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Air Force Special Operations

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SPEAKER: [in progress] -- in 2000 the DOD active duty reserve and Air National Guard and civilian professionals. We have a full copy of his biography in your program.

Ladies and gentlemen, General Heithold.

GENERAL HEITHOLD: Thank you very much. Thanks, folks. [Applause] Great to be here today. And we're sorry we got started a little bit late but the Chief had quite the comments going on, quite the impressionable comments I might say. So listen, folks, I think we've got about 45 minutes, right? Is that the timeline? Okay. So I'm going to talk for probably about 30. Now I really want to hear your questions at the end. So this is your opportunity to kind of sort out what's going on in Air Force Special Operations Command. I've got some themes here --

you've got this thing fired up? The first thing that I want to do is kind of follow you up with a video that we use often to kind of show you what we do. What I often say to folks is I have a customer, the customer is the enemy. I have a product that's called violence, and we do a very, very good job of delivering our product to our customer. And that's what we do. And this video should drive that home for you. Now I want to take up and give you a little comment about where we're headed. Go ahead if you can fire it up. This no kidding Danish journalist embedded with Taliban. Isn't Hollywood.

[Video Playing]

GENERAL HEITHOLD: So there you go. I'm the proud Commander of 1,900 air commandos that do this business here. We are just teammates of about 8,000 Special Operations Forces that are down range today prosecuting this struggle against violent extremism. I have about 1,500 Airman doing this sort of business every day and every night and I couldn't be a prouder Airman.

What I want to do is spend about 30 minutes talking about three things with you. Next slide please. First thing I wanted to talk about, this culture of innovation that we have in our command. I'm going to go back to World War II time period and show you that we are a command of innovation and continue to innovate, and I need your help, those of you in the industry, to continue this innovation. I want to talk to you about the training transformation that we have going. How do we build an air commando? I want to talk to you about that because I need your help on that as well. Then I want to talk about innovative technologies. Two things in particular that we have a focus on right now in our Air Force Special Operations Command that I need your help with. That's what this is all about. My industry partners come here, they spend a lot of money to come here and they want to hear why we need your help. I'll tell you how we need -- I'll show you how we need your help.

So let's talk about this culture of

innovation. So I'll send us back to World War II, the age before hover flight. That was a top secret aircraft, the helicopter, first used by the first air commando group in World War II in a seaside mission by at 19 year old lieutenant that's up in the upper left there. And so those were the things that we took, weapons systems that were developed were top secret and deployed them in the combat zone quickly. Same with the Project Nine. Project Nine was where we inserted the Chindits behind the Japanese in Burma. We towed gliders at that time behind the cargo aircraft. We just loaded them up. There was no landing zone, there was nowhere to put the airplanes, but we had to get deep, had to get by the enemy. Let's tow gliders and let's have the gliders crash land and let's have them building an LZ and then pick up the campaign behind enemy lines. Ladies and gentlemen, I have been doing the same thing today, but we do it with a V-22. We continue to innovate with that aircraft that allows us to fly at the speeds of a C-130, land like a helicopter. You put defensive gear

on it, put a refueling probe on it, you arm it in the back, and you can take that thing a lot of place a lot of times. So we continue to innovate, continue to modify this particular aircraft to do the missions that we frankly had to do even back as far as World War II with the first air commando group. Next slide.

Picked that up again with our B-24s. B-24s that were painted black, the absorbing paint schemes if you will to hide from the German search flights at the time, and we were inserting OSS, Officer Strategic Services back in those days, behind the enemy lines frankly in the middle of Europe to the French support forces and the underground there. So we would provide -- drop folks behind enemy lines and then resupply them. So they had specific navigation gear that when you flew over the beacon the beacon would turn on, the aircraft would know where to put the resupplies and the folks out. We did those deep infiltration-exfiltration missions back in World War II with the B-24 and young airman like you see displayed here from air commando groups. What did we do with that? We've

innovated along the way. We do that very same thing using MC-130Js now a lot of equipment on board those aircraft, pinpoint navigation system, trained following radars, RF countermeasures. Those sorts of things that allow us to get behind enemy lines any time, any place, to deliver people and/or supplies to the forces we have deep behind the lines.

If you look at our gunship history, same sort of innovation went on here. You take C-47 airplanes, you put a bunch of guns down the sides, you put fix mounted on it, you put an iron side on it, and you attach the trucks on the Ho Chi Minh Trail. They were so effective that they chained the drivers in. The North Vietnamese chained the drivers in the vehicles because as soon as the drivers would hear the sounds of our gunships overhead they would of course get out of their vehicles. So the North Vietnamese chained the drivers in. We found a lot of dead, chained in drivers in the trucks as it were.

We have continued to innovate along the way from the Viet Nam era through the various gunships, to

the one you see in the bottom right now which is our most current AC-130J. So now we continued to add precision strike capability, we're upgunning the aircraft with a 105, it's got a 30 millimeter on it, we've got small diameter bombs on the wing, we've got Griffins coming out the tail. This is the ultimate fighter plane. I call it a bomb truck with guns. It's got high definition sensors on it, it's got SIGINT capability on it. We can seek the enemy out and kill them. We continue to innovate with this aircraft.

Our special tactics airmen, that's [inaudible], that's Coach Carney on the motorcycle there. This goes all the way back to about the late '70s, folks. We actually had a very small group of combat controllers, that was it. That one photo, that was [inaudible]. Those were the folks that postured and set up the LZs deep into Iran as we infiltrated into Iran in a failed rescue attempt in 1980. But it started with that group of Airman. And it's grown now to where we've got 1,349 like them, better equipped,

digital CAS, point at the target, click. Feeds the coordinates the aircraft, strike the target. So we've gone with a couple of folks on a motorcycle and a beacon and maybe a pair of NVGs, first generation, to where we are today. It's digital CAS in a battlefield. So we're very proud of the innovation in all of those areas, either our ability to strike, our ability for our combat controllers to get their job done, and our ability to infiltrate and exfiltrate. That's the heart of what we do, and we continue to innovate through those.

So I need you to keep that in mind as I go through the rest of this briefing, that continued innovation. This is what we consider to be our private parties, the other is faded out here, but we provide combat ready forces first and foremost, folks, okay. We have a customer, it's the enemy. We deliver violence and we're proud of that. That first and foremost is what we do. We provide combat ready forces. We create an environment for the Airmen that do that to thrive. Air power starts with them. So we

have to create the right environment, right? Free of sexual assault, free of sexual harassment, free of racism, free of toxic leaders, free of all those toxic things in their elements. You clear those out so Airmen can thrive. People get that.

What I want to talk to you about today is transforming the way we train. You've got to have the right airmen, but then you've got to train them harder. So we shoot more, we fly more, and we train harder than whatever had before. And we're going to show you how we develop air commandos. And I'm closing out with the last one to show you how we're modernizing. So this is kind of a -- if you had a glidescope on how we develop an air commando. So ladies and gentlemen, if I stood a Navy SEAL up here from [inaudible]. If you stood a Navy SEAL up here that went through three years of training, who went through an assessment program, who went through all that we put up there, you'd kind of know what you got wouldn't you? You know what you get when you get a Navy SEAL, you get somebody special. You probably get

the most highly trained killer on the planet to the business we have to do. If you stood next to them a Night Stalker from the 160th special operations aviation regiment, the world's greatest helicopter pilot, you know what you get. You get somebody that's going to get you there no matter what it is. They've proven it. You stand an air commando up here, I want you to have that same sense that you're getting the world's greatest Airmen to put you where you need to be and provide what you need on time, on target, any time, any place. I have to develop that. We are close. But this is how we're going to finish that whole project.

What we're going to do is this in phase. Every air commando goes through this. The first phase of this development, which takes 24-36 months; this is a two year to three year development with about the cycle that a Navy SEAL is on, about the cycle where the pararescueman is on, a combat controller is on. My Airmen that come into my business, whether you're enlisted or whether you're an officer, and you're

flying a special operations airplane, this is what you will do. The first thing you will do when you complete undergraduate pilot training, you don't show up at your follow on training unit. You don't go to Kirtland to learn to fly a Talon, or you don't go to Hurlburt to learn to fly a gunship, or you don't go to Cannon to learn to fly Dornier -- you come to Hurlburt Field and you get indoctrinated. Bright lights in your face first, right. Three weeks of indoctrination of what it is to be an air commando. Two weeks of that are in the field. So you're going to learn -- in the upper left -- you're going to learn how to shoot, you're going to learn how to communicate and move, on the move. You're going to learn defensive driving skills, you're going to learn how to take care of your battle buddy in the field because they expect that of you, because you're in formations with the joint partners. And so you're going to learn how to take care of your battle buddies, you're going to learn defensive driving skills, you're going to learn about culture. This isn't Chicago you're going to go to,

this isn't Los Angeles you're going to go to. The cultures that you're going to have to adapt to are different, so you get culture training. You get one week in a classroom, you get two weeks in the field. You get indoctrinated of what's different that's about to take place in your life. You're going to be -- not only an Airman, you're going to be an air commando. So the indoctrination starts early. Okay. So that takes about three weeks that we got -- then we send you to your follow up flight training unit. Going to be a gunship. First thing you're going to go to Hurlburt and learn how to fly a gunship, et cetera. You go to Kirtland for MCs, et cetera. So you're building your FTU, and that's where we teach you the bottomline inside. That's where if you're an enlisted gunner, that's where you're going to learn the trait of being an air commando and your specific weapons system, okay. So first indoctrination, then off to your FTU. That's the first phase. That all takes about four to six months. This is how I'm creating that person that's standing toe to toe with my other

joint partners in SOCOM. Okay.

The next phase is what we call combat mission ready. Now after you finished FTU, if you're not assessed out of the program, if you make it to your FTU then you come into a unit. You arrive at a special operations squadron and you begin combat mission ready training. You go into green platoon or the green flight. You are not ready for combat. You simply have arrived at your unit, okay. At the very beginning of this -- I failed to mention this -- at the very beginning of this when you showed up for three week training to become an air commando we issued you an iPad. We hooked you up to the AFSOC cloud. This is where I need some of your help. This is where I'm going to feed you everything you need to know about being an air commando through that cloud. Okay. You're going to be hooked up to your instructor virtually and through classrooms. You can -- just like our motto, any time, any place, your iPad is going to be with you any time, any place, expecting you to be hooked up into our server, into our cloud,

learning what we need you to learn at a self-pace. So if you're really, really aggressive you can advance in front of your peer group. This is up to you if you want to take all the information in and you want to be able to pass those blocks of information quickly. So you arrive at your squadron, you've got your electronic toolkit, you've got all this information you're being pumped in, and you've gone through FTU, you arrive. And when you arrive at your squadron, the first thing that you've got to do is you begin the learning of what it is to go into combat. Because remember that peers around you have been in combat now for 15 years in the struggle we're in. So they know what it is to fly in Afghanistan, they even know what it is to fly in Iraq, Syria, and North Africa, et cetera, et cetera. You're going to fold in with them and you're going to learn what it is to employ your weapon system in combat. At the end of that phase, one to three month phase, you must now develop a scenario in that AOR -- maybe it's a leaflet drop followed to an air refueling of the 160th, return back

safely to your recovery base. How you're going to use your TTPs, tactics training procedures, what you have learned through this, and you're going to prove that you know how to incorporate all that you've learned so far into a mission, and you're graded by your instructor. You all need this phase. You're not going down range until you pass the test, that you understand how to employ the weapon system in combat. All through simulators we need to do distributed mission planning, we need virtual -- the way kids learn today -- I find out from my son -- is a lot of times these are online courses, they are virtual courses, the instructors can be accessed. This is the way they're going to train given that device we give you in your hand. You will be able to access your instructor any time you want to get access to him, okay. That's how we're going to teach them going into this. Now here you are at your combat mission and you've passed that phase. Now you're ready to go into combat, we go into the last phase.

We call this advanced tactical training.

Think of weapons school minus. It's not quite going to weapons school and earning the patch. It's a scaled down version of that where now you're going to employ what you learned down range. You've passed your combat mission ready phase, you're going on multiple deployments now. Now we begin that advanced tactics -- you're now folding into the joint team. So you've got to learn what it is to fly with the 160th behind you. You've got to learn what it is to get in the stack, one, two, three, four, five, over the X. [Inaudible] the area. Okay. A gunship on top, two A-10s on formation, two 47s coming in with 60 rangers on the back. You got to learn how to get in the stack and perform your duties on the joint team. So we're going to take you to exercises like it, put you through the advanced tactical training. At the end of that you also are graded on your ability to get a mission together and pass as a mission commander the employment of a joint team effort. All of these phases you have to pass before you would go into upgrade as an instructor. Again this whole thing is

self-paced. What we're trying to do is those that want to perform, and outperform their peers and get to the front of the line to be an instructor, you can do it, rather than you show up at your squadron and you get in line behind the five people in front of you. You can pass the five people, okay.

So that's where we're headed. And then you get eligible for your upgrade, your instructor. So what we need from you is to help how to make this better. So I can imagine these 3D programs on an iPad where it says listen, I've to learn about where all the emergency equipment is on an AC-130. Call up the icon and it shows you and you walk through the airplane with the iPad virtually. You can do this from your living room. You're out from 245 flight station, down the back, and there's a fire extinguisher on the right hand side, there's a first aid kit after 245, et cetera. We ought to be able to do that virtually, we ought to be able to take the crew chief or the flight engineer, and take a Dash 56 engine and tear that darn thing apart three

dimensionally and tell them everything about that engine with an iPad. You ought to be able to drive the generator over here and tear the generator apart, put it together and put it back on the airplane. These tools are what I need, if you will. These programs that will go into this database so that I can teach people these methods rather than having a stack of books like all of us were handed back in the day. I've still got all those black binders somewhere in my attic, right, where here's the Dash-1, here's the multi-command manual, here's all this stuff, and you've got 5,000 pounds of books. Want to cram all that out into the cloud and we're going to push to our students so that they can learn better that way. So if you have ways of helping me do that, push them to me. Okay. Our simulators are on the front side of things, not the tail end of things. It used to be buy airplanes and then scratch your head and say hey, don't we need a Dash-1 and maybe a simulator. We're going to buy the high end simulators on the front end of this because a lot of this training is going to be

done in simulators, distributed, so I can actually build the stack over an object it by simulators. I can latch the AC-130 crew over in the 19th SOS, just sitting in a federated training system, to a simulator at Cannon that might be flying a Reaper to a special tactics team that's sitting in a pod that's in the same mission with you, all tied together. We're going to be able to do those things. So that's how we are developing and putting efforts in to develop that air commando that when you get them, you know they're the most highly trained individual the Air Force can provide you to do the mission on the joint team. That's what this is all about.

Okay. So I think you understand that. I'll take questions on that momentarily. So last priority. Remember I told you we're going to provide combat ready forces, we create the environment for them, and do that we shoot more, fly more, and train harder and we give them the tools. Re-modernize and sustain the Force. Let's talk about modernize and sustain the Force for a minute. Many of you are in the business

of helping me do this. So the far left hand side is what we looked like about 2013 or so. All right. We had Spectre gunships, AC-130Hs, we had Spookys, AC-130Us Stingers, we had Whiskeys, we had 37 gunships. We had eight H's but 12 whiskeys and we had 17 U models, about 37. Leave to the right on that timeline and just snap a chalk line at fiscal year '15. We don't have 37 gunships any more, we retired 8 of them, Spectres, so you've got 29. And we started down this path of retiring more gunships. We're walking into a bathtub and what happened, we had no J models yet, we're still building them. So we locked ourselves in the bathtub and then ISIS got a vote. And we've got to turn it back up loud again, all right. So I actually had to unretired, if you will, a couple of gunships and keep them on board so we could sustain our operations. While we continue to recapitalize. Every of these swim lanes, we call them -- they're really capability bends or capabilities lanes -- we do precision specialized mobility, non-standard aviation, that's what NSAV means. It means we hide in plain

sight, folks, okay. We hide -- we fly little airplanes to get in place. We maneuver special operations on the battlefield without putting a big gray tail. Those are non-standard aviation. We have two [inaudible] of the V-22s, and then all of our ISIR capability, both manned and unmanned, and then my special tactics teams. You see on the far right where we're headed, the numbers that we're trying to head toward.

Now each of these aircraft -- I won't dive into each one of these, but suffice it to say that we have every element of our formation under a recapitalization, to include our base housing by the way at both Cannon and Hurlburt. That's even being recapitalized for Pete's sake. Now this is a good thing. This is not about that. But they're being recapitalized the same time we have a fight on our hands. I can't declare a C-5 unit in transition and say okay, everybody, take pause here, we're back in the fight here in about two years. We can't take a pause. So recapitalizing, taking Airmen from one

airplane to another at the same time as we have to deploy that Legacy System in a fight. So it gets to be a management challenge. But we're doing it. So we're recapitalizing. Let me just show you how we're putting the AC-130J -- and I know this is a lot on the slide and the intent is not for you to intake and ingest all of this information, but suffice it to say that we put the aircraft in a block modification. Now if I had all the money in the world I'd be at block 60 tomorrow. I would just fund all of these capabilities right now. And my first airplane that would hit the ramp at Hurlburt Field would be a block 60 aircraft. We don't have all the money in the world. We have a kind of a capped budget if you will at about $8 billion a year in special operations forces, of which we get about $2 billion of it. So what you've got to do is decide what you've got to have on the front end of this thing, a block 10 aircraft, that have a 30 millimeter gun, with about 3,000 rounds of ammunition. We'll have the AGM-76, read the Griffin missiles out the tail, and then we've got the small diameter bombs

on the wing. All right. That's a block 10 aircraft. And we've got the high definition sensors on the aircraft. The aircraft we're going to go to war with is a block 20. I'm adding the 105 gun. It is a SEAL standard of, you know, one makes none, two makes one. So we have one gun on a gunship and when it quit working you went home. So in my mind one makes none. So I need two guns and I need a little bit more, a larger caliber gun. So we're going with a 105 on it. We're going to make this a bomb truck with guns. That's what we do. So we added a 105 on it and put another crew position on it with some helmet mounted displays for the pilot in large aircraft counter missions. That's a block 20, that's the go to war aircraft.

Now the reason I put this on here -- and then you can see some of the other things we're putting on it. I wanted to focus on this for just a second because of you out here are going to help me get there. So we call it the block 60 aircraft. I've challenged my folks -- this is my John F. Kennedy

challenge, John F. Kennedy said -- I think you said in 1961 or '62 we're going to put a man on the moon by the close of the decade, right? You guys remember that? And he was assassinated in 1963. Did we put a man on the moon by the close of the decade? We sure did. We did in 1969. So putting the man on the moon in a short period of time as John F. Kennedy asked us to do it was done. I've asked my [inaudible] I want a high energy laser on an AC-130J gunship by the close of this decade. That's five years, folks. We can do it. The technology is ripe. I've got the space, I've got the weight, and I've got the power on an AC-130J with a high energy laser on an aircraft. So I want to move out. I'm not saying all of the aircraft will be block 60 aircraft, but I'm thinking four or five of those airplanes will have this capability at some point in the very, very near future, okay. That's why I wanted to put this up. We have all of our aircraft in this sort of configuration while [inaudible] develop the airplane into ultimately what we want it to be. Again I repeat if I had all the money in the

world I'd do this all up front, but you got to phase it in, all right.

So come out of that. So I have to take you down each of those and show you where we are with each of the platforms and how we plan to [inaudible] develop the aircraft. Again I told you we're an innovative command who takes innovation, learns from the battlefield, takes that and puts it into the aircraft. Always innovating.

Let's switch gears now and talk -- this is my last subject and then we'll take some questions. So what we're really, really focused on in the headquarters right now that's transformational if you will, are these two projects. Our tactical off-board sensors and the directed energy that I just alluded to on the AC-130s.

Let's talk about what tactical off-board sensors are because you guys are going to help me get there. This is what it is. It is what's happening today on the battlefield. The -- and to keep this unclassified -- the enemy kind of uses the cover of

weather. They'll mass their force, they'll take an objective when they understand coalition air can't strike them because in some cases weather hinders our ability to do that, particularly in a gunship. Okay. I've got to have eyes on target, I've got full motion videos. If there is a deck below me like created here, I can't stay below that. I spent hours and hours and hours at 15,000 feet or higher looking at the top of clouds while my joint partners were being engaged on the ground. That's not right. So what we want to do is take that away from them. I don't want to bore through the clouds, don't bring me another radar, I don't need that. I'm in the business of man hunting, okay. So I don't need to peer through it on my way through it, or brute force through it, folks. I'm not interested. What I'm interested in is dropping something out of my common launch tube that I have 10 of on the ramp that I'm putting Griffin missiles out of. It's about eight inches in diameter and about three feet long. I can put small UAVs out of that common launch tube, have it fire below the

weather, cut it [inaudible], go into a fixed orbit that I programmed it before I launched it. It's got a gimbled sensor but I'm still with the joystick, right. I drop it below the weather, it goes into a fixed orbit. I'm not flying it, I'm hands off. All I'm doing is steering the gimbled sensor. I can put the cursors on the enemy, I can feed those coordinates back to the airplane, can't we? It's called wifi. I used to use tethered sensor and then somebody thought I was actually putting a fiber optic cable back to the airplane, so I quit using tethered sensor. It's tethered electronically, essentially it's back to the airplane. So it's taking the eyesight off of the airplane and dropping it below the weather, put the cursors -- and what happens if I got [inaudible] coordinates off of that thing now and I fed it back to the fire control? What could I do with that? I could drop just about anything on a set of coordinates, right? I've got small diameter bombs, I got Griffins that go to GPS coordinates. Now I broke the code, right. Not only that, when I fire the munitions -- I

could shoot a 105 at a set of coordinates by the way. I make INS primary, put the coordinates in it, shoot the coordinates. Now that I can see where the round is hitting and I can adjust. Miss two more radians forward, adjust the system, off-set two more radians aft. And I'll strike the target. Not only that -- now let's just suppose that the weather has cleared and I want a stand off because I've got a threat, and I don't want to put an AC-130 over a threat that can touch me. Well, drop the tactical off-board sensor, have it fly set out, tell me ahead of time what I'm seeing and launch a standoff weapon from a long way away. It's like a search and destroy. A kind of killer scout concept here with a small UAV out of the aircraft. I've got common launch tubes on a lot of my airplanes. So imagine what it does not only for gunships, but what it does for MC-130s and everything else.

The next scenario, if I've got an MC-130 -- anybody here involved in Grenada? Gordie, were you? Some of you guys? Okay. What happens there, we got

the whole 82nd Airborne Rangers in the back of the airplanes, we fly down to invade this little island, Grenada. We go down there to do an air land and what happens -- we couldn't land, right, because they put things on the runway. Wouldn't it be real nice if we had a tactical off-board sensor that we could put out in advance to tell us what was on the runway, to decide whether we air land or whether we air drop? These are the kinds of concepts -- I told you we're innovative -- these are the kinds of concepts, folks, that are not hard to do. We can do it with a Coyote -- Raytheon folks here? You got a Coyote sensor. There are many of you out there that have a sensor I could put out the common launch tube. All I've got to do is tie it back to the fire control system on the airplane. These are doable things.

So we want to push hard. We've got an effort going on with my combat development division right now that's going to look at doing this right today. We've already dropped one. And then we've got a long-range effort going on with Air Force Materiel

Command that will take us, you know, the standard 18 month-2 year project at the end of the day. And that's how we might do this a more permanent way. But I need to feel it in the battlefield today because the enemy has taken the cover of weather. Okay. So we're looking at doing that.

The next thing that we're really focused on -- I alluded to this earlier on my block 60 gunship -- is this concept of a high energy laser. This isn't Star Wars stuff, folks. The technology is ripe for doing this. What we want to do is first put a high energy laser on an AC-130 to defend the aircraft. And here's why, because I feel my AC-130s -- the area of which I can operate them, folks, is shrinking because the threat is getting higher and higher. All right. They're already taking pot shots at the airplanes. The threat of -- the area of which I'm going to be able to operate my AC-130 is going to continue to shrink if I don't do something. I've got to do something to broaden that area back up. So what is the next technology that I apply in an innovative way

is to take a high energy laser on the airplane and have a way to steer the energy to zap the seeker. Okay. This can be done. So first mode is let's get into a defensive capability that can ensure that I can fight my way to the target, I can fight on the target, and I can fight my way off the target. That's our job. Any time, any place. It doesn't matter. So I've got to able to do this, I've got to be able to survive that engagement. Defensive role of a high energy laser first, secondly offensive capability. I think if we break the code offensively and we can find the missile coming at me and zap it, I can zap targets on the ground. And so -- go ahead. I think there's a slide that depicts that. Defensive capability. That's the AC-130 I'm talking about. You've got plenty of guns, you've got plenty of sensors on the airplane. If you could imagine a sensor out of the bottom down there that had a high energy laser adapted to it. I've given industry -- and you can right this down -- industry you get 5,000 pounds and you get the space that the 105 is in. That ought to be plenty.

And I'll give you all the energy off the airplane. I've got lots of fuel to make energy. So you get that much. And then all you've got to do is direct the beam and I can put in a defensive mode.

Next, offensive mode. Okay. Navy guys involved in Operation Just Cause. I'm going back, way back machine here for some of you, I get it. [Laughter] But the way back machine, remember when we went down to dismantle a Panamanian defense force and catch that criminal and bring him to justice, right? Noriega. And as you recall we had four Navy SEALS that were killed disabling Noriega's airplane. The idea was to set the trap, disable his mechanisms of escape, his airplane, his boat, his vehicle. We had SEALs come ashore, come across the airfield. They were supposed to disable his aircraft and another means, but they were engaged. Four SEALs were shot; they fired a [inaudible] to disable the airplanes. SEALs don't quit. We lost four SEALs we shouldn't have. We put SEALs in the water to disable Noriega's boat by disabling the prop. We needed to disable the

vehicle. Wouldn't it have been nice had we had a high energy laser on an AC-130 that would have simply zapped some point on that airplane, probably through one of the motors, or the flap hinge or the aileron or the stabilizer, whatever. Disable the aircraft and nobody knows it happened until they go to use it, because nobody heard anything and nobody saw anything. You haven't spooked anybody, you've simply disabled the aircraft. Could I disable a boat with 150 kilowatt laser and about a three to six second burst? Yes. Burn a beer can size hole in the top of the motor. Boat's disabled, vehicle disabled, comms disabled. They had an operation where when the spouse makes a call to the quick reaction force we have to call the team off, okay. It was a capture mission not a kill mission. You had to call the team off because a phone call was made. Wouldn't it be nice if you knew which cell tower that call was going to go to and zap the cell tower with the laser and nobody knew you did it until they try to make the call? These things we can do, today. So I have set my challenge out

there to have a high energy laser on an AC-130 again by the close of the decade.

This is just a sampling. And I could go after mission after mission after mission where had we been able to disable a node somewhere without anybody knowing we disabled that node, we would have had more success on the mission. Okay, so offensive. And these are the things we're doing. This is why I say I'm not kidding. We've engaged with just about every industry partner we can that has a laser. We've already published our concept, our CONOPs, concept of operations, I've dedicated an airplane, so an AC-130W. We've got 12 of them. I'm going to modify 9 of them with a 105. I've got one of them I said that's going to be a dedicated airplane and it will have orange wire on it, it will be dedicated to this effort. We created the ICD. We've already got a [inaudible] CDD. I put it in my POM '18. I've already gotten support from my combatant commander, USSOCOM. We funded a land study to look at how we would do this. We've got another study going on with DARPA to look at

integration. In other words, take the pieces, the laser, the ability to steer the beam, or we look at how to power that and how to dissipate the heat that's generated from that. You put those things together, [inaudible] is looking at that, and, folks, for the first time that I know of, the TTPs, the tactics, techniques, and procedures for employment of lasers in the battlefield is already being completed. So we know how we're going to integrate lasers on the battlefield. No fly zones, laser zones, all those things that you would expect to see in a manual that says if I'm going to employ them, this is how you're going to do it, and it comes in the SPINS, special instructions, in the air tasking order. These things are being developed today. So we're getting ahead on that. And the things remaining to do, we've got a subsystem down select, we've got to publish the CDD which I said was being drafted, we're coordinating it now, we've got to conduct the test and evaluation, lifecycle the low cost estimates being done by Rand, and then we field the block 6o aircraft. Okay.

So if you think you can help me I'd like to hear from you. All right. And that of course is the concept. Of course you won't be able to see it, that's just an artist sort of conception that -- we can already do that one by the way. I can already put a -- talking about a high energy laser at this point, offensively, against targets. But something stops working middle of the night and nobody knows it. Okay. So what did I tell you? We're the -- innovative -- this command has been since day one. What we're doing to move forward, how we continue to be innovative. All right. And I kind of gave you a peek at what we're looking at with [inaudible].

So at this point what I'd like to do is take your questions. [Inaudible].

SPEAKER: Okay. And, General Heithold, I've got the first one here.

GENERAL HEITHOLD: [Inaudible].

SPEAKER: You've mentioned several times a partnership with industry. We'd like your perspective on two things. What are the couple of things or three

things that industry does that you love, and what are the things that you wish were done differently with our industry partners?

GENERAL HEITHOLD: Well, I love what can we do differently. I think there's a lot of things that industry is doing for me that I'm very, very appreciative of. And I hate to highlight specific ones, but when ask you to take a Pilatus PC-12 and turn it into a manned ISR aircraft and you do it in nine months and put it in the battlefield, that's the sort of energy and innovation -- of course we paid you quite a bit to do that [laughter] but that sort of rapid response to an urgent requirement to get a capability in a battlefield is what I really like because our command can do that. We have the luxury if you will of having a little bit of unique acquisition authorities. We get after things quickly, don't necessarily have to test the hair off of it before we put it, you know, in the zone. We can test it, say I'm satisfied, we're moving out. So I appreciate our industry partners being able to kind of

saddle up with, put a capability in the battlefield quickly. We've done it with the Reapers. The Extended Range Reapers are -- well rapid development capability -- I'm drawing a blank on what we call that.

SPEAKER: Lead Off Hitter.

GENERAL HEITHOLD: Lead Off Hitter, thank you. The Lead Off Hitter Capability out at Cannon to be able to rapidly modify so we're always staying in front of the enemy's ability to communicate. When they communicate, we find them. So I really need to continue to put the right black box on our RPA capabilities so we can chase the enemy down. Those are the kinds of things I appreciate how rapidly we can be able to get after those things.

I'm not so sure that anything comes to mind that I can see really aggravates me about my industry partners, to be really honest with you.

SPEAKER: And we do want you to be honest with us.

GENERAL HEITHOLD: Yeah, I almost said I

wish I could tell you something. There isn't anything I am disappointed. There are times when I get a little bit disappointed at the pace we're able to get some of our sub vendors providing the right pieces and parts, and able to keep the sustainability of my aircraft up. But even that is -- you know, some of that is our own fault because we try to do things a bit sometimes on the cheap and then you end up parceling out those things, you end up sometimes with sub vendors that provide critical pieces and parts for an aircraft, and you find out they can't keep up. So I'm waiting on, you know, windshields for CV-22s and things like that. Those times sometimes aggravate me, but I'm not sure that that's my industry partners' fault, sometimes that's a self-induced problem. So frankly I'm not sure I have any.

SPEAKER: Okay. Thank you, sir. Are there questions from the audience? We've got time for about two questions before we need to adjourn. Yes, right here.

QUESTIONER: [Off mic -- inaudible 43:05 -]?

GENERAL HEITHOLD: So you go back to the block [inaudible]. So we have a battlefield [inaudible] we're developing up at Wright-Patterson that's kind of the -- you know, the click the target, feed the coordinates directly to it. We've got some spinoffs -- so pull back one more -- we've got spinoffs coming out of our [inaudible] program -- go back to [inaudible]. [Inaudible] program being that first person through the door [inaudible] that ODA team or that ranger. You know, things like liquid armor, communications gear, ability to have a three dimensional NVG capability. All of that being put all on a human being so he can be the first one through the door, power, communications, everything. We call that [inaudible] system. So there are spinoffs from that now that we're going to capture. It's largely about lightening the load of that that JTAC and the combat controller. It's also batteries. They carry, you know 60 pounds of batteries [inaudible]. So we've got lots of effort on energy generation throughout the block 40 SDS [inaudible]. So these are the things

right now we describe what a SDS squadron is going to look like. Really this is [inaudible] squadrons have just combat controller and the JTAC [inaudible]. What we want to do is send out four block 40 STS squadrons. [Inaudible] all our combat controllers, all our combat [inaudible] in a squadron. So really it's a build out. So that I got light squadrons that get into a battle rhythm that we can sustain. One's down range, one's reset, one's getting ready to go down range, et cetera. So we're in the process really if I were to walk you through block 10, 20, 30 -- go back a couple, I think -- isn't there a block -- is there a block 10 or 20 slide in there? No? Okay. If I were walk you through the various blocks it shows you how I'm going for the ultimate squadron in STS, equipped the right way with the battlefield airman kit, a spin off from TALOS. Battery power, new amour, et cetera. Does that answer your question? There's a lot of effort in building this capability up because if I had one problem with [inaudible] it's with these folks. They're probably on a one to one dwell. It means

they're gone the same amount of time as they're home. And I just can't produce them fast enough. So we're standing up a battlefield airman group and their education training command. We're taking this on in a serious way, $200 million, 200 people. Stand up a battlefield airman group and we're going to do this right, from start to finish. A campus like you have at Coronado for Navy SEALs. You go there, you come out of there prepared to do this business. Right now we've got federated all across the planet -- well, all across the United States.

SPEAKER: One more question. In the back please.

QUESTIONER: [Off mic]

GENERAL HEITHOLD: Great question. Yes. So what I showed you is how we're -- first off we're taking -- and I'm really glad you asked that question. Because the first thing we're doing is we're taking the folks, the air commandos that are in the airships and we go through that training I just showed you to make sure that when they stand here next to their

joint partners they're the best air commando. But that then spreads -- right now I've got enough capacity to take on some of my other support, maybe EOD, maybe security forces. So they get routed through this. The idea is to expand this sort of thing and institutionalize it so that every air commando, no matter where you are in AFSOC, goes through that sort of a glide scope. So I just showed you one for an airman that's in an airship. I didn't show you what it's going to look like for all air commandos as we expand this program and institutionalize it. So if you come to AFSOC you will go through this indoctrination. We already are doing it with handfuls. I know when I speak at the course, special operations course there at Hurlburt Field to all of them, and you'll be amazed at who's making up the audience. There is very few rated folks. I'm talking to a whole lot of support folks about what it is to become an air commando. So we're on the track to do this across my Force, our Force.

One more was up here and then probably have

to get. Right here.

QUESTIONER: This is a related question. How do you feel about the -- do you have anything in mind for a selection process in terms of initial assignment [inaudible]?

GENERAL HEITHOLD: Yeah, here's what I -- so here's what I think about the -- the honest answer to that question is probably not. And here's why, I think that the kids that go to the Air Force Academy are assessed. I'm not going to. But there are only 1,000 kids a year that go to that great institution, right? They give them an assessment. You don't go there unless you're cream of the crop, right? So we start our assessment quite frankly before you ever enter our Air Force. When you go to that institution you've got to make it through that institution, and not all of them do, about 800 or so, roughly. Then you've got to go to pilot training to become an air commando. You go to that school and you get through what I just showed you right there -- first off you're not going to get to UPT unless you've got something

going on. I'm not one of those either. But you have got to have something going on if you end up going there, right? Then you've got to make it through our rigorous training program or you're not coming out the other end with the air commando tag. So I would argue that the assessment starts very early in our Air Force, before we even bring you in. That being my first answer to that.

The other part of that now with our special tactics Airmen, we do a pretty rigorous assessment on the front end. So we go out to all the places that you're going to find a Navy SEAL or you're going to find Special Forces, a ranger, we go to all the same places. You got a contract in place to go out and find them. They're at water polo meets. They're at places like that because you've got to be adaptive to the water. That's the one thing that frankly stops a lot of our special tactics Airmen. So we go to those kind of meets, we go to wrestling matches. Because you don't give up in a wrestling match easy, right? You can't have that give up thing, you've got to have

I ain't giving up mode. So we [inaudible] the right folks. We get out and we find them, we put them through an early assessment as to whether we think you're going to have the physical and mental capacity and stay with it in your heart to do it. And then if you do, we put you in the program. So there's an assessment of that cutout of our people. But the rest of it, let's face it, we do have to assess to come into the United States Air Force. One in ten high school graduates qualifies to come into the United States Air Force. We're assessing already.

SPEAKER: General Heithold, thank you very much. I'm afraid our time is well over. We have here for you a gift on behalf of the Air Force Association. It's the story of Curtis LeMay, his life and wars. And I don't know about you folks, but I see a strong resemblance here. He's just missing the cigar. Sir, thank you very much.

GENERAL HEITHOLD: Thank you. Thank you all, appreciate it. Thanks. [Applause]

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