

United States Geospatial Intelligence Foundation

**GEOINT Symposium 2012:
Creating the Innovation Advantage**

Keynote Address

**Speaker:
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Undersecretary of Defense for Intelligence (USD-I)**

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MICHAEL VICKERS: Well, thank you, John (sp). And good morning, ladies and gentlemen. It's a pleasure to be with you here today in sunny Florida. I'd like to begin by thanking the United States Geospatial Intelligence Foundation and its CEO and board chairman, Stu Shea, and USGIF president Keith Masback for hosting the annual GEOINT symposium – truly one of our nation's pre-eminent intelligence events. I also want to wish a belated happy Sweet 16th to NGA.

Yesterday you heard from our easy-riding DNI, so you should still be in a Zen-like state this morning. I can't promise you further enlightenment, but in keeping with this year's conference theme, I want to take a few moments to highlight how we're driving innovation across defense intelligence. I will then spend a few minutes more talking about what I see as the way forward for GEOINT.

When I became the undersecretary of defense for intelligence at the beginning of last year, I established a number of strategic and operational priorities to set the direction for defense intelligence. On the operational side, based on guidance I received from Secretaries Gates and Panetta, I identified four imperatives: operationally dismantling and strategically defeating al-Qaida; establishing the conditions for successful transition in Afghanistan; preventing the proliferation of weapons of mass destruction, principally but by no means exclusively in Iran and North Korea; and defending the nation against cyberthreats. Today I would add a fifth: enabling the Syrian people to determine their own destiny and shaping the political transitions that are under way across the Arab world in ways supportive of U.S. interests.

We of course are engaged in other areas as well, but these are the big five in terms of their strategic importance at present. I am pleased to report that we have made substantial progress in each of these areas in the past year and a half, but much remains to be done. The crucial point from an innovation perspective is that we have to fight and change at the same time – not just change so we can prevail in these areas, but change to successfully address emerging challenges as well.

My strategic priorities were intended to address both current and future challenges, to better align defense intelligence with the new defense strategic guidance, and to strengthen the ability of my organization to support operations and policy and to drive change. Most of my strategic priorities and principal capabilities initiatives fall into four categories: one, further strengthening our capabilities in counterterrorism and counterproliferation; two, substantially improving our capability to project power in anti-access, aerial (sic; area) denial environments; three, expanding our global coverage and global reach; and four, rapidly building our cyber capabilities to outpace extant and emerging threats. Now, it goes without saying that several of our capabilities initiatives address more than one category, but the categories provide strategic focus.

Given the highly classified nature of our capabilities initiatives, I can only discuss them in general terms. Some of them will also be elaborated on a bit more by our agency directors. In the counterterrorism arena, we are continue (sic) to build out our Predator-Reaper fleet both in terms of capacity and capability. Predators and Reapers are the signature weapon of the war against al-Qaida and its affiliates, enabling the most precise campaign in the history of warfare.

Over the next five years, we will substantially improve the resolution of our GEOINT sensors and add new SIGINT packages. We will also develop additional capabilities to conduct precision, armed, multi-int ISR from extended range. We will improve our capability and capacity to penetrate foliage, and we will expand the global reach and capacity of our SIGINT geolocation capabilities. We will strengthen in a number of areas our tactical warning of terrorist and other violent threats to U.S. personnel and facilities.

In counterproliferation, we are working to improve our ability to keep nuclear weapons out of terrorist hands.

In the anti-access aerial denial area, we will develop and field end-to-end robust and resilient ISR capabilities that can address this challenge. Now, this is a critically important area for us. It is the operational manifestation of our strategic shift to Asia. Unfortunately, due to the highly classified nature of these capabilities, I'm precluded for saying much more about them in this forum.

We have two major initiatives in the area of global coverage. The first is a new overhead architecture that will provide us with a truly integrated system of systems for the first time, along with much greater persistence. In my mind, it is the most significant change to our overhead architecture in at least three decades. For those of you able to attend the TS/SCI session on Friday, you'll hear more about this from Betty Sao (ph). The second, the Defense Clandestine Service, which Mike Flynn just discussed, is a series of reforms that will substantially enable us to be more effective in the collection of national-level clandestine human intelligence across a range of targets of paramount interest to the Department of Defense.

In the cyber arena, we are building a cyberforce to defend our nation when called upon and to exploit the full potential of this important new warfare domain. Keith Alexander will have a lot more to say about this topic tomorrow, so I won't steal his thunder.

I also established four additional priorities that cut across these four capability areas. The first is to make national military intelligence integration a focus of nearly everything we do. Intelligence integration is critical within intelligence agencies, across our agencies and disciplines and from the national to the tactical level. Intelligence integration is not just a good in itself, but it is also a major driver of change. We partner with Director Clapper's office on more and more of our most critical national capabilities.

My second cross-cutting priority is to further develop the increasingly important partnership between the Department of Defense and the Central Intelligence Agency. This partnership ranges from operational integration to mutual support and joint development of capabilities. It is central to our ability to solve our most pressing national security challenges. Closely related to this priority is further strengthening the relationship between our special operations forces and the CIA and between SOF and the rest of the intelligence community.

My third cross-cutting priority is to develop and leverage the intelligence capabilities of our many foreign partners. Our global intelligence network enables speed of operations, global reach and tailored local solutions.

My fourth priority enables all the others, and that is fostering an even closer partnership with Congress on intelligence matters.

I hope this brief overview gives you a sense of how we are driving change in direct – in defense intelligence and in what directions. More than ever, intelligence is our first line of defense. Intelligence increasingly shapes, not just informs, policy and it drives our operations. Sustaining and building upon the intelligence advantage we enjoy is central to our future strategic success as a nation and as a world leader.

My remaining time, I would like to make a few comments about where I believe GEOINT is headed. Before I do, however, I'd like to reflect briefly on where we've been. During the Cold War, our ISR capabilities were revolution – revolutionary – excuse me – even if they represented only a fraction of today's capabilities. The National Reconnaissance Office, which just celebrated its 50th birthday last year, was instrumental in keeping the Cold War cold. U.S. senior leaders lived by the imagery produced by the array of satellites that the NRO deployed, a situation that caused President Johnson to rate the value of imagery higher than the cost of the entire U.S. space program.

Overhead systems provided much needed critical intelligence, but not within the timelines we know today. On these early platforms, as many of you know, exposed film was stored onboard in recovery capsules or buckets which were later ejected and retrieved for further processing. NRO historians have remarked that one of the major challenges in the early years was developing the mechanisms to reel the film through the labyrinth from spool to capsule. Most modern-day speedy service providers would cringe at the inefficiencies of our Cold War system, but they worked and they worked remarkably well.

One early Cold War aircraft, the U-2, continues to make important contributions to defense intelligence today and will likely continue to do so for a few decades more. This year, the U-2 celebrated the 57th anniversary of its first flight – a flight that occurred only 8 months after contract award and under budget. I think it is fitting to extend kudos to the Lockheed Martin Corporation and their Skunk Works for coming up with a design that has withstood the test of time and has far exceeded government expectations.

In the last two decades of the Cold War the U.S. military entered a new era of warfare defined by precision strike weaponry and increased responsiveness of our ISR systems. It became readily apparent that for our ISR systems to remain relevant they must keep up with the operational pace and precision of modern warfare, which requires them to be both day/night capable and responsive to the immediate needs of the operational commanders. This era saw ISR processing timelines decrease dramatically and began to highlight the operational benefits derived from being able to link modern weapons with the ability to quickly and accurately locate people, places and activities.

The advent of Predator and Reaper has facilitated a new era in GEOINT with ramifications far beyond precision counterterrorist operations – the transition from still imagery to full-motion video. High-definition FMV on persistent platforms capable of precision strike, enabled by new tactics and operational integrated with other forms of intelligence has effected a revolution in counterterrorism operations. The FMV revolution won't be limited to counterterrorism, however.

Now for a few comments on the future of GEOINT: GEOINT will remain central to most, if not all, of our core national security challenges. It provides responsive warning, situational awareness and insight to our policymakers and operators and provides a unique source of analysis in – of enduring and emerging challenges. Among GEOINT's critical contributions are the characterization of advanced foreign weapons and additional insight into enemy strategies. This, of course, relates directly to our ability to deter and defeat future aggression and counter the proliferation of weapons of mass destruction. At the tactical level, GEOINT also provides innumerable critical information to our operators.

The next big leap in GEOINT capabilities, in my judgment, will be platforms and architectures that enable much greater persistence and resilience, **activity-based intelligence and multi-INT integration**, provide more affordable optics, enable the continued exploitation of new phenomenologies and more sensitive sensors and provide the expansion of GEOINT capabilities to new warfare domains and intelligence problems. These major trends, moreover, will reinforce one another. GEOINT will make major contributions to cyberwarfare and social media analysis. GEOINT's ability to put things into a spatial context is a vital contributor to multi-INT analysis and fused intelligence. GEOINT frequently enables us to corroborate other sources. We need to think, as other speakers have said, an operate multi-INT.

The work that NGA has done with new phenomenologies to help detect and defeat improvised explosive devices in Afghanistan has been outstanding. Many, many lives have been saved. Volume must become our friend. Our goal is not to miss anything, and large volumes of data support that goal. We just need to make sure that our enterprise infrastructure supports the provisioning of volume and variety of data we need at the velocity we need it to the right people or machines that need it. This requires significant investment in processing, exploitation and dissemination capabilities and capacity.

NGA needs to principally focus on NGA-hard tasks. I believe Director Long has exactly the right vision for NGA in enabling greater access to GEOINT data and allowing less sophisticated users to meet the requirements that do not require NGA's expertise. For this to work, the services must do their part and continue toward network solutions and sharing. Efforts such as the Defense Intelligence Information Enterprise, or DI2E, will facilitate the services and combat support agencies coming together to share infrastructure and common services.

Precision engagement has been, and will continue to be, the hallmark of our war-fighting capability and we must continue to invest in areas that promote enhanced precision at all levels. The GEOINT future will see increased machine to machine transactions, but humans will remain in the loop where and when necessary. One of our emerging challenges is to make our sensors and downstream systems smart enough to automatically identify specific activities and to

distinguish normal from abnormal activity and then alert the human analyst or targeter to the object or activity of interest. Once a potential target is identified, advanced tracking algorithms can facilitate keeping the target in our sights.

Most of you probably remember the old term: Do more with less. The more appropriate new term, given our robust ISR portfolio and the current fiscal environment, is: Do more with more, but for less cost. As threats expand in scope and complexity while budgets remain flat or decline, our principal challenge is ensuring that our evolving capabilities are aligned with our top national security challenges. I believe that we are focused on the most important challenges confronting defense intelligence and that we are aggressively pursuing innovative solutions to these challenges.

I thank you for your attention and I apologize that my limited time here in Orlando today does not permit me to entertain any questions. Thank you. (Applause.)

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