

DEPARTMENT OF DEFENSE BLOGGERS ROUNDTABLE VIA TELECONFERENCE WITH COLONEL GREGORY GONZALEZ, PROGRAM MANAGER, UNMANNED AIRCRAFT SYSTEMS (UAS); TIM OWINGS, DEPUTY PROGRAM MANAGER, UAS; VIVA AUSTIN, AIRSPACE INTEGRATION PRODUCT DIRECTOR, UAS; AND COLONEL ROBERT SOVA, TRAINING AND DOCTRINE COMMAND (TRADOC) CAPABILITY MANAGER, UAS SUBJECT: ADVANCES IN UNMANNED AIRCRAFT SYSTEMS TIME: 9:02 A.M. EDT DATE: MONDAY, OCTOBER 25, 2010

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ASHLEY WASHINGTON (Army Public Affairs): Okay. I think we're ready to begin. Good morning again. This is Ashley Washington with Army Public Affairs, and I'm joining you live from the Association of the United States Army -- AUSA -- Exposition and Meeting.

Our roundtable this morning is with Colonel Gregory Gonzalez, USA (sic) program manager; Tim Owings, UAS deputy program manager; and Viva Austin, UAS Airspace Integration Product director. They will be discussing updates -- (inaudible) -- in regards to the unmanned aerial system. We begin with opening remarks from Colonel Gonzalez, Mr. Owings and Mrs. Austin, and then we will open the floor for questions and discussion.

COL. GONZALEZ: Yeah. Thank you. Good morning, everyone. This is Colonel Greg Gonzalez. Appreciate all of you dialing in today.

We've got several individuals here, and what we'll do is, we'll each make an opening statement about one or two different topics. I'll start out to give you a quick overview and update on our quick reaction capability number 2, with the Gray Eagle, and I'll also talk a little bit about a fault-tolerant avionics demonstration that we had a demonstration on in conjunction with DARPA and Rockwell Collins.

And then I'll turn the time over to my deputy, Mr. Tim Owings, who is going to talk about a -- an interoperability demonstration or manned-unmanned teaming demonstration. He'll give details on that.

And then Ms. Viva Austin will talk some about our latest efforts to get access to national airspace for unmanned aircraft systems.

So -- and also I want to mention that we've got Colonel Rob Sova here, who is my TRADOC capability manager. And while he doesn't have a specific topic, he's here to answer questions as our user representative.

To start with, many of you know that we -- in 2009 we deployed the first Gray Eagle quick reaction capability into Iraq. And since the initial deployment in the late summer, early fall of 2009, they have flown over 6,000 safe hours in support of a division directly in Iraq.

In September of '10, last month, we fielded the second quick reaction capability of Gray Eagle. And each of the quick reaction capabilities is a platoon size of four Gray Eagle aircraft with all these ground support equipment and the soldiers that are operating those particular aircraft and systems.

The second QRC has some significant improvements over the first quick reaction capability in Iraq. First of all, the Hellfire weapon system has been added to QRC, which is a significant capability.

And also, we've added a beyond-line-of-sight capability, of course, which allows them not only to control the aircraft in the line of sight -- (audio break) -- length, but beyond line of sight, through satellite communications. And then, in addition to that, there are upgraded software capabilities. This second QRC is in support of the Army Special Operations Forces. And I won't mention specifically where they're located, other than Afghanistan, or what specific army unit, but they are in support of special operations.

It will take a few weeks for the unit to get all of their equipment to get set up and begin operations, but they have successfully deployed there, and we're looking forward to some great feedback. All of these QRCs, QRC-1 and 2, together, of course, are early fieldings of our program of record. And the program of record will have a(n) initial operational test and evaluation in September of '11, and we are on track to have that take place successfully.

The second thing that I want to mention is we have had a joint activity between PM Unmanned Aircraft Systems, DARPA and Rockwell Collins. It has to do with fault-tolerant avionics. And the idea here is to develop software which is, of course, through DARPA -- and their contractor is Rockwell Collins -- to develop software that will help us save aircraft either through engine outs, engine stalls or loss of partial wings.

And we've been working for months with DARPA in our office to set up demonstrations. On the 1st through 3rd of October and on the 15th of October, out at Dugway, Utah, the entire team got together out at Dugway and actually did several demonstrations where they stalled an engine, where they cut an engine, and then they blew off a 20-foot -- excuse me, a 20-inch -- a 20-inch piece of the wing. And in all three cases, they successfully landed the aircraft without further damage. It was a -- it's tremendous capability that has future implications for sustainment and saving of aircraft and saving money. And it's a really -

- quite an interesting event. And we'll be able to answer questions about that as we go forward.

So I'll turn it over to Mr. Tim Croft (sp).

MR. OWINGS: Tim Owings. (Laughs) -- (inaudible) -- be promoted, though, if that's in the cards.

COL. GONZALEZ: Right. MR. OWINGS: This is Tim Owings. I hope you guys can hear me okay. It's pretty loud in here, so it may be difficult for you to hear me, but we'll do the best we can.

One of the other things that I was going to talk about -- and we talked about this the last time we were together -- is this demonstration called MUSIC, which stands for Manned/Unmanned System Integration Concepts. And it will be the largest demonstration -- (audio break) -- ever conducted. It will include our Gray Eagle, our Hunter, our Shadow, our Raven, our gMAV, all on the unmanned side; and then on the manned side, will include Apache Block III, and possibly Kiowa Warrior. All of that will be integrated behind the One System Universal Ground Control Station and a bidirectional variant of the One System RVT. So once we conduct this demonstration, that will be the proof of all the things that we've been working for the last several years and talking about in terms of interoperability, not just on the unmanned side, but on the manned side as well.

That also sets the stage for next-generation architectural improvements. Where do we go from here? With that demonstration, we're going to showcase movement of video, command and control, fusion of the control centers in terms of aviation -- or manned and unmanned assets. But it really sets the stage for the next generation. The next generation for us involves a series of evolving technologies for greater tactical fusion, what we call sensor fusion at the glass, or at the tactical level, at the operator; so that the operator gets the feeds from not just his own resident intel-collecting sensors, but from other sensors off other manned or unmanned platforms -- specifically, video-based ground moving-target indications, synthetic aperture radar -- (audio difficulties) -- I think a spacecraft just landed. But in addition to that will be signals intelligence pieces. All pieced together, the operator can get cues at the tactical level.

So we think that's going to be really the next generation of what we're doing. So what you will see is, this MUSIC demonstration is really phase one.

But every couple of years we will continue to do this to showcase the new technologies that are coming on board. And I'll -- we'll talk more about that as we get into today's discussion.

But everyone will get an invite to that event as well. It will be a very large event with a lot of flying and moving parts, and will really showcase the -- how far we've come with regard to command and control, and video-based architecture and interoperability.

And with that, I'm going to turn it over to Ms. Viva Austin.

MS. AUSTIN: Good morning. This this is Viva Austin, and I'm the product director for the Army's Unmanned Systems Airspace Integration Concepts.

And so what we're trying to do is to try to get more access to the national airspace with some of the unmanned systems. And a lot of you probably know we have a certification of authorization, which I'll call a COA, with the FAA for proof of concept at El Mirage to allow supply at nighttime in class E and G airspace, which is just in the national airspace.

That was actually the first sense-and-avoid system ever approved by the FAA to fly an unmanned system in national airspace. That was approved back in August, I think. There were some pretty strict data requirements on it. And currently we are still working through those. One of the important things is to make sure that we line this one up correctly so that we can repeat it easily, and we -- all of the other services can also repeat it.

So I -- with that -- (inaudible) -- I'll turn it back over to Colonel Gonzalez.

COL. GONZALEZ: (Inaudible) -- open the floor for questions.

MS. WASHINGTON: Yes. So now we will open the floor for any questions. We will start with John Doyle, if you have a question.

Q I'll pass at this moment. MS. WASHINGTON: Okay. Sean Gallagher.

Q Yes. I wanted to ask if the MUSIC demonstration, if that was going to -- if your plans include integrating that with the Distributed Common Ground System or any other system for test purposes in that demonstration.

COL. SOVA (?): Yes, could you repeat the question?

Q Sure. Can you hear me?

COL. SOVA (?): Yes, I can hear you fine now.

Q Okay. I was asking if the MUSIC demonstration, if that was going to include a capabilities demonstration using integration -- Distributed Common Ground System or not.

COL. SOVA (?): We're not specifically going to be demonstrating a D6 (ph) functionality, although that is resident. It's actually a good question in terms of something we might want to consider, because the system that we're providing to D6 (ph) is basically the one system RVT for their receipt point. So it certainly could be there. But as we envision it right now, we're not going to have the D6 (ph) and those there.

We will have our Universal Ground Control Station flying all of the larger platforms. So it will fly Hunters, it will fly Shadows and it will fly Gray Eagles, all from the same ground control station and same software load. But D6 (ph) itself will not be part of that.

Q Okay. So it's going to -- you're going to be using the common ground station across -- the universal controller across all the unmanned platforms, then.

COL. SOVA (?): Absolutely, across that. And in fact, what we will have is, is we will be using what we call our IOPs, which stand for interoperability profiles, which basically is an open standard in terms of how we communicate. So that's the way we're going to communicate to the air -- to the unmanned aircraft, and to the Apaches and to the KWs, so that we'll be demonstrating all at one time the ability to showcase that open architecture.

The other beauty about that is we're -- even though we're going to be flying six or seven different aircraft, that it's very easy to cookie-cut in a new system into that architectural approach, which is exactly what we're going to see with 1V (ph), exactly what we're going to do with A1-610 (ph) and future applications.

Q Is that platform -- that -- and just one more follow-up. Is that universal control platform, is that compatible with the NATO universal UAS control standard?

COL. SOVA (?): Is it compatible with what? Q The NATO (STANAG ?)?

COL. SOVA (?): Yes. Yes, in fact, it is. It's built upon the STANAG 4586 and several other STANAGs. So, yes, it's compatible with it and operates both in the -- in the -- you know, the joint and then, of course, the NATO environment.

Q Thank you, sir.

COL. SOVA (?): Okay.

MS. WASHINGTON: Okay. We will go to our next question.

James Meek (sp), do you have a question?

Q No, ma'am, I don't. Not right now.

MS. WASHINGTON: Okay.

Q Thank you.

MS. WASHINGTON: Not a problem.

Anyone else on the line have a question?

Q Hi. It's Michael Bruno from Aviation Week.

MS. WASHINGTON: Okay, Mike.

Q Mr. Owings, can you describe a little bit more about this next step after MUSIC? What exactly is going to get demonstrated together in this (centrifuging ?) of the glass?

MR. OWINGS: Right, yeah. What -- yeah, what our -- if you look at the way we've evolved, from video-based information, it's fairly easy to fuse that information at the -- at the tactical level. You know, the operator can -- knows what he sees; he can tell what he's -- what he's looking at. When you begin looking at signals-intelligence pieces and moving-target indication pieces, particularly off of synthetic aperture radars, it gets a little bit more complicated, number one.

Number two is, we want to break down the stovepipe, so to speak, of the information. And by that what I mean is at the -- at the -- at the glass level, or the operator level, right now he is limited to what he sees on his glass. We want to make the other information available to him as well so he can pull through the network either pieces of video, he can pull signals-intelligence hits, pull SAR (ph) hits, and use that information to guide him in terms of what he's searching for, to make him much more effective in his mission as we piece that together.

So that's what we're talking about and trying to build and trying to prototype with the JTC/SIL, or the joint technology/systems integration lab, to showcase that ability first and then to bring some operators in, see if we've gotten it right, and then eventually this would be some type of -- you know, we envision some type of TRC (ph) down the road.

MS. WASHINGTON: Thanks. Anyone have any additional questions?
(Pause.)

Well, there was a question from a blogger that couldn't attend online -- or over the phone. It's from Chuck Simmins. His question was, what is the agreement between the Air Force and the Army on the size of aircraft that the Army can operate?

COL. GONZALES: This is Colonel Gonzales. There's no specific agreement on what size aircraft the Army or the Air Force can fly. I mean, we're independent services; we're not restricted by one another. But we do have a sort of agreement -- not a formal agreement -- that the Air Force normally deals with the strategic mission, and therefore they fly aircraft that collects, usually, ISR. The Army clearly has the mission and the lead in the tactical area, at the division and below. And that's where our Gray Eagle and below aircraft cover. The one area that is sort of a -- if you call it a grey area, is at the operational level, and that's where we both have aircraft that operate in the same -- in the same space, with some combining and overlapping mission. And the Gray Eagle does -- and the Gray Eagle and the Predator sort of fall into that grey area a little bit in terms of missions that both could cover.

But primarily we have a good agreement on what they do and what we do. We each have separate missions. Our aircraft have their own capabilities that need the specific missions. And primarily the Army, at the division and below, we're looking for what we have referred to in the past as RSTA -- reconnaissance, surveillance and target acquisition. We use those aircraft typically to support the direct combat mission, and full-motion video and weapons are critical to us.

The Air Force may focus more on collection of ISR capabilities that will help more in defining what the enemy and -- courses of action and future capabilities will lead to.

I'll let Colonel Rob Sova follow up with that, since he's our user representative and he can clarify.

COL. SOVA: No, this is a good question that came in, and I'm going to go back to it, because I've read some recent quotes that talked about this grey area, as it was mentioned, and the utilization and the (pacts ?). What I've seen in theater, when we've -- have an -- a platform that was from our Air Force that is command-and- controlled out of what is called the K-OP (ph), because it is a strategic and upper-tier operational asset, that at the end of the tasking of that particular platform, if it's supporting a unit, sometimes at the end of the time that it has been apportioned or allocated, it goes onto another priority mission that was determined by the senior leadership in that region. And that is, in fact, as it was pointed out in the article I'm referencing, an Army senior leader that makes that decision. But it's made based on the priorities of the theater.

When we, as the Army, have what we call organic platforms that are capable, as Colonel Gonzalez mentioned, operational, the difference is, they are in direct support of that tactical-level commander, division and/or below, where he prioritizes. And they're not going to be apportioned away or allocated away, unless that decision has been made by higher to allocate those portions. But that's not the primary purpose of the Gray Eagle.

And I'd like to caveat one more item with this. The -- it also referenced the ability to have assets or it talked about the Army having assets that were in what we call dwell and not in the fight, and specifically they were talking about our Shadow platform. But that's -- again, that's an operation (in/and ?) a military necessity. We have several platforms, as we rotate back, that are with units. You can think of tanks -- if you think of other services, C-130s and/or large -- (inaudible) -- aircraft.

And so that -- the Army, we call it ARFORGEN. We have made decisions that we will also push our additional assets in theater and continue to have more aircraft UAS assets that won't be in dwell, that'll be in the fight.

And with that, I'll just leave it there, unless there's a follow- up question.

MS. WASHINGTON: Thank you, sir.

Does anyone have any additional question? (Pause.) Okay. If there are no other questions, we will now have any additional remarks --

Q This is John Doyle with 4GWar.

MS. WASHINGTON: Okay.

Q I have a quick question for Colonel Gonzalez. Just to clarify on the deployment or the planned deployment of the Gray Eagle quick reaction, is it in Afghanistan now or planned for Afghanistan?

COL. GONZALEZ: It's in Afghanistan. The soldiers and equipment are already there and arrived last month, in September.

Q Okay. Thank you. And if I may, a very quick question for Ms. Austin. What is the situation now with access to the national airspace? Have you increased the areas that the military is able to operate in? Are there any new areas?

MS. AUSTIN: Well, as I said before, currently we're working out at El Mirage, California, which is a private airfield where we're testing and training with the different variations of the Gray Eagle. And that -- that's the only one that's been approved in the national airspace right now. And we're still working on the data collection requirements for that.

But this will significantly increase access to national airspace, once we're able to repeat this.

Q How large an area is it?

MS. AUSTIN: The current -- the proof of concept?

Q Well, the El Mirage one.

MS. AUSTIN: Well, El Mirage is an airfield, and there's a restricted area that's just north of it. And so it allows you to fly right there at El Mirage and also transition over into the restricted airspace. It's about six miles from the restricted airspace, I think -- something like that.

Q Okay. Thank you. Thank you.

MS. WASHINGTON: And are there any additional comments or questions? (Pause.)

From here we will have any additional remarks our subject matter experts would like to make.

COL. GONZALEZ: This is Colonel Gonzalez. One thing that I haven't mentioned that I'd like to close with is, the fight in Afghanistan is a -- particularly in the south, is a significantly

different fight than has been going on in Iraq, and at this time it's -- (inaudible).

One of the things that we seen is an increased demand for the small UAS down at the soldier level, at the squads and the platoons and the companies. And until this time, we've focused a little on the Shadow and above systems because they've been in the greatest demand, but now what we're seeing is a little bit of a shift in the demand for those -- for additional systems -- (units ?) that are out basically on their own, spread out -- (audio break) -- platoons that are protecting and covering and responsible for a lot of area with a small amount of soldiers. And so we're seeing some significant requests for additional small UAS, like the Raven, and we're also having some greater demand for a system that is just slightly larger than the Raven, called the Puma, all environment. And with these aircraft, they are providing the soldiers significant eyes beyond the -- beyond what they can normally see and what they have not had in the past. And so we're seeing a great success with that.

And so, really, from the smallest to the largest, we're seeing a huge impact with these systems, particularly as we increase the -- (audio break) -- numbers of systems and the hours that they fly in Afghanistan, which is a good -- (audio break) -- in terms of what we're able to provide the soldiers to help them meet the challenges that they're facing in Afghanistan.

Tim.

MR. OWINGS: This is Tim Owings. Only one additional thing to add, and that has to do with -- along the same lines with what Colonel Gonzalez is talking about. We're also continuing to see demand increase for our one-system remote video terminals. And specifically, one of the things that we're working on -- and I mentioned it briefly during the discussion of the MUSIC demonstration -- is the bidirectional capability. The ability to have command and control of the payload from the RVTs will be a significant step forward.

One of the things that meshes with that is a program that we're doing -- is a QRC currently called Triclops, where we put three sensor balls on a Gray Eagle platform. The nice thing about that is that it allows one of those OSRVTs to have control of one of the sensor balls, one of the sensor balls can be controlled from the primary controller, and perhaps one can be handed off to a Block III Apache. So it begins to really enable a multiplying of the systems.

And the reason I bring that up is that -- is that's another large focus of ours currently across the Army, but specifically in unmanned aircraft systems: to be able to perform more missions with fewer aircraft. And so that efficiency metric is becoming, you know, big in terms of how we're procuring systems and how we're equipping the systems.

And I'll turn it to Rob Sova.

COL. SOVA: Yeah, any time I get an opportunity to discuss it, certainly as the user's representative I'm going to highlight the -- and just add to what Colonel Gonzalez has mentioned about our success, anywhere from the small systems all the way up to our Gray Eagle. And they are all operated, as folks should know, by enlisted operators. As the NTO is the backbone of the Army, the enlisted operators are why our unmanned aircraft systems have been so successful -- very training proficient and tactically integrated to whatever formation. And it just continues to amaze me when I see folks that are right out of high school that -- one example, graduating in May, and then in less than six months, has already gone through their Army training, has become a military soldier, and then has operated and amassed up to 500 hours in about six to seven months, supporting the operation in Afghanistan.

Again, as Colonel Gonzalez mentioned, the small UAS, we are very looking forward to the proof of principle, where we have even the Puma that was mentioned, the Raven. We also have a smaller system that's less than 2 pounds, the Wasp, and that will prove out and provide us an ability to pursue a family (of smalls ?) for our tactical operation.

And also, the -- what was added by Tim Owings in the one-system remote video terminal, that is a success story because we do have an approved and funded bidirectional SRVT where we'll increase what's called Increment 2 so that we can not only receive the video but, as Tim mentioned, we'll be able to control payloads for current programs, as well as we move forward with the cyclop -- or Triclops that Tim was mentioning. And I'll end.

MS. WASHINGTON: Well, again, we'd like to thank everyone -- Colonel Gonzalez, Mr. Owings, Ms. Austin and Colonel Sova -- for taking the time out to speak with us this morning from AUSA. And thank you all to everyone who participated. And this ends our roundtable.

If anyone would like a transcript of today's roundtable, by tomorrow afternoon I'll be able to disseminate that to everyone. Thank you.

COL. GONZALEZ: Thank you.

END.