**NAWCWD Industry Day Question and Answers**

NAWCWD will be holding Industry days with an emphasis on small business and today’s event is a kick-off where we will give you an overview of what we do at NAWCWD and then we will talk about the strategic thrust and in subsequent industry day events, we are going take a deeper dive into the strategic thrust area.

**Scott O’Neil Brief:**

Q1. Is the benefit to NAWCWD in intellectual property, especially commercializing intellectual property, a licensing agreement that we can generate revenue stream from?

Scott O’Neil:

A1. That is right. Our goal is to go and generate enough revenue on intellectual property that we can fund research from that. I don’t know if we are going to get there, but its sure going to make us focus on business aspect to some of the intellectual property we’ve found. A lot of times, Navy, and the government in general will spend millions and millions of dollars on developing new intellectual property and we give it away. I was reading an article in Newsweek a couple of years ago and IBM makes a billion dollars a year off of the technology that they license that they don’t even choose to use in IBM, but they see some other companies can take advantage of it. The U.S. government is leaving a lot of money on the table, without taking advantage of its intellectual property it builds. So we’re really focusing on changing our strategy and our approach to how we use our intellectual property, how to capture it, because it is a big deal.

Q2. Is NAWCWD involved or going to be involved with weapons integration for the new jet fighter without a pilot, [you mean unmanned systems] yes in the unmanned systems?

Scott O’Neil:

A2. Yes, in fact we have been getting ready to do that for probably the last 15 years. Looking at how we can make our weapons smaller and keep the capability up. The 10,000 we need to develop, we are getting ready to write the requirements for those classes of weapons, and we understand where those issues are, where the technologies are and how much we can get out of the smaller package effectively. Yes we see NAWCWD playing very much a similar role they are playing in F18 today in weaponizing that platform.

Q3. EW suite for the JSF, will that be headquartered in China Lake or Point Mugu?

Scott O’Neil:

A3. That is a good question, what can I say, we are trying to make sure that Navy leadership and Air Force leadership and OSD leadership understand the capabilities and the approach that the Navy is taking in weaponizing the F18, whether it’s from the weapons perspective, EW suite or sensors integration. So we have a lot of infrastructure that been put in place in support of that particular weapons systems in F18. We have got a lot of knowledge and skills resident in our workforce and what we want to do is to make sure that as we go forward to JSF that we will continue to get leverage those we have in house. Those decisions have not been made yet, but they are actually in discussion right now. We’ll see what happens.

Q4. They just pulled the funding of the next generation jammer in the R&D. Where is the next generation jammer going?

Scott O’Neil:

A4. I personal doubt if it’s going to be killed, although it might change in requirements. It is still evolving.

Q5. There is a lot of press these days about the Carrier Killer that the Chinese supposedly have, but I didn’t see any weapons in development, not sure if you can talk about or we need to talk off line, but any information is appreciated.

Scott O’Neil:

A5. Obviously we are tracking that threat and we are paying attention to that. We have done some things that we are doing that I can’t talk about, but yes we are tracking that pretty closely.

Q6. Is the CSA process fairly streamlined now? Is it a little faster than it used to be?

Scott O’Neil:

A6. Yes. I think we have improved that process quite a bit.

Q7. I want to see maybe an org chart so we can begin to engage the elements of your staff in your organization to start and talk about these kinds of things.

Scott O’Neil:

A7. Yes, we can do that. Thank you.

**Mallory Boyd Brief:**

Q8. Are you doing much with SWIR (Short Wave Infrared) imaging?

Mallory Boyd:

A8. We are looking at SWIR for applications for extending the current Spike design into the near IR, the original Spike design was based on optical sensor. Again, I think Scott mentioned we pulled together inexpensive parts to see what we can build up in terms of weapons systems. At the time to get the most resolution from the limited aperture we had on the 2.75 diameter weapons was to use optical decibel wavelength signature, but that limited us to day time operations or targets that might be illuminated by a third party source, so we’ve integrated and done some work with SWIR to look at how it might expand that envelop in some of the SWIR technology out there. So I’m sure some of you in the audience may be aware if can we use as night vision to augment this technology. It is not good as night vision goggles, but it’s good enough if you don’t have a cloud lining or clouded sky during the starlit night, but you could walk around, so it’s pretty interesting. So the answer is yes, but not in the vigorous way that I’d like to see, but we have done some evaluation of the potential to the technology to understand the phenomenology of it and getting ready when we have the opportunity to integrate them into more capabilities.

Q9. Is there any work going to be done in developing networking in the (JALN) Joint Areal Laser Networking?

Mallory Boyd:

A9. I’m not prepared or qualified to answer that question. I don’t know enough about that, is there anyone on the team who can respond? Can we take that one off line? Be happy to get you an answer, but I’m just not the right guy to do that.

Q10. Do you have a Position Navigation Timing (PNT) sort of center of excellence on base?

Mallory Body:

A11. Of course, you can see PNT throughout right, the weapon systems that we have been or in our dependence on it, particularly as we look at alternatives to things like GPS when certain electromagnetic spectrum being a challenge in certain primers in the future. So to answer your question, do we have a focused effort or ownership of that issue here, Yes, I can get you the point of contact for there. Ray DiEsposti, he’s the technologist working that, he works in 4.7, so we’ll hook you up with right contacts where you can dive deeper in that.

Q12. How do you interface with DARPA, how do NAWC fit in to the scheme of DARPA?

Mallory Boyd:

A12. So if you look at the DARPA model, it isn’t dominated by government warfare center participation. Their primary mission appears to us to be more in getting funds out to the industry. Having said that though, we have had a number of successful DARPA programs that we’ve participated and managed and led here in China Lake, I’m aware of a few, currently they are not for open discussion in this environment. We have not positioned anybody from WD in a program management role within DARPA, but we do have a number of our entrepreneur some that is leading these strategic thrust areas in particular that they engage with DARPA but not on a regular basis. I’d like to see that relationship improve. I know Mr. Wilbe is moving up and Mr. Wilbe and one of our leaders in 4.5 competency had a very interesting relationship back in the 80’s when we were developing live static synthetic aperture radar systems. We were leading that effort here, that guy that was leading that thrust on the earlier chart, struck up a good relationship with Mr. Wilbe and helped DARPA overcome some very challenging live static aperture radar program challenges. So I’d like to say that there have been good interaction, they are not a huge part of our portfolio, I’d like to see it grow and I think with our successes coming more evident to them, that there will be more opportunities.

Q13. Do you tie in SBIR opportunities into this particular science and technology areas? And if so, how many do you do or put out each year or each season?

Mallory Boyd:

A13. So we do, I thought we might have a summary of those charts, matter of fact that is, one of the deep dive topics that we’ve thought of as we planned for this conference, to have as something for you to tell us that you like for us to go into more detail. We have two individuals here that have been highly successful in leveraging SBIR contribution to the mission area to both directed energy and advancement of dome technologies for high speed weapons. And then we have a scattering of folks who have managed to partner with small industry interest in SBIR to pursue smaller scale topics of interest. We have a number of opportunities, but a lot of these are managed by our PEO structure back at PAX because the way we collect funds for the SBIR investment, they allow the PEO and PMs to compete for getting some of the money back. And where we can submit ideas that are of interest to weapons programs or unmanned platforms to PEOs and if we win the competition then those ideas go forward and get funded. We also partake on non-NAVAIR SBIR topics, that is manage that out of Office of Naval Research, so there is couple of venues there that we exercise. There is a call right now in place for an idea in topics that’s Dr. Seltzer, who is our principle lead for those. So in any event, so yes we have, it is an interest to us, is it big as I’d like it to be, no, I’d like it to be much bigger. I think there is a lot of opportunity there and one of the reasons that we are, of course, talking with you is that, in this community, you are the source of a lot of those ideas and you are the small business part of the small business innovative research. We have the opportunity to influence where it goes, manage it towards the Navy problem to have the ideas that we can partners with industry so we welcome topics to entertain or we welcome solutions.

Q14. In the area of autonomy, are you dealing much with cooperative economy for possibly swarm type efforts?

Mallory Boyd:

A14. Yes, in its infancy at this point, but there is a an FNC (Future Naval Capacity) called CASE (, that John Cranney out of 4.52 is leading that effort for us, code 35 at ONR sponsored Ken Heeke’s group, CASE is a collaborative weapons, UAV and S&T effort to deal with both swarm and other targets of interest in the littoral areas. It’s just starting but you know the collaborative piece you’ve talk to is a big scene to CASE and one of our bigger challenges, how do you get autonomous platforms to perform together to enhance the overall mission.

**PANEL DISCUSSION:**

Q15. So, you’ve mentioned that your funding profile is to close out the books at end of the year, so how do you plan multi-year efforts and how do you maintain continuity of purpose in real high critical technology areas?

Scott O’Neil:

A15. We get a lot of repeat business from customers, so we do work closely with customers base to understand what’s there to advance, what look like in the short run out here, so we have been trying to pull that all together in that perspective and eventually look at where we see emerging work coming in the door.

Q16. What kind of technologies do you envision needed to evolve to be ready for FAxx? For example, maybe you can give us some perspectives on how you might have to drive your strategy in your investment to get ready for procuring after that.

RDML Moran:

A16. I can talk to that for a second, you guys jump in. FAxx is a very iffy if you know, the study started by OSD seems amazing at the 35 ton delivery jet where we’re starting the next generation study. But it is about technology and I will tell you it’s an end-to-end manned platform, unmanned, you know it’s a save space, I mean the AOA is completely open and that’s where DARPA is very heavily involved in the AOA study and they are starting to reach out to all of the technology houses now. Air Force and Navy is heavily and obviously leaning in forward in that AOA, but you know, I think there will be questions coming for us to engage on that piece, but I will tell you, that’s probably 6 month old or so, they are starting to set groundwork to start collecting that data.

Mallory Boyd:

I was just going to add, that, I think to follow on what the Admiral’s point about the AOA being wide open. I’m not even sure if it’s going to be a manned platform at this point. Don’t take that as guidance, but I think it is that open, but they are just going to be ending these technologies we’ve talked about. We have picked our portfolio fairly carefully that it’s not narrowly selected to only benefit one very narrow niche in the market. We don’t have enough money or resources to approach in that sense; we try to be broad spectrum.

Q17. So, thanks for the overview on what you guys do and what’s your interest are in. I’m a small business owner and I think what’s missing for me is the link between what you want to accomplish and how we can help or I can help. Somebody mentioned the SBIR program, which is certainly useful in getting the small business involved in providing technology. But is there a, or what is the plan for in engaging small business in your future plan? When I see things like integrated warfare, that’s a very a big picture right there, that’s not small business providing integrated warfare so what is the plan for small business?

RDML Moran:

A17. I’ll let these guys jump on, I’ll just lead them in; integrated warfare gives us the big topic right. What we are talking about or what Mallory is talking about is power supplies. I mean some of those technologies that we can put on UAVs that are smaller or more effective or we can put it in some of our disparate sites that require some kind of long term power supply where they can’t rotate some kind of the electrical systems to, but it crosses the spectrum so we’re looking for opportunities to engage with small business and invite you into partner with us in those areas that we think are important. So I’ll let these guys talk, there is all sorts of contract activities that we can engage with you to enable that working together relationship.

Q17 (follow-on question) So maybe that’s the area and it sounds fair to me those contracts vehicles that we can engage in?

Larry Merwin:

Where I see us most effective is where you have a good idea or we have a need and we have a good idea that links to that, we go forward together cooperatively, CRADA can help to protect your IP (intellectual property) protect our IP and IP is generated together we can work together. We don’t have all the answers we need good ideas too, so let’s work together to do that.

Mallory Boyd:

And although some of the CRADAs we have are with our large business partners and small business partners as well. Some of those have resulted into shared intellectual property, ownership, licensing, royalties, it’s interesting to watch how some of these evolve, but it starts with a good idea and helping you understand our interest are and what we are trying to solve is part of this preliminary session is step one, to help and improve your ability to approach us with topics that may be of interest to us. I think Karen seems to have something she wanted to add to as well.

Karen Haden:

My name is Karen Haden, director of contracts here for the weapons division. And so in addition to what we’ve talked about here on CRADAs and what we previously talked about in SBIRs you all noticed that we put out broad agency announcements and lots of sources sought for our market research. One of the focus areas from better buying power is to increase the rigger that we are putting into the market research effort and I think we really have done that so we are very interested in getting serious responses coming back in when we put out these sources sought and we will also be having an Industry Day where we are going to focus more specifically on our long range acquisition forecast where we have very specific contract opportunities that we’ve identified, that is going to be June 25th, so we will be having specific actions that will talk about there and if we follow the similar format that seem to be positively received the last time, opportunities to engage with the actual requirement owners for those actions so you can talk about the capabilities there. I wanted to stand up with Derrick when he was talking earlier here; we work very closely with Derrick, we live in the same space together and work very closely with the Small Business Office and he gets insights into the new capabilities from companies which he shares with us, we get inquiries we pass them to him because we know he sees every single action in his office so he can do the match making function with the requirement owners and the various industry partners that have that capability.

RDML Moran:

I would just add, that it is one of the big reasons we’re having this, I mean it’s clear to me in conversations I’ve had in several venues that we don’t educate small business enough on how to become engage with the government, especially when there are good ideas out there, so you know, as we said in our next quarterly one we are going to deep dive a little bit more to make that process easier, more well known, because the good ideas are out there. There out there in somebodies garage that can really help the warfighter tomorrow and we just don’t know about it. So it’s not all about us knowing what we want, it’s what out there that we can go “oh my gosh that is a great idea” let’s go partner and let’s work that, so that’s what we are trying to do.

Karen Haden:

One other thing that I want to add onto that which I should have mentioned is unsolicited proposals. I personally read every unsolicited proposal that comes into the weapons divisions and trying to do the match making function here so I would encourage those of you, who think you have some capability that matches some of these mission areas to get those to us. I will discourage any of you from sending me a big pile of marketing literature, because I do get a fair amount of that too, so I’m looking for serious unsolicited proposals.

Q18. Now that Inyokern airport has three companies doing UAV work, what is the Navy’s plan to take advantage of this new capability in our Valley?

Scott O’Neil:

A18. Yeah I think it’s not news that Inyokern airport and the California General did not appoint (Inyokern airport) as one of the FAA substations for working with unmanned aviation while protecting the civilian airspace. The fact is though we got the R2508 and we also got the restricted airspace over the sea range over at Point Mugu. 25,000 miles of restricted air space on the sea range and one eighth of air space over California and it happens that Inyokern is right in that airspace as is with Mohave and some other airports. So, this is going to be part of the business that we do. We are already actively engaged in testing unmanned systems and as we said earlier that the number of sorties that we did on the range last year exceeded the manned aviation sorties. So we are here and we are going to have to learn how to work in this environment no matter what, so we look to and you know, we got a relationship with Inyokern Airport and the fact is that a lot of our partners fly out of Inyokern Airport and come on to our ranges and use our ranges and so on. This is just a natural extension of our relationship with that airport and other airports in our airspaces, so that we can really understand, one, how to integrate our unmanned aviation with our military systems and it is one that is going to happen. So we are going to put our heads in and we are going to participate as best we can.

Mallory Boyd:

Can add a bit to that Scott, another point I think is worth making is that while the FAA designation did not include Inyokern submission to CAL UAS. The mission implications of unmanned systems integrated with manned platforms is a mission that we face in deploying environments which aren’t FAA territory. So we still have a motivation here to solve some of the challenges such as see and avoid and other technologies that are common interest to discussions that is currently going on about integrating our platform into CONUS airspaces. So we’re not stopping our working our efforts to explore those technologies, if you have ideas there, don’t limit them just because you think CAL UAS was not selected as a player in the FAA program.

Q19. Is there any way that you can help with the COA, maybe be a partner for a COA for private small business that wants to get involved in UASs, because right now that’s where they’re locked out. They can’t get in because they’re not a government entity and they can’t do a COA so is there like a partnering agreement with you guys that we could work out a deal where we can get a COA worked out?

Scott O’Neil:

A19. I’m not going to say no, but I’d like to sit down and talk about it with you on the specifics on what you are talking about. You know that we do have a standing relationship with Inyokern airport, for example, and maybe that’s another way in, whether it’s COA or if there are some other vehicle, I’d like to sit down and talk to see what the right instrument is.

Q19. (Follow-up question) Because that’s how Alaska got in, they formed a private corporation or some type of corporate entity with commercial, Military and government and that is how they were able to get ahead of some of these FAA things.

RDML Moran:

I think there’s opportunity to go do that, and we’ve just got to have that serious conversation on what the venue to properly pass to go have that agreement codified so that we can go do that work jointly. But you know NAVAIR, today; we have over 180 UAVs that we’ve documented just in NAVAIR that we’re working every day, teams both here and at Pax River working upgrade in sensors and capabilities. So there is a lot of work that has both Military and commercial application that we’ve love to partner in, because it’s where we are going, it’s the future.

Scott O’Neil:

It’s also interesting that all of the FAA partnerships that were selected have some kind of working relationship with academia. We’ve got a lot of academia; we got a lot of educational partners with a lot of the University in California and around the nation, so that might another venue.

Q20. You talked about kill chain and a lot of the new technology where you’re headed and some of the older technology. But my question is regards to….. wouldn’t communication be part of that kill chain and what are you doing with other agencies such as; SPAWAR, NAVSEA, NSWC to link with chains or some of the new networks they are coming out with, what kind of work in that area exist out here?

Scott O’Neil:

A20. We are working pretty heavily with SPAWAR systems center, with Eglin and NIOC (Navy Information Operations Command) because kill chain obviously just don’t involve just tactical aviation or airborne assets so the communication links are huge. So our interface with SPAWAR in that particular area and also looking at what the command and control structure itself. Because a lot of time, it’s just our policy is in the way, our doctrine is set up that really limits. So it’s working with those organizations including fleets like NSAWC (Naval Strike and Air Warfare Center), NMOC (Naval Meteorology and Oceanography Command) you know, those fleet organizations that address those various warfighting areas.

Q20. (Follow-up questions) Will those contracts be out here or are they more with SPAWAR and with NSWC as part of their contract’s acquisition or are you looking at doing contract acquisition as well?

Scott O’Neil:

It depends. You are asking who is in control, and right now it is an evolving area. But things like chains and ops and some of the command and control issues are going to come out of SPAWAR, who’s got to make sure that from our perspective, aviation assets requirements are in those acquisitions, same things that serve the combatants and we are doing programs within the Navy that are really starting to work through some these challenges, Navy’s got a very different fire control systems for aviation and ships so it’s big area that is needing some of these integration challenges. The other things we’re are trying to do is where we’ve got major interfaces, is to try to standardize those interfaces so that everybody can be working on common sense standards and some things will be or have a better opportunity to be able to work with you all, and then through the acquisition part of it make it much easier to coordinate across the Navy and across the services. So you can see, as we go forward, we are going to be developing a lot more standards for some of these interfaces and governmental control standards.

RDML Moran:

Yes, so let me add to that. The integrated warfare capability right now, I’ll tell you that NAVIAR’s Admiral Dunaway is making a hard push and it really started out I’d say about 5 or 6 years ago that is grabbing hold. So he’s working with the other SYSCOMS, NAVSEA and SPAWAR to get on board with identifying those missions. So mission technical baseline, so what are those standard in interface is key that ties the surface Navy and the air Navy together. Those are what we hold ourselves accountable to so as program managers, as I once was, I know I have a tech standard that I am be held accountable to that I can’t simple go trade away. Right, I got to have that conversation with the enterprise, does that make sense. Right now we’re off on our own little individual tangent in some degree, and when money gets tight, we make decisions, and those decisions sometimes lead to breakages in the communication trail that lead to kill chain being broken. So we’re trying to codify that, but it’s a lot of work, it is a lot of work in trying to get everybody on broad with that and industry is a going to be a huge part of that as we go forward.

Scott O’Neil:

We want to make sure that we get the requirements written right so that’s another area where we are really trying to work so that jobs have sponsors.

Mallory Boyd:

Ultimately we are talking about other services participations in national technical needs as well, there’s a lot of stuff out there that we are not fully taking advantage today in kill chain implications and mission baselines.

Q21. We have heard that interoperability and integration is the new strategic thrust in NAVAIR, is there any plan to create an organization dedicated to this area?

Scott O’Neil:

A21. That’s a good question, I would say yes, but what that organization looks like is still under discussion now. Because it’s not just an engineering function, but also a test and evaluation function and it’s also the logistics functions. So there is a lot work going on within NAVAIR to try to understand what does this means from an organizational perspective. The fact is, it’s the skills is what’s really important. It’s the understanding and having the knowledge of the systems that have to be integrated and so we recognize that there is a new competency, how do we best organize to nurture those skills and facilities that we are going to need, but that is the point of the discussion I think that will come to handle in the next few month within NAVAIR, I do think that there would be smaller organizational adjustments to start with, we’ll see where it goes. Now that said, I don’t know what’s going on, but I think NAVAIR is out in front of the NAVSEA or SPAWAR as far as organizing, but it is a Navy wide issue so it doesn’t help if just one part of the organization starts mobilizing to address this, we really got to work across organization.

RDML Moran:

So I’ll add to that, there is an integrated warfare capability center that NAVAIR established but some of our senior executive is in and are manning it with folks to get this started, so we all understand now, we all have equivalent counterparts at NAVSEA and SPAWAR that have joined. Scott is the NAVAIR’s head, once again founded back here at China Lake a few years ago so we have a little bit of head start, but that conversation dialog was just briefed to Secretary Stackley three weeks ago. Secretary Stackley is a pretty big fan, he goes back to that comment; mission versus platform base and so I think you guys all knows this, when we go up to brief our programs, and then you get the full reproduction or milestone B, whatever that B is, it’s really platform centric. When I was a PA, I didn’t brief all of the networks and all of the weapons that went along with it, I bring PA and there was an assumption that the weapons and the networks and the communications were all part of that piece, we touched on, but we didn’t get any details on it. So what’s being proposed to Secretary Stackley I think is going to Mr. Kendall in a month, to say let’s look at that differently, when you review it, looking at it from the mission perspective. So let’s look at it from an air to air perspective, when we add this capability what else is all going on around that, are those things funded and I think what you’ll find when you do it that way, and certainly not by design, is that there is gaps, and those gaps as Scott said, need to be funded. And right now we don’t have a venue in N98 and everyone is hesitant to add more money to programs and so now are those gaps significant enough, can we identify them early enough so we can minimize the impact and the cost to fix those. To me that’s the backbone of what IWC brings and it’s not a whole new organization at the end of the day, it is just a new way to do business and look at it to make sure we’re all aligned behind it.

Mallory Boyd:

I was just going to add that the big challenge in that construct, if you think about how we’re currently organized around technical competences of… we have some learning to do in area of what is mission engineering. How do you train up a mission engineer? Because that’s what they need, so IWC need people who’s very broad and have a full appreciation of many of the systems that they horizontally integrate with as they think through these mission construct, because it’s all about mission. So where do you maintain that mission engineering strength. I think there is big challenge. Right now we do it by ordinarily identify technical talents.

Scott O’Neil:

We just think about the tech standards, we are going back trying to figure out how to manage and how to establish nodes into how to manage technical standards for these inferences some them are great learnings, some of them we use to do a long time ago and quite a bit in government, but we haven’t managed technical standard in many years.

Q22. Can you describe how you’re supporting the long-range strike thrust area?

Mallory Boyd:

A22. So long-range rapid strike has been around for few years, depending upon whom the leadership was of it, there was a strong proponent for air breathing technology to get the long-range out of missile is necessary because you can’t do it with solid propulsion. You just can’t pack enough solid into a tactical size weapons. So air breathing technology has been a long-term interest area where it be a SCRAMJET, SRAMJET or RAMJET. So we’ve maintained some very low level, but important, of course fuel and capabilities area there, for example T-range is a unique asset we have here at weapons division. High speed, very high speed environments and allow for dramatic events like separation of stages which is energetic driven events which we think is unique to WD. Most other high speed testing capabilities and facilities will not allow you to have an explosive event. So we have infrastructure, we have skills largely around air breathing technology areas but also in component technology areas like domes, because if you fly faster, you know domes get heated up but you still need to see though them whether if they’re optical or RF guided so you have some material challenges there. So that’s in general kind of where we’re working at, I can go into more detail off line especially if you have a secret security clearance.

Q23. I have a two part question; we’ll save the first part because it’s a little bit more complex. In one way or another, you all stated you have been trying to live with systems that you have had for a long time, everybody is saying that you use old stuff for a long time. So a lot of times innovations and improvements in those systems were proposed and they say, nah, we’ve got something coming along that’s better and cheaper for the future and those things die their own deaths. Are you looking at all at looking at some of the older systems that can take let’s say some minor improvements to meet some of the gaps that you have if you have a process and a system for that. I mean I guess there is a department which is the Devenci supplier base in those older systems because you may not have them available. So that was the more complex question. The second one is that you mentioned biometrics, will there be someone at the social from that area that I can talk to, to have an off line?

Scott O’Neil:

A23. I’ll take the first one. I don’t think anything is off the table as the systems go. We are in fact in the process of getting proposals out right now that we’re working pretty aggressively with the OSD on looking at using target drones as assistance to delivery capability. What we have to do is to look at the threats that we’re going to face in the next 20 to 25 years and understand the capabilities we’ve got today where we might be able to morph them. And then, where we’ve got challenges, you know, what can we do as a stop gap using what we’ve got, and then use the time we’ve got to start really understanding the requirements we need for our new systems. I think that is going to be a time phased approach. You know people are looking at long-term vision I’d say up to 2025. The fact is that 2025, we’re going to pretty much have the Navy deal with what we have today and yet the threat is not going to change. So what do we need to do with that stuff, and what are we going to have to cater to. That’s we have a lot of capabilities, let’s start using it as a proving ground if you will, to start latching together some of these systems and to be able to address some of these emerging threats that we are seeing and learn from it and then, take that learning and use it to write the requirements for the systems that might be deploying let’s say in 2040 or 2050. That’s really looking out there a long ways and trying to use the capabilities we’ve got. The competence we might find ourselves in and the exercise that we might find ourselves in as a proving ground to try to really evaluate some of these ways to use what we call latent capabilities.

Mallory Boyd:

I’ll take a stab at biometrics and I also ask Dr. Merwin here to way in. I think we’re approaching it a slightly different approach than you see in the commercial world. Commercial world with a thumb print on my i-phone to login and that is one of the biometric approaches. We are a warfare center, we’re interested in the increased accuracy or surgical aspects to our missions, limiting collateral damage is very important and so you make sure that you get the correct target and not create more enemies by hitting the wrong targets. So biometrics is going to be part of that picture in our future, whether biometrics can be collected in distance, which would be optimal, if I could collect useable biometric information from UAV for example, that might be useful for me strategically or tactically. It may be less beneficial if I have to rely upon, you know, hand shake with the bad guy to get that biometric information so we’re looking at ways that this information is available to us to help make targeting decisions. But there’s other application as well, I’m sure, but that’s the one I’m generally aware of. Larry you’ve got something?

Larry Merwin:

I guess I would say that…, I didn’t introduce myself before; I’m Larry Merwin, director of research. Come find me afterward, we’ll talk a little bit. Our efforts in biometrics I think are very basic science, very mathematics based, so not perhaps what DHS or somebody like that would be doing, but I think we’re doing some cool stuffs so we’ll talk off line.

RDML Moran:

I’ll go back to that first question a little bit. I think it is a good thing for Naval aviation in terms of platform and capitalization. We’re far better off than our sister services in a big way and the other thing that I think that’s really good it’s happening across our platform is evolutionary acquisition, so there’s increments all are in proponents in the budgets for P8s, E2s, flight plans for F18s continues. So there are opportunities, funded opportunities to incrementally upgrade the capabilities in those aircrafts, so it’s known. Let’s get them the latest capability as we know today, these maturity risks get fielded, get it out

In the field and executed and as we learn, and then put the platform out there and the technology matures, we have funding in place. I’d say other thing that I think is good is that we’re finally winning the argument, but having won it yet is the funds things, which is a two year cycle, right, so through the POM cycle and what they want to know is exactly what you are going to buy and put one an airplane three years from now. So we’re trying to convince them that technology is moving so fast and things are maturing behind closed door that we don’t know about, but it’s going to be a capability thing so let’s put funding aside for capability, so that we are not waiting for those three year cycle in responding and if there is something mature, right, and we understand it, we can integrate it in far less time than we do today. And so we’re trying to win that argument up at the Pentagon, I think we’re making some inroads to do that. There are code programs that have bought funding aside for exactly that, so as Scott said there’s some near-term technology that we’re maturing that will be ready in a year or two and there are stuffs that we need to work that’s going to be 20 years out that’s the next big thing that’s really going to dominate or change the face of warfighting. So we’re trying to attack it from both ends. But, I think we’re really in a great position in the Naval aviation. We just got to take advantage of the knowhow that is in this room to bring to the fleet.

Q24. This is a question for the contracts lady in the panel, one of the slides presented earlier said that the China Lake facilities budget created about 1.3 billion. In that 1.3 billion how much in goods and service does your organization to go buy creator.

Karen Haden:

A24. So I can tell you that last year during CR & sequestration we didn’t spend nearly as much money on contracts, but prior to that, it’s around 700 million is what goes on in contracts per year. That’s not the value of the contracts we write but that’s how much money we obligate and then what another 20 million on government purchase cards.

Q25. There is an article in the local newspaper about NAWCWD will be doing only Navy work. What are your views on the subject?

Scott O’Neil:

A25. That is a lie. I admit a lot of inconsistence in Navy labs and warfare centers make up work on its own. But the fact is that the NAWCWD 95 percent of our work is Navy work. Majority of that work is for Naval aviation. But in fact that’s why I pointed out on my slides, even of the 5 percent that’s looked as a non-Navy work, the fact is the majority of that is work that the Navy had made the decision to join with joint lab assistance, whether it be JSF or JSOW or JDAM or whether or not the Navy or the United States government had decided to sell a particular weapons system to foreign ally and then we do work under that agreement to support the weapons system and what the United States has sold. So a lot of that work and then the work we do at the ranges, the fact is that our ranges are National ranges, they are not owned by either Navy at Point Mugu or China Lake. The truth to that is it is an OSD range that the Navy happens to manage for the Defense Department. So we’ve got responsibilities and obligation to support other services in those areas. So it’s down to one to one and half percent, the word that we call that discretion. The fact is that that work is for an agencies or organizations like DITRA that are actually in on the mission areas looking for explosives or on systems like that, so we don’t see it as a problem. We think it’s something that’s going to be like it’s going to be like am I getting the nomination? Because there are worries or anxiety that the Navy has its infrastructure and its people that need to be available for the Navy mission and making sure that we manage that if we’re doing some other work for some other organizations. I think with some data and we’ll continue the dialog and some transparency while we’re making some decisions, we’ll be fine.

Q26. What kind of future do you see for counter IED and counter mine work especially since we’re drawing down out there in Afghanistan?

Scott O’Neil:

A26. Yeah you know our IED work is drawing down right now, but right now there is a lot of interest in that work being picked up by different agencies, so we’re anticipating a little bit of a hiccup but, the fact is the world is a risky place and we really don’t see a lot of that work just going away. I think that the assets that we’ve got both on the deployments and on this site, on our electronic warfare lab and the assets we’ve got here in our simulations and bombing areas and our JCIEF on the north range we’re postured to do that kind of work and will be able to demonstrate the capabilities so I don’t think it’s going to go away.

RDML Moran:

I think I’ll touch upon it just for a second because I think it is a very dynamic environment. Scott touched little bit earlier, and it’s really astounding to me when I got here, how quickly we engaged both in the EW front and the IED front. We’re turning this organization; our guys are turning back answers to the field in hours. So we have a RF threat we need to get into our EW systems out in a Hornet. Our labs are turning out data getting loads back in hours. Same thing with the IEDs front, if we get information back from Afghanistan, Iraq or wherever that’s coming from our forces, these guys are up in the JCIEF, testing and figuring it out, determining what’s best, what works, what prevents it or ignites it and their turning that thing back in hours. It’s pretty amazing stuff in real time so I think there’s going to be still a continuation of that. It’s not going to be great as you said, and then Scott’s exactly right, there’s just a need in and demand now, that the field has or fleet has for that quick turn-around, you can imagine how much they appreciate that. It’s amazing they’re doing that.

Mallory Boyd:

I was just going to offer from the technology stand-point, we look at things kind of simply, and we see this as a problem of detection and nullification. How do you find them and once you’ve found them, how do you make them go away. So there is some fundamental science and issues associated with sensing technology that are very much interest to us. Again, a little bit of sensitive topic in this environment, but the better we can find them, it’s easier for us to get rid of them, but we’ve got to find them first.

Q27. Since WSISS work maybe drawing down due to the end of aircraft production lines, is there any possibility for JSF to backfill this role in NAWCWD?

Scott O’Neil:

A27. I got this, I talked a little about it in my briefing, but the fact is that the Navy has invested huge amount of money and blood, sweat and tears, if you know, they know we have them on the Super Hornets and Growlers, and those assets, whether it’s people or facilities or equipment, our assets are that the Navy own, really DoD owns. So we’re working with the J0 and with the OSD and with Navy leadership to make sure that they understand those capabilities that we’ve already invested in and the skills that we got that are at sites at China Lake and Point Mugu and Pax River and other organizations that need to be involved in this and the Admiral is making sure that investments are going to be leveraged in the future. And again those decisions are right now on the table and we are heavily engaged.

RDML Moran:

Just to be clear, JSF program of record which is to leverage Lockheed for that long-term sustainment at Fort Worth and some work being done at Eglin with the Air Force. That’s the program of record, Scott said, when we’re putting the deed on the table, he primarily talked about the training knowledge challenge out there, are there other venues of avenue to go ahead and reduce that debt that’s building up…. I think that there is a pretty good case when you look at the Super Hornet model that’s put in place out here in China Lake with people, facilities and skill sets. Right now the program of record is what it is, so that dialog continues as the JSF program matures.

Karen Haden:

So I would add a little bit to that, for those who aren’t familiar with the contract, the WSISS contract is actually a, small business set aside that is a breakout of the functions that we believe can be done by other than the OEM on the platform that it supports. You will get more details at the next conference. But we’re getting the process right now of putting together the follow-on requirement for that particular contract in. In fact, we are talking to the JSF folks or what do they need in level of effort in the statement of work for support to them on that contract.

Q28. What is the base doing to help to restart commercial air service to Inyokern Airport?

Scott O’Neil:

A28. Let’s see, everybody knows that, maybe you don’t, American Airlines won the government contract for government travelers and before that it was the United Airlines, so United had that United Express Airline at the Inyokern airport. When they did not win the follow-on contract, they didn’t continue to provide service at the Inyokern airport, so Inyokern airport right now is leading the way looking for carriers that will come into Inyokern, and we have been in dialog with GSAs and other government agencies to see what we can do to make sure that the organizations and private world to understand the amount of travel and the business space that’s available here for our workforce when they go on TDY and our partners and collaborators come here to high desert. So, that’s about all we can do, we are not in the position to go out and award a contract for a private carrier to come into Inyokern, but Inyokern is a partnership between us and the Inyokern. It’s something where we’re working pretty heavily on or very interested in getting it resolved.

Q29. You mentioned that you like to increase or improve partnering with small business and industry, where are the qualities you see in a good partnership?

Scott O’Neil:

A29. I think that being able to really work in a collaborative way, in another words, you know, get the right vehicle so that we can roll up our workforce’s sleeves and really work in a joint fashion. I don’t see in a big organization with a complex system that we’re talking about that any one organization whether it’s government or private sector that’s going to have the knowledge and skills and aware of all of the details of those systems. So we’re going to have to figure out how to really work together towards the things we are talking about and it’s going to take, I would envision working on some of the vehicles we’ve got today, whether they’re contracts or CSAs or CRADAs, but we might have to come up with some new lists, you know, biotech and special legislation to be able to run some items like that so I think what we’re envisioning in the future is a whole different way to approach government and private partnership and how they manifest themselves is going to really depend on kind of jobs we have to do. So we’re looking for companies that are very knowledgeable, but willing to go through all these things and work hand in hand not only for you all to make money because that’s important, but we want to make sure that warfighters get these assets that they need, on time and on schedule for a reasonable cost and that’s the bottom line and I personally think that that can be done in the partnership fashion.

RDML Moran:

That’s exactly right, serious proposals aligned with where we’ve outlined our focus areas and then we sit down and have conversations. We really want to do that, I think there is… and as I told my team here, you never know where that great idea comes from, and if you’re not asking and putting yourself out there, you’ll never going to know and never find out, so it’s worth that dialog. But as Karen said and she’s exactly right, we get a lot of wonderful things we could do, but it’s serious and vetted with data and facts, we can go out and with conversations and engage and find a path forward, because we want to do that. I hate to go back to that one slide we put up there, but there is going to be money to do prototyping experimentation to just push technology. Let’s go discover together what makes sense and then we’re supportive of things that have commercial applications as long as they’re on-line with where we want to go, you know that’s a win, win.

Mallory Boyd:

We’re kind of visual, right, you see a round hole with square peg a lot of times, but I feel that we sometimes carry around holes back to square peg problems back East as well. So we face the same kind of customer if you will or partner challenges I think as this community does, how do we communicate such way that we’re working towards a mutual benefit, and not just selling something that I invented two years ago for the sake of selling it. We’re really looking at developing, co-development of ideas into something to solve our mission challenges and hopefully these forums can help you understand what those mission challenges are.

Q30. Are there any thoughts on using ducted fan energy in the F35 to power our directed energy weapons?

Mallory Boyd:

A30. That’s an interesting thought, of course going back to the challenges we have working with the Lockheed Martin organization on that because it might be an idea that they need to surface, but I don’t know enough about the downside of putting a motor in the airstream. Probably it reduces its efficiencies if you’re putting a drag on the exhaust, but it certainly sounds like there is an opportunity there, as would be perhaps if you’re burning the wastage of that platform into usable energy. We don’t have anything going on in that area that I’m aware of in our power systems, so it’s a worthwhile area to expand on, if somebody here invented that idea and if you like to pursue it further, please bring that topic to my attention and we’ll take it to the next step.