TRANSCRIPT

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Q: I wanted to know about something that Admiral Roughead said a little bit more than a year ago when he was first espousing the creation of your office. It seems to have become even more relevant with time. According to the speech here he says, "We have to take advantage of the new opportunities that exist such as the [task] storage of collected data information and intelligence that often lie at rest, unrecoverable, unavailable, and untapped." Obviously getting at the point that no matter how much intelligence you suck in and do something with, it [inaudible] productive.

How much of a problem is that still today, and what progress have you made to solve that over the last year?

A: I think managing data, making sense of the information is one of our largest challenges. You talk about [inaudible] security being a challenge, security of our networks. My view, and part of the job of dealing with information dominance, is looking at information from one end to the other -- from sensors to networks, transport, to exportation, dissemination. We've made great progress in the Navy on the organizations, professionalizing our workforce, and on making good steps towards development of our sensors, our networks.

The one area this past year that we haven't made as much progress on was on processing, exploitation and dissemination. So it's high on our list for this upcoming year. We're not going to do it alone. We're in discussions with the U.S. Air Force. Our perspective of the Navy and the Air Force is that managing data, managing information has got to be something you do across agencies, across departments. So within the Department of Defense we're primarily partnering with the Air Force. We're tackling

imagery exploitation first as something that I think is easier to get our hands around. We're also partnering with agencies like the National Security Agency on their cloud computing initiatives, their cyber pilot initiatives, and it also deals with how do you manage information, how you get the flow from one point to the other.

So a big issues on our plate. We've focused on other areas, to get to your question, focused on other areas this past year, but this upcoming year managing data is a big issue.

Q: How much of this can you automate and how much of it is relying on human analysts sitting down and looking at this?

A: I think an awful lot can be automated. We haven't applied enough resources to the right tools and capabilities, technical tools and capabilities. Part of this is the [inaudible] that are used as well. You don't need to look at every single piece of electro-optical imagery that comes in necessarily. You need tools to alert you to I think the key issues that you could then apply an analyst, but if you don't have analysts that are well trained and experienced in looking at data, whether it's imagery or signals intelligence or open source information, then you're going to miss the [inaudible] as well.

Again, we look at this holistically. If you just look at the data and technology and tools and didn't apply energy to training your people, you won't get to the right solution, so you won't get to a suboptimal solution.

Q: Secretary Gates is trying to push DOD and the Air Force very publicly towards decreasing the amount of overhead [inaudible] in the war zone. Has there been a similar push to increase the back end of the processing, the exploitation?

A: There has been. I think mostly there's been greater emphasis over the last year and a half or so on making sure you get the right platforms with sensors into the battle space right now. That said, initiatives like the Real-Time Regional Gateway (RTRG) that NSA has pursued over the last several years in Iraq and Afghanistan are mechanisms to fuse information, make sense of information. So there's been a great emphasis on that as well, but I think more needs to be applied to this issue of processing, exploitation and dissemination, especially as all of the services bring more sensors to bear in our future capabilities. The Navy's certainly focused on that. As we bring new sensors and platforms, if we don't also bring new processing capabilities and processes, [inaudible]. That's part of our [inaudible].

Q: Good morning, Admiral. About a year and a half ago Secretary Gates said that we wouldn't see a Chinese stealth fighter for about 20 years. I'm sorry, until 2020. He said it not once but several times, and very emphatically. Last week there were pictures circulating on the Internet, apparently blessed by the Chinese government, that show a Chinese stealth fighter. It looks an awful lot like our F-22 and F-35.

Can you tell us first of all, is this actually a surprise? And is this a game-changer in the view of the Navy or in just your personal opinion?

A: No. It's not a surprise. I think one of the things that is probably true, true from my observation in the last several years, is we have been pretty consistent in underestimating the delivery and IOC of Chinese technology, weapon systems. They've entered operational capability quicker. We frequently project, in terms of the stealth photos, there to be IOC of a stealth aircraft. It's not clear to me when it's still going to become operational.

So is it a surprise? No. Do we need to refine our assessments better? I think so.

And your second question, is it a threat to the U.S. Navy?

Q: Is it a game-changer.

A: I've been concerned about Chinese game-changing capabilities in non-kinetic vice kinetic. I am concerned about the [inaudible] ballistic missile. I am concerned about stealth fighter aircraft. But the area and the technology that I'm most concerned about is China's focus and attention on trying to develop capabilities to dominate in the electromagnetic spectrum, to conduct counter-space capabilities, and clearly to conduct cyber activities. That's a greater concern for me than some of the other hardware-driven or kinetic associated capabilities that they're delivering.

I think the other concern I have is China's ability to become operationally sufficient in a joint warfighting, sophisticated combat environment.

Q: I'm sorry, operationally?

A: Sophisticated in a joint warfighting, complex combat environment. I don't see China with those capabilities right now. I see them delivering individual components, individual weapon systems. Those things are being developed. But as soon as they acquire that proficiency, the question is how competent are they really going to be?

So one of the areas that I focus on is how good are they at developing their operational proficiency to manage across the spectrum of warfare? And that's one where I don't want to get the assessment wrong. I don't want to underestimate or overestimate. I want to get it pretty right about when we think they're going to become operationally proficient. We're not seeing that. We're seeing it in individual elements of warfare, but not across the joint spectrum of the fight.

Q: Let me follow up a bit. The fact that this airplane looks so much like some of our airplanes -- F-22, F-35. What's at work here? Are we underestimating the speed of their technological advance? Or are they pretty much able to enter our data systems and pilfer at will?

A: I can't really comment on to what extent they're pilfering from our data systems. I think what you see is across a broad array of weapon systems they're making advances. Their economy is such that they can invest and have been able to invest this decade

quite heavily in their military buildup, and a stealth fighter is just one aspect of that. So the fact that they're making progress in that should not be a surprise to us. The speed at which they're making progress in some of these areas, their anti-ship ballistic missile, we underestimated when they would be competent [inaudible] in delivering a technological weapon of that type. We certainly wouldn't have expected them to be as far along as they are today, if you'd asked me the question five years ago.

I think this stealth fighter is part of the same issue. How far along are they? I don't know. They clearly have an initial prototype. Is it advanced? How many trials and tests and demos do they need to go through before it becomes operational? That's not clear to me.

Q: You mentioned the BF-21. Is that a game-changer? Do you consider that operational, or is that like what we did with Global Hawk where we rushed something out to the field really before it was fully shaken out?

A: I think [inaudible] has written an article on it just recently, and our assessment, Admiral Willard's assessment at PACOM is that it has reached an initial operational capability. I think that's true.

The Chinese have tested the BF-21B missile system over land a sufficient number of times that the missile system itself is truly competent and capable. The entire weapon capability, they have ISR, they have sensors on board ship that can feed into the targeting aspect of it. So could they start to employ that and field it operationally? Yes, I think so. It gets back to that question of proficiency. How proficient are they, though, in the end-to-end employment of that capability? Their 2nd Artillery's been around for over five decades, so they have a competent missile system, or missile command and control capability. But the question of fusing all the information to use it in targeting, I think there's still some questions of how proficient they would be to fully employ that at this point. But are they at the initial operational capability? Yes, I think so.

Q: One follow-up of that. The [Navy] people told me a year or two ago that the chances of hitting a carrier with a ballistic missile is pretty remote. Has that assessment changed?

A: Yes. The technology that the Chinese have developed and are employing in their BF-21B missile system has increased their probability of being able to employ a salvo of missiles to be able to hit a maneuvering target. How proficient they are, what that level of probability is, we don't know. Frankly, I'm guessing that they don't know. I'm assessing that they don't know. The reason I say that is they've probably simulated this in laboratories. They've certainly test-fired it over land. But to our knowledge they have not test-fired this over water against maneuvering targets. If you're an engineer and you've developed a weapon system, you pretty much want to make sure that you use the entire weapon system and employ it in an operational environment to understand how really competent and effective it is.

But to answer your question, yeah, they're demonstrating the technology to be able to

hit maneuvering targets. A few years ago our assessment was no one had a capability.

Q: A salvo would be like two, three, four missiles?

A: Several missiles, let's put it that way.

Q: You said you were in charge of airborne intelligence collections.

A: I'm responsible for the development of requirements and the resourcing and the lead-offs from the Navy staff.

Q: So now GTX has met Eclipse, as near as I can tell. How are you going to get around to a replacement for EP-3? Are you going to join the RAF and sign up for Rivet Joints and --

A: No. We've got an approach where we're going to take a family of systems. Our view is if we're doing binary solutions, replacing one old weapon system or legacy weapon system with another system that's just a follow-on, that's a suboptimal approach. Instead what we're going to do is have multi-[INT] sensors on board multiple aircraft. In fact one of the principles for information dominance is every platform needs to be a sensor and every sensor needs to be networked. So a very simple answer is, we're looking at medium range UAV, [inaudible]. We are looking at BAMS to have a SIGINT payload. We are not precluding the P-8 from having some type of multi-INT payload, but at this point we want to focus our P-8s on ASW. It's a primary fighting area for the Navy. And we don't want to optimize it for SIGINT at the expense of ASW.

I think we'll deal with spiral approaches to a variety of our systems and platforms and plug and play in the years ahead. So I wouldn't preclude us from having a SIGINT or Multi-INT payload but at this point we're going to focus primarily on ASW.

May I add one more comment on that? Our surface ships, we have a significant SIGINT capability on surface ships, so that's part of our family of systems that we can't ignore.

Q: The Air Force demonstrated [Suter] was the ability to use an airplane to get inside of air defense, integrated network. Of course that was two big airframes that did that. But the idea was to make that tactical size, and that, as I understand it, is going to be part of the purpose of next generation jammer [inaudible]. The next generation jammer is going to be a very versatile system. And my impression is that you can [inaudible] data be moved out, you can put the algorithms in it [inaudible] and you've done some electronic surveillance, you know where the antennas are of the networks you're trying to invade, to get information in and get information out.

A: I think that's a good description of next generation jammer, but its specific capabilities, I'd prefer not to go into any detail in an unclassified environment.

Q: But you do plan to have that kind of networking --

A: Yes.

Q: -- on tactical aircraft.

A: Yes, correct.

Q: Do you have it already? Or does that come with next generation --

A: I think that's [inaudible] focus [inaudible] capability.

Q: Back to the EP-3, how are the wings on the EP-3, and [inaudible] and the EP-3s. How are you managing that? [Inaudible] EP-3 requirements without the AIPs [inaudible].

A: We require [inaudible], that's correct. The Naval Air Enterprise has an approach that includes all the aircraft. They don't, to my knowledge, I have not seen any bias for or against an EP-3 compared to any other of the P-3 airframes. I see periodic updates on what the status of re-winging, what the status of the EP-3 improvements in service life is, and it's consistent with the rest of the P-3 fleet.

Q: Also on the EP-3 there's that congressional language that says you have [inaudible], you have to have plans in place. Is what you just described there --

A: Simply, yes. We owe back to not only Congress but to DOD a more detailed explanation of what our approaches. We've already told them the macro approaches, [inaudible] systems rather than a one-for-one replacement of an EP-3 with something that looks just like it, just a more modern aircraft. And we will provide the detailed game plan based on their guidance.

Q: I wanted to ask you what [inaudible] have [inaudible] ships. They talk about [inaudible], they talk about destroying missiles. If [inaudible]?

A: If you looked at Iran five or ten years ago, our biggest concern primarily at that time was mine warfare, their mining capability as an anti-access capability, because they had proven that in combat. Then they had developed their small [boat] capabilities, and they've continued to increase both the quantity and some of their proficiency in operating in small boats. So [inaudible]. Five years ago [inaudible] small boats. Their anti-access with surface tier missile systems was a concern. But it's the sort of asymmetric capabilities that I think caused us to pay attention.

Over the last year or so, and certainly since the sinking of the *Cheonan* off of Korea, we have become increasingly concerned about the numbers of small nuke submarines, … they're indigenously producing in Iran as an anti-access capability. So those are key focus areas, just like we focus on other militaries that are developing anti-access capabilities. Iran is one. Those are the key issues.

We are developing [CAVRS], and those [CAVRS] are both for sea-going, technology and

again, it's in an unclassified environment that's one area I can't go into, what are we doing to counter them. But it's clear that we are. We are spending some time with [inaudible].

Q: Is that maybe something that you feel the technology --

A: Yes, absolutely. If you just take the issue of the Yono [-class submarine], it's a mini-submarine. When it's on battery power it's relatively quiet. So if you want to counter it and it's at sea you have to first identify where it is, and then you need to be able to counter with some type of weapon system. Those are things it's safe to say the Navy's looking at.

Q: Admiral, two kinds of issues. In his guidance last year the CNO said that they wanted to shift the idea of using information in warfare to information as warfare. Kind of a strange term, but it seems to hit directly on in your bailiwick. How do you operate in conjunction with naval cyber force and 10th Fleet? [Inaudible] information dominance [inaudible].

A: Organizational relationships. I'm sort of the banker for information capabilities in the Navy and unmanned capabilities in the Navy. I do resources. I do requirements. I do policies.

10th Fleet is the operational commander for our cyber forces and our network forces and our Navy's information operations capabilities.

The Navy cyber forces -- So 10th Fleet is a three star operational commander. The CNO this past year also created a Navy Cyber Forces commander, a two star commander, and she's responsible for manning, training and equipping the fleet. 10th Fleet Command -- I pay for it, the Navy's cyber forces mans, trains and equips, puts people on board ships, sends them, ensures that they're trained, ensures they have the equipment, and the 10th Fleet commander actually employs the cyber element task force. So that's the organizational relationships.

Q: The thing is, information as warfare.

A: Let me address that. Here's where we are. We're still trying to define the right terminology. If you were in the Air Force or the Army you'd be looking at more doctrinal terms. The Navy shies away from doctrine. But we're trying to get our hands around a dramatic paradigm shift from an industrial age military force to an information age force, to a force where we're in command and control of your forces, where dealing with information from end to end is a key warfighting element.

It was always important to command forces, but in the information age it's absolutely vital that we elevate that as a key component. The CNO calls it a main battery of the U.S. Navy's arsenal. But you need to elevate it as something that's integral to what the operational commander does. In fact we just had a conversation yesterday about this where we've spent time on our organization [transformation] this past year. We've

spent time on starting to train individuals. And we've started to buy and procure the right information capabilities. Now the next step is getting our operational commanders and their staffs to think about information, command and control of the use of space, attempting to dominate the electromagnetic spectrum at the same time using your ISR systems. Not using them separately and stovepiped. That's the industrial age process. The information age process is the commander needs to have visibility and insights into all elements of information and employ those capabilities at the same time he's employing kinetic capabilities.

We're great at strike warfare, dropping bombs. It's now time for the Navy and frankly the U.S. joint forces to stop up and start dealing with information in a much more sophisticated manner than we have in the past. So we're at the front end of that.

Q: Admiral, sort of spinning off of that and asking you to just go a little bit higher in altitude, information dominance has such a nice ring to it, but when you think back to when the rubber met the road on the Vincennes and the Iranian airliner, on the Chinese embassy in Belgrade. It's been a decade since this nation has been unable to find the ringleader of 9/11. Do you think the balance is right between finding targets against attacking targets? Are we putting too much emphasis on the kinetic side of that ledger and consequently not being as efficient as we might otherwise be in trying to deal with some of these threats?

A: I think we have historically applied, industrial age warfare really dealt with kinetic warfighting. I think you see the [inaudible] the creation of U.S. Cyber Command a recognition by the Secretary of Defense and the seniors within the department that the non-kinetic, the cyber, the information side of the house is really critical.

We didn't just create a Cyber Command because you see some people hacking into our computer systems. We see it because you need a combatant commander that is dealing in that arena as its primary mission area.

I think when you get to the issue of are we out of balance, yes, I think we are. I think even operational commanders in the field, whether Iraq or Afghanistan, have really seen the value of ISR capabilities integrated with operations over the last five years. General McChrystal was just a super star in ops and intel integration.

Where we are is that's not good enough even. Ops/intel integration is the 2000-2010 era improvement that we made in joint warfighting. 2010-2020, it needs to be this elevation of non-kinetic information capability.

So the Navy's effort at that was create a focus on information dominance, try and bring the various elements, whether it's ISR, electronic warfare, cyber networks, oceanography, meteorology. Knowledge of the environment is a critical element in warfighting. We brought that into the information domain as well, to try and break down barriers and deliver a different product than we have in the past.

So out of balance, we have been. I think we, DOD, is taking a variety of steps to make

improvements in this non-kinetic information side of the house.

Q: To go back to China. If you could just talk generally, how much are you concerned, how much has your concern risen in the last say six months about the Chinese military buildup? Rather than getting into specifics, are you more alarmed than you were before? And secondly, is there any sense that we are maybe overestimating the Chinese military buildup the same way that we overestimated the Soviet Union back in the '70s and '80s?

A: First of all, I'm not alarmed. As an intelligence professional largely, that's been my background, I am intrigued by the developments. I am quite interested in the quantities and different types of technology that have been developed that we either didn't expect or we underestimated.

I see a clear relationship between their economic capabilities and their military buildup, but I also see a direct connection between their military leadership, some of the leaders in the PLA, and how they have provided guidance to be able to advance their military capabilities.

I don't think we are overestimating. For example, while they're developing technology capabilities, it's just been the last year and a half, two years, that we've seen the Chinese Navy deploy out of area for any period of time. In I guess late 2008 when they deployed a three-ship task group to the Gulf of Aden to conduct counter-piracy operations. That was a big step for them. Three ships to the Gulf of Aden compared to what the U.S. Navy does on a daily basis is, you can't even compare the two. The differences are great.

They don't have a great ISR, integrated ISR capability. They don't have an anti-submarine warfare capability virtually at all. They don't demonstrate a level of sophistication and joint warfighting. As I mentioned, while they're delivering technology and capabilities, they are at the early stages of operational proficiency across the board.

So what would be dangerous for us is to overestimate them today, but underestimate what that timeline of trying to synchronize these various elements together.

Ten years ago if you looked at their C4ISR capabilities they didn't have an over-the-horizon radar. They had virtually no satellites that were, no ISR satellites. They've now got a competent capability in ISR and over-the-horizon radars, but the years from now we expect a much greater increase in the numbers of satellites they have in orbit and their capability to fuse information.

So we see them progressing rather dramatically across a variety of areas. But no, I don't view them as ten feet tall.

Q: Are you saying that they've basically got all the stuff but they can't use it very well?

A: They are maturing in the use of the capabilities. But have you seen them deploy

[inaudible]? No. Have we seen large joint sophisticated exercises? No. Do they have any contact proficiency? No. That's what I'm saying. They are at the front end of developing their military capability.

Q: But isn't it just inevitable with time, once they have the equipment that they will be able to use it in a coordinated way?

A: Yes. That's what I'm saying, we need to look to the future and not underestimate their capabilities to develop that operational proficiency, but we shouldn't overplay how competent they are today.

Q: How many years are we talking about? A decade? Actually could you compare the United States military with the Chinese military right now in terms of percentage wise or some apples-to-apples comparison?

A: Let me try to explain in terms of how I think they look at it. They look at developing a dramatic capability to be a, for the PLA Navy, to be not only a regional power, but to be viewed as a global Navy by the middle years of this century. That's their timeline. Should we expect them to be much more competent ten years from now than they are today? As long as their economy's robust, absolutely. But they've got a game plan, they're building up capability. Their aircraft carrier capability. They've got a used, very old Russian carrier that they're going to probably start conducting sea trials with later this year. They are planning on building indigenous aircraft carriers that will come into their order of battle later on over the next decade. But by 2020 their aircraft carrier proficiency and capability will be very limited because even once they get those operational, flying aircraft, trying to integrate them into not just flight deck operations, but integrate them into battle group operations takes a fair amount of time, and the U.S. Navy's had over eight decades, nine decades worth of aviation flight, I guess almost 100 years' worth of flight --

Q: [Inaudible].

A: That's right. A hundred years of flight activity. So it's going to take time for them to build that capability and they're pragmatic. They've got a game plan that deals in decades.

Q: On the timeline, you just said how hardware estimates in the past have been [inaudible] wrong, that they had achieved these goals much quicker than expected. [Might it not be the same about] their operating capability?

A: I do believe their operational capabilities will improve. When I talk in terms of the middle years of this century, I'm using what they've told us their plan is. What they talk openly about developing a naval force, a capability that takes some time to mature.

Q: As you go judging how these capabilities develop, can you say step by step what you were looking at? If we're not seeing them do more out of area ops immediately, if we're not seeing them take on aggressive action that would require some joint capabilities

together right now, what are the steps that you in your current job are looking at to see them develop this?

A: Can you help me with that question again?

Q: We don't want to either overestimate or underestimate how the development goes. So tell us clearly what your metrics are as you're looking at it to judge their actual development as it goes forward.

A: One thing I look at, I do look at the capability, the technology that's being fielded. A second [inaudible] quantity of capability that's being built. The third thing that I look at is how do they operate, how do they train their people, how are they organized? How do they command and control [inaudible] capability? Those are things that it's hard to measure with metrics, but they're things that you do measure and you do judge and do evaluate.

Q: And you feel confident that you have the visibility necessary to make those judgments?

A: I'm able to make assessments. I would love all of us to have greater insights into things that are going on around the globe. So do I have sufficient information to make an assessment? Yes. Do I have as much as I want? No.

Q: What are the resourcing requirements implications of the Chinese missile given you said it's got capability [inaudible]? Are there major improvements in the Aegis air defense system that you're recommending or [inaudible] the edges? What are the defensive implications for the Navy and resources in the next four or five years?

A: First of all, Tony, going into any level of detail would be a classified answer, and I'll tell you, like any advanced technology that's developed for military use around the globe, the U.S. Navy needs to develop counters. We need to be innovative in that approach. I think that's one of the things that with creation of information dominance, we've been able to look at a variety of kinetic and non-kinetic solution sets to counter advancing capabilities. And relative to advanced missile systems, we're doing that as well. It's a vague answer for you, but it's the best I can do.

Q: Can you give a sense of whether the Aegis system is roughly capable of handling this threat?

A: Because of the -- I'd prefer not to answer the question.

Q: On the J-20, just to be clear, this falls in the weapons programs that the U.S. is consistently underestimating China's capability to move forward. You mentioned the U.S. has consistently underestimated China's IOC capabilities.

A: I guess I should be careful about that, if I could. We have various point targets, point technologies, point weapon systems we've underestimated. Have we done that

across the board? No. We've been on the mark in an awful lot of our assessments, but there have been a handful of things that we've underestimated. In terms of a stealth aircraft, I think time will tell whether we ever underestimated or not. I'm not convinced that we have underestimated at this point, but it will take just a little bit more time for me to make an evaluation of whether we have or not.

Q: The [inaudible] threat page, they're hyperventilating over it. That's not our style, but -- [Laughter]. Given what you've seen, they may have a working prototype, but you can't go any further than that in terms of whether it's a threat to U.S. forces any time soon?

A: Once again, developing a stealth capability with the prototype and then integrating that into a combat environment is going to take some time. And I'd have to, since I read the Wall Street Journal article today I didn't prep myself by reading what our assessments were. So I'm ill at ease to compare the two today.

Q: One quick BAMS question. How well is [inaudible] over the Persian Gulf? And you've seen an Inspector General report that trashes the management of it and raises real questions about whether the [inaudible] deal there. Bookend it. How well is it doing? What's the Navy need to do to improve the management?

A: Good questions. BAMS -- Let me tell you how well it's doing, first of all. I apologize for going to my notes, but I don't remember the data right off the top of my head.

Q: Nor should you.

A: We deployed BAMS, the Global Hawk Maritime Demonstrator, BAMS, to the Gulf in January 2009. Since then it's flown over 350 sorties, over 4,000 hours of which over 2,600 of those hours have been in support of combat operations. The verbal feedback from the 5th Fleet commander, in fact two 5th Fleet commanders, is that it fills a significant gap in terms of ISR in support of maritime commanders, but also in terms of the ground commanders. But largely the maritime commander and [inaudible]. Tremendous resources. Very very valuable.

In terms of the BAMS program itself, the program's on track. We're very pleased with our industry partner in terms of how they're progressing with the development of the BAMS. The DOD IG report clearly as caught my attention and other seniors in the Navy. We had a contracting problem. The IG report clearly identifies that. NAVAIR, the program office, and the industry partner are taking a hard look at that. I've already gotten feedback on some corrective action it's taking. But it's an issue that occurred, we need to fix it. Some of those fixes have already occurred, the others are in the works at this point.

But I'm very positive about the BAMS program itself. I'm sad to see that we had a contracting problem, but we're correcting that.

Q: Admiral, good morning. The discussion about Chinese missiles and aircraft carriers

and all is interesting, but what caught my attention was you saying a few minutes ago that you were more worried about the non-kinetic [inaudible] capabilities as they come on-stream. Would you explain why that's so? And is it that we're less prepared for that kind of warfare than we are the kinetic side?

A: I think because non-kinetic aspects -- the Chinese right in terms of, they call it Joint Informationalized Operations. They write about attempting to dominate the electromagnetic environment. In fact what you use throughout there, their training, their exercises, they attempt to employ a wide range of electronic warfare and electromagnetic control mechanisms. They try to really use space.

So all of these things that are non-kinetic are pretty crucial to warfighting for China. But guess what? In the information age they need to be critical elements for all nations.

So I'm not worried. I'm very concerned, I'm very focused, I'm very attentive on non-kinetic and information warfare, on trying to dominate that electromagnetic spectrum. And I see that as a key component of warfighting for the future. So we really shouldn't focus excessively on China, we should focus on information capabilities and how nations might employ those in the future. That's what's got my attention.

Q: And is the Defense Department in general and the Navy in particular less prepared for that kind of warfare than --

A: I mentioned we're in a paradigm shift here. We're transitioning from what we've learned, what we've been very good at in the past. This is one where we don't want to shoot behind the target. We don't want to prepare for the last war. We don't want to prepare for ground activities in Iraq and Afghanistan in a relatively benign environment in terms of sophistication of warfare. Clearly Ides and individual insurgents on the ground pose a great threat to our individual soldiers. There's no doubt about that.

What I'm talking about is warfighting in the future. I do think we'll use advanced technologies, advanced capabilities and much more non-kinetic than we've ever seen in the past. So DOD is in fact preparing for that, and as I mentioned, the creation of Cyber Command was an attempt on the cyber side of the house; the creation of an Information Dominance Deputy Chief of Naval Operations; and organizationally align ourselves; creating an Information Dominance Corps of 45000 people within the Navy where we're focusing and bringing the skill sets together. There's an effort within the Navy to prepare ourselves for that type of future conflict.

Q: Sam [inaudible] with Jane's. Going back to the whole China question, I guess there were a couple of things that popped up in the last couple of months or so like the ... administration publicly revealed that they were working on a domestic carrier program. In May. Nobody found about it. In a 500 page document it was like a sentence. The first military-to-military engagement in 5th Fleet between the PLA Navy and the [inaudible] Bahrain.

Then I guess what I'm trying -- those just seem like stilted and kind of digging your toe

in the water of like transparency and trying to let the world know [inaudible]. China and their intentions, especially in the maritime domain, has been such an anathema, such a [inaudible]. It's so difficult for the U.S. to ascertain.

Do you all have kind of a sense of what they're up to? That just seems to be the question. Little individual snippets of information here and there. It's really difficult to see what their intentions are.

A: Over the years the Chinese military doctrine was one of hide and bide -- hide your resources and bide your time. They now apparently appear to have shifted into an era where they're willing to show their resources and capabilities. Whether it's at a naval expedition in China, whether it's deploying forces forward, whether it's conveying more insights into what their future capabilities are going to be in an indigenously built carrier. So they're in a period of shifting and providing us a little bit more insight openly, but still the lack of transparency into what they're doing, the lack of openness remains a concern for us.

In terms of their intentions, I think to me their intentions at the macro level, strategic level, were pretty clear. Again, I'm a naval officer, so I'll focus on naval forces. They're trying to build a Navy that is for the near term, becomes a regional power, and then over the long term their naval force, they'd like to have a regional power with significant global implications in support of their nation. That appears to be their intention and that's pretty clear to me. They don't have to tell me that to let me understand that's what they're developing. They want a naval force that can be deployed to protect their resource flow or their vital national interests, such as the anti-piracy operations. So that's a first step of what they're doing.

Q: To follow up, apparently, I guess no one really knows, but I guess you could say in 2010 especially in the maritime domain around the South China Sea, the Chinese have been very un-Chinese. They are not hiding and biding, they are planting flags like off the coast of the Philippines. They're making very sort of aggressive moves. It just seems a little schizophrenic sometimes about how they're acting.

A: I agree.

Q: Is there some sort of dynamic going on inside China between like we need to be more open, and then -- What's going on there?

A: Take the South China Sea. Let's take a look at China-Taiwan. 2006, up until 2006 the Taiwan situation was a big concern to them. They have, at least for the near term, resolved the Taiwan situation sufficiently that they can focus on other national priorities. From a maritime perspective, protecting their EEZ is one. Protecting and influencing their control over the South China Sea. Their claim in the South China Sea is something that we see them doing.

What we're seeing, or what we've seen over the last few years is a shift in focus, and perhaps even a shift in some of their priorities.

Q: Resolved it meaning politically or they feel they can handle Taiwan under any military circumstance?

A: Up until 2006 I think there was, within the Chinese leadership, they were concerned they might have to do something militarily to control the Taiwan government. Since then the governments in Taiwan have, I think from a Beijing perspective, have been stable, haven't been as threatening, and therefore the Chinese do not appear to have focused as much on the potential to have to do something militarily about Taiwan. So they're looking at dealing with Taiwan right now from more of a diplomatic political situation than they would have five years ago.

Q: Are we heading to a potential clash between the U.S. and China on access to the Yellow Sea or the South China Sea in terms of international water versus exclusive economic zone issues, the sort of differing interpretation of those the two nations have? It seems like the South China Sea has gotten a little bit better, but whenever the U.S. exercises in the Yellow Sea, there's [inaudible] Beijing. From an intelligence perspective, what's the situation in those two bodies of water?

A: I can't talk to you about it from an intelligence perspective. What I can tell you is that China, because they are focusing on their exclusive economic zone, they are looking at territorial disputes, is they are openly conveying their position which is different the position the United States has, different from the position Japan or Taiwan has. So [inaudible], for example, I think you asked the question about are we heading towards a clash between the U.S. and China. I don't think so. I'd be more concerned about an inadvertent tensions, crisis, conflict over the Senkaku's with the deployment of Chinese maritime-associated ships, having them be more aggressive around ships of another nation in areas like the Senkaku's. That's more of a clash area for me in the next couple of years than the Yellow Sea or perhaps even the South China Sea for the next couple of years or so. It's hard to see how this is going to play out, but because China is flexing their muscles in the maritime areas adjacent to the [inaudible].

Q: If you look over the last two years we've had a situation where the U.S. and China mil-to-mil relations have gotten better, they've gotten worse. And there is in various different little incidents that have flared up, or [inaudible] Taiwan, [inaudible] and then rise up. From your perspective, what might break that cycle to keep a more even mil-to-mil relationship?

A: I'd prefer not -- It's not my portfolio and I'd prefer not to speculate on that, if you don't mind. I can give you a guess, and that would be the wrong thing. Let me just double check. The stealth fighter is not something that is a near term issue as far as the Navy's concerned. It's more of a paper airplane at this point than a real one. Again, it's hard to say what the Wall Street Journal has reported because I haven't had the time this morning to dig into greater detail. But a prototype stealthy aircraft is something that I would say is the front end of a capability that they're rolling out, and should we be focused on that? Absolutely. And should we be trying to understand the implications of rolling out a prototype based on okay, when are they going to start flight testing and

demoing it, et cetera, and what that schedule is. I can't tell you that. [I can't get any] context and insight into that right now.

Q: When you say front end of a capability, for me that means that it's not, that means it's [inaudible].

A: Correct. It's not something that --

Q: It's a few years off.

A: Correct.

Q: Years.

A: Years.

Q: He doesn't want to have to follow up the story. [Laughter].

Q: If there are missiles [inaudible] U.S. aircraft carrier, if we haven't got the capabilities yet to defend against that, [inaudible] sort of revamping of U.S. plans until such technologies are available to be able to [inaudible]?

A: Who says we're not revamping [inaudible]?

Q: So [inaudible] positioning of U.S. assets?

A: I think as you look across the board, from a military perspective, when you look at various countries, their capabilities, where there might be a tension or not, one of the great things we do in the U.S. military is we plan. When we plan, we don't do it statically, we plan, we evolve [inaudible]. And relative to China and their interests, their more assertive stance in the South China Sea has not gone unnoticed. It's something that we are [inaudible] assessing and yes, planning [inaudible] to that -- diplomatically, politically, militarily.

Q: [Inaudible] further away for the moment to avoid risk of any kind of [inaudible].

A: It's something I'd prefer not to talk about, I guess. Once we get to specific [inaudible] or issues of how we'd respond to a crisis, it's not something that I'd choose to delve into.

Q: [Inaudible]. Early last year there was a [inaudible] report of military intelligence in Afghanistan. I wanted to get your estimation on how that's changed over the past year.

A: Unfortunately, I really can't answer that issue. One of the things that is not in my portfolio, it used to be [inaudible] was Iran, Iraq, Afghanistan. Now I develop capabilities, requirements, resources longer term. I can look at technologies and specific capabilities. But what's going on in Iraq of Afghanistan these days is best

answered by Joint Staff, I think, or CENTCOM, or even General Petraeus and his staff. So I'm not the expert on that at this point.

Q: You answered my question already on hardware and non-kinetic so I'll try a different take.

Secretary Gates really likes to say that he's trying to prepare for the more realistic types of threats that will happen, not these worst possible [inaudible] in the future. He said that a lot when it came to the F-22. [Inaudible] and starting new ones.

Based on what you're saying now, I'm not as worried about the kinetic [inaudible] in China but you are worried about the non-kinetic, the cyber, and DOD is --

A: If we can clarify. Worry is a bad word. I think a better one is, because I'm a very pragmatic business-like person. So what am I focused on? I really am focused on those things that I don't know and I need to understand better. So the non-kinetic is the area that I needed to spend more time.

I spend time on the technology, the hardware, the kinetic side of the house as well. So you've got to have a right balance, but where am I putting more of my attention? Certainly on the non-kinetic side because that's where we're seeing new capabilities being developed. I am concerned, I am focused also on the technology that's being developed around the globe that I don't know about yet. So I'm a political science major, but I really rely on people who deal with engineering and science and the math and the physics of what's possible in terms of new capabilities, whether it's doing something on a network or developing a new weapon system, so I'm concerned about those things too. Those new technologies that I don't want to be surprised about. I want people looking at those issues.

Q: I was trying to get a sense of if you agree or disagree with the notion that I kind of described, that the U.S. needs to be more on the track away from things like F-22 and more towards these other items, the other capabilities. When the Navy prepared this, I thought your answer was less than reassuring that [inaudible] Cyber Command, which it seems like you're getting there but what you're really saying is that DOD is behind on --

A: No, I'm saying we're going through a transformation if not a revolution in military capabilities these days, and it's more towards the information, the non-kinetic, the cyber side of the house. We are at the front end of that. The Chinese military is in front of that. So I don't think we're behind. I think we are progressing. We are maturing our capabilities. Are we in the position where we need to be for our future? No. But we're building the foundations.

This last year in the Navy we focused an awful lot on organization and on initial capabilities. We were extremely focused on enhancing our electronic warfare capabilities in the Navy. We're doing that. We are advancing our ISR capabilities. We are stabilizing our networks and the fundings that go into our ashore and afloat networks. And those are -- Cyber. We're training professionals in the cyber arena, but

have we trained everybody? No. We are at the front end of some of these initiatives.

Q: So you're at the front end and China's at the front end, who's got the lead? Who is more at the front end? [Laughter].

A: I think it's a new area of warfare that major powers, major nations, and even other nations are looking at and developing. Around the globe you have a lot of folks with wakeup calls starting in Georgia about the ability of people to take down a network or to be able to manipulate or influence another nation's networks. Those got a lot of attention.

So yeah, we're at the early stages of some of our development there.

Are we shifting completely from kinetic to non-kinetic? No. Are we shifting from irregular warfare like Afghanistan? No. We really need to commit the right resources to win in Afghanistan, to be successful there. But at the same time, and I'm speaking for the U.S. Navy, we are looking at other types of elements of warfighting, especially in the information side, where we need to make improvements. So it's not either/or, it's both, and at the same time we're going through a significant transition.

Q: You talked about the fact that the continuing resolution for the budget [inaudible]. It kind of threw up a road block for the medium range UAV. [Inaudible] can't go ahead until we get a real budget going. Was there [inaudible] FY11 [inaudible]?

A: Whenever you have a continuing resolution it requires you to manage dollars and to use your dollars differently than if you had a full budget. So it pressurizes us. It causes us to, in some cases you have to slow down the funding that you otherwise would have. It's not something that's causing me dramatic concern at the moment. It's something that we're managing effectively. But yeah, I sure would love to see a full budget supported because that makes it a lot easier for everybody across DOD.

Q: In terms of MR UAS, are you having to kind of push back your schedule on that?

A: No. In fact our schedule for MR UAS, part of our family of systems of UAVs, we've got a fire scout. We're looking to evolve the fire scout capability with more, with a weapon system, et cetera, so we're thinking for evolution of that. Our next step really is a medium range UAS and we are working with industry, defining what it is we want in terms of our capabilities and our timeline. It still looks very good to have a medium range UAS operational by 2019 with significant improvements in our fire scout capability between now and then. A ship-based vertical takeoff and landing UAV.

Q: Can I ask a historical question about the EP-3 from ten years ago? You're a student, you're a professional. Gates is going to China next week. This is going to be brought up in paragraphs and stories, but what was the level of damage done to Navy intelligence by the compromise of that aircraft? Ten years later, can you give us a sense of was it at the Walker-Pelton kind of damage? Is there a way to --

A: Can I get back to you on that? I'll give you an answer to that, but I would give you an inaccurate answer if I answered it just today.

Q: We're out of time. Admiral, thanks for coming in.

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