## 34th National Space Symposium Remarks by General David L. Goldfein Chief Of Staff, U.S. Air Force Colorado Springs, CO 17 April 2018

GENERAL GOLDFEIN: Well, can I just say howdy? And to General Shelton, thank you for that kind introduction. I normally don't include that part about intercepting an enemy missile with my aircraft in most introductions but thank you for that.

So congratulations on this 34th symposium and for attracting such an incredible crowd. And to think we have grown from 200 or so people in the first symposium to all of this now, so well done.

To get things started, whether you are here today representing Congress or industry, allied partners or academia, Airmen or one of our Joint teammates, I want you to know a couple things up front. First, I am thankful. Not only for the chance to speak, which is very humbling by the way, but for this gathering of professionals.

Defending the homeland with the safe, secure and effective nuclear deterrent, owning the high ground with air and space superiority and projecting power shoulder to shoulder with our allies and partners is the ultimate team sport. So I truly appreciate what each of you brings to make the world a better place for our children and for our grandchildren. It is our shared calling. And having become a grandparent just a few days ago, this has extra special meaning to me.

And second, I am energized to talk to you about space. And I want you to feel this energy from your chief and know that when it comes to space, you can be confident in your Air Force. Space is in our DNA. We have been the leaders of this domain since 1954 and I can assure you that we will remain passionate and unyielding as we continue into the future, which brings me to the topic of my presentation today and the message I want to convey.

Space remains in confident and competent hands under the care of the United States Air Force and it is our duty and our obligation to ensure that we are always the predator and never the prey when it comes to competing, deterring and winning in this warfighting domain. No one, no one who knows what we have in space today would trade our defense and intelligence architecture with anyone on the planet. We retain an asymmetric advantage today based on the bold leadership and the vision of leaders like Benny Schriever and Tom Morgan and Susan Helms and Kevin Chilton.

Men and women like Space Foundation chairman, General Willie Shelton and the CEO Admiral Tom Zelibor and other pathfinders who are here today who put their heart and their soul into building the space capabilities that we enjoy today.

And while the nation has been focused on countering violent extremism in the Middle East over the past decade and a half, thank goodness we had the vision and the fortitude during this same time to develop, build, and launch the X37B which flies today. When it comes to game changing technology, look no farther than our current space plan. And as I saw today when I looked at the Dream Chaser, there is more to come.

Space remains the ultimate high ground and it is our job to defend it. In 20th century warfare, military dominance was defined by manufacturing speed. The side who can produce more things and get them into the hands of the war fighter faster retained the advantage. So was the epitome of mid-20th century warfare when fully-functional flight worthy B-24 aircraft came off this production line at the rate of one per hour. And we needed every one. Because it took flights of multiple numbers of these aircraft with dozens of bombs to hit within a mile of the target with up to 45 percent of the bombers lost or damaged on every sortie. Wars of attrition.

But by the end of the 20th century, we began to flip that equation. So in 1991 I was a young captain flying in the Gulf War and I know what you are thinking. Chief, you haven't changed a bit. So when we suited up to go downtown, stealth technology, GPS, ground moving target indicator, air, land, sea integration, and precision guided munitions meant we could do far more with less numbers.

The Gulf War was the first space war. And we inverted the targeting equation from aircraft per target to targets per aircraft. We deployed game changing technology integrated with war fighters to tremendous effect and with our allies, projected power for a decisive victory and it changed the pilot's prayer. We went from please God, let me find my target and not let my wingman down, to please God, let me aim at the right target and not let my wingman down.

Because today as was recently displayed in the successful coalition strikes against Syrian chemical facilities, all directly supported by space capabilities, we hit what we aim at.

So in Desert Storm it was the combination of all these capabilities that made our success possible. Individual strengths made greater when aligned and integrated. But it also put our adversaries on notice and they sharpened their pencils and started taking notes.

A drastically altered security landscape emerged the two decades following the Gulf War. And the speed, pace and character of 21st century warfare is now marked less by manufacturing speed of platforms, sensors, and weapons and more about the manipulation and the integration of data and information.

Wars of cognition. And now as the President recently stated, space has transitioned from a benign into a war fighting domain.

But there was a time when the national leadership wasn't all that enthused or aligned about using space for war fighting advantages. In 1957 Benny Schriever, the father of the Air Force missile rocket program addressed a crowd in San Diego and he talked about space playing an important role of the future of national security and the next day he got a memo from the Secretary of Defense's office that said, "Do not use the word 'space' in any of your speeches in the future."

Eight months later Sputnik launched. The world began to shrink and our perceptions of space radically changed as we realized the sky was no longer the limit. The national dialogue changed.

The leadership of the nation became aligned and we prioritized resources for space exploration and national defense.

However, up until the President's recent bold statement, we have been unable to talk openly about space as a joint warfighting domain. This has changed the dialogue and I am excited and pleased to report that in 2018, we once again have strategic alignment from the President, the Vice President, the Secretary of Defense, service secretaries, chairmen, Congress, Combatant Commanders, Joint Chiefs.

Space is receiving prioritization in a dialogue, in the budget and it is absolutely central in both the national security and the recently published National Defense Strategies.

Vice President Pence has re-established the National Space Council to drive important strategy and policy decisions with the support of our secretary, Dr. Heather Wilson. And Dr. Wilson, let me say on behalf of all of your Airmen, we won the lottery with our 24th Secretary of the Air Force. Madame Secretary, thank you for rejoining this formation and leading us all.

Let there be no doubt as the service responsible for 90 percent of the DOD's space architecture and the professional force with the sacred duty to defend it, we must and we will embrace space superiority with the same passion and sense of ownership as we apply to air superiority here today. The nation demands it. And we will deliver. We must always be the predator and never the prey.

So as the Chief of Staff, I maintain certain roles and responsibilities for space. My three hats if you will, to ensure we never relinquish our nation's war fighting edge. So my first hat is the traditional organize, train and equip responsibility to present ready forces to Combatant Commanders like General John Hyten so they can prosecute the fight. And we do this through the Space Component Commander to U.S. Strat Comm General Jay Raymond, our most seasoned and experienced war fighter.

Ladies and gentlemen, we are blessed to have Jay Raymond on point at this time as we make the transition from uncontested to joint warfighting domain. He has been leading the integration and employment of space capabilities across the joint and combined spectrum of conflict his entire career. And when it comes to war fighting we all climb the mountain to get his sage wisdom and advice. Jay, thank you for your leadership.

The President's budget for FY19 offers the largest budget for space since 2003 and makes bold moves to ensure we remain the predator and never become the prey. So let me focus for a minute on an equally important investment. The development training of our joint warriors. We must make important investments in our people to strengthen and integrate their expertise because we are building a joint smart space force and a space smart joint force. And that begins with both experience and deep expertise.

Over the course of this year, we are revising the development of our war fighters as multi domain and joint leaders better prepared for air and space superiority in future conflict. For our officers, I'm excited to highlight Air University's inaugural class of Schriever Scholars. As I mentioned,

Benny Schriever was the father of the Air Force missile and rocket program and this group of students will carry Schriever's torch forward. And these students are a mix of Air Force and sister service space operators who we are deliberately developing and training to be experts at integrating space and space based capabilities with our joint warfighting efforts.

We also launched a brand new curriculum for our young officers at Squadron Officer School in the fall of 2017. The course expanded from five weeks to six and a half, spending more time addressing the integration of space into multi-domain operations. With our enlisted force, Chief Wright and I are completely overhauling four levels of professional development to refocus the attitudes and the aptitudes we need to thrive as Airmen in the 21st century. We will address air, space, cyber, and multi-domain ops in each of the schools regardless of force specialty.

Our space specialists must be world-class experts and have deep knowledge in their domain. But I submit that every area beyond the space specialty must understand and embrace the business of space superiority. And we must also have a working knowledge of ground maneuvers and maritime operations if we are to integrate air, space and cyber in a truly seamless joint campaign.

It's no longer enough for an Airman to be good only in airmanship. And likewise, Soldiers, Sailors, Marines, and Coast Guardsmen must have a better understanding of air and space operations. And because we have the majority of training venue for space, we will work to build more capacity for joint and combined space training and development. These changes to the curriculum and the widened exposure to our joint teammates and our allies are foundational to better integrating expertise and building the experience that we need to fight to win.

And we are aligning our training and exercises with a broader joint space focus. For example Red Flag, our premiere war fighting exercise hosted at Nellis Air Force Base incorporates active space war fighting as a central component of every exercise. Mission commanders today are responsible for incorporating space into all of their missions. And real time results of space operations are fanned to the cockpit and C2 nodes so real time audibles can be called for an enhanced lethality.

And during a recent Red Flag, 100 percent of the deployed forces chopped to and reported to the expeditionary wing commander, Brigadier General Deanna Burt who at the time was also commander at Schriever Air Force Base. And she was solely responsible for orchestrating the entire multi-domain campaign. So how appropriate that she now serves as our Vice Commander of the Air Warfare Center.

And last April, under General Raymond's leadership, Air Force Space Command used Red Flag as a template and held its inaugural Space Flag exercise. Multi-domain operations are here. And I firmly believe we need to be ready now to fight a war should it start or extend into space. And this investment in our people -- as important as any investment we make in technology -- will better prepare us for the future fight against a thinking and increasingly hostile adversary with advancing counter space capabilities. Always the predator. Never the prey.

Moving on to my second hat. As a member of the Joint Chiefs of Staff, now that's a hat to be proud. Isn't it? I love that picture. So here I advise the Chairman of the Joint Chiefs, the

Secretary of Defense, our Secretary and the President on space based capabilities and how they are best incorporated in support of Chairman Dunford's role as the global integrator for global campaign plans.

And I had a chance to learn this first hand while deployed to the Middle East from 2011 to 2013 as the CCFACC and as the Space Coordinating Authority in Central Command. A role every one of our CFAC's performs today globally. My job, their job is to understand the operational space requirements of the Combatant Commander and their fellow component commanders and connect with 14th Air Force to ensure requirements meet capabilities.

So it's natural for me to see a similar role as the Space Joint Chief to understand global operational space requirements and ensure space mindedness is built into every global campaign plan. And no mission is more critical than our responsibility with the United States Navy to sustain and employ when called upon a safe, secure and effective nuclear deterrent.

On our worst day as a nation our job is to get the Commander in Chief where he needs to be when he needs to be there and keep him connected to leadership and forces in the field working for U.S. Strategic Command. And space is absolutely central to nuclear command and control. Sacred duty. Space is an inseparable aspect of every mission the joint force provides and our adversaries are looking or a level playing field.

Ladies and gentlemen, we have no interest in allowing that to happen. Always the predator. Never the prey. And we won't be fighting alone. As strong as we may be as Airmen and as joint war fighters, we are strongest when we fight together with our allies and partners. The National Defense Strategy says it best. Mutually beneficial alliances and partnerships are crucial to our strategy providing a durable, asymmetric advantage that no competitor or rival can match.

Which brings me to the third hat, International Air Chief. Helping advise, train and prepare our international partners and the allied use of space in the defense of common interests. Security cooperation enables our partners to address defense challenges on their own, operate alongside us in coalitions or provide us with access to conduct operations and the ability to maneuver. And the foundation for this involves building partner capacity and strengthening partner capacity.

Equally as important is our ability to break down the barriers to aggressively sharing this common picture and the information with our allies and partners. There is no greater confidence building measure than sharing the critical and timely information needed for success on the battlefield. Integrating with our allies and partners will improve the safety, stability and sustainability of space and ultimately go under the international support that will condemn any adversary's harmful actions producing an established set of norms for acceptable behavior.

And I'm looking forward to hosting an International Air Chiefs Conference in 2019 focused on space operations. And, General Shelton, I would like to associate that with this conference next year.

Ladies and gentlemen, it is an exciting time to be an airman and your 24th -- 21st Chief of Staff leading these efforts with our secretary. By balancing the responsibility and each of these hats, I

remain laser-focused on ensuring we remain the stewards of defense space, the nation both demands and deserves. Because while we enjoy an advantage today, we face mounting threats from multiple nations fielding capabilities designed to take away our lead.

We will never rest on our laurels and assume a guaranteed advantage endures in space. As taken from the National Defense Strategy, America's military has no preordained right to victory on the battlefield. Today we benefit for the second time in our history from a top down alignment of priorities and strategy that we haven't seen for many years. And I will assure you we will remain the preeminent air and space force for America and her allies.

The future of military space remains in confident and competent hands with our Airmen. Always the predator. Never the prey. We own the high ground. Thank you very much.