

Statement for the Record

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Introduction

Good afternoon, Madame Chairman and Distinguished Members. Thank you for the opportunity to discuss the National Reconnaissance Office (NRO) plans and accomplishments. It gives me great pleasure to join two of our mission partners, the Honorable Gary Payton, Deputy Under Secretary of the Air Force and General Robert Kehler, Commander, Air Force Space Command. The NRO's close relationship with our mission partners is central to our Nation's commanding lead in space. We are all fully aware other countries are striving to challenge our space advantage or render our systems vulnerable. It is this knowledge that provides the sense of urgency, fueling our initiative as a team, to seek ways to smartly develop and protect our space systems. To do this, the NRO must foster these close and continuing partnerships, not just with my colleagues here today, but with virtually every U.S. Government entity with significant investment, or reliance on space capabilities. Unfortunately, the unclassified nature of today's hearing precludes me from talking about some of our greatest successes; however, I welcome the opportunity to meet in another setting to help you fully understand the breadth and depth of our capabilities, partnerships, and the value of space-based architectures.

Today I will describe a few recent developments and steps we are taking as an integrated space community to protect

today's systems. Most importantly, I will discuss the tremendous military and civil space community alliance and the expertise and extensive capabilities they provide warfighters. Today, we provide unprecedented levels of support never imagined when the NRO was created in 1962. When the NRO was formed, our primary role was strategic intelligence. The latency inherent to those systems did not provide the tactical intelligence our warfighters need today. This emphasized the need to develop a means to rapidly deliver information and the requisite training and doctrine for their use. Today, in addition to the traditional roles of these systems, NRO systems are used extensively to support the warfighter. In many ways, integration into our mission partner plans and strategies is nearly seamless. The idea that our Nation might have to go to war without our national systems is an alarming prospect and one reason why we are so committed to our close partnerships.

SUPPORT TO WARFIGHTER

The first topic I want to touch upon is support to the warfighter, a critical mission for the NRO. This past year, NRO systems provided critical mission support to warfighters across the globe. With an expanding arsenal of sensing capabilities, multi-intelligence fusion methods, and a commitment to collaboration across communities, NRO systems and secure

networks have ensured the timely delivery of accurate, insightful, life-saving intelligence to our nation's defenders.

Tremendous innovations resulted from the integration of the NRO with other elements of the Department of Defense (DoD) and the IC. The NRO has facilitated great improvements to the quality and timeliness of information and the IC's ability to deliver actionable intelligence to the warfighter. During 2007, the NRO implemented a new enterprise-wide information sharing management process. This new process not only improved communication to users in theater, but also improved the efficiency of system tasking, reducing demand on other national systems. Two information sharing tools are now in use by troops as a direct result of the new management process.

The first of these information sharing tools developed by the NRO, the Analyst Support Architecture (ASA), is a multi-intelligence correlation, display and analysis software tool designed to allow rapid integration of multi-source data into a scalable collaborative analysis environment. The ASA revolutionized the way DoD and IC analysts collaborate, share data, and see a common operating picture. It provides a correlated operational picture for the analyst to validate new and unusual activity. The ASA-detected events are displayed both graphically, textually and conveyed in the context of the

organization being monitored. In addition, the system contains numerous interactive tools which allow ad-hoc manipulation of the data to support user-driven analysis activities. The ASA system is currently being used aboard the U.S.S. Boxer and U.S.S. Nimitz. The Navy has praised the tool, citing improved efficiency and increased situational awareness since implementation. The Air Force is also actively using ASA in the National Air and Space Intelligence Center (NASIC) Operational Watch Center. Analysts at NASIC pass relevant information to tactical users in-theater. The success of ASA resulted in the Air Force decision to add ASA to its Electronic Systems Center (ESC) at Hanscom Air Force Base in Massachusetts.

The second information sharing tool also developed by the NRO, the Threat Human Intelligence Reporting Evaluation Analysis and Display System (THREADS), is a multi-intelligence analytical tool that builds on human intelligence reports. THREADS takes individual human intelligence reports and autonomously searches correlating databases of NRO system data to find coincident information, allowing analysts to build case files and make judgments in support of operations. Forward-deployed units have successfully used THREADS to piece together information leading to the capture or death of enemy forces in Iraq and Afghanistan. The Air Force has also requested THREADS for use at the ESC.

We continue to work closely with our mission partners to address challenges elevated by the changing threat landscape. Specifically, the NRO has coordinated with multiple agencies to help ensure warfighters have access to a broad spectrum of intelligence to support forces overseas. This collaboration has resulted in focused, meaningful intelligence for decision makers, analysts, and others in harms way.

We've also made critical information technology investments to significantly decrease the time required to activate current and future cross-community networks. This new cross-cutting communications service provides a cost-effective solution for implementing current and future communications requirements for the NRO and IC partners. Perhaps one of the biggest lessons our nation learned from the tragedy of 9/11 is the need for communication across services and communities. Major efforts have been underway to accelerate information sharing, not just to the DoD, but across all our users. The NRO is playing a pivotal role in enabling information sharing between government and military organizations. This year, the NRO broke new ground to provide non-traditional intelligence users with capabilities to access national data. Similarly, the NRO has provided solutions for the Secret Service and National Guard Bureau to satisfy unmet information requirements. The NRO's efforts to enable information sharing are making it possible for Government

agencies and military organizations to work together as they protect our Nation.

SPACE PROTECTION

Threats to our space systems are growing. This requires a new way of thinking and a new way of addressing the challenges facing our community. It also requires we realize the threat exists end-to-end and any protection approach must take this into account. One significant step in space protection is the key role the NRO is taking, in concert with U.S. Strategic Command (USSTRATCOM) and Air Force Space Command, in laying the foundation for defensive space capabilities. Such capabilities, while vital to our survival, have also helped establish a framework for further cooperation. For example, as a result of operating as an integrated space community, the National Reconnaissance Operations Center now also serves as a back-up facility for elements of USSTRATCOM's Joint Space Operations Center. This allows us to share the wealth of space situational awareness information we collect across multiple domains and provide a back-up capability with little additional cost.

The complete protection picture also requires we take a careful look at the vulnerabilities on the ground as well as those in space; these vulnerabilities take many forms. As the NRO plays an increasingly visible role in the defense of our

Nation, we can also expect to increasingly become a target as well. The NRO is committed to protecting the information and assets that help us maintain our Nation's freedom and security.

REVOLUTIONIZING SPACE - ON THE GROUND

The NRO's satellites provide critical support to policymakers, analysts, and front-line warfighters in the global war on terror. We are working to maintain these systems that have served us faithfully, many serving more than 25 years, as we proceed with acquisition of new, technologically advanced systems that can respond to evolving threats, and ensure the success of the United States against future adversaries.

Before we can operate satellites that deliver critical support to the warfighter, we must design, develop, and procure those systems. Once procured, we must then launch, operate, and maintain each satellite to ensure accurate, timely, relevant intelligence is available to users when, where, and how they need it.

In April 2006, the seeds of change were planted with the publication of the NRO's Strategic Framework. The NRO recognized the challenges it faced and acknowledged the need to have better integration with our mission partners and customers, and a need to better emphasize the role of our ground systems.

The Strategic Framework defined two key goals for the NRO: *Be the Foundation for Global Situational Awareness*, and *Deliver Information to Users on Timelines Important to Their Needs*.

While the NRO recognized the need to move in this direction, we were not organizationally aligned to do so at the time.

Therefore, as part of the transformation process, I am implementing a transformation of the NRO's structure. This is perhaps the most fundamental transformation ever undertaken by the NRO. It requires focused discipline and diligence to succeed, but I am convinced the risk of not doing so is even greater. This transformation involves significant managerial and organizational changes. It will facilitate a common mission management, establish a common services layer across our ground enterprise, consolidate operations, continue our focus on space system acquisition excellence, and create an enterprise-wide system engineering acquisition structure. This new framework will allow us to better manage our acquisitions and develop and operate our systems as a single, integrated architecture focused on sensor-agnostic solutions to intelligence problems. This, in turn, will help us use our systems more effectively to deliver value-added information where, and when it is needed most.

This transformation has already begun to change our organizational, personnel, and business processes. In turn, these new processes are creating a better, more responsive organization; one that is meeting the challenges we face now,

and into the future. The NRO's restructuring efforts are designed to make the best use of limited resources in the face of evolving threats. We are rebuilding our architecture with more integrated intelligence solutions in mind. Instead of the traditional INT-centric approach, the NRO is working to create a fundamentally integrated architecture that will bring together the data from all sensors in ways that will refine products, streamline delivery, and create more value added content to improve the entire process for analysts and warfighters alike.

INTEGRATED GROUND

The NRO builds complete satellite systems, but an often under-appreciated aspect of this is the importance of the ground portion of these systems. Many of our newest capabilities are ground-based. Through ongoing algorithm development and processing improvements, we are providing quick-turnaround solutions to urgent user needs. This makes it clear that our most flexible "system" is not in space, but on the ground. Therefore, the key is to build a functional flexibility on our satellites which enables us to be operationally responsive on the ground. Responsive ground-based solutions are critical to the continued success of NRO systems against our Nation's most daunting adversaries.

Recognizing the importance of the ground element to the entire NRO system architecture, one significant and foundational step in response to the strategic framework, has been the stand-up of the Ground Enterprise Directorate (GED). The GED is responsible for delivering a ground architecture integrated across the organization based on a multi-intelligence, ground system-of-systems that can provide near real-time responsiveness to pressing intelligence problems. By standing up the GED, we are taking the first vital step to ensure effective, flexible, seamless solutions to our customers needs across the IC, and to ensure that we have processes and systems that enable common tasking, timely cross-cueing, and a synergy that allows for immediate response.

MULTI-Intelligence FUSION

One of the many ground-based initiatives currently underway, with greatest impact on our customers, is multi-intelligence fusion. This involves combining multiple sources of data from various collectors to develop new products yielding intelligence few sources could provide on their own. Recent activities have focused on efforts with both the National Security Agency and the National Geospatial-Intelligence Agency (NGA) to combine geospatial products with other intelligence sources to create fused products for users. These products are generated using automated computer processing and information

integration techniques, accessed via a user-friendly interface. This valuable capability significantly improves analysts' ability to accurately describe and assess areas of interest. For example, the combination of geospatial intelligence and signals intelligence has resulted in a comprehensive, integrated product of particular value when applied to border protection and Maritime Domain Awareness (MDA).

The NRO is currently working closely with the U.S. Navy and the Department of Homeland Security to find effective ways to assist them with border security. In seeking to address this challenge, many technologies, processes and procedures have been applied that combine several sources of intelligence to track sea-going vessels. Each of these intelligence sources provides information useful for tracking commercial vessels. Ship itineraries, port arrival and departure information available from open sources are combined with Signals Intelligence and Geospatial Intelligence data to yield visually detectable locations and identifiable features of the vessels.

Alongside our mission partners, the NRO has helped lead the way in demonstrating how multiple sources of data brought into a multi-intelligence domain yield far more intelligence. Large quantities of positional data on ship locations, traffic patterns and activity within certain areas of interest may

provide a few data points on a screen, but when fused with imagery and signals intelligence, analysts can quickly and easily determine false data sets and provide added-value to products more typically derived from single intelligence sources. Simply put, fusing multiple types of traditional data in non-traditional ways can exponentially increase the value of the intelligence the user receives.

In addition to our multi-intelligence capabilities supporting MDA, the NRO is providing operational support to Lt. General Metz at the Joint Improvised Explosive Device Defeat Organization. We have established a functional team within the NRO, dedicated to providing our warfighters with a number of multi-intelligence capabilities focused on detecting and tracking our enemies engaging in developing and deploying these lethal devices. To date, we have made notable progress addressing this challenge.

RESEARCH AND DEVELOPMENT COLLABORATION

The NRO operates as part of a larger research and development (R&D) community, working with mission partners, members of the DoD, and the IC to determine the best path forward for our national reconnaissance and broader ISR efforts. This community is not limited to a small group of scientists. As intelligence problems grow and as new threats emerge, we are

committing to work even more closely as a community to harness our great innovative capabilities to overcome challenges together.

In an effort to combine our broad intellectual assets to solve these difficult problems, in fiscal year 2007 (FY 07) and FY 08 the NRO played a key role in providing services to facilitate collaboration across several international R&D organizations.

Perhaps the most significant achievement in 2007 was the instantiation of the Virtual Laboratory (VL) network. The VL, a shared communication network, is the first of its kind, and has quickly become the primary collaboration tool for international R&D initiatives. The objectives of R&D organizations using the VL include demonstrating the technologies and techniques necessary to support federated exploitation in a collaborative environment. Currently, over 20 active classified R&D projects between two or more of the partners are being worked over the VL. Since its inception, the VL has been under NGA management as an R&D project.

This year the NRO has accepted NGA's request, supported by the VL partners, to assume the executive agent management and oversight role for the VL transport segments and network

security, certification and accreditation functions. In this role, the NRO is now responsible for providing leadership and technical support across many R&D organizations to facilitate the exchange of new technology information. By upgrading the VL into a professionally run network designed with future growth in mind, the NRO has put into place the foundational infrastructure for present and future international R&D collaboration.

CONCLUSION

While I am confident the NRO is headed in the right direction to meet the needs of the warfighter and the IC, there will always be new challenges that require our vigilant attention. I will continue to work these areas aggressively during my tenure as Director of the National Reconnaissance Office.

I appreciate the continued strong support of Congress, and this Committee. This support is vital to our continued delivery of critical capabilities today, and meeting the warfighter needs of tomorrow. I look forward to working with you as we continue to develop, produce, launch, and operate critical space systems and ground systems vital to our Nation's warfighters and the intelligence community.

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