Move toward a Responsible Use Framework. Lastly, a Responsible Use Framework holds data collectors and users accountable for how they manage data and any harm it causes. Building a technical means based on principled scientific methodologies to support the identification of civil liberties and privacy risks can help us better protect civil liberties and privacy in a fluid world of big data. Disciplined data tagging, aided by analytics and metrics that track the movement and use of data, is also of utmost importance for identifying and mitigating risks. These activities, combined with a strong compliance program, provide a holistic approach to building civil liberties and privacy protections into the infrastructure of the cloud and an enterprise’s mission systems and architecture.

Success is dependent upon input from a variety of disciplines ranging from technologists, social scientists, privacy and civil liberties experts, ethicists, attorneys, and computer scientists, to name a few. We would welcome the opportunity to discuss this in more detail and greater technical depths at a later time.

Conclusion

Again, I would like to thank you for this opportunity to outline how NSA is addressing privacy today and our path for the future. We will continue to develop and refine a multifaceted approach to strengthen the privacy protections at NSA. We believe that the advancement of the science of privacy, blended with the art of privacy has a potential to benefit how NSA considers civil liberties and privacy within its mission activities and we believe it could benefit others. I look forward to learning more about your views.