

Ensuring an Omnipresent Eye in the Sky

James R. Clapper Jr. Director, National Geospatial-Intelligence Agency

James R. Clapper Jr. is the first civilian director of the National Geospatial-Intelligence Agency. He retired as a lieutenant general from the United States Air Force in 1995, after a 32-year career. Prior to his appointment as director of the National Imagery and Mapping Agency in September 2001, he worked in industry for six years as an executive in three successive companies. His business focus was on the intelligence community.

Clapper's last military assignment was as director of the Defense Intelligence Agency. His earlier assignments included a variety of intelligence-related positions such as assistant chief of staff, intelligence, Headquarters USAF, during Operations Desert Shield/Desert Storm, and as director of intelligence for three war-fighting commands: United States Forces, Korea; Pacific Command; and Strategic Air Command.

Clapper has served as a consultant and advisor to Congress and the departments of Defense and Energy, and as a member of a wide variety of government panels, boards, commissions and advisory groups.

He was a member of the Downing Assessment Task Force that investigated the Khobar Towers bombing in 1996. He earned a bachelor's degree in government and politics from the University of Maryland, a master's degree in political science from St. Mary's University, San Antonio, TX, and an honorary doctorate in strategic intelligence from the Joint Military Intelligence College.

His military awards include two National Intelligence Distinguished Service Medals, the Defense Distinguished Service Medal with Oak Leaf Cluster, the Air Force Distinguished Service Medal and a host of other U.S. States military and foreign government awards and decorations. He served two combat tours during the Southeast Asia conflict and flew 73 combat support missions in EC-47s over Laos and Cambodia. He was named as one of the Top 100 Information Technology Executives by Federal Computer Week in 2001 and has received the NAACP National Distinguished Service Award and the presidentially conferred National Security Medal.

MGT Editor Jordan N. Fuhr interviewed General Clapper.

Q: It has been almost three years since you were named director of NIMA back in September 2001. What significant changes, including the name change from NIMA to NGA, has the agency undergone and brought it to where it is today?

A: I think the major changes are actually symbolized by the name change. This is a huge cultural Rubicon to cross—the determination that we were in fact going to converge mapping, charting, geodesy and



imagery analysis and imagery intelligence, which had been essentially separate and disparate activities. The original vision of the founding fathers and mothers of NIMA in the early '90s was to converge the two. It really never happened. Prompted by the catalyst of 9/11, we got serious about it and in the immediate aftermath, specifically in January of '02, we decided as a corporate leadership that this was the right vision for the agency to pursue. It wasn't maps and pictures separately, but rather the convergence of the two—and when we did that the sum was truly greater than the parts. Ergo, we're going to formally embrace the term and the concept and the doctrine of "geospatial intelligence." Ergo the name change.

So the name change, although in the eyes of some perhaps is superficial or symbolic, really does connote what, to me, has been the major seat change here.

Q: What are some of the challenges that NGA now faces?

A: I think the major challenge is 50 pounds of requirements and 30 pounds of resources to do them. That's not new. I've been doing intelligence work for 41 years, and that's as true today as it was 41 years ago. And that essentially is our issue. We, collectively, the intelligence community, have gotten better at—despite the impasse—at figuring out how to make do, get more out of that 30 pounds of resources to meet the 50 pounds of requirements. That's been a change.

It's the mounting and increasing demands, in our case, for volume, for accuracy, for currency, for completeness, rapid turn around, rapid update—everything's got to be done faster and faster and faster with greater and greater accuracy and currency. And, of course, whatever

successes we enjoy begets higher expectations on the part of the user, which begets more requirements. It's a never-ending spiral.

Q: What role does existing commercial imagery play, in terms of helping to offset that demand?

A: FY03 was the first year in which we put what I would call “serious money” on commercial imagery—prior to that it had been kind of ad hoc, end-of-year congressional adds. To its credit, the Congress, early on, has been supportive of commercial imagery.

Coincident with 9/11 and its aftermath, I believe commercial imagery came into its own. It is one now of three major thrusts in this agency—what I would call transformational thrusts. The other two being advanced geospatial intelligence and the growing use of airborne collection.

So, commercial imagery now is a major business. We are in the process of investing in the development of the next generation of commercial imagery satellites. We are at the same time learning internally how to use and deploy commercial imagery, which has some great advantages. It is a great area collector. You gain a great area of perspective, and it takes the load off the national technical means for those requirements that require a wide area and lesser resolution. It is of course ideal in a coalition environment because you don't have the complication of classification. It's great in a public or state-to-state diplomacy context where you can use the imagery to illustrate to the public or someone else the point you are trying to make. It has tremendous applications in a domestic context as well for the same reasons.

The challenge for us has been to make commercial imagery look like the “other stuff”—the high-priced spread, so to speak. In terms of its availability, it's also a challenge making it as responsive as our national technical means, which we've gotten pretty good at. Of course, we invested a lot of money in the infrastructure to move it around. Because of the history of commercial imagery, it was, until very recently, managed somewhat on a shoestring, so we've had a lot of tennis shoe conveyance. What we are trying to do is automate it so it looks the same and it is as responsive as our national technical means.

Q: You've kind of mentioned the NextView program. Could you talk more about this?

A: Yes, that is exactly what I was alluding to. We actually have two contractual vehicles—ClearView is the vehicle which has options for the acquisition of operational procurement of imagery, and NextView is the contractual vehicle for what is already accomplished with DigitalGlobe, and we're still in negotiation for another one, for the next generation of commercial imagery satellites.

Q: Do you ever envision a day when commercial satellite imagery will completely replace the need for classified systems?

A: No, I think there will always be a requirement for the unique characteristics and attributes and strengths of the national technical means. In a classified context, the exquisite high resolution, the exotic applications that really are only designed for one purpose, which is gleaning secrets.

Bear in mind, the commercial imagery industry is also interested in generating revenue from non-government sources, and the kind of requirements we might have in a government-only context may or may not have a need or market commercially.

So, what we try to do—I think I would characterize it as an unfolding philosophy—in terms of our relationship with the industry, is we support

their development of capabilities, which help fulfill some of our needs and are also commercially marketable. That's the sweet spot that they would want to be in.

Q: Taking all this imagery, what technologies are facilitating the ability to analyze and distribute the geospatial intelligence?

A: The endeavor that we focus on and concentrate on a lot is what's called TPED, which is a term for tasking, processing, exploitation and dissemination. That is the apparatus on the ground, if you will, that takes the intelligence that is collected from whatever source and then from which we can extract usable information and intelligence.

While others focus on fielding operating collection systems, we have to be the champions for “what do we do with all of this data on the ground.” So, one of our major pursuits from an R&D perspective are the capabilities which allow us to manipulate, correlate all this data, store it and be able to extract it, and automate a lot of what today is done by humans.

So, another major focus of ours is tools so that we can do things like data mine, automatic target recognition—which is a big thing—where you free up the analyst to do those things that are the most sophisticated challenges, the most subtle challenges, that ones only a human mind can deal with, and some of the other low grade stuff can be done automatically.

Now, this sounds good. It's a tough challenge though in an era of denial and deception, and more and more of our adversaries are sensitive to that.

Q: Are there any programs in the process of development dealing with automated processes—such as target recognition?

A: Yes, one that comes to mind is a system called PIPES—PACOM Image Processing Exploitation Segment—it's a PACOM developed system that fortunately had Congressional interest. It was done as a test development out in the Joint Intelligence Center in the Pacific. It's reached a point of maturity now, so we're in the process of exporting it—substantiating it elsewhere. That's just one example of the kind of things we are currently bringing to bear in terms of automation.

Q: How is the NGA managing data in terms of moving from the “warehouse of maps” toward better distribution of on-demand intelligence?

A: Actually, hard copy is the vision we are trying to get away from. We want to evolve away from hard-copy products, which are out-of-date before the ink dries, and move to an e-business way of conducting our business, much as you would on the Internet for research.

The objective here would be to develop this digital foundation database, from which customers could extract what they need and then if they want to print something locally, then fine. Given the advance in printing technology, you can buy very capable big printers to produce big products very cheaply. So we have a conscious campaign now to get rid of our product lines that are built for one customer and move more and more to a digital environment.

That said, it's one thing for us to say we are going to transform and go digital and all that. It's quite another thing for all our customers out there. Ground combat forces, the Army and the Marines in particular, are always going to want hard-copy maps. So we are always going to get it to them, at least to the end of my life. But, what we want to do is neck-down, so we do less and less of that and more and more of the digital business. But, this is a gradual thing. We're not going to have all of this done by close of business next Friday.

Q: How is NGA involved in the Geospatial One-Stop e-government initiative, and does that factor into providing your customers digital access to geospatial intelligence?

A: It's a player for us, although particularly in a domestic context. We have a partnership agreement with the U.S. Geological Survey, which actually has the responsibility for America's Map. We get involved and engaged with them particularly in supporting homeland security. So, to the extent that products and services and solutions we generate in support of the Department of Homeland Security and all of its components are releasable they have relevance to the e-government initiative. Some of that, of course, is classified or limited in its distribution. We've done a lot of what I would call visual depictions of our infrastructure—"where are all the nuclear power plants?" "Where are electrical generation systems?" I'm not sure you want to put that out there for public consumption. We have that sort of trade to make.

Q: That seems like it would be good information for local and state agencies?

A: Well, we don't do business directly with state and local agencies. We have to do whatever business we are going to do, such as deliver products and services, through a lead federal agency. Someone else can sponsor us; normally, these days, it's though DHS.

Q: NGA released the National System for Geospatial-Intelligence (NSG) Statement of Strategic Intent this April. Could you discuss the purpose behind the NSG and intent statement?

A: What the NSG—as we call it—the National System for Geospatial-Intelligence, refers to the larger domain, not only as NGA as an agency, but a larger domain that includes service, military department and civil geospatial intelligence activities and endeavors—so, it refers to the systems, the people, the standards.

The notion is that I'm sort of the titular functional manager presiding over this endeavor, if you will. The interest that I have is trying to promote as much coherence and standardization and interoperability that I can, bearing in mind that much of the National System for Geospatial-Intelligence I don't own or control. The only part over which I have some nominal oversight is this agency.

Q: How would you like to see industry respond to the NSG?

A: Well, industry is a major partner of ours. The bulk of our workforce is industry. We have more contractor full-time employees than we do government. We are already partnered with industry big time. They are part of us. If all of our industry representatives didn't come to work tomorrow, we'd be out of business. They are very much a part of us.

Corporately, or institutionally, I depend on industry to be the innovators, to help us be change agents, to help us be what we want to be, to move into the future. We are looking at them for the ingenuity, the creativity, technological improvements that can substantiate the agency. So, that's what we look to them to do.

Q: It seems NGA is always releasing broad agency announcements looking for unspecified geospatial technologies, sometimes already existing technologies for use in new ways. How does the agency actively help businesses present their capabilities?

A: We actively try to engage industry. In fact, I was in industry myself for six years and worked for three companies. I know some of the frustration I had dealing with the government. So I've tried to capitalize on that experience here. For example, we have set up a fairly elaborate process where a company comes in here and presents its capabilities, demonstrates them, briefs them, whatever. We have a pretty rigorous staffing process for tracking that.

It always frustrated me when I was in industry, and I would seek an audience with some government official, show them the capabilities, brief them, whatever, and that's the last I'd ever hear of that. I'd never get any feedback.

So, we've attempted to set up a mechanism that does that. This is a direct reflection of my own experience in industry, and I try to create an atmosphere where our industry people are a part of us and treat them as part of the team to the maximum extent possible. This is not in any way to suggest abrogating our contractual or fiduciary responsibilities for overseeing contracts.

Q: How will the administration's actions based on the 9/11 Commission's recommendations strengthen the intelligence community as a whole, and specifically the NGA?

A: I think it is a little too early to speculate on specific results, but the overall effect should be positive. The administration has and will continue to provide guidance and direction; those of us charged with implementation will do our best to accomplish the desired actions. We all have the same common goal—to better address terrorist threats to our nation.

Q: Any final thoughts you'd like to share with our readers?

A: We are not a communications house. Our business is the generation of intelligence. Of course there is the old saw, "Intelligence is cool. Reported intelligence is really cool."

We are dependant on others for conveying, disseminating. That "D" in TPED is a big deal, because if it doesn't get to the user—then what? We have DISA [Defense Information Security Agency] and others who are partners in that respect as well.

Also, something we didn't talk about in the NSG Strategic Intent is our portrayal of what our nine or 10 sort of timeless initiatives are going to be. One of them is taking care of our people, which despite all the technology and the systems, remains our most important resource.

The other thing is our global deployment. We are located in more than 90 locations around the Earth and we have customer support entities, called NSTs—NGA Support Teams—some of which can be quite large, others just one or two, but the object is to be a representational pointy end for the agency that has a reach-back capability to the mother ship, if you will.

Our experience has been it's invaluable to have our people in the customer's footprint, knowing what the customer's needs and requirements are, letting the customer know what the art of the possible is—even if it isn't in the catalog, knowing we can tailor something for you. That's invaluable. That's a major part of us, our deployed folk who are up front, up close and personal the customer.

At the height of OIF [Operation Iraqi Freedom] we had upwards of 100 people deployed—out of hide I might add. Various subsidiary elements in the AOR [area of operations], down to and including, for example, each one of the larger Army units had a NGA contingent. ○