

General Raymond Speech at AFA Mitchell Institute—

Space Breakfast Series, Washington D.C.

December 8, 2017

MODERATOR: ** Welcome once again. Obviously, we're very, very pleased to have with us Jay Raymond, Commander of Air Force Space Command. I think he's got some perspective that we're all very much looking forward to hear, particularly regarding some of the significant changes that were outlined in the recent NDAA language.

I've had the good fortune of knowing General Raymond for many years and could spend a lot of time reflecting on his career, but in the interest of time, and to your benefit, I won't wax eloquently on his career; I'll just suffice it to say that we couldn't be more privileged to have somebody with his expertise and background serving as our Air Force Space Command Commander.

So with that, General Raymond, the microphone is yours.

RAYMOND: Good morning. Looking around, I think I have three former bosses within like 10 feet of me. They're all here, gonna grade my homework and see what I have to say—but it's great—it is great to be here. I think this is my fourth—fourth time speaking at one of your breakfasts—either four or five, but I always enjoy the conversation, always get a lot out of it and I want to thank the Mitchell

Institute for pulling all this together. It's a really important series throughout the year for us and I just want to say 'thanks' up front.

Good turnout. There's a lot going on in our business and it's an exciting—very exciting time to be in Air Force Space Command and an exciting time to be in the Air Force. Last year, when Roger Teague introduced me, he mentioned that I was a Clemson grad. I say this in every speech...that's part of the cost of admission, here. And at the time—it's the Harvard of the South—didn't you people know that? In fact, General Hyten went to the Clemson of the North—but at that time last year, Clemson was in the hunt for a national championship and shortly thereafter, after this breakfast, we beat Alabama for the national championship, and so here we are again—once again this year and as of last week's thrashing of the University of Miami in football, Clemson is once again ranked number one in the conference and will have the opportunity to once again play Alabama on New Year's Day and yours truly will be there. I would ask each of you to do me a favor if you would, please: If any of you have the opportunity to see General Hyten or Congressman Rogers or anybody else that went to Alabama between now and 1 January, tell them I said "Go Tigers". I'd really, really appreciate it.

So what I've learned this year in following Clemson football is that the only thing harder than winning a national championship is staying on top because everybody else has a vision of trying to knock you off. And I would say that that's kind of where we are in space—pretty good analogy. Our space capabilities and the warfighters that

operate these space capabilities are the envy of the world. Best capabilities, best warfighters on the planet. But we can't rest; we've gotta move fast and I will tell you we are. And in the 14 months that I've been privileged—absolutely privileged to be the Commander of Air Force Space Command, I will tell you we have had our foot firmly on the accelerator and I'm extremely proud of the advances that we've made. And let me just state right up front that we could not have made anywhere near those advances without the support of the folks that are in this room. So I wanted to say, before I get really into my talk, just thank you for all that you have done in your roles.

So let me do a little recap from last year. Last year, I spoke to you about a month and a half after I took command of Air Force Space Command, and what I did last year was review all the talks that had occurred throughout the year, the course of the year, and then I shared with you my initial guidance that I gave—that I provided to my command the day after the change of command. That guidance centered around warfighting, agility, strengthening our component relationship with U.S. Strategic Command, professionally developing our joint warfighters, and developing partnerships.

I hope that you have felt an increase in the willingness to partner with you, because it's really, really important. I'm going to talk about that as I go forward. We designed this year's speaker series to really reflect and to build on that initial guidance. We started out with our Chief of Staff of the Air Force, General Dave Goldfein, who is a spectacular chief, discussing the importance of space as a

warfighting domain and the need to understand it in the context of war amongst all other domains. We then had a panel on space policy where some of our foremost thinkers on the subject focused on the policy implications and the big muscle movements in space—in the space domain like the National Space Council, the rapidly expanding commercial industry, and our desire to go faster. Then over the next few months, we hosted several Air Force space leaders; Lieutenant General Buck came and gave his joint warfighting perspective and shared his imperatives. Three of my wing commanders followed the following month and focused their remarks on the Space Mission Force. That's a new mindset for how we train and develop our space forces. That's the human capital line of effort, if you will, for our warfighting construct.

Next up, General Hyten discussed his initial guidance because if you'll recall, I took command from him, so he was also relatively new in the job and he talked about his initial guidance for U.S. Strategic Command; he talked about deterrence and he talked about the need to go fast—a theme that was echoed a couple of months later, or the next couple of months, when General Pawlikowski from AFMC and Lieutenant General J.T. Thompson, our Commander of the Space and Missile Systems Center out at Los Angeles also discussed how to go faster in acquisitions.

In October, we had our allied partners here who hosted a great conversation on allied partnerships and international cooperation. It's critically important to our success going forward.

And finally, to wrap up the year, Brigadier General “Salty” Saltzman talked this last month on the battle management command and control that he has done and he has led for the United States Air Force, which I will tell you Air Force Space Command has been integral in and, in fact, leading the way in that multi-domain C2 effort.

So my plan today is to use that same format that I used last year. I will weave in some thoughts from this year's speaker series wrapped around a priority framework. The framework I'm going to use—are the priorities spelled out by our Secretary of Defense, Secretary Mattis as our priorities and our priorities in the Air Force that Secretary Wilson and the Chief of Staff put out, restoring readiness, cost effective modernization, driving innovation, developing exceptional leaders, and strengthening alliances and the priorities that I spelled out initially last year really nest very nicely under Secretary Mattis' priorities. His priorities are, first, to restore military readiness as we build a more lethal force. This has been our primary focus for the past year and we've made great strides.

Second is strengthen alliances and attract new partners. We have focused on this in Air Force Space Command pretty significantly and when we talk about partners we're really focusing on three aspects: Allies, international cooperation, intelligence—cooperation with the intelligence community. I will tell you the partnership that we have with the NRO—I say this in every speech and I mean this in all sincerity—has never been better. And obviously with commercial

industry, and we're working hard to be good partners with commercial industry.

Third, bringing business reforms to the Department of Defense. There is nothing more urgent as we look at the need to go fast.

So let me start with lethality and readiness. The Secretary of Defense's first priority is to restore military readiness as we build a more lethal force. Secretary Mattis speaks to rapidly rebuilding the warfighting readiness of the joint force while filling holes in capacity and lethality. So many of our speakers this year either directly spoke to it or spoke about topics that have a direct relationship to lethality and readiness. General Hyten stated that STRATCOM's clear priorities, one of which is to provide a combat ready force who can deliver a decisive response in the event that deterrence should fail. Lieutenant General Buck discussed his imperative for warfighting on how to be more lethal and be ready for the next fight. He said his first imperative was that we must maintain our competitive advantage and noted that the Air Force is the service for space superiority.

So now what I'd like to do, and I'll do this in each of these three priorities—now let me tell you what we've done. And I'll tell you, the list—I could go on for hours talking about what we've done. I've taken the big major muscle movements in each of these sections, but if you—at the end of the speech, if you think about it, you know, let's look at the body of work that I'm gonna talk about; it's been a remarkable, remarkable year.

Last year, I discussed transforming the Joint Air Force/NRO Space Enterprise Vision into a warfighting construct—into reality. My concern was that it was a vision and it was too far out and I wanted to bring it near term, so our first step was to wrap that Space Enterprise Vision into a warfighting construct and call it the 'Space Warfighting Construct'. We developed this construct and wrote it in partnership with the National Reconnaissance Office—and once again, let me tell you there is no stronger partnership than ours and the NRO. It has never been better. We wrote a series of concept of operations which serve as the foundation of that warfighting construct—there's actually four of them; three are done and one is in draft. There's an overarching construct—overarching space warfighting CONOPs and that's how we plan to fight for space superiority if required to do so in the future. A C2 CONOPs which lays out how we're going to work the unity of effort, the unity of command required for this business with the National Reconnaissance Office and the broader intelligence community. We also wrote an integrated space situational awareness and indications and warning CONOPs to define how we are reinventing the way we gain and maintain situational awareness for the domain. This is all about warfighting, not cataloging. That's a significant shift. And we're in the final stages of coordinating a fourth CONOPs for intelligence, surveillance, reconnaissance support to space. These CONOPs are driving how we operate in this domain and serve as the foundation and our guiding principles.

In a warfighting domain, you have to have the ability to command and control the fight, and we continue to focus on maturing the National Space Defense Center, formerly known as the JICSpOC—that's located out at Schriever. This year, we went from experimentation to limited operations—a big milestone in our readiness for a potential future conflict and we expect to go into limited 24x7 operations here in the very near term.

Another component of readiness is training. On the training front, I said while I was here last year that I wanted to nurture and grow a joint warfighting perspective in Air Force Space Command. We've had some great accomplishments here as well. I'm happy to report that all of Air Force Space Command's space operations assigned to the U.S. Strategic Command are now completed, at least their first cycle in the Space Mission Force, which is our new construct for conducting advanced training. In fact, down at Schriever I think they're on their fourth cycle.

Equally important is how we exercise, and this year we developed a new exercise called 'Space Flag'. We conducted two of them to help us prepare our space forces for the complexity of the space environment they face today. We just held our second Space Flag and they're already paying significant dividends for our space operators. We'll continue to grow and mature these exercises and we will continue to plan to conduct two of these exercises every year.

We've also made some great advances on the space professional development side, and I'm telling you, with all of these, there's still a lot more work to do.

In partnership with Air University, we're developing a space-focused intermediate development education course that will be aligned with Air Command and Staff College at Maxwell. We'll cut the ribbon on this course, so the first class will start next fall, which is when the next ACSC class starts.

This year, we've also doubled the number of space operators attending the School of Advanced Air and Space Studies course; that is our high-end strategy course down at Maxwell. And I expect next year's class will have even more space operators. That's critical not just for the space professionals, but to grow the multi-domain Air Force that we need going forward to the future.

At this point, we're reviewing every single course, the curriculum of every single course from accessions like ROTC and the Air Force Academy all the way up through retirement and every single education opportunity, reviewing that critically to make sure that multi-domain piece is adequately represented.

Part of the lethality of a combatant commander is to have ready and lethal components for each service. And as I mentioned, last year when I was here I said "We must be a strong component of the United States Strategic Command." Just last Friday, as part of a

larger U.S. Strategic Command command and control restructure, we made fundamental changes at the operational level command and control for space. We deactivated the Joint Functional Component Command for Space, one that I was privileged to command a few years back, and activated the Joint Force Space Component Command, one that I am privileged to command today, and transferred command of 14th Air Force from Lieutenant General Dave Buck to Major General Stephen Whiting out at Vandenberg. Initially—in fact, in that same ceremony—you couldn't get much more into one ceremony—we also retired Lieutenant General Dave Buck after 41 years of service. And I'll tell you he was the longest serving general officer in our Air Force and the only one that had been over 40 years. We're gonna miss him.

Just comparing the names of the command, if you just look at the Joint Functional Component Command for Space and the Joint Forces Space Component Command, one might think this is not that big of a deal—we've just rearranged a couple of names around and instead of functional called it forces. If that's what you think, you missed it because this is a significant transformation. It elevates the operational level C2 from a three star to a four star; it consolidates Air Force organize, train, and equip and joint warfighting responsibilities under one commander; it normalizes command and control across U.S. Strategic Command; reduces 18 separate commands down to three; and it normalizes the command and control relationships with the geographic commands which we support, enabling an even greater integration than what we've done today, and I'll tell you we're

already seeing dividends there. That's the integration with our geographic warfighting partners.

In addition we work very closely with the Pacific Air Forces and the United States Air Forces in Europe to integrate our operations even more effectively. We've elevated that level of integration to a new level. From the effort with PACAF, we've developed an integrated tabletop exercise and presented this to the entire leadership of the United States Air Force. At the last CORONA out at Colorado Springs, the entire leadership—Chief, Secretary, all the four stars, significant number of the three stars all came to Schriever for a day and we walked through this tabletop exercise helping to build joint smart space leaders and space smart joint leaders, and it was an extremely, extremely valuable exercise.

Let's talk about strengthening alliances. I spent some time today then talking about the SecDef's first priority and I could have gone on with many, many more examples. Those are the big muscle movements. But now let's try this new number two. The second SecDef priority is to strengthen alliances and attract new partners. Partnerships promote peace and cooperation, economic growth, and are an anchor of deterrence to aggressive states. Several of our panelists talked about the importance of partnerships. The policy panel discussed public/private partnerships, which are absolutely critical for success in the national security space. Our international panel discussed how key collaboration in space—discussed key collaboration in space going forward with our allies. Partnerships

promote coalitions and coalitions are how we fight in every other domain. Space will be no different. A few years ago in space, partnerships were not that important. Space was a benign domain. If a nation could launch a satellite and get it into orbit and if it survived infant mortality, you were good to go. That's not the case today. In today's space environment, potential adversaries are developing the full spectrum of capabilities to be able to hold our space assets at risk. In this environment, cooperation amongst nations is not just a nice-to-have, it's a necessity. And I'm extremely confident that this growing partnership with our allies is going to increase going forward.

I spoke earlier of the National Space Defense Center. It's one of our operations centers where we C2 our joint space forces. Another operations center is the Joint Space Operations Center at Vandenberg Air Force Base in California. This year, we stood up a multinational space collaboration cell to further expand our allies' and partners' presence in that cell. Germany was the first country to send a representative; he's in place today and more countries now are en route.

This coming year, we plan to take the next step and formally transition the Joint Space Operations Center into a Combined Space Operations Center. The CONOPs to make this transition is already signed and our allies are all in. This represents the further maturing of our partnerships and the next evolutionary step of this important command and control work.

Programmatically, we're also working to incorporate international partners into our acquisitions wherever possible. One example of this is the Ninth Wideband Global SATCOM satellite, or WGS-9. This year, WGS-9 was launched and was recently accepted into operations. WGS-9 represents a partnership of five nations to include Canada, Denmark, the Netherlands, Luxembourg, and New Zealand to fund the building of that satellite in exchange for access to the entire wideband global system constellation.

We just wrapped up a successful Schriever Wargame as part of an ongoing wargame series. Once again this year, we focused on coalition operations and actually held a two-day policy planning workshop in London with all of our partners including our Five Eyes partners, France and Germany. This year, we also invited Japan to participate in the next Schriever Wargame. They have accepted our invitation and have already participated in the initial planning sessions for next year, so we're excited about that expansion.

I know that there are several—as we mentioned, several of our international partners and allies are here in this room and I just want to say 'thank you' to each of you for your partnership. It's important to us and I hope you know that we are committed to being good partners and we'd like to take this to even further levels.

So now let's talk about commercial partnerships. We also continue to robust our partnerships with commercial industry. We've expanded the commercial integration cell at the Joint Space Operations Center,

something that we stood up back in I think it was 2015. I was the Commander of the 14th and JFCC Space. This cell continues to mature and it's already providing significant operational utility.

On the commercial launch side, we've made a significant leap forward by partnering with commercial launch companies and with SpaceX specifically to make autonomous flight safety a reality. With an autonomous range, we no longer have to call up the vast amounts of range infrastructure like radars, telemetry, optics, command destruct antennas. This allows us to launch more rapidly and allows us to turn the range around more quickly and it allows us to reduce costs. My goal is in the next five or so years that our ranges will be all autonomous. This is going to be really critical for us and our warfighting construct. Going forward, I see a partnership with the burgeoning commercial space industry to be a great source of strength and I look forward to tapping into that strength and closer partnerships.

Third priority: Business reforms for the Department of Defense. Third SecDef priority is business reform. Included in the Secretary's policy memo were budget discipline, resource management, rapid innovation, streamlined requirements and acquisition processes. The Secretary wants us to promote risk-taking and personal initiative. Our Chief, when he was here, discussed the need for revisiting acquisitions for speed as part of this framework for our warfighting construct. The acquisition officers that spoke to you this year, General Pawlikoski and Lieutenant General Thompson, centered

their talks around increasing the speed of procurement processes. The panel in March focused on space policies, spent some time on the policy implications for rapid acquisitions. General Hyten, when he was here in June, talked about the necessity of getting back to simpler requirements and compared it to some of our historical acquisition successes. In other words, we focused a lot on that topic this year in this series and we focused a lot on that at Air Force Space Command.

One of the themes that I pulled from all the talks was speed, and specifically the speed of acquisition. We know we need to go faster and, again, we've had our foot on the accelerator to do just that. We have focused our efforts on three areas: Partnerships for multiple effects, delegation of authority, and continuous process improvement and streamlining, what Lieutenant General Thompson talked about in his talk about hacking the 5000 series. But in the first month I'd taken command, I dug into two really critical programs for us. One was the critical warfighting imperative program. First one was our space situational awareness, and the second was command and control. And shortly after taking command, I directed a restructure of both of those programs. Let me talk about that.

First, on the space situational awareness front. We have a satellite on orbit called the 'Space-Based Space Surveillance satellite'. That satellite is getting close to its end of life and we were developing an SBSS follow-on satellite. And as we went through the analysis, looking at the domain as a warfighting domain, we determined that

that satellite wasn't going to meet the mission requirements of that domain—of the domain that we operate in today. So upon further analysis, we also determined that we had a partner that was developing a program that would actually meet our needs better. It would be able to be launched into orbit sooner and would be of less cost. We made the leap; we terminated the SBSS follow-on program and entered into a joint partnership with the National Reconnaissance Office to procure a satellite that meets both of our needs. We use this program to help us model the go-fast partnerships of the future and I couldn't be happier with the partnership or the progress seen to date.

Next up, we tackled the battle management command and control capability, once again analyzing our multi-domain strategic imperative that we currently face and our current JSpOC Mission System Increment 3—JMS, as it's referred to. In my opinion, it was time to go another direction. We terminated JMS Increment 3 and built a partnership with AFRL, the Air Force RCO, and Space and Missile Systems Center to rapidly build an open-architected C2 system built on OMS/UCI standards and adopting a consortium-based approach. The Air Force RCO is leading that prototype development and they're modeling it after work they've already done on the capability called the CMCC for the air domain. No longer do we have one company that's a winner and everyone else is on the outside looking in. We now have a standard that's being designed and a consortium of companies being built to fuel speed and innovation. And again, the

progress to date has been remarkable. I am excited for the transformational capability that it's going to provide and deliver to us.

Another critical enabler to going fast is delegating authorities down to the lowest level and we've made great strides on that front as well. First, consistent with last year's National Defense Authorization Act, our Secretary, Secretary Wilson, who has been a spectacular Secretary for Space Command and for the Air Force, has requested milestone decision authority for space programs be pushed down to the lowest level. To date, eight of our critical space programs have transitioned back to the Air Force. This eliminates a layer of review that can typically add four to six months to acquisition starts into every milestone. At the Space and Missile Systems Center, Lieutenant General Thompson has also delegated acquisition authority for all 16 of his ACAT-3 programs to his program director. This represents 40% of his portfolio. Previously, these programs were retained at the PEO level; this means program directors—with this delegation, this means program directors can now move out fast and are empowered to make the decisions they need to make to deliver on faster timelines. This also saves no less than four to eight weeks for each acquisition event in the process.

In addition to delegating authorities, the Space and Missile Systems Center is also speeding up the time it takes to get something on contract. As an example, Space and Missile Systems Center—SMC—is also rearchitecting the process to award contracts, decreasing the time a half of what it took in 2016. SMC has also

recently awarded the Space Enterprise Consortium under other transaction agreements which gives the Command the ability to rapidly prototype new systems for risk reduction efforts over the next five years.

Innovation is booming all around in space, internal to the Department of Defense and in private industry, and we need to capitalize on that innovation. From new entrants in the launch field to companies planning constellations of thousands of satellites, again, the industry is booming. In Air Force Space Command, we've made some initial real moves to shift our budget to a space warfighting budget. As I mentioned earlier, we spent the last year developing the Space Warfighting Construct where, from an enterprise perspective, survivability and lethality are valued greater than availability and longevity. Our focus on warfighting has driven some tough but necessary choices. In FY18, the Air Force requested a 20% increase in our budget for space and we appreciate the support of Congress with this increase. In our planning for FY19, we have taken a bold move to get after the warfighting imperatives and to invest in our Secretary of Defense, our Secretary of the Air Force, and Air Force Space Command priorities of readiness, lethality and modernization.

In closing, I'll bring you back to the SecDef's number one priority: Lethality and readiness. It's been our focus with an eye towards deterrence. We do not want a fight—and I say this every time I can as well—we do not want a fight that extends to space. But as

General Washington once said, "To be prepared for war is one of the most effective means of preserving the peace."

Let me end with one final quote. I used this last week in my change of command ceremony as the Joint Force Space Component Commander, and this is from General Douglas MacArthur. "The history of the failure of war can almost be summed up in two words: Too late." With your help—with the help of everybody in this room, we're not going to be too late. Thank you very much.

Alright, I've got time for a few questions. Yes. ma'am?

AUDIENCE: General, you mentioned the Joint Space Operations Center morphing into more of a combined space operations center...what would you like allies to bring to the fighting capabilities you need?

RAYMOND: I'd like allies to bring a full range of capabilities—everything that they have—and I want to share everything that we have. Clearly, the one that comes to mind right off the bat is space situational awareness and having the ability to have a deeper understanding and appreciation of the domain in which we all operate would be extremely helpful. Yes, sir?

AUDIENCE: Good morning, sir. Last week, General Raymond was out at the Reagan Forum with the Secretary—I'm sorry.

RAYMOND: I've got several hats, but I know I wasn't there.

AUDIENCE: General Hyten was at the forum with the Secretary and then earlier this week Secretary Wilson was on The Hill talking about things that she was gonna do and they talked about requirements. General Hyten said he's gonna take care of that, and the Secretary mentioned, as you did, that authorities are being pushed down to the lowest level. In 2018, there are a number of acquisition programs that are hanging out there-- GPS3, SBIRS, and AEHF. Do you anticipate that your command and General Hyten will be able to put all of those on contract to move fast, to not be late?

RAYMOND: We're not gonna be late. I'm comfortable, we've submitted a POM to do just that. It's still working through the building. I agree wholeheartedly with you that requirements are key. We have to make—we are over-required and I've had this conversation with General Hyten. He agrees with me on that. I think that's gonna be one really important step for the military. We can do a lot of things but if you don't change the requirements or lock down simpler requirements, the process will not be—will not be as quick. Yes, sir?

AUDIENCE: Colin Clark, Breaking Defense. Could you give us some insight into the practical effects—maybe give us an example—of how the reorganization with STRATCOM actually will affect how you guys operate?

RAYMOND: Sure, I'd be happy to. So let me tell you a story. So I've been at STRATCOM; I was the STRATCOM J-5; I was the JFCC Space Component Commander under STRATCOM so I was a part of the staff, I was a functional component and then in my new job a year ago as the Air Force Space Command Commander I was the service component. So I've pretty much been every—every kind of relationship you can have with STRATCOM. I went—shortly after my change of command, I went to General Hyten's change of command a week later and he has a conference room, and in the conference room there's a U-shaped table and 18 of his components were sitting around the table—18 components—and those components were everything from an O-6, a colonel or a Navy captain, all the way up to four star generals in the Air Force and the Navy. General Hyten had his initial commander's conference or commander's call and he asked the components to tell him what—you know, their top three issues, if you will. And everybody went around the table and did it. And we got done and the four stars huddled in a room and we looked at each other and said "What was wrong with that?" Well, the only people that didn't talk were the four stars and all the other components all work for the four stars, and so what we focused on then was 'Let's normalize the way STRATCOM does command and control and get down to an air component, a maritime component, and in this case a space component.' And that's what we've done. And that's gonna allow better integration throughout STRATCOM because now you don't have 18 different places you have to go—you have three—and it will also allow better integration with our forward commands because the folks that I—my counterparts, if you will, in the Pacific

and Europe, for example, are Air Force four star generals, and so it eases that discussion; it normalizes it and elevates it and it smooths out the integration with space throughout STRATCOM and across the globe. Yes, ma'am?

AUDIENCE: Dee Ann Divis, Inside GNSS. Will you please speak to the international cooperation to provide satellite navigation, plans going forward ***?

RAYMOND: Can you repeat that again? I missed the first part.

AUDIENCE: Yeah—satellite navigation. It's been an enormous topic *** but I'm particularly interested in international cooperation both in space and *** just this week *** but there are challenges going forward **.

RAYMOND: I would just say that, as I mentioned in the talk, in line with the priorities, international cooperation is key. International cooperation across the whole range of capabilities, everything from situational awareness to on-orbit satellites is important, and it's important for resilience as well. So I'm open to that across the board in all of our capabilities of effort. Yes, ma'am?

AUDIENCE: Thank you. Sandra Erwin, Space News. I wanted to ask you about the NDAA.

RAYMOND: Yes.

AUDIENCE: What was your initial take on the changes that are being implemented, or are going to be implemented in the NDAA? How is that going to help your job or is it going to make it more complicated?

RAYMOND: Well, my first thing was I got extended for 6 years. I'm really privileged to serve. I really mean that—I love my job. I love what I do; I love the airmen that I'm privileged to lead. I will tell you I appreciate—I very much appreciate the interest of Congress in space and I think the law is gonna help us—help us get to where we need to go. I talked about having our foot on the accelerator; I don't just want to have our foot on the accelerator—I want to lap our competitors. And I think the language gives us some flexibility in working with the Deputy Secretary of Defense to figure out how best to do this and I appreciate the interest from Congress.

Let me start here and then I'll work my way around—I've got a few more minutes. Yes?

AUDIENCE: Bridget Harris with Inside the Air Force. Could you talk about some of the key issues or the problems that you want to work through in the electronic warfare - ECCT that the Air Force is gonna kick off, particularly as it relates to space?

RAYMOND: I just want to make sure that as we do that, that space has full participation in this. It's a multi-domain business and I just want to make sure that as we do that—I mean, that's why we're doing

it; it's that it's a full effect of capabilities from across all the domains that the Air Force operates in to great effect. Yes, sir?

AUDIENCE: Marc Selinger, Defense Daily. I believe that with the reorganization of STRATCOM, there was supposed to be a fourth component for missile defense. Is that on hold because of the missile defense review or is that **?

RAYMOND: That's—so I mentioned the three components; the other thing that STRATCOM currently has today is JFCC Missile Defense and that still is in existence, it's still under the command of an Army three star down in Huntsville. I think that's gonna be reviewed again after the missile defense review. Yes, sir?

AUDIENCE: ** Wilson Brissett, Air Force Magazine. Do the changes to the ORS and the NDAA provide a platform to extend that into a space RCO that would be able to take a look at that?

RAYMOND: Absolutely. This—in my opinion, where I'm headed with this is not just a name change. It'll be a change in capability, capacity, to get after what we need to do.

AUDIENCE: What's the significance of ***?

RAYMOND: You know, SMC is the acquisition lead for Air Force Space Command. I'm really, really pleased with the work they're doing. I'll tell you, Lieutenant General Thompson has been

spectacular as I mentioned throughout my talk of unleashing it. My goal is to bring ORS capabilities more broadly across the Space and Missile Systems Center, not just use them for little niche capabilities. I've got time for two more. Yes?

AUDIENCE: Thank you for coming, General.

RAYMOND: Thanks for letting me be here.

AUDIENCE: Do you think that changes to the Outer Space Treaty of 1967 could prevent military escalation in space? Do you want changes?

RAYMOND: So let me just state right up front: We do not want military escalation into space. As I mentioned, we're all about deterring that. I think as we go—as we go forward, we need to look at norms of behavior and rules of the road and rules of engagement. I think that's gonna be a really important body of work to do to keep this domain safe for all.

AUDIENCE: Do you think the treaty is the best way to do that?

RAYMOND: I'll leave that up to...

AUDIENCE: **

RAYMOND: I think we—again, we've got to review all of that and I think it begins with norms of behavior and we'll see where it goes.

MODERATOR: One more?

RAYMOND: Yes?

AUDIENCE: I've got two questions.

RAYMOND: You're not allowed to have two. You're gonna have to speak up, though—I can't hardly hear you.

AUDIENCE: My first question is about GPS-III follow-up. Yesterday, the Secretary said that in the last week we've been able to-- because you've been delegated new authority, you've been able to move forward and approve a strategy. So can you give us an update on the strategy? And then my second question is about commercial space and leveraging commercial space. I know there's been a lot of talk about going forward with some of these efforts, but there aren't—I have not seen many concrete programs to actually leverage commercial space. So can you just correct me if I'm wrong, and if I'm not, tell me are there are security concerns or is it just bureaucracy? Why...

RAYMOND: So I'm gonna answer your second question. The first question is as we delegated authorities down, again, that allows us to get after it and I mentioned that in my talk, and that authority for the

GPS program to come back from OSD back to the Air Force, which allows us, again, to remove that layer of bureaucracy and go faster. So that's really important and that's an example of where that's already paying dividends.

On the commercial space side, I would disagree with the premise that we're not leveraging commercial space. We are leveraging commercial space every opportunity we get. If you look at our launch—how we do launch, it's—you know, we are leveraging commercial space in a big way. We're partnering with commercial space in a big way. I talked to you about how that partnership has already allowed us to move towards an autonomous flight safety system on the ranges; I think that's gonna continue. There's also a significant amount of, as I mentioned, small satellites being built in large numbers in a constellation and I'm very comfortable that we've got folks working hard to capitalize on that—that growth as well.

I've talked about—in my talk, I talked about OTA, which gets after being able to leverage that more quickly. That was work done out of the Space and Missile Systems Center. We've also stood up the Catalyst Campus in Colorado Springs so commercial companies can bring their capabilities in and test them out at an unclassified level and then we can mature them and roll them over into our C2 center. So there's a lot going on and I will tell you I'm committed to this. I'm absolutely committed to this because I believe this is an area of great possibilities going forward.

MODERATOR: General Stafford wanted to just say one thing.

RAYMOND: Yes, sir.

STAFFORD: I'd like to really emphasize what you pointed out about speed. Kennedy made the speech in May of '61 that we'd go to the moon in a decade. We didn't know how we'd go to the moon. Once it was decided to go a lunar orbit rendezvous, five years and four months. We built the biggest building in the world by volume, the two biggest launch pads, and we launched successfully the biggest booster in the world—five years and four months. And we didn't use other transactional authority, either. *** For the F-117A, from the time the contract was signed, the first plane flew in less than two years and it was operational in less than four. It can be done.

RAYMOND: I'm with you. It can be done and it's gonna be done again—absolutely.

RAYMOND: With the help of everybody in this room. Let me just say 'thank you' again for hosting this, not just today but throughout the year. Let me say that I look forward to next year and I look forward to helping craft the series. If you do have any ideas on what you'd like to hear talked about or who you'd like to see up here, we can make that happen.

I'd like to wish everybody a very happy holiday going forward and I hope you all have a safe and enjoyable time with family and friends.

I'm excited. If there's nothing that comes out of this talk, if you can't tell the excitement of being in our business and the work that we've been able to do collectively, then come talk to me because you missed the main point of the speech. There's a lot going on and I appreciate the opportunity to be a part of it. Thank you.