

**GEOINT SYMPOSIUM
OCTOBER 21, 2009
SAN ANTONIO, TEXAS**

Mark Lowenthal: The next speaker is General Bruce Carlson, United States Air Force, Retired. General Carlson is the 17th Director of the National Reconnaissance Office. He took that job in June of this year. He was a command flyer of more than 3500 flying hours of combat aircraft and, in fact, a forward air controller (an OV-10 Bronco) which older people will remember. Prior to his retirement, he commanded the Air Force Material Command at Wright-Patterson Air Force Base, which is a really neat place. We are very pleased to have General Carlson with us. Please join with me in welcoming to General Carlson.

General Carlson: Good Morning everyone. It's a pleasure to be here. It's a delight for me to get out of Washington, D.C. and especially to be in San Antonio, TX; my home.

I was in an undisclosed location last week, in a vault, and gave a briefing on the capabilities in the National Reconnaissance Office. Not because of my personality or the way I present briefings but simply because of the content of that briefing, I got a standing ovation. So I thought, gosh, that's a pretty good briefing why don't I just present that down at GEOINT. I sent it in for review and this is what I got back (silence). Based on that, my crack staff came up with 22 pages of remarkable text and I am prepared to read that to you. But instead of doing that, what I thought I would do is spend a few minutes talking to you about the National Reconnaissance Office and some of my perceptions and vision for what we are going to do in the future. My hope is that will answer all the questions so that you will get a 45 minute break instead of a 30 minute break.

One of the first questions people ask me is "Given that there's a lot of things wrong at the NRO, tell me some of the good things that are going on out there." Yes, there are some things wrong and I'll talk about those. Those are some of the things that are not hidden. In fact we get criticized for a number of things, and some of them, rightfully so. But there are some things that are very right at your National Reconnaissance Office that I think you ought to know about. The first one of those is "people." We have a workforce that is not our own. I am not going to fight that battle. There are some that would like to give us another 100 people and call those the NRO Workforce. I think that's absurd and if I get them, I will convert them to Air Force, Navy, or Agency personnel. If I get 3,200 people as a NRO Workforce, that would be another argument. But that's beside the point. The people that we have there are an incredibly dedicated workforce. I've had experience leading large groups of civilians and they were great people. They did good things but, quite frankly, those groups of civilians that I have led in the past don't compare with the civilian workforce combined with the military expertise that we have out at the National Reconnaissance Office. They are a National Treasure. I can't keep them forever. I am working hard on a pilot program, that's the only way we can get things moving in a hurry in the bureaucracy today. A pilot program to hire college graduates who I will pay for a Masters Degree as long as they don't get a Masters Degree in basketweaving or Sociology or Minnesota Aquatic Studies. They have to get a technical degree and agree to come to work for me for about 6 years and I'll pay for their tuition, books, and give them a little stipend while they are going to

school. My hope is to begin to grow some of that talent that we need inside the Agency to replace some of those scientist and artist who will age out over time. But my workforce is still the most priceless thing that we have and they are performing magnificently.

The second thing is the Technology. Now there are two edges to this sword. The first edge is that we don't have as much as we would like and I'll talk specifically about that in a just a couple of minutes. Nonetheless, the technology that we are pursuing inside the National Reconnaissance Office is absolutely leading edge. We partner with the finest universities, the most advanced companies and other government agencies, some of whom have spoken here this week, to develop that technology. We don't have as much money as we'd like to move it forward as fast as we'd like, to field it, incorporate it into some of the systems we are fielding. Nonetheless, the technology is still leading the world and some of you take part in some of that technology and for that I am very, very grateful.

The third thing that I think is right with the NRO is our relationship with our partners and customers. Admiral Bob Murrett was just up here a few minutes ago and somebody asked him, about the relationship with the NRO, and I have to say exactly the same thing. Of course, in any large organization, there is friction and conflict but that's how you make things better. If everything was running so smoothly that no one cared if Bob Murrett and I ever left town, I would be very suspicious that we were actually getting anything done. So he and I actually enjoy, as well as Keith Alexander and Ron Burgess, we enjoy a little bit of conflict every now and then just to make sure that the systems are working together and that we're applying as much pressure from both sides or all four sides as we possibly can. I think that the relationships that we have with our mission partners have never been better. I have never had the privilege to work with a more superb leadership team than we are fortunate to have in place today.

The fourth thing that I think is right with the National Reconnaissance Office is our support to the warfighter. I have been, not to every Combatant Commander yet, but I have been to half of them and, to the man, they are all incredibly complimentary of what the agency, the organization is doing. I have worked very hard to get the right people focused on that business and I have Dr. Pete Rustan who does nothing but focus on our relationship with the warfighter, our interface with the users, and how we're servicing customers. I'm satisfied that we are doing very well. There's always more we can do. In fact, every trip that Pete goes on, he comes back with a list of things to do. And that's exactly what I would expect. This is a dynamic world, a dynamic war, it's a changing war, we're switching regions inside the AOR. There are new intelligence needs and so we're trying to service those the best we possibly can. We're in over 70 different locations. We've got liaisons and working people inside the AOR servicing the warfighters needs every day. Those are the things I think are right with the NRO.

Now, let me transition into a few others things that aren't quite as good as I'd like them to be. Before I do that maybe just spend a minute or two and talk about this thing that we're involved in here. I have to tell you. You heard my background a little in the introduction. Two months ago, I never heard of GEOINT and I didn't lose sleep over the fact that I hadn't heard of GEOINT. But I felt guilty about it after I learned and then after yesterday and the day before walking the floor and I think I visited almost every booth. There are a few that I missed just because this is my second pair of shoes, I wore out the first pair. I am incredibly impressed. I

have been to a number of other symposiums and expositions that are related to this. But I have never seen one that is so focused on the mission and on technical capability. I have learned a great deal and met a number of people who I'll get to have the opportunity to do business with over the next few years, I hope. I have advanced my personal tradecraft expeditiously because of my attendance here. So, first my thanks to the foundation, for the hard work that they do, to put something like this together on a consistent basis. My understanding that it's be going on for only a short number of years and that the growth curve has been remarkable and the support by industry has also been remarkable. Secondly, may I compliment the industrial partners who have done so much in such a dramatic and down-turning time to support efforts like this so that we can get together and talk about common needs and common solutions.

I'd like to go into a little bit of the history that leads people to ask me the second question and that is "What's wrong with the NRO?" Well, that's a complex story but I see by the clock that we have 31 minutes and 15 seconds so I'm going to tell you a little bit of the complex story. The Charter for the NRO was built in 1964. The organizations that signed it no longer exist in the form that they did then. They're still around; they're still doing great things but they don't exist in the form that they did then. It's time for a new charter, it's outdated.

Second, the funding modality's and the push for requirements are different than they were 5, 10, 15, 20 or 30 years ago.. The need for overhead intelligence is significantly different, I didn't say it was invalid. I just said it's different than it was 10, 20, or 30 years ago. The workforce, although composed of the same groups of people, is remarkably different than it was, even 5 yrs ago. The demands on that workforce and the number of people and the mix of competencies are significantly different and we're fighting a war that has been a long war. The drain on our people and our assets has been remarkable. In addition to that, we've started a very concerted, a very objective and conscious effort to take money and capacity and capability out of space reconnaissance and that's been done over a decade and a half. With all that behind us, some things happened inside Washington, D.C., that led to a couple of significant and very, very costly failures in space reconnaissance. I was in Washington then. I was on the Joint Staff. I was the money guy for the Joint Staff so I knew a little bit about those big money decisions that were being made. I gave my input, whatever happened, happened and we had some failures. Those failures as I look back at them and as I review, not the history, but as I review the activities that I was engaged in and the circumstances that surrounded those failures. I note, professionally, that there was a lot of blame to go around. There was blame in the Intelligence Community, there was blame in the Joint Staff, there was blame in the Air Force and the other services and the OSD Staff. There was blame over in Congress but I also have been in Washington long enough to know that's not how the system works. Somebody's got to take the blame, so National Reconnaissance Office took that on the chin. All right, that's fine. I'm not going to discuss whether it's fair or not. It doesn't matter. Those are the facts. The National Reconnaissance Office took that one on the chin. Ok. So we had some failures. That was in the past. If you look at our recent activity, I'm talking about the last 18 months performance inside the National Reconnaissance Office, you will see that in terms of cost, schedule, and performance we are plus or minus 5%, which is remarkable in the kind of business that we're in. We are going to turn the corner and we are going to begin to deliver things on time and on cost.

That gets to my priorities. What are they? I have several of them but I'll just give you my top four. First, we're going to launch the equipment that we have under construction in the next 15-18 months. I went through college and got a business degree and I didn't do very well in that. That's why I became a fighter pilot because I realized I couldn't be successful in business and so I'm going to give you my view of the construction and launch of a rocket. It's a little bit like a woman giving birth to a child. We know about when it's going to happen but the precise date is not exactly known. I'm telling you, within the next 15 months - that's the gestation period of the rest of these pieces of equipment we've got to launch - we're going to launch them. One of them might be set for the first of December or the fifth of December and we might not make it until the 15th. That's not the issue with me, but in the next 15-18 months, we are going to launch those vehicles. We're going to put them into orbit in the place they supposed to be and they're going to start doing what we've asked them to do. That is my Number One priority. They are big payloads. They will do important and critical national intelligence missions and we're going to launch them. So don't screw that up and don't get in the way. That's Number One for me. I have got to lead an organization that can demonstrate performance.

Second priority is the business of launch. The business of launch in this country is not very good. The state of launch is not very good. Many of you out there, who I've talked to, have packages already built and ready to go, sitting in a barn someplace, waiting for a rocket. That's a dickens of a way to have a space program. You'd think, on the other hand, if you were in the rent-a-car business you wouldn't want people standing in line waiting for cars. The rent-a-car business wouldn't be Hertz Rent-a-car if there were fifty people standing in line at every counter because there were no cars available. We've simply got to turn that around. Again, it was a host of conscience decisions made over time that got us into the position where we are today. We've got essentially one launch crew, one set of launch equipment, two places to launch from and they're spread out across the continent and we've forgotten how to build the equipment that gets space vehicles into orbit. We're reconstituting that through the superhuman efforts of some very, very dedicated people and it's just going to take some time. That's my second priority.

The Third Priority is our S&T budget. I told you that the technology is great and it is. In fact we have just launched some technology that will demonstrate over the next decade or so, just how absolutely leading edge the NRO is. However, if you look at my S&T budget, the budget of the National Reconnaissance Office,, what you'll see is a budget that has been slashed by 50% in the last 5 years. That is the seed corn for the future. What keeps young, energetic, hard-working engineers and scientist excited, motivated, and eager to come to work every day is to be able to work on the kind of technology that is going to launch four, five or ten years from now and we're not doing nearly enough of it. Shame on us. Shame on this nation for forfeiting it's future like we're doing in S&T. I have a little bit of experience in this business. I spent almost four years in the Air Force doing its Science & Technology and it's practically the same way there, so we're not alone. S&T budgets have been slashed in all of our agencies. We're going to be working very, very hard to make sure that between us and DARPA, us and IARPA, us and AFRL and so on, that there's not any duplication. That we're working synergistically together. We have to do that in order to maximize the utility of each of these dollars. We're not doing as well as we should.

My forth priority is our people. This is one of the ones that keep me up at night. I told you that our people are the greatest and I won't change that. I will just tell you that because personnel systems have changed over time, the requirement, for instance, to get promoted if you're a young Air Force lieutenant colonel acquisitions officer. Those requirements are so much different than they were just a few years ago that I had difficulty retaining these people for more than about two years at a time. If you're trying to build a spacecraft that takes 6, or 8, or 10 years to build, you must have about 3 or 4 different program managers during that time period. It's not very good for program management and it's the same way with the other portion of our workforce. They're required joint tours, schooling, career broadening, and a whole bunch of other things that a few years ago just were not in the requirement set. That's my next priority.

Let me just mention a bit about the partnerships we have with our mission partners. I think they're very good and I think Admiral Murrett mentioned that, so I won't go any further.

Let me just conclude my unprepared remarks by saying just a couple more things. First, a charter. I've told you we are in the middle of reworking a charter. That has been tried probably half a dozen times over the last 10 or 12 years. We now have a process that has been agreed to by the Secretary of Defense and the Director of National Intelligence. That process will take us probably 60-70 days. I wanted to do it a lot faster than that but we'll take the 60-70 days and work our way through it. It will probably be about two pages long. We have written the organizing principles for that charter. It addresses such things as an Executive Committee being formed where we can make the kind of decisions we need to make about important national overhead systems. It addresses the Milestone Decision Authority for the reconnaissance office; it addresses control of our personnel. It's not all perfect, it's not exactly what I wanted, but that's not the point. We're going to have a charter. It will address the requirements process and the Director of the NRO having some input in the requirements process. Now, before the pens start flashing and people start making phone calls. Let me tell you what I mean by that. I don't mean changing requirements. I know a little bit about how it works because I was the Director of Requirements for the Air Force and the Director of Requirements for the Joint Staff. In the past the requirements process has forced us in the development and acquisition business, to commit to things that were pricy, took a long time, and were very difficult. For those of you who are in program management, you know you only have 3 variables – Cost, Schedule, and Management. When you're dealing with something that's pricy, if it takes a long time, and it's highly risky to do, the management capacity of a program manager gets to be very limited. At some point during the requirements process, somebody has to stand up and say, as the developer, we don't think we can do that or if you really want to do that, you better give us another 10 months or 30 months or you better give us a lot more money. Is it really worth that to you to have a two-speed cigarette lighter in the front glove box? Is that what you really want out of this thing? It's not saying "No", it's just advising the requirements process of the cost, schedule, and performance impacts that some of the things have because sometimes we get requirements that are incredibly difficult to satisfy within the cost, schedule, and performance factors that we have been issued.

Finally, I'd like to close with just a minute of so on the Next Generation Electro Optical reconnaissance (NGEO) satellite.. There's been a great deal of debate in our little, tiny community. It's sort of a tempest in a teapot and I know it doesn't affect everybody. In what I thought was a remarkable feat of bureaucratic cooperation, the Director for National Intelligence

and the Secretary of Defense, took a proposal for a next generation EO architecture to the President, and the President said “ I agree”. The Department of Defense and the Intelligence Community had agreed already so we began to march forward. You’d think with that kind of horsepower, that this would be a pretty simple feat. Not so fast Buffalo Bill. There are some who believe that there are other solutions to this problem. Let me just say that from a technical and a requirements performance perspectives there are other opportunities to pursue but they simply do not fulfill the requirement. This NCEO concept that we have in mind will require a little bit of up-front investment. Over time, this concept will develop a family of vehicles that will be much less costly to acquire, will be much more easily modified, have a much more open architecture, be more modularly constructed, and allow us the ability to insert new technology faster than we have even been able to do before. All of the other candidates will certainly feed technology into that future and they’re important that we examine. However, they are not solutions to this incredibly complex and difficult intelligence collection requirement on behalf of the warfighter, the intelligence community, the national security apparatus. I stand firm on NCEO and am anxious to work with associated technologies that come along as they are appropriate, but our next generation overhead intelligence architecture will be led by NCEO. With that, let me stop and allow for a few minutes of questions. I’ve brought along a third of the NRO over here to answer them if you’ve got any hard ones. So Mark.....

Mark Lowenthal: General, Thank you for your candid remarks and I know you have to leave here on time and we’ll get you off safe and on time. I saw you last week get asked the strangest questions I’ve ever seen in 35 years. It was another conference and it was in his building. It was, “Do you want to buy a company?” Everyone went “What the?” I’m not going to ask you that one again.

“What keeps you awake at night?”

General Carlson: The next 15 months.

Mark: “When it comes to launch, does NRO expect NASA to be part of the solution to the gap and if not, what is NASA’s role?”

General Carlson: We work very closely with NASA. In fact, we just concluded a large launch symposium out at; I can’t remember if it was Colorado or Vandenberg , we sent a team of people out there. It has to be a multi-community, Air Force, other agencies, NASA, and the NRO have to be involved in this because, as I said, we have such limited capacity so there are some of us, and I include all of us out there, who aren’t going to be happy with the solutions. Because it’s going to mean the package you have ready to go will have to sit in the barn a little longer and we have some priorities, the Air Force has priorities, NASA has priorities. We will do our best together, with the Air Force in the lead, to make sure we optimize the use of those facilities, the equipment, and the people.

Mark: This is a very good question: “We’ve heard many statements this week about the need to change and adapt within the time cycle of the enemy. How can this be accomplished with a next generation system that takes ten years to deploy.”

General Carlson: OK, I'll answer that but can I ask you to put that question on hold because Pete Rustan is going to talk about that. Aren't you Pete?

(General Carlson asks Dr. Rustan) Pete, aren't you going to talk about that?

Mark: And that's why he's the Director.

General Carlson: Pete will give you a great answer because he did that and he did it remarkably well for the last few months. Let me just say, we do a lot of that through the incredible, creative use of our ground systems. Let me give you a generic example, I apologize that I can't get in to the specifics. We have a satellite up there that is ten times older than we expected it to be. It has been up there this long (extends his arms out wide) and it has been up there this long (extends his arms out farther) and it's still working. We expected it to do a mission that had to do with strategic, long-haul communications and today it's helping us kill bad guys in the AOR. Now that's as specific as I can get. But we do that because of the incredible contractor and NRO team that we have that nurses that satellite along and the young people that write software to change it's functionality and keep it going. I know it takes a long time but the systems that we have in orbit, I think, give the public a real bargain. The constellation is this big (holds hands out) half of it is geriatric, yet it's all functioning.

Mark: "You talked about your concerns about S&T funding. What are your plans to improve that?"

General Carlson: Beg.

Mark: Begging is good.

General Carlson: Admiral Murrett and I were just talking in the back, before we came on. There will be an EXCOM, where the Director of National Intelligence gets together with all of his senior staff, next Monday. I think we will talk specifically about the budget and I already have my talking points prepared for our S&T budget. I don't know what will happen. The pressure on the budget in FY11 is as difficult and tough as I've ever seen it and we'll just have to see how it turns out.

Mark: Last question and it's a big question: "You're an expert acquisition professional," Congratulations. "Does the current system of multiple checks and balances really help insure mission success and capability delivery to the operators; what changes would you recommend?"

General Carlson: I only can change what is under my authority. I have tweaked just a little bit, the organization that Scott Large began to put in to place. The only thing I've done is take out a layer in the middle to get the Program Managers closer to me. If I was in the Air Force, the law in the Air Force was, it wasn't the Air Force law, it was public law – You can only have one person between the Program Manager and the PEO. We had too many layers so we have steam lined that a little bit. I, quite frankly, am not worried about the rest of it. My view is, that if you perform, if you do what you contract for, if you meet the requirement, if you deliver on cost and if you deliver on time, I don't care how picky, I don't care how nosey and how much minutiae

they want to get into. They can come and look anytime they want. That's what we are going to do in the National Reconnaissance Office.

Mark: Thank you very much

General Carlson: Thanks very much.

--NRO--