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Director Letitia A. Long's Keynote Speech

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Director Long: I will tell you, it is great to be here in San Antonio and back at GEOINT. We are off to a great start here this morning. DNI Clapper, General Alexander, Director Carlson – I've actually had three pretty good warm-up acts! I think those three really deserve a round of applause, not just for their presentations here this morning but for their collective service to our nation. (Applause.)

Director Long: And a big thanks to Shay and Keith Mossbach for once again surpassing all expectations. More attendees, more exhibitors, more members of USGIF. We are so very fortunate that they are on the leadership of the U.S. Geospatial Intelligence Foundation. I will tell you, we at NGA are very thankful to have a foundation such as this that is working towards the furtherance of our very business. So we're pretty darn lucky and we know that.

This symposium follows on the heels of a number of very important events at NGA. Director Clapper talked about Family Day. That was actually the culmination of a week of Celebration 2011 events. We started out with Family Day in St. Louis, and then we had the formal dedication and ribbon cutting on our new headquarters, NGA Campus East. It is an outstanding facility. Again, we are so very fortunate. I don't think we'll have a BRAC like that one again anytime soon.

A facility that is purpose-built for our business; that encourages collaboration; that really helps us with forging integrated GEOINT and therefore forging integrated intelligence.

We also paid tribute to our former leaders. We had all four of the former Directors there, all three of the former Deputy Directors there. Icons in our business.

We inducted five new members into our Hall of Fame, and hosting that ceremony and listening to what those individuals had done over their careers reminded me that the men and women of NGA are innovators, that they are truly there for service to our country just as you all in this audience are innovators and all about service to our country. So I know that our collective future is in very good hands.

This year's theme underscores how we meet our mission priorities – 4-D integrated intelligence. And you've heard a couple of folks, and even I mentioned it in the opening video that the Osama bin Laden operation was a prime example of integrated intelligence. Each agency brought its unique and complementary expertise to bear without regard to turf.

You heard Robert Cardillo mention when we can work without boundaries, when we can work as an integrated whole without even thinking about it, that's when we know we will have arrived, and I will tell you when we are operating that way, that's when we are at our best.

GEOINT as DNI Clapper said, is the very foundation. It's the lynchpin to integrated intelligence, at least I believe that. Why do I say that? Because not only do we generate the means to visualize the environment and provide the basis for all to see the integrated intelligence, our core competency, the ability to think spatially and depict visually gives us that edge. It gives us an edge in analyzing data in spatial and temporal terms. It allows us to contribute to the larger intelligence picture by analyzing all types of GEOINT sources to anticipate what may happen, where it may happen, and why. And a key outcome of this integrated intelligence gives the policymaker, the warfighter, and the first responder more time to figure out what they may need to do to work on their responses.

Last year I told you that I wanted to fundamentally change the user's experience by putting the power of GEOINT in the hands of the user. Before I give you an update on our progress over the past year, I'd like to spend a few minutes and talk about the framework in which I think about the progress that we make, or put in other words, how we measure that progress.

Four areas, as you see up on the screen.

First is content. What do I mean by content? Quite simply, it's all of our source material. It is national technical means that the NRO does such a superb job in providing to us. It is our commercial satellite imagery. It is airborne, both manned and unmanned. It is handheld imagery. It is our foundation data. So it's all of that source material, but it's even more than that. It's what's in the analyst's shoebox. It's their Excel spreadsheet. It's a finished product that's hosted on one of our many many web sites or URLs. It's work that's in progress. What's the goal? The goal is to expose 100 percent of that content. Make it discoverable, make it accessible, and make it useable. That's the first measure. Content.

The second is an open IT environment and you've already heard the first three speakers talk to this. So providing an open IT environment where users can contribute information to that content I just talked about. Where applications easily reside and can be used against that content. An environment where you can bring your applications and operate on our content or someone else's. So an open environment, and oh by the way that's in all of our security classifications. So extremely important, obviously, with the right controls, the [CION's] ability you heard about earlier, the identity management, the strong security layer, but nonetheless an open environment.

Third is customer service. It is all about the customer. It is all about the user's experience. Today we are very much a full service organization. We are embedded in our mission partner's footprint, we understand the priorities, we understand their concept of operations, we can often anticipate what they might need before they know they even need it. That's a good thing. It's also very manpower intensive. It's also point-to-point. You ask a question, I provide the answer. You may not know that person over here has asked the same question and I've got an analyst over here who's answering it, and they're not necessarily collaborating. Am I exaggerating? Of course I am. We have a pretty good RFI tracking system. Our analysts do collaborate and we do post, we do push. But when analysts across the enterprise, not just NGA, but the NSG, the National System for Geospatial-Intelligence, the ASG, the Allied System

for Geospatial-Intelligence, are working on a problem set, they may not know what everyone else is doing. We need that open IT environment to be able to expose all of that content.

What I want to do is take our customer service delivery model and turn it on its head and have a three-tiered delivery model. Self-service, assisted service, and full service. We will always be embedded with our mission partner. We will always be providing that full service experience to those who need it. But increasingly our mission partners, our customers, our users, whatever term you want to use, are increasingly GIS savvy. They want to be able to serve themselves. If they have easy access to our content and can work in an open environment where they can pull down an app and work a product for themselves, why wouldn't we encourage that?

For those of you who are over 30 in this audience, you remember the old AAA Trip-Tiks. You used to call AAA, or better yet you'd go to the office, sit down, you'd plan out your vacation. You'd get Point A to Point B. They'd take that nice big magic marker and map out all those routes. They'd tell you where the construction was going on and give you a detour. They'd show you where the rest stops are, where the good places were to spend the night, where you didn't want to stay. Kind of quaint, isn't it? When's the last time anyone's been to a AAA office to get a Trip-Tik? Well, okay, you can do it on-line now which is exactly what we do. We serve ourselves. We use Mapquest, we use Google Maps, we use our iPhone – hopefully when we're not driving, or we use our GPS system. So that's what I'm referring to. The ability to serve ourselves for those things that make sense, for those things where content is easily available, the application has been developed.

Assisted service. Maybe you can reach down and find some of the content, even do a basic product but you need a little more help. So you enter into a chat with an NGA analyst, they are right there with a proactive assistance service, helping you find what you need. Helping you find a similar product. Like when you're on Amazon.com, you pull down a book and the little bubble comes up and says, oh, you like that author? You might like these over here. Oh, that product worked for you? We've got a whole new suite of products that you may not know about. So proactive assisted service. And as I said, we will always have that full service.

When we've accomplished those first three, when our content is easily accessible, when it's useable, within an open environment, and we've got a different delivery model, those three are going to help us get to the deeper analytics because we're going to free up the time of our analysts to be focused on the so what, to be focused on adding to context, to be able to experiment with the new sensor data, the new phenomenology, developing new analytic tools and techniques.

So that's the framework within which I have been measuring our progress over the last year. So why don't I tell you what we've been doing over the last year or better yet, why don't I show you?

Humanitarian assistance and disaster recovery is one of our key mission areas. When a natural disaster is about to occur or has just occurred the first thing we will do is go into production mode and we will produce some very nice disaster atlases, map atlases, for FEMA for the urban search and rescue teams. They can show base maps and imagery, it might be before and after imagery. It just depends on what FEMA is looking for at the time. Our analysts can produce about 200 pages an hour. We produce those, we print, we bind, we ship

or more than likely we take them with us because we deploy with the urban search and rescue teams or USAR teams.

A typical disaster is about 200,000 pages. You can do the math. We can sometimes be bottlenecked. So we started working on a suite of applications for our FEMA mission partner as Hurricane Irene was bearing down on the East Coast. We thought what better way to beta test our apps then to just deploy with a bunch of mobile devices. That's exactly what we did.

I am not a USAR team member and I have just been told that I am deploying to the Cape Hatteras area. So I've got my nice mobile device. And oh by the way, we did not print map atlases for Hurricane Irene. We went totally mobile.

So the first thing I'm going to do is pull up the disaster atlas. For purposes of this demo I have Cape Hatteras loaded in. We can do 6,000 pages an hour, the equivalent of 6,000 pages an hour on the mobile device once the information, of course, is loaded in.

So what I'm doing is expanding to the area of interest that I know I'm going. And oh by the way, with the static atlases, the team members would typically go to their two or three or five pages of interest and rip those out and go. The rest of the book, not used by anyone, and there are six or seven members on a team, so six or seven books for two or three or five pages.

In this event we uploaded, and what we did for Hurricane Irene is both pre and post. I'll just pull up the post. We'll immediately get the graded reference traffic, the map traffic, along with the imagery.

I will tell you what we would normally have done in an atlas is the coastline and about three miles in. If the weather guessers get the route of the hurricane wrong, we've got to back to production. Not so here. I just go and pick up the different grid. So there you can see on the screen the base map along with the imagery. I can zoom in on the imagery. You can't do that with the static atlas. Simple but very powerful.

The second application that I'd like to demonstrate is one we wish we had had when the tornado went through Joplin, Missouri, because in fact the devastation was so total that as the USAR teams got there, they actually couldn't find their way around. This is a picture of Joplin. Not only were both areas just leveled, there were no street signs.

In this case my task is to find the nursing homes west of town and make sure they're okay, make sure they have basic facilities, or if they don't, vector the teams to that location. I know I'm going west of town, so I can easily key in on one of those. As I said, I'm headed in that direction, but there are no street signs. So I really don't know where I'm going. What we did, this uses the homeland security infrastructure program data that NGA posts for the federal government working with a number of our mission partners. 451 layers of infrastructure. Information on medical facilities, schools, power plants, you name it. Anything that a first responder would need to know is loaded in here. We've geospatially enabled it and in this case we have just added a compass. So if I don't know where I'm going I just take my handy little device. I can use it in a car. I can use it if I need to get out and walk.

Again, simple but powerful. This will take me right to where I need to go.

If I didn't know the location on the map but I had the name of the facility, we have the information loaded in that way also.

Simple, powerful, up to date.

So speaking about today, as the teams are out in the field they need a way to get information back to the command post. The way the teams were working when we deployed with them into New York, you may recall the inland flooding that took place with Hurricane Irene. The teams that they were out surveying the landscape to update infrastructure for the first responders were actually using hand-held GPS devices, writing down the lat/long, writing down what they were observing. After several hours going back to the command post, handing that piece of paper over to the NGA analyst who deployed with them who would then type everything in, put it on a base map, pull some imagery, make copies, send that back out to the teams. You got that? Time sensitive, not very efficient.

So on the fly while we were deployed with the FEMA teams we came up with a very simple application to allow entry of data from the field. So you put in your lat/long, you put in the date, time, you put in the key attributes that you want to get back to command central. I've got some things pre-loaded. We're in Texas so I'll be Task Force 1. I will add that event in that quickly. It's now entered in and everyone has access to it. You don't have to worry about driving back to the command post to get that information back in. And of course it shows up right back on the base map at the same time. You don't have to go through a whole database of things, but you can actually just see that the information has been entered in, or you can trust and believe it.

It really is that easy.

Okay, trust me. (Laughter.).

The big thing on this, a couple of take-aways. It was not only the fact that we made FEMA's life so much easier, much more efficient in what they were doing, but we freed up our analysts' time to do some deeper analytics. As the hurricane actually did take a path that wasn't predicted, we didn't have to go back into production mode. As we developed the app for data entry from the field, we didn't have to be doing all of that manual input and generation of maps. So our analysts were able to go to some of those 451 layers of the infrastructure program and actually pull up some information we've never looked at before. Slime lagoons. I didn't even know what a slime lagoon was until I was getting an update from the folks who came back from the deployment and they were able to do some very, again, simple but elegant analysis on the location of the slime lagoons, looking at how the waters were rising and whether or not the water supply would be contaminated. That's a big deal. And again, one of the layers in the [H set].

Another piece of analysis that we did was looking at mobile home communities. Where were they? Were they in the path of the hurricane? And so something clearly that FEMA would want to know so they could get there and evacuate the folks before the hurricane came through so it would give them a range of options instead of responding to a crisis afterwards. I think you'll hear from Ambassador Fugate tomorrow that while he is very pleased with the direction that we're headed in giving all of these mobile apps to these folks, he's really looking to us for that

deeper analytics and that is, of course, where we really do create new value. So we're pretty excited about this.

So support to the first responders. The next thing I'd like to talk about is support to our military forces.

I'm a pilot now, and I have just been given the assignment to fly a DV from D.C. to San Antonio. That in fact happened yesterday when I had the good fortune to ride with Director Clapper from National [Washington-Reagan Airport] down here. Now I wasn't flying the plane but I did talk to the pilots. I will tell you, the first thing they do when they get their assignment is to load their FLIP kit – Flight Information Procedure Kit. A statutory mission for NGA to provide safety and navigation materials for the safe flight – takeoff, landing – for all of our military aircraft as well as for our maritime forces. A worldwide FLIP Kit, if you are a cargo pilot or a refueler is 90 pounds of books and charts. Okay, a fighter jet doesn't take as much, but this one book is one-third of Texas. So you need more than one book. You need a bunch of stuff. That's how it is done today. We print those every 28 days so that our pilots have the most up-to-date information. Okay, some of it's printed maybe every 40 to 50 days, but the bulk of it is every 28 days.

In 2010 we published in hard copy ten million books and charts. $20 million. I think I have a better, cheaper, faster way of doing that.

So I'm a pilot. The first thing I'm going to do is do my flight planning. So D.C. to GEOINT and there we go. I've already got Ronald Reagan, Washington National and San Antonio loaded in, but if I was going to get diverted say to Randolph [Air Force Base], all I need to do is quickly enter that in, if I can type, and if I can see. I can find it and add it in that quickly.

So I've done my flight planning. I'm not in flight, or getting ready to take off. So the first thing that I need of course is just general info on the airport. And even though I landed at Ronald Reagan yesterday I need to refresh myself on the lat/long, the airport communications frequencies, information about the runways. All right there at my fingertips as well as a diagram of the airport.

That's something I can't do with those books. I can't zoom in. So very easily, all at the touch of your finger.

Now the departure procedures. Same thing. The ability to just have that right there. I think you kind of get the general idea.

I mentioned charts. So when we were actually en-route yesterday I noticed the pilot in the cockpit unfolding this big old chart, trying to spread it out. I got a little nervous for a while. I didn't tell the DNI that that was actually going on up there, but I think they were fine. Obviously we landed okay. But you don't have to do that. You could just pull up a chart and have it, again, right at your fingertips and the ability to just see all of that all in one place. You can understand the importance.

And of course approaching San Antonio, the tower has just informed us that we will be, the arrival procedure that we will be using Runway 12R and again, all there, right at our fingertips.

It's going to save us a lot of time. No more printing. Save us a lot of money. It's going to save military services a lot of time and money also. Working with multiple pieces of paper there, books, charts.

Lloyd Rowland my Deputy, former F-4 pilot, likes to regale us with the story of every 28 days when you got that new shipment in, you'd have to roll up the 55 gallon trash barrel to get rid of all the old stuff. It's also going to be a lot better for the environment.

We are pretty excited about this. We're actually starting beta testing with Air Mobility Command today. Again, I talked to our pilots and they were – the pilots from yesterday – and they said bring it on. We're ready. It's about time. Why haven't we done that already?

Simple, but very powerful.

The next thing I'd like to show you is actually a video. This is a video of a demo, it's an app that we're working on right now. I'm now mission planner and I am working on where to place an internally displaced person camp. So I've got to think about ingress/egress routes, I've got to think about that helicopter landing zone that I talked about last year, I've got to think about flood plains, mud flies, what are all the things that we need to take into account as we're trying to identify a good place to put an IDP camp?

If we can have the video, please.

This video will start off with some LIDAR data, Light Detection and Ranging information which is a much better resolution than just using big maps. So this is LIDAR data that was collected from over Haiti. We used this along with the apps. I'll tell you, the app is actually operating on a number of disparate databases to pull in the various layers of information to display what we need. So here you will see the optimum place for the helicopter landing zone. Next you will see the max distance, how far do you need or want to be able to travel to the camp? What are the areas that are safe from mud slides? What are the areas that are safe from flooding?

The value here, previously you'd have to go to six different databases to get all of that information to come up with a candidate camp site, and there we did that in less than a minute. So we are in the process of appifying that and it should be ready in the next couple of months.

I've just given you a couple of examples of support to disaster operations and support to our military forces. We are also a national intelligence agency and we have a strategic mission.

This next short vignette is to talk about water. Water is a strategic issue. It is a resource that we all need.

Yemen happens to be the most water-scarce country in the Middle East. This could be anywhere, but we have starting with well data, some well data that actually the Army Corps of Engineers has collected over Yemen. I'm sure the layers will come up in a minute. What we've done, and it's a number of layers of open source information. It's well data. The Yemenis are actually depleting their well water at a rate higher than it is being replenished. There's a layer to look at waterfall, where the concentration of waterfall is. Where the concentration of water scarce areas are. As well, we overlay vegetation, vegetation uses 90 percent of the well water.

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And then overlay population. Where are the most populous areas of Yemen? It doesn't appear to be coming up today.

You're probably sitting out there thinking okay, I get it, I know what she was going to show, a bunch of Disney maps. I was actually going to show you how it changed over time. So there you go. There's the scarce or lacking groundwater area. So each of those layers we put over there and you're saying again. Okay, pretty easy, it's all open source information, readily available. If I've got a GIS program, I can do that.

This is an unclassified forum so that's about all I can show you. The value that NGA brings, again, our ability to think spatially, depict visually, when we overlay our classified information, and I'm not talking about Yemen now, I'm talking about anywhere in the world, giving our all-source analysts a different way of viewing things, a different approach. Giving our national security consumers the ability to look at things ahead of time, that's the anticipatory or predictive analysis. And so this is an area that, again, as we talk about deeper analytics we are very much focused on, and I think you can see the final overlay there with all of the layers.

That's what I wanted to show you. This is just a small sampling of what we have done over the last year. There is a panel later today that will talk to the implementation of the NGA vision. There are also a number of breakout sessions throughout the week. So you'll have the opportunity to hear a lot more about what we're doing.

I'd also encourage you to visit our booth where you can see these apps along with a number of others and you'll have the real experts out there who can answer your detailed questions.

That's what we've been doing. What can you expect next year? Where are we headed?

I'd like to talk about that in customer-centric or mission-centric terms.

Disaster support. We'd really like to drive out the art of the possible using FEMA as our mission partner. I don't know how many apps, but apps that are readily available, apps that we build, apps that you build and bring to the environment so that FEMA can do what they need to do when they need to do it. They work in a very mobile environment. So the ability for them to have at their fingertips what they need, the ability for them to contribute content. You saw that by just a simple application that I demonstrated today. And the ability for us to provide the analytic support before, again, they can anticipate what they need. So it's really the ability for us to do things that we cannot even imagine here today. That's the disaster support arena.

In the support to military planning and ops, I'd really like to move from a data poor to a data rich environment. I'd like to be able to build and provide those apps for our military forces for military operations with secure mobile devices. You heard General Alexander talking to that earlier today. And experiment and use different types of information.

For integrated GEOINT analysis, it really is the continuation of using all of our traditional and non-traditional sources so that we are creating new value, so that we are focusing on the key intelligence questions. And we will do all of this while we are focused on gaining efficiencies. We will do all of this while we are still embedded in our mission partners footprint forward with our fighting forces. We will continue to partner with all of you. With our industry partners, our academic partners, the NSG, the ASG, all of our international partners.

I really believe we have irreversible momentum in what we have started here. You heard that this morning in a video from General McCrystal also. The demand for GEOINT is rising and it will continue to rise. We are delivering and we will continue to deliver. I hope you see that we can't do this without you. This is an outstanding forum that brings together so many folks who are interested in our business.

So I thank you all for being here, and I thank you for giving me the opportunity to talk with you this morning and to show you that what we are trying to do for all GEOINT users is to know the earth, show the way, and understand the world. Thank you all very much. (Applause.).

Moderator: Thank you, Director Long.

Continuing the questions on reductions. There is a possibly outmoded idea around duplication that certain agencies should do all-source analysis and certain shouldn't. How do you respond to the criticism about NGA as an all-source analysis producer? Are you doing all-source analysis or is that definition outdated?

Moderator: I guess I'll follow on to what DNI Clapper said this morning in that I don't really worry about what some would try to define as very hard lanes in the road.

We need to be pushing the boundaries each and every day. We do GEOINT in an all-source environment. We start with GEOINT, we end with GEOINT. But we are in an all-source environment. I want our analysts focused on the key intelligence questions. It is not simply about reading out imagery and putting remarks in a database. That's important and we will always do that. But why is more important. Why is more interesting. Why is something on imagery? Why is something not there? What are the other associated information that I could add to that to provide more context so our all-source analysis mission partners can use that and again add their information to it.

So I don't really get hung up on that, although I will tell you, and Lisa Spuria is here and she knows, she gets the phone calls. When I read an NGA report and there is an assessment that in on way, shape or form [it] came from GEOINT, I do question how we got that assessment. We are doing GEOINT in an all-source environment and I think our all-source brethren really want us pushing that envelope every single day.

Moderator: You've laid out a vision that includes a transition to soft copy. Are the military services and our allied partners ready for you to go away from hard copy products to soft copy?

Director Long: I like to do informal surveys. I was doing more of that yesterday as I visited with our pilots in the cockpit. The answer is a resounding yes. Why would you not want to be able to have everything at your fingertips? The ability to add in the latest and greatest on demand? The ability to zoom in? All the many attributes that having digital or soft copy or on-line/on-demand brings you.

Do we need to be mindful of the timeline on which we do that, and do we need to work with the military services and our international partners? Of course we do. That's exactly what we're doing.

I'll answer a question you haven't asked yet which is the efficiencies piece. This is an area where we are going to find savings. Just the FLIP Kit alone – $20 million on printing paper. I don't know exactly what it's going to cost to do it on-line, but it's going to be a lot cheaper.

Moderator: In line with that, how do you ensure that the end user who now is tailoring their own information for their purposes understands that information, how to use it, and is protected from making mistakes based on it?

Director Long: Thank you for that question. Our job is to make the data available, to make it accessible, and as we are providing the apps hopefully in such a way that it is easy to create and therefore so we not go astray. Now DNI Clapper and I, I was actually surprised there wasn't a follow-on when he answered a question and talked about the ability to manipulate the data. [Inaudible] understand as they are working with the data, it is as good as what they are doing with it. We need to ensure the efficacy of it. We need to ensure when folks are contributing to our data sets that we have a way of auditing, that we have a way of showing who touched it last, and who did something with it last.

Just as when you look at some other products today and there's that big banner across it that says not for targeting purposes. You need to know what you want to use that information for and therefore what is the pedigree of it.

Moderator: Along those lines, your apps are going to require a lot of bandwidth and connectivity. You provide the data and the apps, but how do you ensure the connectivity is there to use?

Director Long: I'm not sure it's going to require a lot of bandwidth. One of the things that we have been doing with Google is working the globes. Once that globe is out there you are only transmitting the changes to it. The same with the FLIP kits. Once the baseline is out there, you may only be transmitting changes to it.

So I do think it's tailorable. Obviously we need to be mindful of the mission partner and the environment that they're working in. One of the examples this morning was a ship at sea. So we need to be mindful of looking at the best way, which his often make sure when that unit departs they have the most up-to-date baseline information and then what we're doing is transmitting changes.

Moderator: Along those lines is there a plan to incorporate a GPS into those apps and their dynamic?

Director Long: A couple of them actually had it. I didn't mention that on the [inaudible] compass. We actually developed that so that it could either work with terrestrial coms or satellite communications because in the case of Joplin, terrestrial coms, the towers were taken out. So we designed that to be able to work either way, and we'll do that to the extent it makes sense in all of our apps.

Moderator: One of the take-aways from yesterday's GEOINT socio-cultural sessions, was that funding seems tool-focused. What's your vision for collecting and standardizing the right data for accomplishing the human geography mission?

Director Long: I will tell you it is all about the data. That is certainly a part of our value proposition.

As far as the human geography piece, we have just put in place a 12 layer standard around which folks are identifying human geography information. So the setting of standards, which I talked to last year and didn't talk about it here today, is extremely important and one of the things that I certainly am responsible for in my role as the functional manager. So the setting of standards, the enforcing of standards is key.

Moderator: As you focus on teaming with industry to bring apps and solutions to NGA, what changes are required for flexible acquisition and how can you drive towards a more flexible acquisition approach?

Director Long: We talked about the four measures of progress, the framework in which I'm looking at our progress. We actually have eight strategic initiatives that we're using to kind of test things out. On the eight strategic initiatives, a couple are regional-based, a couple are functional-based, and then there's one for leadership because there is a whole cultural change that we're talking about here. [Joan] mentioned earlier weeding through a time of declining resources is a challenge.

The eighth initiative is agile acquisition. A lot of folks wouldn't put those two words together. I did that on purpose because we do need to drive out a more agile acquisition system. We're taking a hard look at ourselves internally. We're finding some things that aren't real pretty on the way we do business. Another one of my informal polls, every time I meet with industry I ask, what's it like doing business with NGA? Most of you are pretty honest and I appreciate that, and I hope you're seeing some changes as we've been working our industry and our action program.

We're also trying to collect what we need to to work with the DNI's office and OSD because we do have federal acquisition regulations that we need to follow. But just as we talk about general policy, policies can be implemented, regulations can be implemented in many different ways. What we're finding within NGA is we kind of do a one size fits all. There's got to be a one size fits many. So agile acquisition is actually one of our strategic initiatives so that we can really put a focus on how we are buying things.

I don't know how to do an RFP for an app that I don't even know I need yet. So we are, again, another area we're working. We're pushing the envelope on how we acquire things.

Moderator: Is there a role for GEOINT in cyber?

Director Long: There absolutely is a role for GEOINT in cyber, and I thought General Alexander did a good job of talking to that earlier. There's the physical instantiation, where is perhaps the cyber attack emanating from and being able to show that, or helping on the collection with the pointing of an antenna or something such as that. But there's also the metadata. And this is an area that we are just beginning to explore with Cyber Command on geospatial enabling the metadata. I think that's where we're going to find some real value in the future.

So it is a growing business area for us. But it's one that we are very much focused on. So if there's an area where we may actually put more resources against, I believe it will be cyber.

Moderator: As an analyst, we got a question from an analyst in the audience. I have a lot more information to me available on the unclassified side through Google Earth than on the classified side. What efforts are underway to integrate unclassified open source information on the classified side?

Director Long: We've actually been working on this for a number of years, even before I arrived at NGA. The demos that I showed you this morning obviously are unclassified and they're operating on unclassified information. We need to do that in all of our security domains, as I talked about. Today we have commercial imagery integrated into our top secret domain, all of the tools available for that are available right there. That's a huge change from just a couple of years ago.

So we have been systematically incorporating open source and unclassified information into all of our security domains and we will continue to do that.

Moderator: There were a lot of questions on the workforce and particularly how in a period of budget decline do you incentivize and provide the skills for a workforce to embrace this new vision? Also is there the opportunity for a technical track for promotion rather than a managerial track, which your workforce is very interested in. In closing, can you speak to the future of the NGA/NGO workforce?

Director Long: Absolutely. I'll kind of take the second part of your question first. We do have a technical track, and we in fact have that across the whole intelligence community. So we recognized some years ago that we needed to provide a track to enable our folks who were very technically focused, whether from an R&D perspective or from the GEOINT analytical perspective, to be able to rise to the senior ranks. So we have that ability and we continue to encourage that. You need those experts.

As the DNI said, we don't want to repeat what we did in the '90s where we stopped hiring and we stopped investing in our workforce. So we are very carefully managing our hire rates and our attrition rates, but also ensuring that we continue to invest in the training and the education that is so vitally important for our workforce. As new employees, new hires come in, they have amazing skills that are just second-nature to them because they are digital natives as opposed to someone like me who is a digital transplant. So we are also seeing mentoring happening in a reverse way across our workforce where our younger folks, you should have seen not only my driver yesterday, doing a live demo, it is brave, as the DNI said, and they were all 20-something. They were all, do this, do that, [inaudible], slow down a little bit, like Chief Alexander said earlier, slow down.

There is reverse mentoring going on. Our NGA College is as busy as ever training and educating not only the new hires but we have completely revamped in the last year our GEOINT training and have broken out a number of tracks. We've infused what we are now calling full-spectrum GEOINT, formerly known as AGI, Advanced Geospatial Intelligence, so that we can take advantage of the full-spectrum, that all of our folks can and we're not just working in niche areas on some of the full spectrum-sensor capabilities. So we're putting a big focus on training

and education within the college, with the military services, to ensure we've got a good leveling between our work forces. So it's a big area of focus for me and will continue to be.

Moderator: We are at the end of our time this morning. As I said at the outset, we have the strongest leadership team in the IC in my experience in the community, and I think you've seen that here today.

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